



Dialogic® System Release 6.0 PCI for Windows®

Release Update

September 28, 2017

Copyright and Legal Notice

Copyright © 2004-2017 Dialogic Corporation. All Rights Reserved. You may not reproduce this document in whole or in part without permission in writing from Dialogic Corporation at the address provided below.

All contents of this document are furnished for informational use only and are subject to change without notice and do not represent a commitment on the part of Dialogic Corporation and its affiliates or subsidiaries ("Dialogic"). Reasonable effort is made to ensure the accuracy of the information contained in the document. However, Dialogic does not warrant the accuracy of this information and cannot accept responsibility for errors, inaccuracies or omissions that may be contained in this document.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH DIALOGIC® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN A SIGNED AGREEMENT BETWEEN YOU AND DIALOGIC, DIALOGIC ASSUMES NO LIABILITY WHATSOEVER, AND DIALOGIC DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF DIALOGIC PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF A THIRD PARTY.

Dialogic products are not intended for use in certain safety-affecting situations. Please see <http://www.dialogic.com/company/terms-of-use.aspx> for more details.

Due to differing national regulations and approval requirements, certain Dialogic products may be suitable for use only in specific countries, and thus may not function properly in other countries. You are responsible for ensuring that your use of such products occurs only in the countries where such use is suitable. For information on specific products, contact Dialogic Corporation at the address indicated below or on the web at www.dialogic.com.

It is possible that the use or implementation of any one of the concepts, applications, or ideas described in this document, in marketing collateral produced by or on web pages maintained by Dialogic may infringe one or more patents or other intellectual property rights owned by third parties. Dialogic does not provide any intellectual property licenses with the sale of Dialogic products other than a license to use such product in accordance with intellectual property owned or validly licensed by Dialogic and no such licenses are provided except pursuant to a signed agreement with Dialogic. More detailed information about such intellectual property is available from Dialogic's legal department at 3300 Boulevard de la Côte-Vertu, Suite 112, Montreal, Quebec, Canada H4R 1P8. **Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement any concepts or applications and does not condone or encourage any intellectual property infringement and disclaims any responsibility related thereto. These intellectual property licenses may differ from country to country and it is the responsibility of those who develop the concepts or applications to be aware of and comply with different national license requirements.**

Dialogic, Dialogic Pro, Veraz, Brooktrout, Diva, BorderNet, PowerMedia, PowerVille, PowerNova, MSaaS, ControlSwitch, I-Gate, Cantata, TruFax, SwitchKit, Eiconcard, NMS Communications, SIPcontrol, Exnet, EXS, Vision, inCloud9, and NaturalAccess, among others as well as related logos, are either registered trademarks or trademarks of Dialogic Corporation and its affiliates or subsidiaries. Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at 3300 Boulevard de la Côte-Vertu, Suite 112, Montreal, Quebec, Canada H4R 1P8. Any authorized use of Dialogic's trademarks will be subject to full respect of the trademark guidelines published by Dialogic from time to time and any use of Dialogic's trademarks requires proper acknowledgement.

The names of actual companies and products mentioned herein are the trademarks of their respective owners.

This document discusses one or more open source products, systems and/or releases. Dialogic is not responsible for your decision to use open source in connection with Dialogic products (including without limitation those referred to herein), nor is Dialogic responsible for any present or future effects such usage might have, including without limitation effects on your products, your business, or your intellectual property rights.

Publication Date: September 28, 2017

Document Number: 05-2221-108

About This Publication

This section contains information about the following topics:

- [Purpose](#)
- [Intended Audience](#)
- [How to Use This Publication](#)
- [Related Information](#)

Purpose

This Release Update addresses issues associated with Dialogic® System Release 6.0 PCI for Windows® (sometimes also referred to herein as “System Release 6.0 PCI Windows”). In addition to summarizing issues that were known as of the Release’s general availability, it is intended that this Release Update will continue to be updated to serve as the primary mechanism for communicating new issues, if any, that may arise after the release date.

Intended Audience

This Release Update is intended for users of System Release 6.0 PCI Windows.

How to Use This Publication

This Release Update is organized into four sections (click the section name to jump to the corresponding section):

- [Document Revision History](#): This section summarizes the ongoing changes and additions that are made to this Release Update after its original release. This section is organized by document revision and document section.
- [Post-Release Developments](#): This section describes significant changes to the system release subsequent to the general availability release date. For example, the new features provided in Service Updates are described here.
- [Release Issues](#): This section lists issues that may affect the system release hardware and software. The primary list is sorted by issue type, but alternate sorts by defect number, by product or component, and by Service Update number are also provided.
- [Documentation Updates](#): This section contains corrections and other changes that apply to the System Release documentation set that were not made to the documents prior to the release. The updates are organized by documentation category and by individual document.

Related Information

See the following for additional information:

- For the latest information on Operating Systems and Boards supported by Dialogic® System Release 6.0 PCI for Windows®, see the http://www.dialogic.com/~media/products/docs/appnotes/64-0530_SW_OS_Prod_Guide_an.pdf.
- For information about the products and features supported in this release, see the *Dialogic® System Release 6.0 PCI for Windows® Release Guide*, which is included as part of the documentation bookshelf for the release.
- <http://www.dialogic.com/support/> (for Dialogic technical support)
- <http://www.dialogic.com/> (for Dialogic® product information)

Document Revision History

This Revision History summarizes the changes made in each published version of the Release Update for Dialogic® System Release 6.0 PCI for Windows®, which is a document that has been and is intended to be periodically updated throughout the lifetime of the release.

Document Rev 108 - published September 28, 2017

Updates for Service Update 275.

In the [Post-Release Developments](#) section:

- Added [Service Update Edition for Dialogic® System Release 6.0 PCI for Windows®](#).
- Added [Windows 2016 Operating System Support - Dialogic® JCT Media Boards](#).
- Updated [Remote Diagnostics Package](#).

In the [Release Issues](#) section:

- Added the following resolved problems: SR-1, SR-2, SR-3, SR-4.
- Added the following known problems: SR-11, SR-14, SR-17, SR-41, SR-45, SR-46, SR-60.

Document Rev 107 - published July 7, 2016

Additional Updates for Service Update 271.

In the [About This Publication](#) section:

- Added a link in [Related Information](#) to the latest information on supported Operating Systems and Boards.

In the [Post-Release Developments](#) section, added:

- [Windows 10 Operating System Support and Expanded Windows 8.1 Operating System Support - Dialogic® JCT Media Boards](#).
- [Windows 2003 Operating System End of Support Notification](#).

Document Rev 106 - published March 2, 2016

Additional Updates for Service Update 271.

In the [Documentation Updates](#) section:

- Added documentation update to the [Dialogic® Voice API Programming Guide](#) regarding Table 10, Voice Encoding Methods (Springware Boards).

Document Rev 105 - published May 8, 2015

Additional Updates for Service Update 271.

In the [Post-Release Developments](#) section, added:

- [Support for Windows 8.1 Operating System - Dialogic® JCT Media Boards.](#)

Document Rev 104 - published December 12, 2013

Updates for Service Update 271.

In the [Post-Release Developments](#) section, added:

- [Support for Windows Server 2012 Standard and Windows Server 2012 R2 Standard Operating Systems.](#)

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00098919, IPY00100131, IPY00100956, IPY00102109, IPY00102756.
- Added the following known problems: IPY00101039, IPY00102755, IPY00102871.

Document Rev 103 - published June 22, 2012

Additional Updates for Service Update 269.

In the [Release Issues](#) section:

Added the following resolved problem: IPY00099876.

Document Rev 102 - published May 9, 2012

Updates for Service Update 269.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00091411, IPY00092912, IPY00093022, IPY00093540, IPY00093771, IPY00094295, IPY00094517, IPY00099099.

Document Rev 101 - published April 9, 2012

Updates for Service Update 267.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00099067, IPY00092052, IPY00098937, IPY00093957, IPY00099487, IPY00099304, IPY00099303, IPY00099221, IPY00099257.
- Added the following known (permanent) problem with workaround: IPY00099002.

In the [Documentation Updates](#) section:

- Added documentation updates to the [Dialogic® Springware Architecture Products on Windows® Configuration Guide](#), [Dialogic® Configuration Manager \(DCM\) Online Help](#), and [Dialogic® Continuous Speech Processing API Programming Guide](#) regarding use of the **EC_Resource** and **CSPEXtraTimeSlot** parameters on Dialogic® Springware Boards (IPY00092052).

Document Rev 100 - published October 28, 2011

Updates for Service Update 266.

In the Post-Release Developments section, added:

- [Notice about Microsoft Windows Updates](#).
- [IPMI Updates](#).

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00094436, IPY00094629.

Document Rev 99 - published October 12, 2011

Updates for Service Update 264.

In the Post-Release Developments section, added:

- [Anti-virus Software Policy](#).
- [User Account Control Recommendation](#).

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00093627, IPY00094129, IPY00094190.

Document Rev 98 - published September 1, 2011

Updates for Service Update 263.

In the Post-Release Developments section, added:

- [Operating System Support Update for SS7 Products](#).
- [New TDX_DRVNOEM Event](#).

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00092854, IPY00093413, IPY00093451, IPY00093453, IPY00093552, IPY00093595, IPY00093596, IPY00093643, IPY00093701, IPY00093749, IPY00093815, IPY00093843, IPY00094025, IPY00094216.

Document Rev 97 - published June 7, 2011

Updates for Service Update 261.

In the Post-Release Developments section, added:

- [PDK Support for Automatic Answer and Reject of Inbound Calls.](#)
- [Improvement to Call Progress Analysis.](#)

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00091022, IPY00092283, IPY00092493, IPY00092578, PY00092594, IPY00093054, IPY00093234, IPY00093235, IPY00093375.

Document Rev 96 - published March 1, 2011

Updates for Service Update 258.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00092204, IPY00092535, IPY00092546, IPY00092833.

Document Rev 95 - published January 24, 2011

Updates for Service Update 257.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00055688, IPY00091039, IPY00091379, IPY00091670, IPY00092055, IPY00092212, IPY00092250, IPY00092618.

Document Rev 94 - published November 19, 2010

Updates for Service Update 256.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00091862, IPY00091954, IPY00091956, IPY00092039, IPY00092122.
- Added the following known problem: IPY00092038.

In the Documentation Updates section:

- Added a note about SNMP Extension Agents in the [Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide](#). (IPY00092038)

Document Rev 93 - published July 15, 2010

Updates for Service Update 253.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00091077, IPY00091142.

Document Rev 92 - published June 22, 2010

Updates for Service Update 252.

In the Post-Release Developments section, added:

- Add Windows Server® 2008 R2 to the list of supported operating systems in [Section 1.35, “Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems”](#), on page 103.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00080931, IPY00082212, IPY00090734, IPY00090737, IPY00090745, IPY00090871, IPY00090898, IPY00090952, IPY00091108, IPY00091183.
- Added the following known (permanent) problem: IPY00091130.

Document Rev 91 - published April 7, 2010

Updated for Service Update 250.

In the Post-Release Developments section, added:

- [Windows® 7 Support](#).
- [64-Bit Version Support for Dialogic® DM3 Boards](#).
- [India R2 Bidirectional Protocol Derivative with TKO](#).
- Updates to [Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems](#).

Document Rev 90 - published February 11, 2010

Updated for Service Update 243.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00081518, IPY00081776, IPY00082084, IPY00082087.

Document Rev 89 - published December 7, 2009

Updated for Service Update 241.

In the Post-Release Developments section:

- Removed Dialogic® DM3 boards from [Boards Supported with 64-Bit OS Versions](#).

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00080184, IPY00081381, IPY00081554, IPY00081672.

In the Documentation Updates section:

- Added that the Global Call SS7 binaries are now linked with the shared library of the Dialogic® SS7 DSI Development Package in the [Dialogic® System Release 6.0 PCI for Windows® Release Guide](#) (IPY00081381).

Note: This change requires that Global Call SS7 customers use the Dialogic® SS7 DSI Development Package version 5.0 or later. If a customer is using an older version, the Global Call SS7 server will not start during download.

Document Rev 88 - published December 2, 2009

Additional Update for Service Update 239.

In the Post-Release Developments section:

- Added [Support for Dialogic® D/4PCIUFEQ and Dialogic® D/4PCIU4SEQ Media Boards](#).

Document Rev 87 - published September 30, 2009

Additional Updates for Service Update 239.

In the Post-Release Developments section:

- [Support for Dialogic® D/80PCIE-LS Media Board](#).
- [Important Notice about System Release Update Installation](#)

In the Documentation Updates section, added a note in the [Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide](#) that the update install should not be used when upgrading from a Service Update prior to SU 207 to a more recent build. (IPY00081149)

Document Rev 86 - published August 31, 2009

Updated for Service Update 239.

In the [Release Issues](#) section:

- Added the following resolved problem: IPY00080927.

Document Rev 85 - published August 17, 2009

Updated for Service Update 237.

In the Post-Release Developments section:

- Added documentation for [Configuring the Line Law Encoding Mode](#). This feature was available in Service Update 235.
- [New Operating System Support](#).

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00079154, IPY00080210, IPY00080636, IPY00080753, IPY00080822.

In the Documentation Updates section:

- Added an update to the *Dialogic® System Release 6.0 PCI for Windows® Release Guide* to show Windows® XP SP3 support. (IPY00080663)
- Added an update to Section 6.9 of the *Dialogic® DM3 Architecture PCI Products on Windows Configuration Guide* for the new LineEncoding parameter.

Document Rev 84 - published June 23, 2009

Updated for Service Update 235.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00079108, IPY00079365, IPY00079393, IPY00079648, IPY00079651, IPY00079668 , IPY00079691, IPY00079716 , IPY00080145, IPY00080244, IPY00080252.

Document Rev 83 -

Document revision 83 was not published.

Document Rev 82 - published May 15, 2009

Updated for Service Update 230.

In the [Release Issues](#) section:

- Added the following resolved problems: IPY00045524, IPY00074292, IPY00079212, IPY00079353, IPY00079561, IPY00079797, IPY00079825, IPY00079866, IPY00080009, IPY00080020.

Document Rev 81 - published April 9, 2009

Updated for Service Update 229.

In the [Release Issues](#) section:

- Added the following resolved problem: IPY00079703.
- Removed following known problem: IPY00079022. This issue has been resolved with IPY00079703.

Document Rev 80 - published March 20, 2009

Updated for Service Update 228.

In the [Release Issues](#) section, added the following resolved problems: IPY00079399, IPY00079477, IPY00079523, IPY00079590.

In the Documentation Updates section, deleted the corrections for the [Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide](#), because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.

Document Rev 79 - published February 25, 2009

Updated for Service Update 227.

In the Post-Release Developments section, added Enhancements to DPNSS Signaling.

In the Release Issues section, added the following resolved problems: IPY00079275, IPY00079414.

Document Rev 78 - published January 30, 2009

Updated for Service Update 223.

In the Release Issues section, added the following resolved problems: IPY00078445, IPY00078519, IPY00078535, IPY00078576, IPY00079095, IPY00079160, IPY00079213, IPY00079345.

In the Documentation Updates section:

- Added an update to the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* for a new parameter in the Brazil R2 Bidirectional protocol *pdk_br_r2_io.cdp* file.
- Added updates to the *Dialogic® Voice API Library Reference* for the **dx_setsvcond()** function and DX_SVCB data structure (IPY00079103).
- Deleted the corrections for the *Dialogic® Digital Network Interface Software Reference*, *Dialogic® Fax Software Reference*, *Dialogic® Global Call ISDN Technology Guide*, and *Dialogic® PBX Integration Software Reference*, because these corrections have been incorporated into updated documents that are now on the online documentation bookshelf.

Document Rev 77 - published December 9, 2008

Updated for Service Update 218.

In the Post-Release Developments section, added Support for SFTP in Dialogic® Global Call SS7 Call Control Library.

In the Release Issues section:

- Added the following resolved problem: IPY00078799.
- Added the following known problem: IPY00079022.

In the Documentation Updates section:

- Added an update to the *Dialogic® Digital Network Interface Software Reference* for the **dt_getctinfo()** function (IPY00079075).
- Added an update to the *Dialogic® Voice API Library Reference* for the **dx_deltones()** function (IPY00079097).
- Deleted the corrections for the *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide* and *Dialogic® Global Call SS7 Technology Guide*, because these corrections have been incorporated into updated documents that are now on the online documentation bookshelf.

Document Rev 76 - published October 29, 2008

Updated for Service Update 215.

In the Release Issues section, added the following resolved problems: IPY00045293, IPY00045376, IPY00045388, IPY00045440, IPY00045442, IPY00045456.

In the Documentation Updates section:

- Added an update to the *Dialogic® Continuous Speech Processing API Library Reference* for the **ec_reciottdata()** and **ec_stream()** functions.
- Added an update to the *Dialogic® Voice API Library Reference* for the **dx_rec()**, **dx_reciottdata()**, **dx_recvox()**, and **dx_recwav()** functions.

Document Rev 75 - published October 16, 2008

Updated for Service Update 214.

In the Release Issues section, added the following resolved problems: IPY00044100, IPY00044425, IPY00044544, IPY00045074, IPY00045184, IPY00045224, IPY00045239, IPY00045277, IPY00045292, IPY00045323, IPY00045478, IPY00078411. Also added a resolved problem with Host Install (no defect number) regarding an error message that can occur during the installation of the Dialogic® System Release Software if the installation of the DetectorsProj service fails.

In the Documentation Updates section:

- Added an update to the *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide* for an error message that can occur during the installation of the Dialogic® System Release Software if the installation of the DetectorsProj service fails.
- Deleted the corrections for the *Dialogic® Global Call API Programming Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.

Document Rev 74 - published October 10, 2008

Additional update for Service Update 211.

In the Post-Release Developments section, under Support for Windows Vista® and Windows Server® 2008 Operating Systems:

- In the Supported Boards section, added that Dialogic® Springware Boards are supported with 32-bit **and 64-bit** versions of the Windows Vista and Windows Server 2008 operating systems.
- Added Application Considerations in 64-Bit Mode.
- In the Content Split into Different Locations section, added default directory locations that are applicable if using 64-bit versions of Windows Vista or Windows Server 2008.
- In the Changes to Environment Variables section, added Environment Variable Values for 64-Bit Versions of Windows Vista and Windows Server 2008.
- Added Guidelines for Moving Applications to Windows Vista or Windows Server 2008.

Document Rev 73 - published September 22, 2008

Additional update for Service Update 211.

In the Post-Release Developments section, under Support for Windows Vista® and Windows Server® 2008 Operating Systems, added Windows Server 2008 Standard, Full Version, as a supported version.

In the Documentation Updates section, deleted the corrections for the *Dialogic® Global Call Analog Technology Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.

Document Rev 72 - published September 12, 2008

Updated for Service Update 211.

In the Post-Release Developments section, added New Dialogic® D/42 API Function for Dialing.

In the Release Issues section, added the following resolved problems: IPY00044251, IPY00044561, IPY00044614, IPY00044730, IPY00044811, IPY00044832, IPY00044932, IPY00045128, IPY00045132, IPY00045136, IPY00045146, IPY00045159, IPY00045176, IPY00045191.

In the Documentation Updates section:

- Added an update to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for the ISDN **ProtocolType** parameter (IPY00045267).
- Added an update to the *Dialogic® Global Call API Library Reference* for the **gc_GetCallInfo()** function (IPY00044729).
- Added an update to the *Dialogic® ISDN Software Reference* for the **cc_StartTrace()** and **cc_StopTrace()** functions (IPY00045193).
- Deleted the corrections for the *Dialogic® PBX Integration Board User's Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.
- Added an update to the *Dialogic® PBX Integration Software Reference* for the new **d42_dial()** function.
- Added an update to the *Dialogic® Voice API Library Reference* for the **dx_OpenStreamBuffer()** function (IPY00044981).

Document Rev 71 - published July 25, 2008

Updated for Service Update 203.

In the Release Issues section, added the following resolved problems: IPY00043700, IPY00043907, IPY00044132, IPY00044185, IPY00044363, IPY00044432.

In the Documentation Updates section, made a correction to the sample code for **gc_GetFrame()** in the *Dialogic® Global Call API Library Reference*.

Document Rev 70 - published July 15, 2008

Updated for Service Update 201.

In the Post-Release Developments section, under Support for Windows Vista® and Windows Server® 2008 Operating Systems, removed the restriction that Java-based diagnostics tools are not supported. The PSTN Diagnostics and Status Monitor tools are now supported when using Windows Vista and Windows Server 2008.

In the Release Issues section, added the following resolved problems: IPY00043806, IPY00044257, IPY00044325, IPY00044452.

In the Documentation Updates section, made a correction to the *Dialogic® Global Call SS7 Technology Guide* about using dual resilient SIU configurations.

Document Rev 69 - published June 12, 2008

Updated for Service Update 197.

In the Post-Release Developments section:

- Updated Support for Windows Vista® and Windows Server® 2008 Operating Systems:
 - Hardware Requirements - A minimum of 2 GB RAM is required when running System Release 6.0 PCI Windows on Windows Vista or Windows Server 2008.
 - Supported Boards - More supported boards.
 - Building Applications - Applications must be recompiled using Microsoft® Visual Studio® 2005 development system with Visual C++® Version 8.0 Service Pack 1.
 - UDD Not Supported.
 - Remote DCM Not Supported.
 - Java-Based Diagnostics Tools Not Supported.
 - HTML help now provided for Dialogic® GUI utilities, demos, etc.
- Added Startup Error Codes for Dialogic® Springware Boards.

In the Release Issues section:

- Added the following resolved problems: IPY00040086, IPY00043515, IPY00043545, IPY00043609, IPY00043701, IPY00043764, IPY00043825, IPY00043826, IPY00043880. Also added IPY00043254 (resolved in Service Update 193).
- Added the following known (permanent) problem: IPY00043811.

In the Documentation Updates section:

- Added information about using remote DCM under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* and *Dialogic® Springware Architecture Products on Windows® Configuration Guide*.
- Added information about a new error message for unsupported operating systems under *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide*.
- Added an update to the *Dialogic® Global Call API Library Reference* for the **gc_util_insert_parm_val()** function (IPY00043078).
- Added two updates to the *Dialogic® Global Call SS7 Technology Guide*, one about Bearer Independent Call Control (BICC) signaling protocol not supported, and one about opening trunk devices for SS7.
- Deleted the corrections for the *Dialogic® Modular Station Interface API Library Reference* and *Dialogic® Modular Station Interface API Programming Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.
- Added that a new version of the *Dialogic® Standard Runtime Library API Library Reference* is now available on the online documentation bookshelf.

Document Rev 68 - published May 16, 2008

Updated for Service Update 193.

In the Release Issues section:

- Added the following resolved problems: IPY00041808, IPY00043029, IPY00043077, IPY00043083, IPY00043230, IPY00043240, IPY00043432, IPY00043434, IPY00043443.
- Added the following known (permanent) problem: IPY00041217.

In the Documentation Updates section, added that a new version of the *Dialogic® Native Configuration Manager API Programming Guide* is now available on the online documentation bookshelf.

Document Rev 67 - published April 22, 2008

Updated for Service Update 191.

In the Release Issues section, added the following resolved problems: IPY00042584, IPY00042828, IPY00042845, IPY00042934.

Document Rev 66 - published April 16, 2008

Updated for Service Update 190.

In the Post-Release Developments section:

- Added Configuring SIP Stack Parameters with Global Call.
- Added Disabling Automatic re-INVITE Message when Switching between Fax and Audio.

In the Release Issues section, added the following resolved problems: IPY00039707, IPY00039965, IPY00040902, IPY00041118, IPY00041300, IPY00042408, IPY00042579, IPY00042601, IPY00042609, IPY00042681, IPY00042730, IPY00042752, IPY00042862, IPY00042940, IPY00042985.

In the Documentation Updates section:

- Added documentation updates to the *Dialogic® Global Call IP Technology Guide* because of new features in the Service Update.
- Deleted the corrections for the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.

Document Rev 65 - published March 12, 2008

Updated for Service Update 184.

In the Post-Release Developments section, added an option for the Telecom Subsystem Summary Tool (its_sysinfo) to disable collection of board memory dumps.

In the Documentation Updates section, added documentation update to the *Dialogic® System Software Diagnostics Guide* because of a new feature in the Service Update.

Document Rev 64 - published February 29, 2008

Updated for Service Update 183.

In the Post-Release Developments section:

- Added New Dialogic® NCM API Functions for PDK Protocol Configuration.
- Added support for the Dialogic® D/41JCT-LSEU Board under Analog Line Adaptation Utility (LineAdapt).

In the Release Issues section, added the following resolved problems: IPY00041339, IPY00042168, IPY00042208.

In the Documentation Updates section, added documentation update to the *Dialogic® Native Configuration Manager API Library Reference* because of a new feature in the Service Update.

Document Rev 63 - published February 15, 2008

Updated for Service Update 182.

In the Post-Release Developments section:

- Added File Management Enhancements for DebugAngel Tool.
- Added File Management Enhancements for PDK Trace Tool.
- Revised the PBX Integration Support for Nortel BCM section to indicate that the Message Waiting Indication (MWI) and Calling Party ID (CPID) features are now supported. Programming instructions have also been updated, and called/calling number ID data has been added.
- Made corrections to the Media Loads table under Support for PCI Express Boards - Dialogic® DM/V-B Boards.

In the Release Issues section:

- Added the following resolved problems: IPY00037905, IPY00041407, IPY00041580, IPY00041740, IPY00041792, IPY00041855, IPY00041959, IPY00041987, IPY00042003.
- Added the following known problem: IPY00042226.

In the Documentation Updates section:

- Added updates to the *Dialogic® System Software Diagnostics Guide* because of new features in the Service Update.
- Added updates to the *Dialogic® PBX Integration Software Reference*.
- Deleted some of the corrections for the *Dialogic® Global Call API Library Reference*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.

Document Rev 62 - published January 30, 2008

Updated for Service Update 181.

In the Post-Release Developments section:

- Added Runtime Control of Single or Double Hookflash on Consultation Drop for FXS/LS Protocol.
- Deleted the detailed descriptions about some Dialogic® Global Call SS7 features that were previously included in this section, because this information has been incorporated into the updated *Dialogic® Global Call SS7 Technology Guide* that is now on the online documentation bookshelf.

In the Release Issues section, added the following resolved problems: IPY00040874, IPY00041079, IPY00041421, IPY00041426.

In the Documentation Updates section:

- Added documentation update to the *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide* because of a new feature in the Service Update.
- Deleted the corrections for the *Dialogic® Global Call SS7 Technology Guide*, because these corrections have been incorporated into an updated document that is now on the online documentation bookshelf.
- Added documentation update to the *Dialogic® Voice API Library Reference* for the **dx_getdig()** function (IPY00038453).
- Deleted the sections for the *Dialogic® Conferencing (CNF) API Library Reference* and *Dialogic® Conferencing (CNF) API Programming Guide*. These documents have been removed from the online documentation bookshelf because the CNF API is no longer supported in Dialogic® System Release 6.0 PCI for Windows®.

Document Rev 61 - published December 28, 2007

Updated for Service Update 178.

In the Release Issues section, added the following resolved problems: IPY00039334, IPY00040536, IPY00041078, IPY00041082, IPY00041178, IPY00041209, IPY00041233, IPY00041345.

In the Documentation Updates section:

- Deleted the corrections for the *Dialogic® Audio Conferencing API Library Reference* and *Dialogic® Audio Conferencing API Programming Guide*, because these corrections have been incorporated into updated documents that are now on the online documentation bookshelf.
- Deleted some of the corrections for the *Dialogic® Continuous Speech Processing API Library Reference* and *Dialogic® Continuous Speech Processing API Programming Guide*, because these corrections have been incorporated into updated documents that are now on the online documentation bookshelf.
- Deleted the corrections for the *Dialogic® Standard Runtime Library API Library Reference* and *Dialogic® Standard Runtime Library API Programming Guide*, because these corrections have been incorporated into updated documents that are now on the online documentation bookshelf.

Document Rev 60 - published November 15, 2007

Updated for Service Update 174.

In the Post-Release Developments section:

- Added Analog Call Transfer Support on Dialogic® Springware Boards.
- Added Windows Server® 2003 R2 SP2 under New Operating System Support.

In the Release Issues section, added the following resolved problems: IPY00038391, IPY00039490, IPY00039661, IPY00040096, IPY00040685, IPY00040798, IPY00040832. Also added IPY00040179 (resolved in Service Update 171).

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*, *Dialogic® Global Call API Library Reference*, *Dialogic® Global Call Analog Technology Guide*.
- Added documentation updates to the *Dialogic® Springware Architecture Products on Windows® Configuration Guide*, *Dialogic® Configuration Manager (DCM) Online Help*, and *Dialogic® Continuous Speech Processing API Programming Guide* regarding use of the **EC_Resource** and **CSPEXtraTimeSlot** parameters on Dialogic® Springware Boards (IPY00041018).
- Added documentation updates to the *Dialogic® Fax Software Reference* for additional return values for **ATFX_RESLN()** and other related changes (IPY00040796).
- Added documentation update to the *Dialogic® GDK Programming Reference Manual* about the **fn_received** queue record field (IPY00040964).
- Added documentation update to the *Dialogic® Global Call ISDN Technology Guide* for additional firmware-related cause values when using Dialogic® DM3 Boards (IPY00041046).
- Added documentation updates to the *Dialogic® Voice API Library Reference* and *Dialogic® Voice API Programming Guide* for functions that are no longer supported (**r2_creatfsig()** and **r2_playbsig()**).

Document Rev 59 - published October 9, 2007

Updated for Service Update 171.

In the Post-Release Developments section, added Support for Windows Vista® Operating System.

In the Release Issues section

- Added the following resolved problems: IPY00039476, IPY00040052.
- Added the following known problems: IPY00040083, IPY00040086.

Made global changes to reflect Dialogic brand.

Document Rev 58 - published September 14, 2007

Updated for Service Update 167.

In the Post-Release Developments section:

- Added Dialogic® DM3 Media Channel Reset Capability (Stuck Channel Recovery).
- Under AMD Opteron Server Support, deleted the note about unsupported hardware; the issues have been resolved.

In the Release Issues section, added the following resolved problem: IPY00039014.

In the Documentation Updates section, added documentation updates to the following documents because of a new feature in the Service Update: *Dialogic® Continuous Speech Processing API Library Reference*, *Dialogic® Voice API Library Reference*.

Document Rev 57 - published September 6, 2007

Additional update for Service Update 166.

In the Post-Release Developments section, added AMD Opteron Server Support.

Document Rev 56 - published August 30, 2007

Updated for Service Update 166.

In the Release Issues section, added the following resolved problems: IPY00038190, IPY00038981, IPY00039068, IPY00039412, IPY00039427, IPY00039538, IPY00039586.

In the Documentation Updates section, deleted some of the corrections for the *Dialogic® Voice API Library Reference*, because these corrections have been incorporated into an updated document that is now on the documentation bookshelf.

Document Rev 55 - published August 20, 2007

Updated for Service Update 165.

In the Post-Release Developments section, added Global DPD Enabled on Dialogic® Springware Boards.

In the Release Issues section:

- Added the following resolved problems: IPY00037918, IPY00038545, IPY00038572, IPY00039155, IPY00039331, IPY00039341, IPY00039492.
- Eliminated the link to view issues sorted by PTR number. (PTR numbers have been superseded by defect numbers. The PTR numbers still appear in the Release Issues table for historical purposes, but a version of the table sorted by PTR number is no longer provided.)

In the Documentation Updates section, added a documentation update to the *Dialogic® Voice API Programming Guide* because of a new feature in the Service Update.

Document Rev 54 - published August 3, 2007

Updated for Service Update 162.

In the Release Issues section, added the following resolved problems: IPY00038551, IPY00038792, IPY00038946, IPY00039032, IPY00039179, IPY00039249.

Document Rev 53 - published July 20, 2007

Updated for Service Update 160.

In the Post-Release Developments section:

- Added Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs.
- Added Troubleshooting Information for RTF Logs.
- Added Remote Diagnostics Package.
- Under Enhanced Diagnostics, added PSTN Diagnostics (pstndiag) and Status Monitor (statusmon).
- Under Enhanced Diagnostics, added more tools that can now be executed from the New Dialogic® Diagnostics Management Console.
- Updated the Support for PCI Express Boards - Dialogic® Springware Boards section for the Dialogic® D/42JCT-EW and Dialogic® D/82JCT-EW PBX Integration Boards.
- Under Telecom Subsystem Summary Tool (its_sysinfo), added information about the new Windows® Package Info section.
- Deleted the section about compliance with ITU-T Q.454 and Q.455; this feature is not supported.

In the Release Issues section:

- Added the following resolved problems: IPY00037319, IPY00037643, IPY00037789, IPY00037923, IPY00038298, IPY00038407, IPY00038419, IPY00038433, IPY00038435, IPY00038494, IPY00038499, IPY00038524, IPY00038533, IPY00038539, IPY00038611, IPY00038612, IPY00038708, IPY00038836, IPY00038849, IPY00038894, IPY00038979, IPY00038991, IPY00038998.
- Revised the information for IPY00036665 (resolved in Service Update 160, not in Service Update 155).

In the Documentation Updates section, added documentation updates to the following documents because of new features in the Service Update: *Dialogic® System Software Diagnostics Guide*, *Dialogic® Global Call API Programming Guide*, *Dialogic® Voice API Library Reference*, *Dialogic® Voice API Programming Guide*.

Document Rev 52 - published June 25, 2007

Updated for Service Update 155.

In the Post-Release Developments section:

- Added New Parameter for Adjusting Silence Threshold on Dialogic® DM3 Boards.
- In the Support for PCI Express Boards - Dialogic® DM/V-B Products section, made minor changes to terminology in the Media Loads table.

In the Release Issues section:

- Added the following resolved problems: IPY00036665, IPY00037262, IPY00037493, IPY00038206, IPY00038280, IPY00038317. Also added IPY00037861 (resolved in Service Update 154).
- Added the following known (permanent) problem: IPY00037706.

In the Documentation Updates section:

- Added updates to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* about NFAS D channel backup (DCBU) supported on 4ESS, 5ESS, and NI-2.
- Added an update to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* about active talker and scaling in conferences.
- Added an update to the *Dialogic® Fax Software Reference* about the default fax font (IPY00037855).

Document Rev 51 - published June 13, 2007

Additional updates for Service Update 154.

In the Post-Release Developments section, updated the Support for PCI Express Boards - Dialogic® Springware Products section for the D/240JCT-T1-EW and D/300JCT-E1-EW PCI Express Boards.

In the Release Issues section, added the following resolved problems: IPY00010514 (PTR 35342), IPY00028248 (PTR 33718), IPY00028516 (PTR 35001), IPY00028549 (PTR 35901), IPY00028555 (PTR 36110), IPY00031590 (PTR 36755).

Document Rev 50 - published June 1, 2007

Updated for Service Update 154.

In the Post-Release Developments section:

- Added Support for PCI Express Boards - Dialogic® Station Interface Boards.
- In the Support for PCI Express Boards - Dialogic® DM/V-B Products and Support for PCI Express Boards - Dialogic® Springware Products sections, revised names of the PCI Express Boards to indicate their item market names.

In the Release Issues section:

- Added the following resolved problems: IPY00032797, IPY00033228, IPY00036855, IPY00037161, IPY00037166, IPY00037351, IPY00037372, IPY00037373, IPY00037467, IPY00037507, IPY00037777, IPY00037817, IPY00037818, IPY00038074, IPY00038119, IPY00038130, IPY00038235, IPY00038244.
- Added the following known problem: IPY00037923.
- Added the following known (permanent) problem: IPY00006127 (PTR 33837).

In the Documentation Updates section:

- Added an update for the **gc_InitXfer()** function under *Dialogic® Global Call API Library Reference* (IPY00038401).
- Added an update for the **dx_setevtmsk()** function under *Dialogic® Voice API Library Reference* (IPY00038053).

Document Rev 49 - published April 20, 2007

Updated for Service Update 148.

In the Post-Release Developments section:

- Updated the Support for PCI Express Boards - Dialogic® Springware Products section for the D/480JCT and D/600JCT PCI Express Boards.
- Added Windows® Server 2003 SP2 under New Operating System Support.

In the Release Issues section, added the following resolved problems: IPY00034857, IPY00036469, IPY00036919, IPY00037183, IPY00037318, IPY00037356, IPY00037396, IPY00037432, IPY00037483, IPY00037607, IPY00037632, IPY00037633, IPY00037708, IPY00037746, IPY00037767.

In the Documentation Updates section:

- Added a documentation update to the *Dialogic® System Release 6.0 PCI for Windows® Release Guide* for Windows Server® 2003 SP2 support.
- Added an update to the Media Load table under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Document Rev 48 - published March 22, 2007

Updated for Service Update 144.

In the Post-Release Developments section:

- Added Support for PCI Express Boards - Dialogic® DM/V-B Products.
- Added Support for Dialogic® D/4PCI Board.
- Added New Parameter for Adjusting Silence Threshold on Dialogic® DM3 Boards.

In the Release Issues section:

- Added the following resolved problems: IPY00036504, IPY00036861.
- Added the following known problem: IPY00035574.

In the Documentation Updates section, added information about binary log files to the *Dialogic® System Software Diagnostics Guide* (IPY00037518).

Document Rev 47 - published March 13, 2007

In the Post-Release Developments section, updated the Support for PCI Express Boards section for additional PCI Express Boards: Dialogic® D/4PCIU4S, D/4PCIUF, D/41JCT-LS, and VFX/41JCT-LS.

Document Rev 46 - published March 5, 2007

Updated for Service Update 142.

In the Release Issues section:

- Added the following resolved problems: IPY00006707 (PTR 33803), IPY00007470 (PTR 32437), IPY00009499 (PTR 33932), IPY00028633 (PTR 35748), IPY00036280, IPY00036345, IPY00036347, IPY00036423, IPY00036448, IPY00036830, IPY00036833, IPY00036865, IPY00036886, IPY00037004. Also added IPY00034365 (resolved in Service Update 139).

Note: The fix for defect **IPY00036345** may have an impact on existing Dialogic® Springware applications; refer to the defect description in the Release Issues section.

- Added the following known (permanent) problem: IPY00037015.

Document Rev 45 - published February 5, 2007

Updated for Service Update 139.

In the Post-Release Developments section, added File Management Enhancements for Dialogic® ISDNtrace Tool.

In the Release Issues section, added the following resolved problems: IPY00031534, IPY00036044, IPY00036101, IPY00036247, IPY00036248, IPY00036337, IPY00036418, IPY00036949.

In the Documentation Updates section:

- Added IPY00006024 (PTR 29612) under *Dialogic® PBX Integration Board User's Guide*.
- Added documentation updates to the following document because of new features in the Service Update: *Dialogic® System Software Diagnostics Guide*.

Document Rev 44 - published January 3, 2007

Updated for Service Update 134.

In the Release Issues section, added the following resolved problems: IPY00034413, IPY00034841, IPY00035350, IPY00035613, IPY00035822, IPY00035831, IPY00035875. Also, added IPY00028444 (PTR 35763) (resolved in Service Update 124).

Document Rev 43 - published December 18, 2006

Updated for Service Update 133.

In the Post-Release Developments section:

- Added Support for Dialogic® DI/0408-LS-AR2 Board.
- Added Change in ipmedia.log Implementation.
- Added Adjusting Pre-Record Beep Tone Characteristics through the CONFIG File.
- Added Reduced Dial Tone Delay with MWI.

In the Release Issues section, added the following resolved problem: IPY00036073.

Document Rev 42 - published November 15, 2006

Updated for Service Update 131.

In the Post-Release Developments section:

- Added Enhanced Diagnostics.
- Added Support for PCI Express Boards.
- Deleted some of the detailed descriptions about diagnostics features that were previously included in this section, because this information is now superseded by the updated *Dialogic® System Software Diagnostics Guide* that is now on the documentation bookshelf.

In the Release Issues section, added the following resolved problems: IPY00006790 (PTR 35137), IPY00033492, IPY00034404, IPY00034495, IPY00034606, IPY00034738, IPY00034816, IPY00035148, IPY00035451, IPY00035506.

In the Documentation Updates section:

- Deleted the corrections for the *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide* because these corrections have been incorporated into an updated document that is now on the documentation bookshelf.
- Deleted the relevant corrections for the *Dialogic® System Software Diagnostics Guide* because these corrections have been incorporated into an updated document that is now on the documentation bookshelf.

Document Rev 41 - published October 18, 2006

Updated for Service Update 125.

In the Release Issues section, added the following resolved problems: IPY00033102, IPY00034079, IPY00034105, IPY00034378, IPY00034618, IPY00034678. Also, added IPY00032664 (resolved in Service Update 105) and IPY00032875 (resolved in Service Update 116).

Document Rev 40 - published September 26, 2006

Updated for Service Update 124.

In the Post-Release Developments section:

- Added PDK Trace Supports CAS/R2MF/Tone Tracing.
- Added Compliance with ITU-T Q.454 and Q.455.
- Added Ability to Lower or Disable White Noise.
- Added Optional Use of Sharing of Timeslot (SOT) Algorithm.
- Under Dialogic® Global Call Software Support for Time Slots on Dialogic® SS7 Boards Running in DTI Mode, deleted the restriction that opening trunk devices is not supported. Trunk devices can be opened.
- Under Notification of Layer 1 Alarm Events on Dialogic® SS7 Boards, revised the Alarm Handling for SS7 Boards section to indicate that GCEV_ALARM events are disabled by default and must be enabled via **gc_SetAlarmConfiguration()**.

In the Release Issues section, added the following resolved problems: IPY00033163, IPY00033698. Also, added IPY00033244 (resolved in Service Update 113).

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide* and *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Added updates about fixed-line short message service (SMS) support on Dialogic® Springware Boards under *Dialogic® Voice API Programming Guide*.

Document Rev 39 - published August 22, 2006

Updated for Service Update 118.

In the Release Issues section:

- Added the following resolved problem: IPY00030001 (PTR 36796).
- Added the following known (permanent) problem: IPY00031563 (PTR 36612).

Document Rev 38 - published August 7, 2006

Updated for Service Update 116.

In the Release Issues section, added the following resolved problems: IPY00034050 (PTR 36636). Also added IPY00034018 (fixed in Service Update 115).

Document Rev 37 - published August 4, 2006

Updated for Service Update 115.

In the Post-Release Developments section:

- Added New FSK Transmit and Receive Signal Level Parameters.
- Added Support for Reporting Billing Type.
- Added Runtime Control of Double Answer for R2MF.
- Added Enhanced ISDN Trace Functionality for DPNSS Tracing.

In the Release Issues section, added the following resolved problems: IPY00007931 (PTR 23718), IPY00033499.

In the Documentation Updates section:

- Added IPY00006258 (PTR 36353) under *Dialogic® PBX Integration Board User's Guide*.
- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Global Call API Library Reference*, *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.

Document Rev 36 - published July 26, 2006

Updated for Service Update 113.

In the Post-Release Developments section, under New Features in Dialogic® Global Call Protocols Package, added five more new protocols (Bulgaria R2, Croatia R2, Kuwait R2, Lithuania R2, Uzbekistan R2) and new parameters for Nortel Meridian Lineside E1 protocol.

In the Release Issues section:

- Added the following resolved problems: IPY00031559 (PTR 36828), IPY00031560 (PTR 36801), IPY00032793, IPY00033009, IPY00033584.
- Added three known (permanent) problems regarding Runtime Trace Facility: IPY00032730, IPY00032735, IPY00032742.

In the Documentation Updates section:

- Added an update to the **NCM_ApplyTrunkConfiguration()** function under *Dialogic® Native Configuration Manager API Library Reference*.
- Added IPY00006540 (PTR 34211) under *Dialogic® Global Call ISDN Technology Guide*.
- Added IPY00033772 under *Dialogic® Voice API Library Reference*.

Document Rev 35 - published July 5, 2006

Updated for Service Update 111.

In the Post-Release Developments section, added information about the following:

- Notification of Layer 1 Alarm Events on Dialogic® SS7 Boards.
- Dialogic® Global Call Software Support for Time Slots on Dialogic® SS7 Boards Running in DTI Mode.
- Time Stamp for Tone-On/Off Events.

In the Release Issues section, added the following resolved problems: IPY00031588 (PTR 36770), IPY00033410.

In the Documentation Updates section, added information about the following:

- Notification of Layer 1 alarm events on Dialogic® SS7 Boards in the *Dialogic® Global Call SS7 Technology Guide* and *Dialogic® Global Call API Library Reference*.
- Dialogic® Global Call Software support for time slots on Dialogic® SS7 Boards running in DTI mode in the *Dialogic® Global Call SS7 Technology Guide*.
- Time stamp for Tone ON/OFF events in the *Dialogic® Voice API Library Reference*.

Document Rev 34 - published June 28, 2006

Updated for Service Update 110.

In the Release Issues section, added the following resolved problems: IPY00029931 (PTR 36809), IPY00031597 (PTR 36527), IPY00032715.

In the Documentation Updates section:

- Added IPY00033335 under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Added IPY00006520 (PTR 36259), IPY00006556 (PTR 35326), and IPY00006570 (PTR 35992) under *Dialogic® Fax Software Reference*.
- Added IPY00006537 (PTR 35666), IPY00006580 (PTR 34546), IPY00006581 (PTR 35616), and IPY00006594 (PTR 36685) under *Dialogic® Voice API Programming Guide*.

Document Rev 33 - published June 12, 2006

Updated for Service Update 108.

In the Post-Release Developments section, added information about the New Fax Parameter for Modem Receive Level.

In the Release Issues section, added the following resolved problems: IPY00006562 (PTR 35636), IPY00028341 (PTR 35790), IPY00030882 (PTR 36057), IPY00031529 (PTR 36814), IPY00031535 (PTR 36852), IPY00031536 (PTR 36637), IPY00031561 (PTR 36775), IPY00032244 (PTR 36750), IPY00032363, IPY00032794, IPY00032796, IPY00032803, IPY00033013, IPY00033029, IPY00033122, IPY00033185. Revised information about IPY00028341 (PTR 35790) - resolved in Service Update 108, not Service Update 65.

In the Documentation Updates section, added information about setting parameters to receive fax under *Dialogic® Fax Software Reference*.

Document Rev 32 - published May 26, 2006

Updated for Service Update 105.

In the Post-Release Developments section, added information about the following:

- Ability to Send and Receive DPNSS End to End Messages, which is the ability to send and receive raw DPNSS end to end message using API control on Dialogic® DM3 Boards.
- Enable RTF Logging on Dialogic® DM3 Libraries by entering module names in the RTF config file.

In the Release Issues section, added the following resolved problem: IPY00031550 (PTR 36859).

In the Documentation Updates section, added information about the following:

- New message type and event for DPNSS end to end messages.
- Enable RTF logging on Dialogic® DM3 libraries.

Document Rev 31 - published May 15, 2006

Updated for Service Update 104.

In the Post-Release Developments section, added information about the following:

- PDK Configuration Property Sheet which is a new property sheet in DCM.
- Automatic FCD File Generation, which provides an enhanced way to generate an updated FCD file.
-
- New Option for Dialogic® dm3post Utility, which provides an option to run POST on a chassis level.
- New OAMIPC Mechanism Replaces CORBA, which will no longer be used during installation.
- Support for Mixed ISDN and Clear Channel on Additional Dialogic® DM3 Boards, which is the ability to mix ISDN (Net5) and clear channel on the same board on a trunk by trunk basis.
- Detection of Unsupported Boards.

In the Release Issues section:

- Added the following resolved problem: IPY00032271 (PTR 36699). Also added IPY00006348 (PTR 36782) (fixed in Service Update 103).
- Added the following known problem: IPY00033013.

In the Documentation Updates section, added information about the following:

- PDK Configuration property sheet because of a new feature in DCM. Added document update for *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* and *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*.
- Java Runtime Environment error messages. Added document update for *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide*.
- Automatic FCD File Generation. Added document update for *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Centralized logging using Runtime Trace Facility (RTF). Added document update for *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*.
- New Option for dm3post Utility. Added document update for *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*.
- New OAMIPC Mechanism replaces CORBA. Added document update for *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide*.
- Support for Mixed ISDN and Clear Channel on Additional DM3 Boards. Added document update for *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Document Rev 30 - published May 3, 2006

Updated for Service Update 100.

In the Post-Release Developments section, added PBX Integration Support for Nortel BCM.

In the Release Issues section, added the following resolved problems: IPY00006712 (PTR 36790), IPY00006846 (PTR 36711), IPY00028547 (PTR 35670), IPY00031562 (PTR 36766).

In the Documentation Updates section:

- Added a documentation update to the *Dialogic® PBX Integration Board User's Guide* because of a new feature in the Service Update.
- Added documentation updates about the PhysicalSlotNumber and PciID parameters under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* and DCM Online Help.
- Added IPY00006588 (PTR 36210) under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* and *Dialogic® Global Call API Programming Guide*.
- Added IPY00032691 under *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.
- Added IPY00029956 (PTR 36646) under *Dialogic® Global Call IP Technology Guide*.
- Added IPY00006590 (PTR 36501) under *Dialogic® Global Call ISDN Technology Guide*.

Document Rev 29 - published April 21, 2006

Updated for Service Update 98.

Note: The Release Issues section has been modified to show issues by Change Control System defect number and by PTR number. Issues reported prior to March 27, 2006, will be identified by both numbers. Issues reported after March 27, 2006, will only have a defect number.

In the Post-Release Developments section:

- Updated the Dynamically Retrieving and Modifying Selected Protocol Parameters When Using Dialogic® DM3 Boards section to add information about Retrieving or Modifying CDP Variable Values and Extension of GC_RTCM_EVTDATA. Also updated the Restrictions and Limitations.
- Added information about a new media load, Media Load QSB-ML10-LC, under New Media Loads for Dialogic® DMV1200BTEP Boards. Also revised the information about Media Load QSB-U3 to indicate that CSP streaming to CT Bus is no longer supported with this media load.

In the Release Issues section:

- Added the following resolved problems: IPY00006345 (PTR 36788), IPY00006647 (PTR 36598), IPY00006856 (PTR 36800), IPY00006862 (PTR 36830), IPY00010760 (PTR 36647), IPY00010900 (PTR 36349), IPY00011037 (PTR 36677), IPY00031596 (PTR 36840), IPY00031791 (PTR 36793), IPY00032239 (PTR 36769).
- Added the following known problems: IPY00006353 (PTR 36792), IPY00006393 (PTR 36758), IPY00006407 (PTR 36806), IPY00031561 (PTR 36775), IPY00032271 (PTR 36699).

In the Documentation Updates section:

- Added documentation update to the following document because of a new feature in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Added documentation updates for the *Dialogic® Digital Network Interface Software Reference*.
- Added IPY00031917 (PTR 27337) under *Dialogic® Fax Software Reference*.

Document Rev 28 - published March 23, 2006

Updated for Service Update 95.

In the Post-Release Developments section, added Windows Server® 2003 R2 under New Operating System Support.

In the Release Issues section, added the following resolved problems: 36640, 36688, 36698, 36735, 36780, 36810.

In the Documentation Updates section, added a documentation update to the following document because of a new feature in the Service Update: *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.

Document Rev 27 - published March 16, 2006

Updated for Service Update 94.

In the Post-Release Developments section:

- Added Automatic Registration of DebugAngel Service.
- Added Windows® 2000 Update Rollup 1 for SP4 under New Operating System Support.
- Added the Dialogic® D/42-NE2 PCI PBX Integration Board under New Boards Supported.

In the Release Issues section:

- Added the following resolved problems: 35746, 36319, 36587, 36666. Also added 32842 (fixed in Service Update 70).
- Added the following known (permanent) problem: 36722.

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® System Release 6.0 PCI for Windows® Release Guide*, *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*, *Dialogic® D/42 Series Software API Library Reference*, *Dialogic® D/42 Series Boards User's Guide*.
- Added documentation update to the *Dialogic® Global Call IP Technology Guide* about the IP_H221NON.STANDARD data structure.

Document Rev 26 - published March 2, 2006

Updated for Service Update 92.

In the Post-Release Developments section, added Enhancements to Runtime Trace Facility (RTF) Logging.

In the Release Issues section:

- Added the following resolved problems: 35117, 36548, 36584, 36633, 36681, 36799. Also added 33144 (fixed in Service Update 18) and 33173 (fixed in Service Update 84).
- Added the following known (permanent) problem: 36119

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*, *Dialogic® Global Call API Programming Guide*
- Added PTR# 36260 under *Dialogic® Native Configuration Manager API Library Reference*.
- Added PTR# 36726 under *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.
- Added PTR# 35565 under *Dialogic® Modular Station Interface API Library Reference*.

Document Rev 25 - published February 14, 2006

Updated for Service Update 90.

In the Release Issues section:

- Added the following resolved problems: 36134, 36302, 36329, 36416, 36606. Also added 33099 (fixed in Service Update 39).
- Added the following known (permanent) problems: 35879, 36716

In the Documentation Updates section:

- Added documentation updates to the *Dialogic® System Release 6.0 PCI for Windows® Release Guide*, *Dialogic® Conferencing (CNF) API Library Reference*, and *Dialogic® Conferencing (CNF) API Programming Guide* because of upcoming changes in support for the CNF API.
- Added PTR# 36674 under *Dialogic® Fax Software Reference*.
- Added PTR# 36660 under *Dialogic® Voice API Library Reference*.

Document Rev 24 - published February 2, 2006

Updated for Service Update 89.

In the Post-Release Developments section, added Dynamically Retrieving and Modifying Selected Protocol Parameters When Using Dialogic® DM3 Boards.

In the Documentation Updates section, added documentation updates to the following documents because of new features in the Service Update: *Dialogic® Global Call API Library Reference*, *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*, *Dialogic® Global Call ISDN Technology Guide*

Document Rev 23 - published January 31, 2006

Updated for Service Update 88.

In the Release Issues section, added the following resolved problem: 36333

In the Documentation Updates section:

- Added PTR# 36671 under *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.
- Added PTR# 36278 under *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*.

Document Rev 22 - published January 11, 2006

Updated for Service Update 87.

In the Post-Release Developments section:

- Added Analog Line Adaptation Utility (LineAdapt).
- Added New QSIG Channel Mapping Parameter for Dialogic® E1 Boards.

In the Release Issues section, added the following resolved problem: 36371

In the Documentation Updates section, added documentation updates to the following documents because of new features in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Springware Architecture Products on Windows® Configuration Guide*

Document Rev 21 - published January 6, 2006

Updated for Service Update 84.

In the Post-Release Developments section:

- Added IP Support on Dialogic® DI0408LSAR2 Boards.
- Added Dialogic® DI0408LSAR2 Product Support for Host Systems with Multiple NICs.
- Added Support for QSIG NCAS Calls on Dialogic® DM3 Boards.
- Added Loop Current Reversal Detection on the Dialogic® DMV160LP Board.
- Added Adjusting DTMF Characteristics through the CONFIG File.
- Added Single Board Start/Stop for Selected Dialogic® JCT Boards.
- Added New Media Load for Dialogic® DMV3600BP Boards.
- Revised Mixing ISDN and CAS on Dialogic® DM/V-B Boards section to mention that A-law/Mu-law conversion is supported.

In the Release Issues section:

- Added the following resolved problems: 31991, 33750, 34095, 34159, 34284, 35423, 35430, 35634, 35809, 35832, 35921, 36020, 36021, 36042, 36063, 36085, 36090, 36108, 36129, 36159, 36197, 36204, 36213, 36237, 36248, 36256, 36295, 36310, 36316, 36335, 36356, 36429
- Added the following known (permanent) problem: 34616

In the Documentation Updates section:

- Added PTR# 36373 under *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*.
- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Springware Architecture Products on Windows® Configuration Guide*, *Dialogic® Board Management API Library Reference*, DCM Online Help, *Dialogic® System Software for PCI Products on Windows® Administration Guide*, *Dialogic® Global Call Analog Technology Guide*, *Dialogic® Global Call IP Technology Guide*, *Dialogic® Global Call ISDN Technology Guide*

Document Rev 20 - published November 4, 2005

Updated for Service Update 74.

In the Post-Release Developments section:

- Added SIP Call Transfer.
- Added Early Media.

In the Release Issues section:

- Added the following resolved problems: 32144, 34532, 34915, 35169, 35339, 35619, 35620, 35967, 36092, 36209
- Added the following known (permanent) problem: 36079

In the Documentation Updates section:

- Added PTR# 34210 under *Dialogic® Audio Conferencing API Library Reference* and *Dialogic® Audio Conferencing API Programming Guide*.
- Added PTR# 33036 under *Dialogic® Fax Software Reference*.
- Added PTR# 32087 under *Dialogic® Global Call IP Technology Guide*.
- Added PTR# 33826 under *Dialogic® IP Media Library API Programming Guide*.
- Added PTR# 34119 under *Dialogic® Standard Runtime Library API Programming Guide*.
- Added PTR# 33806 under *Dialogic® Voice API Library Reference*.

Document Rev 19 - published October 17, 2005

Updated for Service Update 71.

In the Post-Release Developments section, added Dialogic® Global Call SS7 Enhancements.

In the Release Issues section, added the following resolved problems: 33717, 34816, 35102, 35650

Document Rev 18 - published October 10, 2005

Updated for Service Update 70.

In the Post-Release Developments section:

- Added Conference Bridging on Dialogic® Station Interface Boards.
- Added New Parameter for Order of DNIS and ANI.

In the Release Issues section:

- Added the following resolved problems: 32415, 32772, 32855, 33413, 34569, 34858, 34886, 35327, 35417, 35538, 35839, 35851, 35898, 35937, 35991, 36043, 36081, 36091
- Added the following known (permanent) problem: 33991

In the Documentation Updates section:

- Added PTR# 36031 and 36105 under *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.
- Added PTR# 35769 under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*. Also added a documentation update to this guide because of a new feature in the Service Update.
- Added a documentation update to the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* because of a new feature in the Service Update.
- Added documentation updates to the *Dialogic® Continuous Speech Processing API Library Reference* and *Dialogic® Continuous Speech Processing API Programming Guide* about valid values for DXCH_EC_TAP_LENGTH on Dialogic® Springware Boards.
- Added PTR# 34237 and 35965 under *Dialogic® Global Call API Library Reference*.
- Added PTR# 35268 under *Dialogic® Global Call IP Technology Guide*.

Document Rev 17 - published September 2, 2005

Updated for Service Update 65.

In the Post-Release Developments section, added New Channel Block Timer for NTT Protocol.

In the Release Issues section, added the following resolved problems: 34814, 35011, 35270, 35330, 35566, 35671, 35704, 35775, 35790, 35799, 35825, 35875

In the Documentation Updates section, added a documentation update to the *Dialogic® Springware Architecture Products on Windows® Configuration Guide* because of a new feature in the Service Update.

Document Rev 16 - published August 19, 2005

Updated for Service Update 64.

In the Post-Release Developments section, added Mixing ISDN and CAS on Dialogic® DM/V-B Boards.

In the Release Issues section, added the following resolved problem: 35148

In the Documentation Updates section:

- Added a documentation update to the following document because of a new feature in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Added PTR# 35249 and 35844 under *Dialogic® Global Call ISDN Technology Guide*.
- Added documentation update about Application Development Guidelines under *Dialogic® Continuous Speech Processing API Programming Guide* and *Dialogic® Voice API Programming Guide*.

Document Rev 15 - published August 12, 2005

Updated for Service Update 63.

In the Release Issues section, added the following resolved problems: 32759, 34878, 35105, 35390, 35507, 35572, 35573, 35597, 35768

Document Rev 14 - published July 29, 2005

Updated for Service Update 62.

In the Release Issues section:

- Added the following known problems: 35105, 35148, 35572, 35573. Also added a known problem (no PTR number) with the Host Install affecting the use of PDKManager after an update install.
- Added the following resolved problems: 31675, 32313, 32712, 33514, 34160, 35104, 35134, 35170, 35232, 35281, 35321, 35412, 35431, 35438, 35458. In addition, the known problem with the update install from Service Update 58 has been resolved.

In the Documentation Updates section:

- Added PTR# 32933 under *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.
- Added PTR# 33555/34771 under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
- Added PTR# 34244 under *Dialogic® Continuous Speech Processing API Library Reference* and *Dialogic® Continuous Speech Processing API Programming Guide*.
- Added documentation update about alarm handling for Dialogic® DM3 Boards under *Dialogic® Global Call ISDN Technology Guide*.

Document Rev 13 - published July 19, 2005

In the Release Issues section, added a known problem (no PTR number) with the Host Install.

Note: This problem only occurs when performing an **update install** (not a full install) of Service Update 58. Please check the Release Issues section for known problems with Host Install, and perform the workaround that is given.

Document Rev 12 - published July 12, 2005

Updated for Service Update 58.

In the Post-Release Developments section:

- Added Implementation of ROLM Call Waiting LED.
- Added information about two new media loads, QSB-U3 and QSB-ML10, under New Media Loads for Dialogic® DMV1200BTEP Boards.
- Added a new section, New Media Load for Dialogic® DMV600BTEP Boards, with information about media load DSB-U2.

In the Release Issues section, added the following resolved problem: 35154

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® PBX Integration Board User's Guide*, *Dialogic® PBX Integration Software Reference*
- Provided additional information about event cause values (PTR# 34490) under *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.

Document Rev 11 - published June 24, 2005

Updated for Service Update 56.

In the Post-Release Developments section:

- Revised Windows® Hardware Quality Labs (WHQL) Certification section to indicate that WHQL certification for Dialogic® System Release 6.0 PCI for Windows® Service Update is not currently valid; the product is getting recertified.
- Added Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards.
- Added Enhanced GCAMS on Dialogic® DM3 Boards.
- Added Telecom Subsystem Summary Tool (its_sysinfo).
- Revised New Features in Global Call Protocols Package for the latest features that are now available.
- Added support for Windows Server® 2003 SP1 under New Operating System Support.
- Added information about a new media load, 10b, under New Media Loads for Dialogic® DMV1200BTEP Boards.

In the Release Issues section:

- Added the following resolved problems: 30233, 31912, 32103, 32265, 32458, 32539, 32953, 33019, 33199, 33249, 33385, 33685, 33816, 33939, 33998, 34032, 34050, 34175, 34269, 34274, 34329, 34344, 34397, 34427, 34476, 34495, 34503, 34516, 34537, 34543, 34575, 34586, 34587, 34640, 34663, 34664, 34685, 34719, 34753, 34788, 34805, 34862, 34921, 34972, 34985, 34999, 35012, 35013, 35035, 35042, 35049, 35077, 35130, 35132, 35157, 35159, 35190, 35210
- Added the following known problem: 33137
- Added the following known (permanent) problems: 32588, 35118

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® System Release 6.0 PCI for Windows® Release Guide*, *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Global Call API Library Reference*, *Dialogic® Voice API Library Reference*, *Dialogic® Voice API Programming Guide*
- Added PTR# 33698 and 33699 under *Dialogic® GDK 5.0 Installation and Configuration Guide for Windows®*.
- Added documentation update about RTF to *Dialogic® System Software for DM3 Architecture Products on Windows® Diagnostics Guide*.
- Added documentation update about multithreaded programming to *Dialogic® Audio Conferencing API Programming Guide*.
- Added PTR# 33852 and made a correction to the GCLIB_MAKECALL_BLK data structure reference page under *Dialogic® Global Call API Library Reference*.
- Added PTR# 33202 under *Dialogic® Global Call Analog Technology Guide*.
- Added PTR# 29448, 34490, and 35050 under *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.
- Added PTR# 34285 and 34840 under *Dialogic® Voice API Library Reference*.

Document Rev 10 - published March 22, 2005

Updated for Service Update 39.

In the Release Issues section:

- Added the following resolved problems: 34121, 34241, 34345, 34393, 34478
- Added "SU No." column to the Issues table to show the Service Update number for resolved PTRs. Also added a link to view the Issues table sorted by Service Update number.

In the Documentation Updates section, added information about support for Intel Hyper-Threading Technology in the *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.

Document Rev 09 - published February 25, 2005

Updated for Service Update 37.

In the Post-Release Developments section, added the following new features:

- Windows® Hardware Quality Labs (WHQL) Certification
- Single Echo Cancellor Convergence
- New Features in Dialogic® Global Call Protocols Package

In the Release Issues section:

- Added the following resolved problem: 34319
- Added the following known problem: 34764

In the Documentation Updates section:

- Added documentation updates about DCM to *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* and *Dialogic® Springware Architecture Products on Windows® Configuration Guide*.
- Added PTR# 32847 to *Dialogic® Continuous Speech Processing API Library Reference*.
- Added PTR# 32607/21073 to *Dialogic® Continuous Speech Processing API Programming Guide*.
- Added documentation updates about ECCH_XFERBUFFERSIZE to *Dialogic® Continuous Speech Processing API Library Reference* and *Dialogic® Continuous Speech Processing API Programming Guide*. Also added documentation updates about single echo canceller convergence because of a new feature in the Service Update.
- Added PTR# 32544, PTR# 32501, and PTR# 32616 to *Dialogic® Global Call API Library Reference*.
- Added PTR# 32481 to *Dialogic® Global Call API Programming Guide*.
- Added PTR# 32379 to *Dialogic® Global Call Analog Technology Guide*.
- Added PTR# 32966 to *Dialogic® Standard Runtime Library API Programming Guide* and *Dialogic® Voice API Programming Guide*.
- Added PTR# 32681 to *Dialogic® Voice API Library Reference* and *Dialogic® Voice API Programming Guide*.
- Added PTR# 32643, PTR# 32106, and PTR# 30881 to *Dialogic® Voice API Library Reference*.

Document Rev 08 - published January 21, 2005

Updated for Service Update 30.

In the Post-Release Developments section, added the following new features:

- Windows® XP SP2 Support
- New Station Interface Alarms

In the Release Issues section, added the following resolved problems: 30390, 31583, 32188, 32590, 32827, 33772

In the Documentation Updates section, added documentation updates to the following documents because of new features in the Service Update: *Dialogic® Modular Station Interface API Library Reference*, *Dialogic® Modular Station Interface API Programming Guide*

Document Rev 07 - published December 23, 2004

Updated for Service Update 27.

In the Post-Release Developments section, added support for the Dialogic® D/4PCIU4S Media Board.

In the Release Issues section, added the following resolved problems: 32571, 33981, 33994, 34048, 34054, 34063

Document Rev 06 - published December 9, 2004

Updated for Service Update 25.

In the Release Issues section, added the following resolved problems: 31747, 32343, 32978, 33782, 34053

Document Rev 05 - published November 15, 2004

Updated for Service Update 22.

In the Post-Release Developments section:

- Revised the information about installing the Service Update.
- Added the following new features:
 - Support for ANI Category Digit Retrieval on Dialogic® DM3 Boards
 - New Media Load for Dialogic® DMV1200BTEP Boards

In the Release Issues section:

- Added the following resolved problems: 27539, 28620, 31632, 31633, 31661, 31896, 32060, 32318, 32979, 33011, 33200, 33501, 33690
- Added the following known problems: 33019, 34054
- Deleted some PTRs that were not applicable to this release.

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features in the Service Update: *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Global Call API Library Reference*, *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*
- Deleted the corrections for the *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide*, because these corrections have been incorporated into the updated document that is now on the documentation bookshelf.
- Added correction for PTR# 33615 in the *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.
- Added correction about CSP support on Dialogic® DM/IP Boards in the *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.

Document Rev 04 - published October 15, 2004

Added a new section, Post-Release Developments, to describe the new features provided in Service Update 18.

Added the following resolved problems to the Release Issues section: 17567, 25633, 27336, 27563, 27764, 28550, 29328, 29445, 29859, 31242, 31333, 31530, 31777, 31778, 31782, 31840, 31844, 31850, 31945, 32014, 32026, 32065, 32104, 32108, 32111, 32161, 32192, 32209, 32275, 32303, 32411, 32416, 32435, 32441, 32443, 32444, 32510, 32547, 32554, 32557, 32601, 32615, 32625, 32651, 32678, 32696, 32704, 32725, 32733, 32765, 32773, 32810, 32846, 32858, 32913, 33053, 33056, 33069, 33070, 33146, 33156, 33334, 33351, 33389, 33425, 33443, 33444, 33502, 33519, 33543, 33596, 33665, 33694

Added the following known problems to the Release Issues section: 32882, 33625, 33633, 33730, 33939

In the Documentation Updates section:

- Added documentation updates to the following documents because of new features provided in the Service Update: *Dialogic® System Release 6.0 PCI for Windows® Release Guide*, *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*, *Dialogic® Board Management API Library Reference*, *Dialogic® Global Call API Library Reference*, *Dialogic® Global Call Analog Technology Guide*, *Dialogic® Voice API Library Reference*
- Revised the correction that was previously entered for PTR# 33046 under *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.

Document Rev 03 - published June 7, 2004

Added PTR# 31812/32282 in the Documentation Updates section under *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Added PTR# 33046 in the Documentation Updates section under *Dialogic® System Release 6.0 PCI for Windows® Release Guide*.

Added PTR# 32824 in the Documentation Updates section under *Dialogic® Global Call IP Technology Guide*.

Document Rev 02 - published March 29, 2004

Added PTR# 32418 in the Documentation Updates section under *Dialogic® Global Call ISDN Technology Guide*.

Added PTR# 27774 in the Documentation Updates section under *Dialogic® Voice API Library Reference*.

Added a reference to the Media Load Densities on Dialogic® DMV-B Multifunction Series Boards technote in the Release Issues table.

Removed the workaround statement for PTR# 32144 in the Release Issues table. Further testing revealed that the workaround is not feasible and the issue may still arise.

Document Rev 01 - published March 4, 2004

Initial version of document.

Post-Release Developments

This section describes significant changes to the system release subsequent to the general availability release date.

- Service Update for Dialogic® System Release 6.0 PCI for Windows® 52
- Service Update Edition for Dialogic® System Release 6.0 PCI for Windows® . 53
- Windows 2016 Operating System Support - Dialogic® JCT Media Boards . . . 53
- Windows 10 Operating System Support and Expanded Windows 8.1 Operating System Support - Dialogic® JCT Media Boards 53
- Windows 2003 Operating System End of Support Notification. 54
- Support for Windows 8.1 Operating System - Dialogic® JCT Media Boards . . 54
- Support for Windows Server 2012 Standard and Windows Server 2012 R2 Standard Operating Systems 54
- Notice about Microsoft Windows Updates 55
- IPMI Updates 55
- Anti-virus Software Policy 55
- User Account Control Recommendation 56
- Operating System Support Update for SS7 Products. 56
- New TDX_DRVNOEM Event 56
- PDK Support for Automatic Answer and Reject of Inbound Calls. 56
- Improvement to Call Progress Analysis 58
- Windows® 7 Support 58
- 64-Bit Version Support for Dialogic® DM3 Boards 58
- India R2 Bidirectional Protocol Derivative with TKO 58
- Support for Dialogic® D/4PCIUFEQ and Dialogic® D/4PCIU4SEQ Media Boards 65
- Support for Dialogic® D/80PCIE-LS Media Board 65
- Important Notice about System Release Update Installation 67
- Configuring the Line Law Encoding Mode 67
- New Operating System Support 69
- Enhancements to DPNSS Signaling. 70
- Support for SFTP in Dialogic® Global Call SS7 Call Control Library 71
- New Dialogic® D/42 API Function for Dialing 71
- Startup Error Codes for Dialogic® Springware Boards 72

• Configuring SIP Stack Parameters with Global Call	73
• Disabling Automatic re-INVITE Message when Switching between Fax and Audio	77
• New Dialogic® NCM API Functions for PDK Protocol Configuration	80
• File Management Enhancements for DebugAngel Tool	95
• File Management Enhancements for PDK Trace Tool	100
• Runtime Control of Single or Double Hookflash on Consultation Drop for FXS/LS Protocol.	103
• Analog Call Transfer Support on Dialogic® Springware Boards	103
• Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems	103
• Dialogic® DM3 Media Channel Reset Capability (Stuck Channel Recovery) . .	109
• AMD Opteron Server Support	117
• Global DPD Enabled on Dialogic® Springware Boards	117
• Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs	118
• Troubleshooting Information for RTF Logs	129
• Remote Diagnostics Package.	131
• New Parameter for Adjusting Silence Threshold on Dialogic® DM3 Boards. . .	132
• Support for PCI Express Boards - Dialogic® Station Interface Boards	133
• Support for PCI Express Boards - Dialogic® DM/V-B Boards	133
• Support for Dialogic® D/4PCI Voice Board	136
• File Management Enhancements for ISDNtrace Tool.	137
• Support for Dialogic® DI/0408-LS-AR2 Board	140
• Change in ipmedia.log Implementation	141
• Adjusting Pre-Record Beep Tone Characteristics through the CONFIG File . .	141
• Reduced Dial Tone Delay with MWI	144
• Enhanced Diagnostics	144
• Support for PCI Express Boards - Dialogic® Springware Boards	147
• PDK Trace Supports CAS/R2MF/Tone Tracing.	149
• Ability to Lower or Disable White Noise	152
• Optional Use of Sharing of Timeslot (SOT) Algorithm	153
• New FSK Transmit and Receive Signal Level Parameters	154
• Support for Reporting Billing Type	155
• Runtime Control of Double Answer for R2MF.	157
• Enhanced ISDN Trace Functionality for DPNSS Tracing	157

• Notification of Layer 1 Alarm Events on SS7 Boards	158
• Global Call Support for Time Slots on Dialogic® SS7 Boards Running in DTI Mode.	158
• Time Stamp for Tone-On/Off Events.	159
• New Fax Parameter for Modem Receive Level.	160
• Ability to Send and Receive DPNSS End to End Messages	161
• Enhancements to the Configuration Process	161
• New Option for dm3post Utility	164
• New OAMIPC Mechanism Replaces CORBA	164
• Support for Mixed ISDN and Clear Channel on Additional Dialogic® DM3 Boards	164
• Detection of Unsupported Boards.	166
• PBX Integration Support for Nortel BCM	166
• Enhancements to Runtime Trace Facility (RTF) Logging	167
• Dynamically Retrieving and Modifying Selected Protocol Parameters When Using Dialogic® DM3 Boards	167
• Analog Line Adaptation Utility (LineAdapt)	168
• New QSIG Channel Mapping Parameter for E1 Boards	181
• IP Support on Dialogic® DI0408LSAR2 Boards	183
Note: With the inclusion of this new feature in the Service Update, installation of the Service Update will make modifications as needed to the System Network Configuration settings in the Windows® Registry in order to allow the IP Media Service to modify the Type of Service (ToS) IP packet header fields of RTP packets. This happens regardless of whether you use the ToS feature.	
• Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs.	190
• Support for QSIG NCAS Calls on Dialogic® DM3 Boards	192
• Loop Current Reversal Detection on Dialogic® DMV160LP Boards	192
• Adjusting DTMF Characteristics through the CONFIG File	192
• Single Board Start/Stop for Selected Dialogic® JCT Boards	198
• SIP Call Transfer	202
• Early Media.	234
• Global Call SS7 Enhancements	242
• Conference Bridging on Dialogic® DI Boards	242
• New Parameter for Order of DNIS and ANI	243
• New Channel Block Timer for NTT Protocol	244
• Mixing ISDN and CAS on Dialogic® DM/V-B Boards	246
• Implementation of ROLM Call Waiting LED	248

• Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards	248
• Enhanced GCAMS on Dialogic® DM3 Boards	252
• Telecom Subsystem Summary Tool (its_sysinfo)	254
• Windows® Hardware Quality Labs (WHQL) Certification	255
• Single Echo Canceller Convergence	255
• New Features in Dialogic® Global Call Protocols Package.	258
• New Operating System Support	259
• New Station Interface Alarms	259
• Support for ANI Category Digit Retrieval on Dialogic® DM3 Boards	260
• New Media Load for Dialogic® DMV3600BP Boards	260
• New Media Loads for Dialogic® DMV1200BTEP Boards	261
• New Media Load for Dialogic® DMV600BTEP Boards	265
• Call Transfer Support on the Dialogic® DMV160LP Board	266
• dx_reciottdata() Enhancements	266
• Trunk Preconditioning	269
• Extended Board Management API Support for Dialogic® DM3 Boards	271
• New Boards Supported.	272

1.1 Service Update for Dialogic® System Release 6.0 PCI for Windows®

A Service Update for Dialogic® System Release 6.0 PCI for Windows® is now available. Service Updates provide fixes to known problems, and may also introduce new functionality. New versions of the Service Update are planned to be released periodically. It is intended that this Release Update will document the features in the Service Updates.

Depending on whether you already have a version of Dialogic® System Release 6.0 PCI for Windows® on your system, installing the Service Update will give you either a **full install** or an **update install**:

- If you don't have an existing version of System Release 6.0 PCI Windows on your system, installing the Service Update gives you a **full install** of the system release. You can select the features that you want to install, for example, Development Package, Core Runtime Package, ISDN Protocols, Demos, SNMP Component Manager, Global Call Protocols, and Documentation.

Note: With the Service Update, the Global Call Protocols Package can now be installed as part of System Release 6.0 PCI Windows. Previously, this package was installed separately.

The Development Package and Demos are available in the Developer Edition only, not in the Redistributable Edition.

- If you have an existing version of System Release 6.0 PCI Windows on your system, installing the Service Update gives you an **update install**. The update install gives you the latest software for the features that you selected when you did the full install of the system release that is currently on your system. If you want additional features, such as the Global Call Protocols Package, you can use the Modify or Change option as explained in the Installation Guide.

A new *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide* has been added to the documentation bookshelf to describe the full install and update install procedures. The *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* for the Global Call Protocols Package has also been added to the bookshelf.

Note: Since the Global Call Protocols Package is now included with this Service Update version of System Release 6.0 PCI Windows, the stand-alone protocols package should not be used. (If you already have the stand-alone protocols package installed, you will be prompted to remove it before installing the Service Update.) Do not install the stand-alone protocols package after installing the Service Update (full install or update install), or your software may become non-functional.

See the new *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide* on the documentation bookshelf for complete, detailed information about installing the software.

1.2 Service Update Edition for Dialogic® System Release 6.0 PCI for Windows®

As of Service Update 275, the System Release 6.0 PCI Windows Service Update Edition supersedes the previous Software Editions, namely, the:

- System Release 6.0 PCI Windows Redistributable Edition
- System Release 6.0 PCI Windows Developer Edition
- System Release 6.0 PCI Windows Not For Sale Edition

The System Release 6.0 PCI Windows Service Update Edition consists of the Core Runtime Package, SNMP Component Manager, ISDN Protocols, Global Call Protocols, Development Package containing all the software required to develop an application, Demos, and Documentation link. This edition provides installation-time options to select each individual package. It can be redistributed to end users.

1.3 Windows 2016 Operating System Support - Dialogic® JCT Media Boards

Service Update 275 adds support for Windows 2016 Operating System for the full Dialogic® JCT Media Board family.

- Notes:**
1. Currently supported Dialogic® boards operate in Windows 2016 with no specific configuration changes.
 2. Applications must be compiled as 32-bit binaries.

1.4 Windows 10 Operating System Support and Expanded Windows 8.1 Operating System Support - Dialogic® JCT Media Boards

Service Update 271 adds support for Windows 10 and Windows 8.1 Operating Systems for the full Dialogic® JCT Media Board family. Previously for Windows 8.1, only the Dialogic® D/82JCT and Dialogic® D/42JCT PBX Integration Boards were supported.

- Notes:**
1. Power Management is not supported and must be disabled.
 - Failure to disable Power Management could cause the system to crash (Blue Screen), upon resuming from Sleep or Hibernation states.
 - As part of Power Management, what is known as “Hybrid Shutdown” or “Fast Boot” is also not supported and must be disabled.
 2. Currently supported Dialogic® boards operate in Windows 10 with no specific configuration changes.
 3. Applications must be compiled as 32-bit binaries.

1.5 Windows 2003 Operating System End of Support Notification

Microsoft had previously announced that July 15, 2015 was the Extended Support End Date for all versions of Windows Server 2003. Dialogic will immediately end Software Support for Windows Server 2003, and will end Technical support by December 30, 2016. Although Windows Server 2003 and Windows Server 2003 R2 functionality will remain in System Release 6.0 until the End of Technical Service Support date, please note that no further fixes will be made for issues that relate specifically to interoperability with Windows Server 2003 or Windows Server 2003 R2. Customers are strongly encouraged to migrate to newer, supported versions of the Windows operating system.

Consult the following link for more details: <http://support2.microsoft.com/lifecycle/search/default.aspx?sort=PN&alpha=Windows+Server+2003>.

1.6 Support for Windows 8.1 Operating System - Dialogic® JCT Media Boards

Service Update 271 adds limited Dialogic® Springware support on Dialogic® D/82JCT and Dialogic® D/42JCT PBX Integration Boards.

- Notes:**
1. Power Management is not supported and must be disabled.
 2. Failure to disable Power Management could cause the system to crash (Blue Screen), upon resuming from Sleep or Hibernation states.
 3. As part of Power Management, what is known as “Hybrid Shutdown” or “Fast Boot” is also not supported and must be disabled.

1.7 Support for Windows Server 2012 Standard and Windows Server 2012 R2 Standard Operating Systems

Service Update 271 introduces support for Windows Server 2012 Standard and Windows Server 2012 R2 Standard operating systems. For information about installing and using the Dialogic® System Release 6.0 PCI for Windows, refer to the *Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide*.

- Notes:**
1. Currently supported Dialogic® boards operate in Windows 2012 with no specific configuration changes.
 2. Applications must be compiled as 32-bit binaries.

1.8 Notice about Microsoft Windows Updates

Please note with Service Update 266 that running and installing Microsoft Windows updates may compromise the performance of a real time telephony system. Consequently, it is recommended that Windows updates be scheduled during maintenance windows when the Dialogic-based application is closed. This will minimize the risk of interference or disruption that could occur during Windows updates.

1.9 IPMI Updates

Please note with Service Update 266 an issue with Intelligent Platform Management Interface (IPMI) updates. On certain servers, performance impact has been seen observed as delays in execution of Deferred Procedure Calls (DPC) used by Dialogic software. This impacts the performance of a real time telephony system and may result in audio quality issues and, in some extreme cases, hung ports. If using IPMI, it is recommended to upgrade to the latest available versions of the server manufacturer's firmware which corrects the latency issues.

1.10 Anti-virus Software Policy

Service Update 264 announces Dialogic's general policy regarding third-party anti-virus software. Dialogic understands and acknowledges the desire for customers / end users to install anti-virus software in their environment and is providing this policy statement for guidance in this area.

Loading and running any third-party anti-virus software on Dialogic® System Release based servers, regardless of the operating system (Linux or Windows), may compromise the performance of a real time telephony system. Consequently, it is recommended that if such anti-virus software is required by the customer for security purposes, it should be configured to run during periods of minimal to no-call traffic (i.e., system inactivity) to minimize the risk of interference or disruption.

If a problem requiring diagnosis occurs on a server running anti-virus software, and the antivirus software is suspected of causing or contributing to the problem, Dialogic Technical Support will likely ask the customer to remove / disable the anti-virus software before proceeding with further diagnosis.

Dialogic does not validate any particular anti-virus package nor does it endorse the use of a particular third-party anti-virus software vendor or product.

Note: For 64-bit Windows® 7, Windows Vista®, and Windows Server® 2008 operating systems using Anti-Virus programs, it is recommended that users exclude Dialogic subdirectories and also any application sub-directories from the system.

1.11 User Account Control Recommendation

With Service Update 264, it is recommended that users of 64-bit Windows® 7, Windows Vista®, and Windows Server® 2008 operating systems disable Microsoft's User Account Control because it has been shown to cause intermittent audio gaps when streaming audio.

1.12 Operating System Support Update for SS7 Products

Service Update 263 supports Dialogic® SS7 products in Windows® 7, Windows Vista®, and Windows Server® 2008 operating systems. Refer to [Section 1.35, "Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems"](#), on page 103 for supported versions.

Note: The Dialogic® SS7 DSI Development Package installation does not put the *gctlb.dll* file in an accessible location to be dynamically linked with *Dlgcs7srv.exe*. For this to happen, you need to copy the *gctlb.dll* file to the system32 directory or add the SS7 SDK installation directory (usually the C:\Septel directory) to the PATH environment variable.

For additional information about SS7 products, refer to the Dialogic® System Release Software page of the documentation bookshelf for the *Dialogic® Global Call SS7 Technology Guide* and the Dialogic® Distributed Signaling Interface (DSI) page for the *Dialogic® DSI SS7HD Network Interface Boards Programmer's Manual*.

1.13 New TDX_DRVNOEM Event

Service Update 263 adds an unsolicited event, TDX_DRVNOEM, to the Voice API library. This event is added to address IPY00093815 (see [Release Issues](#)). Now, the Voice library will return the TDX_DRVNOEM event if the underlying device driver is unable to allocate physical memory. Applications must link to the Voice library to be able to receive the TDX_DRVNOEM event. This event is for information only and the condition is often "terminal." Restarting the system may be required to restore it to normal operation.

Note: Applications will not see this event during normal operations.

1.14 PDK Support for Automatic Answer and Reject of Inbound Calls

With Service Update 261, the Protocol Development Kit (PDK) is extended to support automatic answer and reject of inbound calls.

1.14.1 Feature Implementation

With this enhancement to the PDK upon enablement through Global Call, when the `gc_DropCall()` function is called before `gc_AnswerCall()`, the protocol will answer and then immediately hang-up the call. This behavior enacts a full disconnect, complete with the sending of a proper signal to the switch to abandon the call.

To accomplish this, the `CDP_Forced_Release_Enabled` parameter is added to the respective Country Dependent Parameter (.cdp) files. This parameter controls the behavior of the protocol when `gc_DropCall()` is called before a call is connected and allows to enable and disable this new functionality.

1.14.2 Protocol Variants

The functionality of the `CDP_Forced_Release_Enabled` parameter is added to the following protocols:

Protocol	Variant File
MELCAS Lineside Bidirectional	<code>pdk_sw_e1_mcls_io.cdp</code>
Nortel Meridian Lineside E1 Bidirectional	<code>pdk_sw_e1_ntmd_io</code>
United States T1 FXS/LS Bidirectional	<code>pdk_us_ls_fxs_io</code>
E1 CAS Bidirectional	<code>pdk_us_mf_io</code>
India R2 Bidirectional	<code>pdk_in_r2_io</code>
Argentina R2 Bidirectional	<code>pdk_ar_r2_io</code>
Australia R2 Bidirectional	<code>pdk_au_r2_io.cdp</code>
Brazil R2 Bidirectional	<code>pdk_br_r2_io.cdp</code>

CDP_Forced_Release_Enabled

Enable the protocol to support "forced release" of incoming calls from the offered or accepted state. The support for forcing release of incoming calls is supported under this implementation for flexibility with Global Call applications which are permitted to call `gc_DropCall()` from the Offered or Accepted state. In these states, the call will be answered transparently without notification to the application and then immediately disconnected, i.e., a "forced release" of the line. Note that in doing this, additional implications external to the PDK and Global Call might exist and should be considered, for instance call billing.

Values:

- 0 = Does not support forced release. No implicit answer will be performed transparently in this scenario, and only a PDK hang-up signal will be generated. (Default)
- 1 = Supports forced release. Calls are answered and then dropped immediately.

Refer to the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* for more information.

1.15 Improvement to Call Progress Analysis

Service Update 261 implements an improvement to Call Progress Analysis on Dialogic® DM3 DMV PCI boards. Refer to the *Dialogic® System Release 6.0 PCI for Windows® Release Guide* for board details.

1.15.1 Implementation

With this improvement, using Global Call and the **gc_Makecall()** function to initiate a PSTN call with CAS or R2MF protocols that fails to complete due to call analysis detecting either a destination busy condition (destination busy tone detected), or a network congestion (fast busy/reorder tone detected) will now provide the correct call outcome. To take advantage of the feature, the **gc_ResultInfo()** function, which provides more information about the GCEV_DISCONNECT event, will return either a GCRV_BUSY or a GCRV_CONGESTION cause value respectively. Previously, Global Call did not distinguish between a destination busy tone and a fast busy/reorder tone when performing call progress analysis under Global Call and would report destination busy for either tone.

Note: This improvement applies only to CAS and R2MF protocols.

For more information, refer to the *Dialogic® Voice API Programming Guide*, the *Dialogic® Global Call API Library Reference*, and the *Dialogic® Global Call API Programming Guide*.

1.16 Windows® 7 Support

Service Update 250 introduces Windows® 7 support for Dialogic® Springware and DM3 products in both 32-bit and 64-bit versions. Refer to [Section 1.35, “Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems”](#), on page 103.

1.17 64-Bit Version Support for Dialogic® DM3 Boards

Service Update 250 adds support for the 64-bit versions of Windows operating systems on Dialogic® DM3 boards. Refer to [Section 1.35, “Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems”](#), on page 103.

1.18 India R2 Bidirectional Protocol Derivative with TKO

Service Update 250 introduces the India R2 Bidirectional Protocol derivative with limited Trunk Offering (TKO) outbound capabilities.

1.18.1 Feature Description

Trunk Offering is used when an originating exchange operator is handling a call from subscriber “A” and gets a busy line when trying to complete this call to end subscriber “B”. End subscriber “B” is likely in a remote exchange and in conversation with another subscriber “C”. Trunk Offering allows the operator to override the busy line by using the TKO procedure to break (intrude) into the conversation between “B” and “C” in order to offer a trunk call from subscriber “A”.

For the purposes of this protocol the words TKO and Intrusion may be used indistinctly in this document to refer to the Trunk Offering functionality.

1.18.1.1 General Protocol Information

Protocol File Set

The files used with the India R2 protocol are listed and described in the following table.

File Type	File Name(s)	
	Dialogic® DM3 Boards	Dialogic® Springware Boards
Protocol Module	pdk_r2_tko_io.hot or pdk_r2_tko_io.qs	Not applicable
Country Dependent Parameters	pdk_r2_tko_io.cdp	Not applicable
	gc_OpenEx() Protocol Name	
	Not applicable†	Not applicable

†On Dialogic® DM3 boards, the protocol is determined at board initialization time and not when a Global Call device is opened. For compatibility, the **gc_OpenEx()** protocol name may be specified for Dialogic® DM3 boards, but it is not used.

Protocol Limitations

The following limitations apply to this India R2 Bidirectional Protocol derivative. For general India protocol limitations, refer to the protocol limitations indicated in the India R2 Bidirectional Protocol Parameter Configuration section of the *Dialogic® Global Call CDP Configuration Guide*.

- This protocol only supports a TKO outbound request at the originating exchange and may be limited to MTNL exchanges. It does not support TKO procedures anywhere else in the network or TKO inbound requests.
Note: MTNL refers to Mahanagar Telephone Nigam Limited.
- This protocol is only supported on digital DM3; however, it is not supported on the Dialogic® DMT160TEC board.

The following changes to the India protocol CDP file were made for backwards compatibility. For protocol functionality, please refer to the India R2 Bidirectional Protocol; however, this new protocol departs from its base protocol in the following ways:

- Removed the Double Answer feature since this feature is not applicable to India R2. This change should not affect the protocol functionality; however, the

following parameters were removed:

CDP_DOUBLE_ANSWER_FLAG

CDP_REANSWER_TIMEOUT,CAS_PULSE_DOUBLE_ANSWER

CDP_RECV_CALL_EVENT_SENT_WITH_FIRST_ANSWER

- Removed DTMF capability since India is R2MF-only protocol. This change should not affect the protocol functionality since it is R2MF based; however, the following parameters were removed:

CDP_DIGITS_DIALING_TYPE

CDP_DIGITS_RECEIVING_TYPE

This change also results in removing any parameters related to DTMF dialing/receiving type, such as CDP_DIALTONE_ENABLED, CDP_Term_Tone_String and CDP_Dialtone_Timeout.

- Combined CDP_TrunkPrefixNumber and CDP_AreaCode into one CDP_TrunkPrefixNumber_AreaCode. Note that combining both into one does not affect protocol functionality.
- Removed R4 CHARSTRING_t SYS_PSINAME = *pdk_r2_io.psi* since this protocol is not supported on Dialogic® Springware boards.
- Added TKO-specific CDP parameters as documented in [Section 1.18.2, “Country Dependent Parameter Descriptions”](#), on page 60.

Additional Protocol Information

The application should include *dm3cc_parm.h* when using this protocol.

1.18.2 Country Dependent Parameter Descriptions

The modifiable parameters in the *pdk_r2_tko_io.cdp* file are:

- CAS_INTRUSION
- CDP_CallingPartyCategory_Intrusion

CAS_INTRUSION

Description: Provides an Intrusion PULSE CAS pattern. When enabled, this signal is sent after receiving CAS_SEIZEACK.

Values: Defaults are 0001, 0011, 450, 50, 900, 80, 1800, 2000, 2200.

Guidelines: The intrusion signaling pattern sent by the protocol as a result of the processing of the CAS_SEIZEACK from the originating exchange; it is a short transition of the signal pattern from the OffPulse value to the OnPulse signaling value, going back to the OffPulse definition afterwards.

The default pattern settings are as follows:

- OffPulse=0001 comes from the default seize signal pattern for the Indian protocol defined as CAS_SEIZE

- OnPulse=0011 default value is what the originating exchange expects for TKO as a response to the CAS_SEIZEACK

The remaining default values represent the PULSE timing in milliseconds:

- PrePulseInterval: Specifies the minimum time for the duration of the pre-transition interval.
- PostPulseInterval: Specifies the minimum time for the duration of the post-transition interval.
- PrePulseIntervalNominal: Specifies the nominal time for the duration of the pre-transition interval.
- PostPulseIntervalNominal: Specifies the nominal time for the duration of the post-transition interval.
- PulseIntervalMin: Specifies the minimum time for the duration of the transition interval.
- PulseIntervalNominal: Specifies the nominal time for the duration of the transition interval
- PulseIntervalMax: Specifies the maximum time for the duration of the transition interval

- Notes:**
1. The term minimum is used to represent a minimum time for which the associated signal must occur.
 2. The term maximum is used to represent the maximum time that the associated signal may occur.
 3. The term nominal is used to represent the actual time to transmit the associated signal.

CDP_CallingPartyCategory_Intrusion

Description: Category of Calling Subscriber provided to the originating exchange that is sent along the intrusion outbound signaling interchange.

Value: 5 [default]

Guidelines:

- By default this protocol is set for forward multi-frequency Group II and backward multi-frequency Group B meanings. Thus the default value represents the group II forward signal representing the category digit (II.5) which is sent upon request of category signal backward signal (A.5). Change according to the forward and backward groups of the originating exchange in the field.
- This value should be set to represent the TKO call as of Operator category. This digit is sent by the protocol as the forward signal immediately following the first addressing digit, as a response to the originating exchange's request for call category (Send Category) digit. If accepted, the rest of the addressing digits (DNIS) are sent.
- This value does not affect the CDP_CallingPartyCategory value.

CDP_TrunkPrefixNumber_AreaCode

Description: This value combines the CDP_TrunkPrefixNumber and CDP_AreaCode values into one string. It should contain the prefix number to dial for access to a trunk (if any) and the area code of the exchange number where the subscriber is connected, in that sequence. It only has meaning when CDP_ANI_WITHAC_FACILITY_CHECK_NEEDED is enabled.

Value: 9987 [default]

Guidelines: Default value CDP_TrunkPrefixNumber_AreaCode = "9987" means 9 for outgoing calls from PBX (Trunk Prefix Number) and 987 code for a particular place (AreaCode).

1.18.3 Application Considerations for TKO Feature Enablement and Disablement

As stated, this feature provides the ability to initiate an outgoing operator-category intrusion (TKO) call. Feature enablement is granted on a channel basis through application control; when enabled, the immediately following outgoing call will be of an operator-category intrusion call (TKO). Feature persistence is limited to the active call following the enablement, that means that once the call is completed for whatever reason, the channel reverts to a non-intrusion call, which is the default protocol setting; however explicit feature disablement on a channel basis is also provided.

The **gc_Extension()** function is used as the mechanism to explicitly enable or disable the functionality on a channel basis. For this feature, the **gc_Extension()** function should use:

```
target_type: GCTGT_GCLIB_CHAN  
  
target_id: Global Call Line device ID  
  
ext_id: DM3CC_EXID_INTRUSION
```

The `parmbldp` argument should be set to a pointer to the GC_PARM_BLK and the `retbldp` should be set to NULL. In particular the `parmbldp` accepts the following entries for feature enablement, prior to initiating a TKO call, and explicit disablement:

```
Set_id: GCSET_ CALLINFO  
  
ParmID: CCPARM_INTRUSION  
  
Values:  
    GCPV_DISABLE (default)  
    GCPV_ENABLE
```

If successful, the protocol will return a GCEV_EXTENSIONCMPLT event with the address pointer of a GC_PARM_BLK returned as the metaevent.extevtdatp. Its extension Id (extevtblkp->ext_id) will contain the DM3CC_EXID_INTRUSION value.

Note: If the protocol fails to enable or disable TKO for the call, no error is reported nor is the GCEV_EXTENSIONCMPLT event provided to the application.

The following example shows how to enable or disable the TKO functionality on a channel basis.

```
#include "gclib.h"
#include "dm3cc_parm.h"

void main(void ) {

    static struct channel {
        LINEDEV      dev;                /* GlobalCall line device handle*/
        char          devname[MAX_DEVNAME]; /* Argument to gc_OpenEx() function */
        int           makecall_timeout;    /* make call time out */

    } port[MAXCHAN];

    /* Open channel line device; protocol name is specified for documentation purposes, but it is
    not used by Dialogic® DM3 protocols */
    strcpy(port[index].devname, ":NdtiB2T1:P_pdk_r2_tko_io:V_dxxxB1C1");

    if (gc_OpenEx(&port[index].ldev, port[index].devname, EV_ASYNC, (void *)&port[index]) !=
    GC_SUCCESS) {
        // process error
    }

    /* Wait for GCEV_OPENEX and GCEV_UNBLOCKED events */

    /* When ready to make a TKO call, call gc_Extension( ) accordingly */

    static void gc_tko_set (int index)
    {
        struct channel *pline;
        GC_PARM_BLK pblkp = NULL;

        pline = &port[index];

        gc_util_insert_parm_val( &pblkp, GCSET_CALLINFO, CCPARM_INTRUSION, sizeof( int ),
        GCPV_ENABLE);

        if (gc_Extension(GCTGT_GCLIB_CHAN, pline->ldev, DM3CC_EXID_INTRUSION, pblkp, NULL,
        EV_ASYNC) != GC_SUCCESS) {

            // process error
        }
        gc_util_delete_parm_blk(pblkp);
    }

} /* End of Function */

/* Process the GCEV_EXTENSIONCMPLT event */

static void gc_process_event(void)
{
    METAEVENTmetaevent;
    struct channel*pline;
    EXTENSIONEVTBLK *extevtblkp;

    switch (evttype)
    {
        case GCEV_EXTENSIONCMPLT:
            extevtblkp = (EXTENSIONEVTBLK*) metaevent.extevtdatap;
            if (extevtblkp->ext_id == DM3CC_EXID_INTRUSION) {
                /* TKO enabled for immediately subsequent outbound call on the channel */
                gc_process_makecall(index);/* attempt to make a TKO call */
            }

            break;
    }
}
```

```

        /* process all other events */
    }
} /* End of Function */

/* Initiate an outgoing TKO call as you would normally do */

static void gc_process_makecall(int index)
{
    struct channel    *pline;
    GC_MAKECALL_BLK   *makecallblkp;          /* Variable for MAKECALL block */
    int               callindex;
    char              *numberstr;

    /* set makecall block, dial string, etc */
    if (gc_MakeCall(pline->ldev, &pline->call[callindex].crn, numberstr, makecallblkp,
        pline->makecall_timeout, EV_ASYNC) != GC_SUCCESS) {
        // process error
    }
} /* End of Function */

```

Example Use Case for Outbound TKO Call

The following possible use case for this feature assumes forward multi-frequency Group II and backward multi-frequency Group B meanings with the following nomenclature:

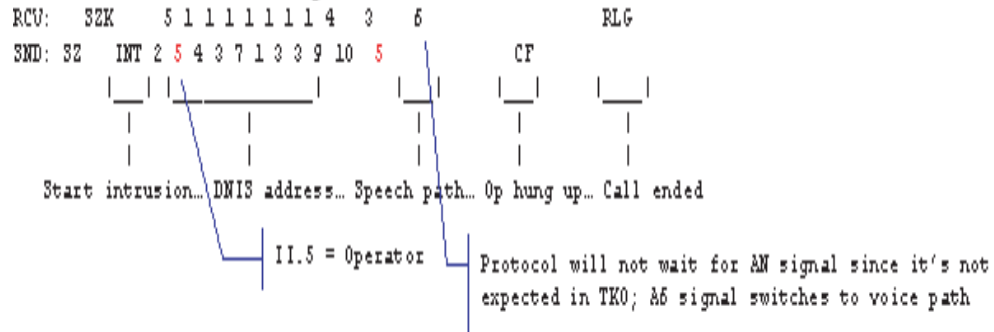
RCV: Receive
 SND: Send
 SZ: Seizure
 SZK: Seizure Acknowledgement
 INT: Intrusion (Trunk Offering)
 AN: Answer
 RLG: Release Guard
 CF: Clear Forward

With the following decoding of register signaling:

RCV	MEANING	SEND	MEANING
5	SND CATEGORY	2	DIGIT
1	SND NEXT DIGIT	5	OPR CATEGORY
1	DO	4	DIGIT 4
1	DO	3	DIGIT 3
1	DO	6	DIGIT 6
1	DO	1	DIGIT 1
1	DO	3	DIGIT 3
1	DO	3	DIGIT 3
1	DO	9	DIGIT 9
4	SND CLI	10	CLI NOT ENABLED
3	ADDRESS COMPLETE	5	OPR CATEGORY
6	SET UP SPEECH CONN		

The SND line represents the CPE, as in the system with the Dialogic® board connected to the RCV side representing the originating exchange.

LINE AND REGISTER SIGNAL SEQUENCE:



1.19 Support for Dialogic® D/4PCIUFEQ and Dialogic® D/4PCIU4SEQ Media Boards

Service Update 239 provides support for the Dialogic® D/4PCIUFEQ and Dialogic® D/4PCIU4SEQ Media Boards. Both are RoHS commercial product 6/6 half-length PCI Express form factor boards. The boards have the same features and functionality as the current analog Dialogic® JCT boards, except they have no CTBus connectivity.

Note: For more information about RoHS compliance, refer to www.dialogic.com/rohs/default.htm.

The Dialogic® D/4PCIUFEQ provides basic voice processing and DSP-based Group 3 fax support (DSP fax or SoftFax). The Dialogic® D/4PCIU4SEQ supports basic voice processing with continuous speech processing (CSP).

When installing the board(s), be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

1.20 Support for Dialogic® D/80PCIE-LS Media Board

Service Update 239 provides support for the Dialogic® D/80PCIE-LS Media Board. The board is an eight-port analog, PCI Express, loop start board used for developing advanced communications applications that require media resources. The Dialogic® D/80PCIE-LS Media Board has the same features and functionality as the current analog Dialogic® JCT boards.

The board provides support for basic voice processing, DSP-based Group 3 fax support (DSP fax or SoftFax) and continuous speech processing (CSP) in one PCI Express slot.

When installing the Dialogic® D/80PCIE-LS Media Board, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

Note: For this release, the analog line adaptation utility (LineAdapt) is not supported on the Dialogic® D/80PCIE-LS Media Board.

Supported Coders

The Dialogic® D/80PCIE-LS Media Board is supported by the following voice encoding methods and sampling rates:

Digitizing Method	Sampling Rate (kHz)	Resolution (Bits)	Bit Rate (Kbps)	File Format
OKI ADPCM	6	4	24	VOX, WAVE
OKI ADPCM	8	4	32	VOX, WAVE
G.711 PCM A-law and mu-law	6	8	48	VOX, WAVE
G.711 PCM A-law and mu-law	8	8	64	VOX, WAVE
Linear PCM	6	8	48	VOX, WAVE
Linear PCM	8	8	64	VOX, WAVE
GSM full rate (Microsoft format)	8	(value ignored)	13	WAVE
GSM full rate (TIPHON format)	8	(value ignored)	13	WAVE
G.726, ITU-T ADPCM	8	4	32	VOX

See the *Dialogic® Voice API Programming Guide* for more information about configuration procedures and firmware load files.

Firmware Load File

The Dialogic® D/80PCIE-LS Media Board requires a firmware load file for the system software to download to the board.

The firmware files available for the Dialogic® D/80PCIE-LS Media Board are as follows:

D8xjct.fwl Provides eight channels of basic voice processing and fax.

D81jcsp.fwl Provides eight channels of basic voice processing, fax, and continuous speech processing (CSP).

Note: *D8xjct.fwl* is the default.

Within the Dialogic Configuration Manager (DCM), each board has a set of property sheets that display a set of board's configuration parameters. Each property sheet displays a different set of parameters based on the functionality they affect. To access a board's property sheets, double-click on the board model name in the system window. The Misc property sheet is displayed by default. The Misc property sheet, contains the FirmwareFile parameter. This is where a non-default parameter for the firmware file would be selected.

See the *Dialogic® Springware Architecture Products on Windows® Configuration Guide* for more information about configuration procedures and firmware load files.

1.21 Important Notice about System Release Update Installation

Due to changes in the Dialogic® Software install process, an update install should not be used when updating to a more recent build from a Dialogic® System Release 6.0 PCI for Windows build prior to Service Update 207. Update install does work when upgrading from Service Update 207 to any more recent build.

1.22 Configuring the Line Law Encoding Mode

Service Update 235 provides the ability to change the line (network interface) law encoding mode irrespective of the line type (T1 or E1). It applies to all protocols on ISDN, CAS, and R2MF protocol groups.

This feature also changes the behavior of the ct_busencoding field in the R4 CT_DEVINFO data structure, for all protocols in all groups.

The following Dialogic® DM3 Media Boards are supported:

- DMV600BTEP
- DMV1200BTEP
- DMV300BTEPE
- DMV600BTEPE
- DMV1200BTEPE

1.22.1 Feature Description

By default, network interface boards enforce a specific line law encoding solely based on the line type (T1 or E1). The line type is automatically determined and set based on the protocol selected through the trunk configuration utility. This feature introduces a new LineAdmin parameter called LineEncoding. LineEncoding provides a way to set the line law encoding preference to either A-law or mu-law on ISDN, CAS, and R2MF protocols.

Once the LineEncoding parameter is set during configuration, it remains in effect until a new board initialization is performed. The LineEncoding parameter and desired value must be present in the LineAdmin section(s) of the board's configuration file every time the board is initialized for it to take effect; otherwise the default line law encoding for the line type applies.

1.22.2 Configuration Changes

The new parameter, LineEncoding, allows the overriding of the board's default line law encoding. This parameter is entered and configured through the generated CONFIG file. Refer to [Section 1.22.4, "Configuring the LineEncoding Parameter"](#), on page 69 for configuration information.

The parameter has three possible values as shown below:

Value	Parameter	Description
0	LineEncoding_Default	This value keeps the default (native) encoding and idle patterns for the line type (mu-law for T1 and A-law for E1).
1	LineEncoding_Alaw	This value forces the encoding on the line to be of A-law type. The idle patterns on all line channels toward the network will be set to acceptable A-law values and law conversion will be decided based on this setting and the CTBus law.
2	LineEncoding_Mulaw	This value forces the encoding on the line to be of mu-law type. The idle patterns on all line channels toward the network will be set to acceptable mu-law values and law conversion will be decided based on this setting and the CTBus law.

1.22.3 API Changes

This section details the API changes made to support this feature irrespective of the LineEncoding setting. It applies to all protocol groups.

The ct_busencoding field in the CT_DEVINFO data structure returns after calling the xx_GetCTInfo() functions (xx=dx, gc, dt, etc.) on any channel device that belongs to the supported boards. This field will now return the CTBus encoding setting. Previously, it returned the encoding of the board's first network interface. The new ct_busencoding field behavior applies to any protocol selection and applies to all protocol groups on supported devices. This is irrespective of the configuration setting for the new LineEncoding parameter. The behavior for all other CT_DEVINFO structure fields remains unchanged.

The ct_busencoding field in the CT_DEVINFO returns either of the following values:

- CT_BEALAW
- CT_BEULAW

1.22.4 Configuring the LineEncoding Parameter

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads. In order to use the LineEncoding parameter, it must be manually added to the CONFIG file that was selected for your board.

Note: Once the CONFIG file has been modified, a new FCD file is automatically generated at the time of board initialization to match the new settings.

The hexadecimal value for the LineEncoding parameter is 0x1627, and must be added in any place after the LineType parameter in the [lineAdmin] section for each line as desired.

For example:

```
[lineAdmin.1]
...
SetParm=0x1627,0 ! LineEncoding (Default=0, Alaw=1, Mulaw=2)

[lineAdmin.2]
...
SetParm=0x1627,1 ! LineEncoding (Default=0, Alaw=1, Mulaw=2)
```

- Notes:**
1. Setting the LineEncoding to an incorrect value may cause audio corruption and call setup failures on most CAS and R2MF protocols due to tone corruption.
 2. Setting the LineEncoding to LineEncoding_Default has the same practical effect as not having it set at all.
 3. The LineEncoding parameter must not be the first one in any LineAdmin section. If multiple entries exist per LineAdmin section, the last one will take effect.
 4. The LineEncoding setting can be different for each LineAdmin section. Each line interface is allowed its own line law encoding setting independent of the other.
 5. The LineEncoding parameter does not apply to ISDN British Telecom group (DPNSS and DASS2) protocols.

1.23 New Operating System Support

In addition to the supported operating systems listed in the Release Guide, the following operating system version is now supported with this Service Update:

- Windows® XP SP3

1.24 Enhancements to DPNSS Signaling

With the Service Update, the Dialogic® Global Call API provides the following support for Dialogic® DM3 Boards:

- Support for sending (outbound) Initial Service Request Message (ISRM) and one or more Subsequent Service Request Messages (SSRMs)
- Support for incoming ISRM(I), ISRM(C), SSRM(I), and SSRM(C) messages (where I=incomplete and C=complete)

1.24.1 Feature Description

This feature provides the following capabilities:

As an example for outbound:

- The ability to send partial dialed number identification service (DNIS) digits in multiple ISRMs and/or SSRMs, i.e., overlap send

And for incoming:

- Support for receipt of partial DNIS digits, i.e., overlap receive. Note that partial, valid digits are not buffered and instead are passed to the Global Call application as soon as a valid message containing the partial list is processed.

Note: Overlap receive due to multiple ISRM and/or SSRM incoming messages with partial digits preserves the existing Global Call interface, so **no change is needed to existing applications** (`gc_GetCallInfo()` with `info_id DESTINATION_ADDRESS`; request more DNIS digits with `gc_CallAck()` and `GACK_SERVICE_INFO`; `GCEV_MOREINFO` event `gc_ReqMoreInfo()`, ...). See the *Dialogic® Global Call API Programming Guide* for information about overlap send and receive.

Additional details about the implementation of this feature include:

- Messages with complete selection blocks but longer than 45 octets will be split into ISRM(I) and one or more SSRMs and sent out the network as such. Messages with incomplete selection blocks are always split into ISRM(I) and one or more SSRMs.
- This feature supports real or virtual (over a DPNSS virtual circuit) calls.
- **The maximum virtual call Text Display IE length remains 24 octets according to the DPNSS specification for the TEXT parameter** (textual display information). Longer strings will be truncated by the DPNSS firmware stack to this maximum length allowed.
- Maximum destination address (DNIS) length is limited to 34 octets.
- Maximum calling, originating number (ANI) length is limited to 24 octets.

Note: If either destination or originating address is longer than the above limits, the DM3 firmware would copy up to the defined length and cut off the rest.

- One use of this functionality is for the ability to perform an overlap send, where a partial list of DNIS digits is first sent to start the routing and at a later time more are provided; thus the digits are carried over multiple messages, with an ISRM followed by one or more SSRMs.
- One other case is where the initial ISRM message contains large digit strings that cannot be held in one message, resulting in additional SSRMs.

1.24.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Global Call API in general, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

For features specific to ISDN (including DPNSS) technology, see:

- *Dialogic® Global Call ISDN Technology Guide*

1.25 Support for SFTP in Dialogic® Global Call SS7 Call Control Library

With the Service Update, a parameter has been added to the *gcss7.cfg* file to specify the type of file transfer protocol used by the Dialogic® Global Call SS7 server to retrieve configuration files from the Signal Interface Units (SIUs) when boards are downloaded. By default, the Global Call SS7 server uses regular ftp. This new parameter, **SIU.FTP_Type**, allows ssh ftp (sftp) to be used. For further information about the **SIU.FTP_Type** parameter, see the *Dialogic® Global Call SS7 Technology Guide*.

1.26 New Dialogic® D/42 API Function for Dialing

With the Service Update, the Dialogic® D/42 API provides a new function, **d42_dial()**. It can be used to send an entire dial string at once, including the hook switch status.

The D/42 API is used with Dialogic® PBX Integration Boards such as the D/42JCT-U and D/82JCT-U Boards. For further information about **d42_dial()** and other D/42 API functions, see the *Dialogic® PBX Integration Software Reference*.

1.27 Startup Error Codes for Dialogic® Springware Boards

Dialogic® Diagnostics Software (UDD), a utility for testing Dialogic® Springware boards, is not supported on Windows Vista® and Windows Server® 2008 operating systems. Furthermore, end of support for UDD has been announced; support for UDD in System Release 6.0 PCI Windows on any operating system ends as of June 30, 2008.

Most of the same UDD tests are performed during the download stage as part of the board startup process. When boards fail to download, error codes are displayed on the screen and stored in the *genload.log* file found in the *\dialogic\log* directory. The following table lists the error codes, their cause, and recommended corrective action, if any.

If no corrective action is given, the hardware may be faulty. If you suspect that a board is bad, run the Telecom Subsystem Summary Tool (*its_sysinfo*) and provide the collected data to Dialogic Technical Support for analysis. (The *genload.log* file is one of the files collected by *its_sysinfo*.) See the *Dialogic® System Software Diagnostics Guide* for information about running *its_sysinfo*.

Error Code*	Cause	Recommended Action
WSBxx08, WSBxx09	Board memory failure	Contact Technical Support.
WSBxx11	Board memory addressing failure	Contact Technical Support.
WSBxx12, WSBxx13	Board memory test failure	Contact Technical Support.
WSBxx14	DSP memory addressing failure	Contact Technical Support.
WSBxx15, WSBxx16	DSP memory test failure	Contact Technical Support.
WSBxx17	CT Bus/SCbus failure	Check the CT Bus cable, terminator jumper, and bus settings.
WSBxx18	DSP clock failure	Contact Technical Support.
WSBxx19- WSBxx26	Firmware file is corrupt or invalid	Reinstall the Dialogic® System Release software.
WSBxx32- WSBxx37	Unsupported product type, corrupt EEPROM, or new board installed with old System Release software	Confirm board is supported by the release and install the latest Service Update.
WSBxx40	Daughterboard memory addressing failure	Contact Technical Support.
WSBxx41, WSBxx42	Daughterboard memory test failure	Contact Technical Support.
WSBxx96, WSBxx97	Time-out waiting for response from DSP, DSP failure	Contact Technical Support.
WSB0112, WSB0113	CT Bus ASIC failure	Contact Technical Support.
WSB0301	Time-out while waiting for ack	Contact Technical Support.
* "xx" indicates that different values may be present in this field.		

Error Code*	Cause	Recommended Action
WSB0401	Time-out while waiting for ack from firmware	Contact Technical Support.
WSB0402	No response from firmware	Contact Technical Support.
WSB2703	Download failed, general download error	If board is CT Bus capable, check A-law/mu-law bus settings; otherwise, contact Technical Support.
* "xx" indicates that different values may be present in this field.		

1.28 Configuring SIP Stack Parameters with Global Call

With the Service Update, selected SIP stack parameters such as timers can now be configured with the Dialogic® Global Call API.

1.28.1 Feature Description

To support SIP stack configuration, IP_VIRTBOARD has been updated with a new structure pointer (default is NULL) as follows:

```
typedef struct {
    ...
    ...
    /* The following is added for VIRTBOARD_VERSION_SIP_STACK_CFG support */
    SIP_STACK_CFG *sip_stack_cfg;
    /* end VIRTBOARD_VERSION_SIP_STACK_CFG additions */
} IP_VIRTBOARD;
```

A new data structure, SIP_STACK_CFG, is used to configure SIP stack parameters. Details about the SIP_STACK_CFG data structure fields follow.

1.28.2 SIP_STACK_CFG Data Structure

The SIP_STACK_CFG structure definition has been added in the *gcip.h* file. The new data structure is described below.

Note: SIP stack parameters can only be configured once per virtual board (at **gc_Start()**) and remain in effect throughout the Global Call application (per process).

SIP_STACK_CFG

```
typedef struct {
    unsigned long version; /* version set by INIT_SIP_STACK_CFG */
    int retransmissionT1;
    int retransmissionT2;
    int retransmissionT4;
    int generalLingerTimer;
    int inviteLingerTimer;
    int provisionalTimer;
    int cancelGeneralNoResponseTimer;
    int cancelInviteNoResponseTimer;
    int generalRequestTimeoutTimer;
} SIP_STACK_CFG;
```

■ Description

The SIP_STACK_CFG data structure is used to configure selected SIP stack parameters such as timers.

The SIP_STACK_CFG data structure is referenced by the IP_VIRTBOARD data structure, which stores configuration and capability information about an IPT (virtual) board device that is populated when the device is started. An array of IP_VIRTBOARD structures (one per virtual board in the system) is referenced by the IPCCLIB_START_DATA structure, which is passed to the **gc_Start()** function.

Applications should use the **INIT_SIP_STACK_CFG()** function to initialize the structure with the correct version number and initial field values before setting the appropriate values.

■ Field Descriptions

The fields of the SIP_STACK_CFG data structure are:

version

The version number of the data structure. The correct value is set by the **INIT_SIP_STACK_CFG()** initialization function and should not be overridden.

retransmissionT1

Determines several timers as defined in RFC 3261. For example, when an unreliable transport protocol is used, a Client Invite transaction retransmits requests at an interval that starts at T1 milliseconds and doubles after every retransmission. A Client General transaction retransmits requests at an interval that starts at T1 and doubles until it reaches T2. The default value is 1000.

retransmissionT2

Determines the maximum retransmission interval as defined in RFC 3261. For example, when an unreliable transport protocol is used, general requests are retransmitted at an interval that starts at T1 and doubles until it reaches T2. If a provisional response is received, retransmissions continue but at an interval of T2. The parameter value cannot be less than 4000. The default value is 8000.

retransmissionT4

Determines the amount of time the network takes to clear messages between client and server transactions as defined in RFC 3261. For example, when working with an unreliable transport protocol, T4 determines the time that a UAS waits after receiving an ACK message and before terminating the transaction. The default value is 10000.

generalLingerTimer

After a server sends a final response, the server cannot be sure that the client has received the response message. The server should be able to retransmit the response upon receiving retransmissions of the request for generalLingerTimer milliseconds. The default value is 32000.

inviteLingerTimer

After sending an ACK for an INVITE final response, a client cannot be sure that the server has received the ACK message. The client should be able to retransmit the ACK upon receiving retransmissions of the final response for inviteLingerTimer milliseconds. The default value is 32000.

provisionalTimer

The provisionalTimer is set when receiving a provisional response on an Invite transaction. The transaction will stop retransmissions of the Invite request and will wait for a final response until the provisionalTimer expires. If you set the provisionalTimer to 0, no timer is set, and the Invite transaction will wait indefinitely for the final response. The default value is 180000.

cancelGeneralNoResponseTimer

When sending a CANCEL request on a General transaction, the User Agent waits cancelGeneralNoResponseTimer milliseconds before timeout termination if there is no response for the canceled transaction. The default value is 32000.

cancelInviteNoResponseTimer

When sending a CANCEL request on an Invite request, the User Agent waits cancelInviteNoResponseTimer milliseconds before timeout termination if there is no response for the canceled transaction. The default value is 32000.

generalRequestTimeoutTimer

After sending a General request, the User Agent waits for a final response generalRequestTimeoutTimer milliseconds before timeout termination (in this time the User Agent retransmits the request every T1, 2*T1, ... , T2, ... milliseconds). The default value is 32000.

1.28.3 Sample Code

The following example sets the SIP T1 timer to 64 ms.

```
#include "gclib.h"
..
..
#define BOARDS_NUM 1
..
..

/* initialize start parameters */
IPCCLIB_START_DATA cclibStartData;
memset(&cclibStartData,0,sizeof(IPCCLIB_START_DATA));
IP_VIRTBOARD virtBoards[BOARDS_NUM];
memset(virtBoards,0,sizeof(IP_VIRTBOARD)*BOARDS_NUM);

/* initialize start data */
INIT_IPCCLIB_START_DATA(&cclibStartData, BOARDS_NUM, virtBoards);

/* initialize virtual board */
INIT_IP_VIRTBOARD(&virtBoards[0]);

/* sip stack cfg support */
SIP_STACK_CFG sip_stack_cfg;
INIT_SIP_STACK_CFG(&sip_stack_cfg);
    virtBoard[bid].sip_stack_cfg = &sip_stack_cfg;

    sip_stack_cfg.retransmissionT1 = 64;
```

1.28.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Global Call API in general, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

For features specific to IP technology, see:

- *Dialogic® Global Call IP Technology Guide*

1.29 Disabling Automatic re-INVITE Message when Switching between Fax and Audio

When using SIP, a change between audio and fax modes may cause both sides of the call to send a re-INVITE message to renegotiate the media session between them. This would cause a glare condition, which disconnects the call.

With the Service Update, the ability to disable/enable the sending of the automatic SIP re-INVITE message upon media switch can now be configured with the Dialogic® Global Call API to prevent this glare condition.

1.29.1 Feature Description

Overview of Use Case

A user application can enable and disable the unsolicited GCEV_EXTENSION notification events associated with certain types of transition events, including media streaming connection state changes. The application can receive notification of changes in the status (connection and disconnection) of media streaming in the transmit and receive directions as GC_EXTENSION_EVT events. The events for this notification must be enabled by setting or adding the bitmask value EXTENSION_EVT_SIGNALING_STATUS to the GC_EXTENSION_EVT mask. Events can be enabled on a per board basis (using **gc_SetConfigData()**) or on a per channel basis (using **gc_SetUserInfo()**).

A user application needs to enable media streaming status EXTENSION_EVT_STREAMING_STATUS to get notification of media transmit and receive connected events before doing specific media tests just after another media test is completed. This is particularly useful in back-to-back testing, because in live applications there are other indications of media session events, e.g., fax CNG/CED tones, busy tone, phone hang-up tone, etc., which are not available in back-to-back testing.

For example, consider two user applications where one makes an IP call to the other, sends a fax (over IP), and after the fax session is completed, dials a string of DTMF digits for the other side to detect. If the DTMF digits are dialed before the fax session completely ends, the DTMF dial test will fail, since the media session has not switched from fax to audio yet. In order for the application to know when to dial the DTMF digits it has to know when the previous fax session has ended and the audio session has started. It knows this when it receives an event indicating that the audio media stream is connected.

When working with the **H.323** protocol, this functionality to detect the media switch is sufficient for user applications. However for **SIP** protocols, when a fax to audio switch occurs, both sides send a re-INVITE message to renegotiate the media session between them, which causes a glare condition that drops the call. This is not an expected situation for a user application.

A similar situation can occur when the media switches from audio to fax.

New Parameters to Disable/Enable Automatic re-INVITE Messages

In order to prevent this glare situation, new parameters are now available in Global Call to:

- prevent sending an automatic SIP re-INVITE when a switch from fax to audio media occurs, or when a switch from audio to fax media occurs
- re-enable the sending of an automatic SIP re-INVITE when a switch from fax to audio media occurs, or when a switch from audio to fax media occurs

The new parameter IDs are added for the existing IPSET_CONFIG set ID as shown in the following table.

Set ID	Parameter ID	Set	Send	Retrieve	SIP/ H.323
IPSET_CONFIG	IPPARM_SIP_FAXTOAUDIO_AUTO_REINVITE_DISABLE	gc_SetConfigData() gc_SetUserInfo()	---	---	SIP only
	IPPARM_SIP_FAXTOAUDIO_AUTO_REINVITE_ENABLE	gc_SetConfigData() gc_SetUserInfo()	---	---	SIP only
	IPPARM_SIP_AUDIOTOFAAX_AUTO_REINVITE_DISABLE	gc_SetConfigData() gc_SetUserInfo()	---	---	SIP only
	IPPARM_SIP_AUDIOTOFAAX_AUTO_REINVITE_ENABLE	gc_SetConfigData() gc_SetUserInfo()	---	---	SIP only

By default, SIP re-INVITE messages upon media switch are sent automatically. The user application has to specifically disable the transmission of the re-INVITE by using the IPSET_CONFIG parameters. Typically, the automatic re-INVITE messages would be disabled on one side user application only, namely a fax server type of application that receives faxes.

The user application has to know whether to use this functionality depending on how the application is to be used. This is usually done at the start of an application. If the automatic re-INVITE messages are disabled on two applications in a back-to-back test, the switch from fax to audio will never occur, because neither side will send out a re-INVITE message to the other to renegotiate new media (audio) when a fax session ends.

The automatic re-INVITE messages can be disabled/enabled on a board, line, or call reference number (CRN) device basis. Code examples are shown below.

1.29.2 Sample Code

Disabling Transmission of Automatic re-INVITE on a Board Device

```
DisableFTToAreinvite()
{
    LINEDEV linedevbp;
    long request_id = 0;
    GC_PARM_BLK *target_datap = NULL;

    if (gc_OpenEx(&linedevbp, ":N_ipTb1:P_IP", EV_SYNC, NULL) != GC_SUCCESS)
    {
        //print error
        return(FALSE);
    }

    gc_util_insert_parm_val (&target_datap, IPSET_CONFIG,
                            IPPARM_SIP_FAXTOAUDIO_AUTO_REINVITE_DISABLE,
                            sizeof (int), IP_MANUAL_MODE);

    if (gc_SetConfigData(GCTGT_CCLIB_NETIF, linedevbp, target_datap, 1000,
                        GCUPDATE_IMMEDIATE , &request_id, EV_ASYNC) != GC_SUCCESS)
    {
        //print error
        rcode=FALSE;
    }

    gc_util_delete_parm_blk(target_datap);

    target_datap = NULL;
}
```

Re-Enabling Transmission of Automatic re-INVITE on a Line Device

```
EnableFTToAreinvite()
{
    GC_PARM_BLK *target_datap = NULL;

    if ((gc_util_insert_parm_val(&target_datap, IPSET_CONFIG,
                                IPPARM_SIP_FAXTOAUDIO_AUTO_REINVITE_ENABLE,
                                sizeof(int), NULL)) != GC_SUCCESS)
    {
        fprintf(stderr, "E%04d(%s): gc_SetUserInfo(line_dev = %d) failed, \n", Res[extts]-
>network.ts_ldev);
        fflush(stderr);
    }

    if ((gc_SetUserInfo(GCTGT_GCLIB_CHAN, Res[extts]->network.ts_ldev, target_datap,
                        GC_ALLCALLS)) != GC_SUCCESS)
    {
        fprintf(stderr, "E%04d(%s): gc_SetUserInfo(line_dev = %d) failed, \n", Res[extts]-
>network.ts_ldev);
        fflush(stderr);
    }
    gc_util_delete_parm_blk(target_datap);
    target_datap = NULL;
}
```

1.29.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Global Call API in general, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

For features specific to IP technology, see:

- *Dialogic® Global Call IP Technology Guide*

1.30 New Dialogic® NCM API Functions for PDK Protocol Configuration

With the Service Update, the Dialogic® Native Configuration Manager (NCM) API can be used to programmatically configure board and line interface PDK settings for Dialogic® DM3 Boards that use PDK protocols; this functionality was previously available in the Dialogic® Configuration Manager (DCM).

The NCM API provides an interface for developing customized system configuration and administration applications. This new feature allows the NCM API to be used for the same configuration provided by the PDK Configuration property sheet in DCM. For information about the PDK Configuration property sheet, see [Section 1.65.1, “PDK Configuration Property Sheet”](#), on page 161.

1.30.1 Feature Description

Before the PDK Configuration property sheet was added to DCM, it was necessary to set up a file called *pdk.cfg* to download the protocol and country dependent parameter (CDP) file to DM3 Boards. The CDP file is also referred to as the *PDK protocol variant* or *protocol variant*. The same protocol variant or different protocol variants can be assigned to each line (trunk) on a board, as described in [Section 1.65.1, “PDK Configuration Property Sheet”](#), on page 161.

The PDK Configuration property sheet provides a more user friendly way to do this using the DCM GUI. It also allows multiple protocol variants to be specified per trunk, so that an application can dynamically change variants on that trunk if this is desired.

For users who create their own configuration applications, the same capabilities are now available programmatically with the NCM API.

Note: This feature applies only to DM3 Boards with digital network interfaces, and to trunks that use CAS or R2MF PDK protocols.

New APIs

The new NCM API functions for PDK protocol configuration are:

NCM_PDKGetVariantList()

gets the applicable protocol variants supported for a given device family and board

NCM_PDKApplyVariantList()

applies a variant list, selected from the available ones as queried by
NCM_PDKGetVariantList(), to a given device family, board, and trunk

NCM_PDKQuerySettings()

gets the current trunk to variant mapping for every trunk on a given device family and board

NCM_FreePDKVariants()

frees up memory allocated with the other NCM APIs for PDK protocol configuration

These functions use the following new data structures:

NCMPDKTrunk

maps trunk names to variant types

NCMPDKTrunkVariantType

contains protocol variant values (that is, CDP file names)

Function and data structure reference information is provided next.

NCM_PDKGetVariantList()

Name: NCMRetCode NCM_PDKGetVariantList(pncmFamily, pncmUniqueDevice, *pdwTrunk, ppPDKTrunkVariantList, pErrMsg)

Inputs: NCMFamily* pncmFamily • pointer to a data structure containing a device family name
NCMDevice* • pointer to a data structure containing a unique device name
pncmUniqueDevice

Outputs: DWORD *pdwTrunk • pointer to a DWORD that returns the number of protocol variants
NCMPDKTrunk** • an array containing the individual PDK protocol variants
ppPDKTrunkVariantList
BYTE* pErrMsg • not used

Returns: NCM_SUCCESS if success
NCM error code if failure

Includes: NCMApi.h

Category: System administration

Mode: synchronous

■ Description

The **NCM_PDKGetVariantList()** function gets the applicable protocol variants supported for a given device family and board.

Parameter	Description
pncmFamily	points to an NCMString data structure containing the family name. The value of the data structure must be an installable family (that is, one that is supported in the DCM catalog). All instantiated families of devices in your current system configuration can be retrieved by NCM_GetInstalledFamilies() .
pncmUniqueDevice	points to an NCMString data structure containing the device's unique name. This name is any string that sufficiently distinguishes multiple instantiations of the same device model. Note: You can retrieve this unique name programmatically by using functions such as NCM_GetInstalledDevices() and/or NCM_GetFamilyDeviceByAUID() .
*pdwTrunk	pointer to a DWORD that returns the number of protocol variants returned in the ppPDKTrunkVariantList parameter
ppPDKTrunkVariantList	an array containing the individual PDK protocol variants. See the descriptions of the NCMPDKTrunk and NCMPDKTrunkVariantType data structures later in this section.
pErrMsg	not used

■ Cautions

The **NCM_PDKGetVariantList()** function is supported only on Dialogic® DM3 Boards with digital network interfaces, and is applicable only to trunks that use CAS or R2MF PDK protocols.

■ Errors

Possible errors for this function include:

NCME_INVALID_INPUTS

the values of the parameters supplied are invalid

NCME_GENERAL

a problem occurred retrieving the data

■ Example

```
#include "stdafx.h"
#include <atlstr.h>
#include "NCMApi.h"
#include "DCMAPItest.h"

void DCMAPItest::TestNCM_PDKGetVariantList (DWORD dwTrunk )
{
    NCMFamily ncmFamily;
    NCMDevice *pncmUniqueDevice=NULL;
    NCMPDKTrunk* pPDKTrunkVariantList=NULL;
    NCMEErrorMsg *pErrMsg = NULL;

    ncmFamily.name = "DM3";
    ncmFamily.next = NULL;

    //Get the possible list of variants available for family / device / Line interface
    NCMRetCode ncmRc = NCM_PDKGetVariantList(&ncmFamily, pncmUniqueDevice, &dwTrunk,
        &pPDKTrunkVariantList, NULL);

    if (ncmRc == NCM_SUCCESS)
    {
        cout << "Family name = " << ncmFamily.name << endl;
        cout << "Device name = " << pncmUniqueDevice->name << endl;
        cout << "Trunk = " << pPDKTrunkVariantList->TrunkName << endl;
        cout << "Variant List Available:" << endl;

        //Traverse thru the Line list
        NCMPDKTrunkVariantType* pTempPDKTrunkVariantType =
            pPDKTrunkVariantList->TrunkPDKValue;
        while (pTempPDKTrunkVariantType != NULL)
        {
            //Variant type;
            if (pTempPDKTrunkVariantType->TrunkPDKValue != NULL) {
                cout << " Variant = " << pTempPDKTrunkVariantType->
                    TrunkPDKValue << endl;
            }
            pTempPDKTrunkVariantType = pTempPDKTrunkVariantType->nextTrunkPDKValue;
        }
    }
    else
    {
        // Process error
    }
}
```

```

        NCM_GetErrorMsg( ncmRc, &pErrMsg );
        cout << "Error message = " << pErrMsg << endl;
    }

    // Deallocate memory when through with using families
    NCM_Dealloc( pncmUniqueDevice );
    NCM_Dealloc(pErrMsg);
    NCM_FreePDKVariants( pPDKTrunkVariantList);
}

void DCMAPITest::TestNCM_PDKQuerySettings(NCMDevice *pncmUniqueDevice )
{
    NCMFamily ncmFamily;
    NCMPDKTrunk* pPDKTrunkVariantList=NULL;
    NCMErrorMsg *pErrMsg = NULL;

    ncmFamily.name = "DM3";
    ncmFamily.next = NULL;

    //Get the current PDK variant list for family and device
    NCMRetCode ncmRc = NCM_PDKQuerySettings(&ncmFamily, pncmUniqueDevice,
        &pPDKTrunkVariantList, NULL);

    if (ncmRc == NCM_SUCCESS)
    {
        cout << "Family name = " << ncmFamily.name << endl;
        cout << "Device name = " << pncmUniqueDevice->name << endl;

        //Traverse thru the trunk list
        NCMPDKTrunk* pTempPDKTrunkVariantList = pPDKTrunkVariantList;
        while (pTempPDKTrunkVariantList != NULL)
        {
            //for each TrunkName;
            cout << "Trunk = << Variant List Assigned:" <<
                pTempPDKTrunkVariantList->TrunkName << endl;

            if (pTempPDKTrunkVariantList->TrunkPDKValue != NULL)
            {
                //Traverse thru the variant list
                NCMPDKTrunkVariantType* pTempPDKTrunkVariantType =
                    pTempPDKTrunkVariantList->TrunkPDKValue;
                while (pTempPDKTrunkVariantType != NULL)
                {
                    //Variant type;
                    if (pTempPDKTrunkVariantType->TrunkPDKValue != NULL)
                    {
                        cout << " Variant = " <<
                            pTempPDKTrunkVariantType->TrunkPDKValue
                            << endl;
                    }

                    pTempPDKTrunkVariantType = pTempPDKTrunkVariantType->
                        nextTrunkPDKValue;
                }
            }
            else
            {
                //no specific variant assigned, board settings will apply
                cout << " Variant = none" << endl;
            }
            pTempPDKTrunkVariantList = pTempPDKTrunkVariantList->pNextTrunkName;
        }
    }
}

```

```

    }
    else
    {
        // Process error
        NCM_GetErrorMsg( ncmRc, &pErrMsg );
        cout << "Error message = " << pErrMsg << endl;
    }

    // Deallocate memory when through with using families
    NCM_Dealloc( pncmUniqueDevice );
    NCM_Dealloc(pErrMsg);
    NCM_FreePDKVariants( pPDKTrunkVariantList );
}

void DCMAPITest::TestNCM_PDKApplyVariantList (NCMDevice *pncmUniqueDevice, char
*szLineInterface, char *szDataValue )
{
    NCMFamily ncmFamily;
    NCMErrMsg *pErrMsg = NULL;

    // invoke the Query function and assign first
    NCMPDKTrunk* pPDKTrunkVariantList=NULL;

    ncmFamily.name = "DM3";
    ncmFamily.next = NULL;

    //Get the current settings
    NCMRetCode ncmRc = NCM_PDKQuerySettings(&ncmFamily, pncmUniqueDevice,
        &pPDKTrunkVariantList, NULL);

    if (ncmRc == NCM_SUCCESS)
    {
        CString szParsing( szDataValue );
        szParsing.TrimLeft();

        if ( !szParsing.IsEmpty() && szParsing.Find(".cdp") == -1)
        {
            cout << "Variant must not be NULL and must contain .cdp in name(s)" <<
                endl;
            cout << "Variant set to pdk_ar_r2_io.cdp" << endl;
            szParsing = "pdk_ar_r2_io.cdp";
        }
        cout << "Variant List: " << szParsing << endl;

        NCMPDKTrunk* pTempPDKTrunkVariantList = pPDKTrunkVariantList;
        NCMPDKTrunkVariantType* pTempPDKTrunkVariantType = NULL;
        NCMPDKTrunkVariantType ncmPDKTrunkVarType;

        //Traverse thru the line list until we locate target line interface
        while (pTempPDKTrunkVariantList != NULL && strcmp(
            (const char*)pTempPDKTrunkVariantList->TrunkName,
            (const char *)szLineInterface) != 0 )
        {
            pTempPDKTrunkVariantList = pTempPDKTrunkVariantList->pNextTrunkName;
        }

        if (pTempPDKTrunkVariantList == NULL)
        {
            cout << "No Trunk Name match; setting to PDKTrunk 0, pdk_ar_r2_io.cdp"
                << endl;
            szParsing = "pdk_ar_r2_io.cdp";
            pTempPDKTrunkVariantList = pPDKTrunkVariantList;
            pTempPDKTrunkVariantList->TrunkPDKValue = &ncmPDKTrunkVarType;
            ncmPDKTrunkVarType.nextTrunkPDKValue = NULL;
            ncmPDKTrunkVarType.TrunkPDKValue = szParsing.GetBuffer(1);
        }
        //Populate VariantList for target line
        pTempPDKTrunkVariantType = pTempPDKTrunkVariantList->TrunkPDKValue;
    }
}

```

```

if (szParsing.Find(":") != -1)    //Searching for append character meaning
                                // variants will be added to previous one(s)
{
    //Append; traverse thru the Variant list
    while (pTempPDKTrunkVariantType->nextTrunkPDKValue != NULL)
    {
        pTempPDKTrunkVariantType = pTempPDKTrunkVariantType->
            nextTrunkPDKValue;
    }
    szParsing.Remove(':'); //remove append character(s)

    //Allocate memory to the VariantType pointer
    pTempPDKTrunkVariantType->nextTrunkPDKValue = &ncmPDKTrunkVarType;
    szParsing.TrimLeft();    // remove leading spaces, if any
}
else { //Set desired Variant instead
    //Allocate memory to the VariantList pointer
    if (szParsing.IsEmpty() )    //Special case
    {
        pTempPDKTrunkVariantList->TrunkPDKValue = NULL;
    }
    else {
        pTempPDKTrunkVariantList->TrunkPDKValue = &ncmPDKTrunkVarType;
    }
}
szParsing.TrimLeft(); // remove leading spaces, if any

ncmPDKTrunkVarType.TrunkPDKValue = szParsing.GetBuffer(0);
ncmPDKTrunkVarType.nextTrunkPDKValue = NULL;

//Apply the list of variants accordingly
NCMRetCode ncmRc = NCM_PDKApplyVariantList(&ncmFamily, pncmUniqueDevice,
    pPDKTrunkVariantList, NULL);

if (ncmRc == NCM_SUCCESS)
{
    cout << "Family name = " << ncmFamily.name << endl;
    cout << "Device name = " << pncmUniqueDevice->name << endl;

    //TrunkName;
    cout << "Line = " << pTempPDKTrunkVariantList->TrunkName <<
        "Variant List Assigned:" << endl;

    if (pTempPDKTrunkVariantList->TrunkPDKValue != NULL) {
        //Traverse thru the variant list
        pTempPDKTrunkVariantType = pTempPDKTrunkVariantList->
            TrunkPDKValue;
        while (pTempPDKTrunkVariantType != NULL)
        {
            //Variant type;
            if (pTempPDKTrunkVariantType->TrunkPDKValue != NULL) {
                cout << " Variant = " <<
                    pTempPDKTrunkVariantType->TrunkPDKValue
                    << endl;
            }
            pTempPDKTrunkVariantType = pTempPDKTrunkVariantType->
                nextTrunkPDKValue;
        }
    }
    else {
        cout << " Variant = none" << endl;
    }
}
else
{
    // Process error
    NCM_GetErrorMsg( ncmRc, &pErrMsg );
    cout << "Error message = " << pErrMsg << endl;
}

```

```

        }
    }
    else
    {
        // Process error
        NCM_GetErrorMsg( ncmRc, &pErrMsg );
        cout << "Error message = " << pErrMsg << endl;
    }
    // Deallocate memory when through
    NCM_FreePDKVariants( pPDKTrunkVariantList );

    // Deallocate memory when through with using families
    NCM_Dealloc( pncmUniqueDevice );
    NCM_Dealloc(pErrMsg);
}

```

■ See Also

- **NCM_PDKApplyVariantList()**
- **NCM_PDKQuerySettings()**
- **NCM_FreePDKVariants()**

NCM_PDKApplyVariantList()

Name: NCMRetCode NCM_PDKApplyVariantList(pncmFamily, pncmUniqueDevice, pPDKTrunkVariantList, pErrMsg)

Inputs:

NCMFamily* pncmFamily	• pointer to a data structure containing a device family name
NCMDevice* pncmUniqueDevice	• pointer to a data structure containing a unique device name
NCMPDKTrunk* pPDKTrunkVariantList	• pointer to a data structure containing a linked list of trunk to variant mapping
BYTE* pErrMsg	• not used

Returns: NCM_SUCCESS if success
NCM error code if failure

Includes: NCMApi.h

Category: Modify configuration

Mode: synchronous

■ Description

The **NCM_PDKApplyVariantList()** function applies a variant list, selected from the available ones as queried by **NCM_PDKGetVariantList()**, to a given device family, board, and trunk.

Parameter	Description
pncmFamily	points to an NCMString data structure containing the family name. The value of the data structure must be an installable family (that is, one that is supported in the DCM catalog). All instantiated families of devices in your current system configuration can be retrieved by NCM_GetInstalledFamilies() .
pncmUniqueDevice	points to an NCMString data structure containing the device's unique name. This name can be any string that sufficiently distinguishes multiple instantiations of the same device model. Note: You are strongly discouraged from parsing the unique device name from your application. Although the name is guaranteed to be unique, Dialogic reserves the right to change the format of the device name in future releases,
pPDKTrunkVariantList	points to an NCMPDKTrunk data structure containing a linked list of trunk to variant mapping. See the descriptions of the NCMPDKTrunk and NCMPDKTrunkVariantType data structures later in this section.
pErrMsg	not used

■ Cautions

The **NCM_PDKApplyVariantList()** function is supported only on Dialogic® DM3 Boards with digital network interfaces, and is applicable only to trunks that use CAS or R2MF PDK protocols.

■ Errors

Possible errors for this function include:

NCME_INVALID_INPUTS

the values of the parameters supplied are invalid

NCME_GENERAL

a problem occurred retrieving the data

■ Example

See the example for the **NCM_PDKGetVariantList()** function.

■ See Also

- **NCM_PDKGetVariantList()**
- **NCM_PDKQuerySettings()**
- **NCM_FreePDKVariants()**
- NCMPDKTrunk data structure
- NCMPDKTrunkVariantType data structure

NCM_PDKQuerySettings()

- Name:** NCMRetCode NCM_PDKQuerySettingsList(pncmFamily, pncmUniqueDevice, *pdwTrunk, ppPDKTrunkVariantList, pErrMsg)
- Inputs:** NCMFamily* pncmFamily • pointer to a data structure containing a device family name
NCMDevice* • pointer to a data structure containing a unique device name
pncmUniqueDevice
- Outputs:** NCMPDKTrunk** • an array containing trunk to PDK protocol variant mappings
ppPDKTrunkVariantList
BYTE* pErrMsg • not used
- Returns:** NCM_SUCCESS if success
NCM error code if failure
- Includes:** NCMApi.h
- Category:** Query configuration
- Mode:** synchronous

■ Description

The **NCM_PDKQuerySettings()** function gets the current trunk to PDK protocol variant mapping for every trunk on a given device family and board.

Parameter	Description
pncmFamily	points to an NCMString data structure containing the family name. The value of the data structure must be an installable family (that is, one that is supported in the DCM catalog). All instantiated families of devices in your current system configuration can be retrieved by NCM_GetInstalledFamilies() .
pncmUniqueDevice	points to an NCMString data structure containing the device's unique name. This name can be any string that sufficiently distinguishes multiple instantiations of the same device model. Note: You are strongly discouraged from parsing the unique device name from your application. Although the name is guaranteed to be unique, Dialogic reserves the right to change the format of the device name in future releases,
ppPDKTrunkVariantList	an array containing trunk to PDK protocol variant mappings. See the descriptions of the NCMPDKTrunk and NCMPDKTrunkVariantType data structures later in this section.
pErrMsg	not used

■ Cautions

The **NCM_PDKQuerySettings()** function is supported only on Dialogic® DM3 Boards with digital network interfaces, and is applicable only to trunks that use CAS or R2MF PDK protocols.

■ Errors

Possible errors for this function include:

NCME_INVALID_INPUTS

the values of the parameters supplied are invalid

NCME_GENERAL

a problem occurred retrieving the data

■ Example

See the example for the **NCM_PDKGetVariantList()** function.

■ See Also

- **NCM_PDKGetVariantList()**
- **NCM_PDKApplyVariantList()**
- **NCM_FreePDKVariants()**

NCM_FreePDKVariants()

Name: NCMRetCode NCM_FreePDKVariants(*pPDKTrunkVarList)

Inputs: NCM_PDKTrunkVarList • points to the data structure occupying the memory to be freed

Returns: NCM_SUCCESS if success
NCM error code if failure

Includes: NCMApi.h

Category: System administration

Mode: synchronous

■ Description

The **NCM_FreePDKVariants()** function frees up memory allocated with the other NCM APIs for PDK protocol configuration.

Parameter	Description
*pPDKTrunkVarList	points to the data structure occupying the memory to be freed

■ Cautions

None

■ Errors

Possible errors for this function include:

NCME_INVALID_INPUTS
the values of the parameters supplied are invalid

NCME_GENERAL
general error

■ Example

See the example for the **NCM_PDKGetVariantList()** function.

■ See Also

- **NCM_PDKGetVariantList()**
- **NCM_PDKApplyVariantList()**
- **NCM_PDKQuerySettings()**

NCMPDKTrunk

```
typedef struct _NCMPDKTrunk {  
    char *TrunkName;  
    NCMPDKTrunkVariantType* TrunkPDKValue;  
    struct _NCMPDKTrunk* pNextTrunkName;  
} NCMPDKTrunk;
```

■ Description

The NCMPDKTrunk data structure maps trunk names to variant types.

■ Field Descriptions

The fields of the NCMPDKTrunk data structure are:

*TrunkName

Name of the trunk.

TrunkPDKValue

Variant type (NCMPDKTrunkVariantType data structure).

pNextTrunkName

Points to trunk mapping for the next trunk on the board.

NCMPDKTrunkVariantType

```
typedef struct _NCMPDKTrunkVariantType {  
    char* TrunkPDKValue;  
    struct _NCMPDKTrunkVariantType* nextTrunkPDKValue;  
} NCMPDKTrunkVariantType;
```

■ Description

The NCMPDKTrunkVariantType data structure contains protocol variant values (that is, CDP file names).

■ Field Descriptions

The fields of the NCMPDKTrunkVariantType data structure are:

TrunkPDKValue

Variant value (CDP file name).

nextTrunkPDKValue

Pointer to the next variant value (if any) for given trunk.

1.30.2 Implementation Guidelines

The following guidelines apply when using the NCM API for PDK protocol configuration:

- Configuration of the protocol variant requires the target board to be stopped. The settings are not applied until the board is reinitialized (that is, firmware downloaded and board started).
- If multiple protocol variants have been configured per trunk, the default variant is the last one in the list. Having more than one protocol variant on a board/trunk allows for dynamic protocol assignment as described in [Section 1.72, “Dynamically Retrieving and Modifying Selected Protocol Parameters When Using Dialogic® DM3 Boards”](#), on page 167.

Note: Dialogic® DMV-B Boards allow the setting of multiple protocol variants per trunk. Dialogic® DMV and DMV-A also allow the setting of multiple protocol variants per trunk, but the variants are limited to using a single HOT file. For information about protocol variants and HOT files, see the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*.

- Do not use the **NCM_SetValueEx()**, **NCM_GetValueEx()**, and similar NCM API functions that set and/or retrieve board configuration parameters to set and retrieve PDK protocol variants. Use the **NCM_PDKGetVariantList()**, **NCM_PDKApplyVariantList()**, and **NCM_PDKQuerySettings()** functions.

1.30.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® NCM API, see the following documents:

- *Dialogic® Native Configuration Manager API Programming Guide*
- *Dialogic® Native Configuration Manager API Library Reference*

For more information about PDK protocol variants, see the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*.

1.31 File Management Enhancements for DebugAngel Tool

With the Service Update, the configuration options for the Dialogic® DebugAngel tool have been enhanced to provide more capabilities for managing multiple log files.

1.31.1 Feature Description

The DebugAngel tool provides low-level firmware tracing, to aid in the troubleshooting of firmware issues on Dialogic® DM3 Boards. The tool is described in the *Dialogic® System Software Diagnostics Guide*. This feature enhances the file management capabilities for the log files created by DebugAngel. (Content of the log files remains unchanged.)

Previously, DebugAngel had only one option for naming multiple log files. With this feature, there is an additional option to include timestamps with multiple log files.

Configuration Options

In addition to command line options for starting/stopping the DebugAngel service, DebugAngel uses configuration settings specified through Windows® registry entries. These entries are created in the registry with their default settings when DebugAngel is first installed as a service (explained in the *Dialogic® System Software Diagnostics Guide*). Upon subsequent startups of DebugAngel, the values of these registry entries are loaded.

Using the Windows RegEdit.exe utility, you can modify the default settings, and the changes will take effect the next time the DebugAngel Windows service is started. The location of these entries in the registry can be found at:

```
\\HKEY_LOCAL_MACHINE\SOFTWARE\Dialogic\DebugAngel
```

Caution: Incorrect manipulation of the Windows registry can render your system unusable, requiring that you reinstall Windows. Only a system administrator qualified to modify the registry should change the DebugAngel configuration.

The following configuration options existed in the previous version of DebugAngel, and their default values remain the same. However, changes in the behavior of the **AutoRename** registry entry provide more options for the processing of multiple files.

DebugLevel

Enables/disables error or warning debug output. When set to 1, the debug output can be viewed using the Windows DebugView.exe utility. Default is 0.

LogFile

Specifies the full path and file name of the log file to be used by DebugAngel. Default is %INTEL_DIALOGIC_DIR%\log\DebugAngel.log, where %INTEL_DIALOGIC_DIR% is the value of the INTEL_DIALOGIC_DIR environment variable (for example, C:\Program Files\Dialogic\log\DebugAngel.log).

MaxFileSize

Specifies the maximum log file size in bytes. Default is 0 (unlimited size).

When a log file reaches the specified maximum size, the logging behavior depends on the **MaxFiles** and **AutoRename** settings as explained below.

MaxFiles

Specifies the maximum number of log files that should be created by DebugAngel. Default is 1 file. This setting is used in conjunction with the **MaxFileSize** registry entry. When a log file reaches the **MaxFileSize**, it is closed and a new log file is created. Multiple log files are named according to the **AutoRename** setting.

- Notes:**
1. If **MaxFiles** is greater than 1, then **MaxFileSize** cannot be 0; it is not permitted to have multiple files of unlimited size. If you specify those settings, a warning message is generated and the value of the **MaxFiles** registry key is reset to 1.
 2. **MaxFiles** cannot be set less than or equal to 0. If it is, a warning message is generated and the value of the **MaxFiles** registry key is reset to 1.

AutoRename

Controls whether an existing log file is backed up (e.g., when the computer is restarted), and specifies the naming convention to use when creating log files. Further information is given in the following sections:

- [AutoRename Options for Single Log Files](#)
- [AutoRename Options for Multiple Log Files](#)

AutoRename Options for Single Log Files

This section explains how the **AutoRename** options work when there is a single log file (**MaxFiles=1**).

Note: When **MaxFiles** is set to 1, the value of the **AutoRename** registry key is automatically set to 1.

AutoRename=0

The log file name specified in the **LogFile** registry entry is used. There is no backup of an existing log file. If the file exists when DebugAngel starts, it is deleted and replaced with a new file of the same name. When **MaxFileSize=0**, the file is allowed to grow without limit. When **MaxFileSize>0**, the file is allowed to grow to the specified limit. When the limit is reached, the file is truncated and logging is resumed from the beginning of the file.

AutoRename=1

The log file name specified in the **LogFile** registry entry is used. If the file exists when DebugAngel starts, it is backed up and renamed with a .bak extension, to avoid overwriting the original. For example, *DebugAngel.log* is renamed *DebugAngel.log.bak*. When **MaxFileSize=0**, the file is allowed to grow without limit. When **MaxFileSize>0**, the file is allowed to grow to the specified limit. When the limit is reached, the file is truncated and logging is resumed from the beginning of the file.

AutoRename=2

Adds a timestamp with the current date and time to the log file name. A file name with a timestamp has the following format:

`filename.MM_DD_at_hh_mm_ss.zzz.log`

where:

- filename - the name specified in the **LogFile** registry entry, stripped of the ".log" extension. (The ".log" extension is appended to the modified file name.)
- MM - month (01=January, 02=February, 03=March, ... 12=December)

- DD - day of the month (01-31)
- hh - hour (24-hour format, 00-23)
- mm - minute (00-59)
- ss - second (00-59)
- zzz - millisecond (000-999)

For example, if DebugAngel is started on February 17 at 3:11:27:357 p.m., with the **LogFile** registry setting of *DebugAngel.log*, the name of the log file created is:

`DebugAngel.02_17_at_15_11_27.357.log`

There is no backup of an existing log file. When **MaxFileSize=0**, the file is allowed to grow without limit. When **MaxFileSize>0**, the file is allowed to grow to the specified limit. When the limit is reached, the file is deleted, a new log file is created (using the same naming convention), and logging is resumed. This process is repeated until logging is stopped.

AutoRename=3

Adds "00" to the log file name, before the ".log" extension. (Although this option can be used with a single log file, it is more suitable when using multiple log files, where it appends an index number to each log file name.) For example, with the **LogFile** registry setting of *DebugAngel.log*, the name of the log file created is:

`DebugAngel00.log`

There is no backup of an existing log file. If the file exists when DebugAngel starts, it is deleted and replaced with a new file of the same name. When **MaxFileSize=0**, the file is allowed to grow without limit. When **MaxFileSize>0**, the file is allowed to grow to the specified limit. When the limit is reached, the file is truncated and logging is resumed from the beginning of the file.

AutoRename Options for Multiple Log Files

This section explains how the **AutoRename** options work when there are multiple log files (**MaxFiles>1**).

Note: When **MaxFiles** is set **greater than 1**, the value of the **AutoRename** registry key is automatically set to **3**. Furthermore, when **MaxFiles>1**, **AutoRename** must be set to either **2** or **3**. If **MaxFiles>1** and **AutoRename** is set to either **0** or **1**, a warning message is generated and the value of the **AutoRename** registry key is reset to **3**.

AutoRename=2

Adds a timestamp with the current date and time to the log file name. A file name with a timestamp has the following format:

`filename.MM_DD_at_hh_mm_ss.zzz.log`

where:

- filename - the name specified in the **LogFile** registry entry, stripped of the ".log" extension. (The ".log" extension is appended to the modified file name.)
- MM - month (01=January, 02=February, 03=March, ... 12=December)
- DD - day of the month (01-31)
- hh - hour (24-hour format, 00-23)
- mm - minute (00-59)

- ss - second (00-59)
- zzz - millisecond (000-999)

For example, if DebugAngel is started on February 17 at 3:11:27:357 p.m., with the **LogFile** registry setting of *DebugAngel.log*, the name of the *first* log file created is:

`DebugAngel.02_17_at_15_11_27.357.log`

There is no backup of an existing log file. When the file reaches its **MaxFileSize**, it is closed and a new log file is created. The new log file will have a timestamp with the current date and time in its file name. This process is repeated until there are **MaxFiles** log files. When **MaxFiles+1** log files are created, the oldest log file is deleted so that no more than **MaxFiles** log files are saved at any time. See [Examples of Multiple Log Files](#) below.

AutoRename=3

Adds a numeric index (counter) to the log file name. The file name has the following format:

`filenamenn.log`

where:

- filename - the name specified in the **LogFile** registry entry, stripped of the “.log” extension. (The “.log” extension is appended to the modified file name.)
- nn - a number starting with 00, then incrementing to 01, 02, etc., up to **MaxFiles-1**

For example, with the **LogFile** registry setting of *DebugAngel.log*, the names of the log files are *DebugAngel00.log*, *DebugAngel01.log*, *DebugAngel02.log*, etc.

There is no backup of an existing log file. When the file reaches its **MaxFileSize**, it is closed and a new log file is created. The new log file will have the next sequential number in its file name. This process is repeated until there are **MaxFiles** log files. When **MaxFiles+1** log files are created, the oldest log file is deleted so no more than **MaxFiles** log files are saved at any time. The file naming is repeated starting with the number 00 again. See [Examples of Multiple Log Files](#) below.

Examples of Multiple Log Files

With the following settings (and default **LogFile** name):

- **AutoRename=2**
- **MaxFileSize=65536**
- **MaxFiles=5**

The resulting files in *C:\Program Files\Dialogic\log* are:

```
65,536   DebugAngel.09_26_at_16_29_08.031.log
65,536   DebugAngel.09_26_at_16_33_18.000.log
65,536   DebugAngel.09_26_at_16_44_09.008.log
65,536   DebugAngel.09_26_at_16_47_12.035.log
10,871   DebugAngel.09_26_at_16_56_58.041.log
```

Note: When this file is filled up, the first file is removed. No more than 5 files exist at any time. Each new file created has a timestamp.

With the following settings (and default **LogFile** name):

- **AutoRename=3**
- **MaxFileSize=1048576**
- **MaxFiles=4**

The resulting files in *C:\Program Files\Dialogic\log* are:

```
1,048,576   DebugAngel00.log
1,048,576   DebugAngel01.log
1,048,576   DebugAngel02.log
650,355     DebugAngel03.log
```

Note: When this file is filled up, the first file (*DebugAngel00.log*) is overwritten. No more than 4 files exist at any time. The files are always named *DebugAngel00.log*, *DebugAngel01.log*, *DebugAngel02.log*, and *DebugAngel03.log*.

1.31.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about DebugAngel, see the *Dialogic® System Software Diagnostics Guide*.

1.32 File Management Enhancements for PDK Trace Tool

With the Service Update, new command line options are provided with the Dialogic® PDK Trace tool to set the output log file size and to create multiple log files.

1.32.1 Feature Description

The PDK Trace tool logs information about PDK protocols on Dialogic® DM3 Boards, to aid in the troubleshooting of protocol issues. The tool is described in the *Dialogic® System Software Diagnostics Guide*. This feature enhances the file management capabilities for the log files created by PDK Trace. (Content of the log files remains unchanged.)

Previously, PDK Trace created a single log file at application startup. Upon subsequent application startups, the existing log file could be overwritten if a log file of the same name (default or otherwise) was specified. The PDK Trace log file was also allowed to grow without limit, which could result in a file that was difficult to work with.

With this feature, you can set command line options to specify the maximum file size and to create multiple log files when the file reaches its maximum size. In addition, the log file name now shows the date and time the log was created.

Command Line Options

PDK Trace uses command line options to specify configuration settings. The following command line options have not changed and continue to be supported as described in the *Dialogic® System Software Diagnostics Guide*:

- b#**
Specifies the logical ID of the board to trace (required).
- l[#]** or **-l[#-#]**
Specifies which line(s) the channels to be traced are located on (optional). The default value is 1 (line 1).
- c[#]** or **-c[#-#]**
Specifies which channel(s) on the specified lines to trace (optional). The default value is 1 (channel 1).
- e** or **-E**
Enables CAS, R2MF, and tone-on/tone-off event tracing on supported boards (optional).
- i**
Initializes the DM3 Tracer Component in the firmware (required only for the **first** time the utility is executed after the board is downloaded).
- v**
Prints the version number of the utility.
- , -h**
Prints the help screen (command line options) for the utility.

New and Enhanced Command Line Options

Two new command line options, **-a** and **-m**, have been added for PDK Trace, and the **-f** option has been enhanced to allow log file management as follows:

- a#**
Log file array size, specifies the maximum number of log files to maintain (optional). The default value is 1, and the maximum value is 10.
Example: `pdktrace -b0 -f[ExampleLog] -a5`
If left default (or explicitly set to 1), then PDK Trace creates a single log file that grows without bound (that is, no limit to the log file size).
If set greater than 1 (up to 10), then PDK Trace creates an initial log file at startup. When the log file reaches the maximum file size (either the default maximum log file size or the value specified via the **-m** command line option), the log file is closed and saved, and a new log file is created.
When the maximum number of log files (as specified by this setting) is reached, the oldest log file is deleted and a new log file is created to replace it.
Note: When the **-a** option is specified, any PDK Trace log files that exist prior to running this particular PDK Trace session are not deleted or modified in any way.

-m#

Specifies the maximum log file size in bytes (optional). The default depends on the setting of the **-a** option, as follows:

- For **-a1** (one log file), the default maximum file size is unlimited.
- For **-a2** through **-a10** (multiple log files), the default maximum file size is 100 megabytes.

The minimum that can be specified with the **-m** option is 100 kilobytes, and the maximum is 100 megabytes.

Example: `pdktrace -b0 -f[ExampleLog] -a5 -m500000`

-f[filename]

Specifies the name of a file on the host system to write the trace data to (optional). The default is *pdktrace.log*. The “.log” extension is appended to the specified file name string when creating the file.

If just a file name is specified, the log file will be created in the current directory where PDK Trace is being run from. However, if a path (either relative or absolute) is specified with the file name, then the log file will be created in the specified directory.

This option existed in the previous version of PDK Trace. However, the processing associated with this option has been modified to include date and time information, for management of multiple log files.

When the **-a** or **-m** option is used, the file name will automatically have a timestamp with the current date and time added to it. The “.log” extension will be appended to the end of the log file name. A file name with a timestamp has the following format:

`filename-MMDDYYYY-xxhyymzss.log`

where:

- filename - the name specified with the **-f** option (or the default if **-f** is not used)
- MM - month (01=January, 02=February, 03=March, ... 12=December)
- DD - day of the month (01-31)
- YYYY - year (e.g., 2008)
- xx - hour (24-hour format, 00-23)
- yy - minute (00-59)
- zz - second (00-59)

Example: If PDK Trace is started on February 17, 2008, at 3:11:27 p.m., with the **-f** command line option of **-f[ExampleLog]**, the name of the *first* log file created is:

`ExampleLog-02172008-15h11m27s.log`

When this file reaches the maximum size, it is closed and a new log file is created. The new log file will have a timestamp with the current date and time in its file name.

1.32.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about PDK Trace, see the *Dialogic® System Software Diagnostics Guide*.

1.33 Runtime Control of Single or Double Hookflash on Consultation Drop for FXS/LS Protocol

With the Service Update, runtime control of sending either a single or double hookflash when dropping a consultation call on a supervised transfer is now supported for Dialogic® DM3 Boards using the United States T1 FXS/LS Bidirectional protocol. For further information about this feature, see the *Dialogic® E1/T1 CAS/R2 Technology Guide*.

1.34 Analog Call Transfer Support on Dialogic® Springware Boards

With the Service Update, blind and supervised analog call transfers using the Dialogic® Global Call API are now supported on Dialogic® Springware Boards. For further information about this feature, see the *Dialogic® Global Call Analog Technology Guide*.

1.35 Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems

With the Service Update, Dialogic® System Release 6.0 PCI for Windows® supports the Windows® 7, Windows Vista®, and Windows Server® 2008 operating systems. The following versions are supported:

- Windows 7 Ultimate
- Windows Vista Business SP1
- Windows Vista Ultimate SP1
- Windows Server 2008 Enterprise
- Windows Server 2008 Standard, Full Version

The following sections highlight some of the differences that users will see when running System Release 6.0 PCI Windows on Windows 7, Windows Vista, or Windows Server 2008, as opposed to running on other Windows® operating systems.

- [Hardware Requirements](#)
- [Supported Boards](#)

- [Application Considerations in 64-Bit Mode](#)
- [Separate Install Media](#)
- [Content Split into Different Locations](#)
- [Changes to Environment Variables](#)
- [Building Applications](#)
- [Consent Dialog](#)
- [UDD Not Supported](#)
- [Remote DCM Not Supported](#)
- [Physical Address Extension \(32-Bit OS Versions Only\)](#)

If you plan to move existing applications to Windows 7, Windows Vista, or Windows Server 2008, see:

- [Guidelines for Moving Applications to Windows 7, Windows Vista, or Windows Server 2008](#)

1.35.1 Hardware Requirements

A minimum of **2 GB RAM** is required when running System Release 6.0 PCI Windows on Windows 7, Windows Vista, or Windows Server 2008.

Note: For Dialogic® DM/V-B Board users: If your system has the required 2 GB RAM but DM/V-B Boards fail to download, the board may have an older boot kernel that requires updating. What happens when using Dialogic® Configuration Manager (DCM), for example, is that when you click the green (Start System) button, the progress bar will go on forever because the board is not detected. If this happens, contact Technical Support to return the board to have a new boot kernel installed.

Refer to <http://www.dialogic.com/support/hwfaults/> for the Return Material Authorization (RMA) process.

1.35.2 Supported Boards

Boards Supported with 32-Bit OS Versions

All of the boards supported in System Release 6.0 PCI Windows are supported when running on 32-bit versions of the Windows 7, Windows Vista, and Windows Server 2008 operating systems **except**:

- BRI boards (for example, Dialogic® BRI/80PCI, BRI/160PCI)
- CPI Fax boards (for example, Dialogic® CPI/2400-1T1-PCIU, CPI/3000-1E1-PCIU)

Boards Supported with 64-Bit OS Versions

Dialogic® Springware boards and Dialogic® DM3 boards are the only boards supported when using 64-bit versions of the Windows 7, Windows Vista, and Windows Server 2008 operating systems.

1.35.3 Application Considerations in 64-Bit Mode

The Dialogic® System Release Software for 64-bit versions of the Windows 7, Windows Vista, and Windows Server 2008 operating systems provides signed 64-bit kernel-mode drivers for supported boards; however, applications must be built in 32-bit mode. Applications built in 64-bit mode will not operate with System Release 6.0 PCI Windows.

1.35.4 Separate Install Media

When you download System Release 6.0 PCI Windows from the Dialogic Support website, note that there is a separate link for downloading the System Release version for Windows Vista. This media is also used for installation under Windows Server 2008 and Windows 7.

1.35.5 Content Split into Different Locations

In order to meet User Account Control and File Virtualization security features of Windows 7, Windows Vista, and Windows Server 2008, those files that may require user modification of some sort have now been moved to a non-restricted target folder. It is strongly advised to keep them in this or other equivalent target location; otherwise, user modification of these files may be disallowed by the operating system.

When installing System Release 6.0 PCI Windows on Windows 7, Windows Vista, or Windows Server 2008, you will be prompted to enter two directory locations (rather than one) for storing Dialogic® System Release Software files:

Choose Program File Destination Location

This is the directory where non-user-modifiable files in the System Release Software will be installed. The default location is:

- *C:\Program Files\Dialogic* for 32-bit versions of Windows 7, Windows Vista, or Windows Server 2008
- *C:\Program Files(x86)\Dialogic* for 64-bit versions of Windows 7, Windows Vista, or Windows Server 2008

Choose User-Modifiable File Destination Location

This is the directory where user-modifiable files in the System Release Software will be installed. User-modifiable files include configuration files such as .prm and .cdp files, and demo programs, among others. The default location is *C:\ProgramData\Dialogic* for 32- and 64-bit versions of Windows 7, Windows Vista, or Windows Server 2008.

Note: *C:\ProgramData* is a hidden directory.

1.35.6 Changes to Environment Variables

Because the Dialogic® System Release Software files are now installed under two directory locations, it was necessary to make changes to the associated environment variables. Three new variables are being introduced to enable internal components to locate the non-modifiable *cfg* and *data* directories, and some of the existing variables point to a different location for a Windows 7, Windows Vista, or Windows Server 2008 install.

Environment Variable Values for 32-Bit Versions of Windows 7, Windows Vista, and Windows Server 2008

Environment Variable	Old Default Value	Windows 7, Windows Vista, and Windows Server 2008 Default Value, 32-Bit Versions of OS
INTEL_DIALOGIC_DIR	C:\Program Files\Dialogic	Unchanged
INTEL_DIALOGIC_BIN	C:\Program Files\Dialogic\bin	Unchanged
INTEL_DIALOGIC_CFG	C:\Program Files\Dialogic\cfg	C:\ProgramData\Dialogic\cfg
INTEL_DIALOGIC_FWL	C:\Program Files\Dialogic\data	C:\ProgramData\Dialogic\data
INTEL_DIALOGIC_INC	C:\Program Files\Dialogic\inc	Unchanged
INTEL_DIALOGIC_LIB	C:\Program Files\Dialogic\lib	Unchanged
INTEL_DIALOGIC_QSCRIPT	C:\Program Files\Dialogic\qscript	Unchanged
DIALOGIC_CFG_INTERNAL	N/A	C:\Program Files\Dialogic\cfg
DIALOGIC_FWL_BIN	N/A	C:\Program Files\Dialogic\data
DIALOGIC_USERDATA_DIR	N/A	C:\ProgramData\Dialogic

Environment Variable Values for 64-Bit Versions of Windows 7, Windows Vista, and Windows Server 2008

Environment Variable	Old Default Value	Windows 7, Windows Vista, and Windows Server 2008 Default Value, 64-Bit Versions of OS
INTEL_DIALOGIC_DIR	C:\Program Files\Dialogic	C:\Program Files(x86)\Dialogic
INTEL_DIALOGIC_BIN	C:\Program Files\Dialogic\bin	C:\Program Files(x86)\Dialogic\bin
INTEL_DIALOGIC_CFG	C:\Program Files\Dialogic\cfg	C:\ProgramData\Dialogic\cfg
INTEL_DIALOGIC_FWL	C:\Program Files\Dialogic\data	C:\ProgramData\Dialogic\data
INTEL_DIALOGIC_INC	C:\Program Files\Dialogic\inc	C:\Program Files(x86)\Dialogic\inc
INTEL_DIALOGIC_LIB	C:\Program Files\Dialogic\lib	C:\Program Files(x86)\Dialogic\lib
INTEL_DIALOGIC_QSCRIPT	C:\Program Files\Dialogic\qscript	C:\Program Files(x86)\Dialogic\qscript
DIALOGIC_CFG_INTERNAL	N/A	C:\Program Files(x86)\Dialogic\cfg

Environment Variable	Old Default Value	Windows 7, Windows Vista, and Windows Server 2008 Default Value, 64-Bit Versions of OS
DIALOGIC_FWL_BIN	N/A	C:\Program Files(x86)\Dialogic\data
DIALOGIC_USERDATA_DIR	N/A	C:\ProgramData\Dialogic

1.35.7 Building Applications

When building applications for Windows 7, Windows Vista, and Windows Server 2008, developers must use the Microsoft® Visual Studio® 2005 development system with Visual C++® Version 8.0 Service Pack 1. Any development system prior to that is no longer supported. **Applications must be recompiled using Visual Studio 2005 with Visual C++ Version 8.0 Service Pack 1.**

- Notes:**
1. Microsoft® Visual Studio 2005 (all editions) includes C++ compiler version 8.0. Applications must be compiled as 32-bit binaries.
 2. If using 64-bit version of Windows 7, Windows Vista, or Windows Server 2008, then Active Solution Platform must be set to Win32.

Microsoft has dropped support of Visual Studio .NET 2002 or Visual Studio .NET 2003 on Windows Vista, and has released the [Visual Studio 2005 Service Pack 1 update for Windows Vista](http://msdn2.microsoft.com/en-us/vstudio/aa948853.aspx). Please refer to the following MSDN® pages for more information:

- <http://msdn2.microsoft.com/en-us/vstudio/aa948853.aspx>
- <http://msdn2.microsoft.com/en-us/vstudio/aa948854.aspx>

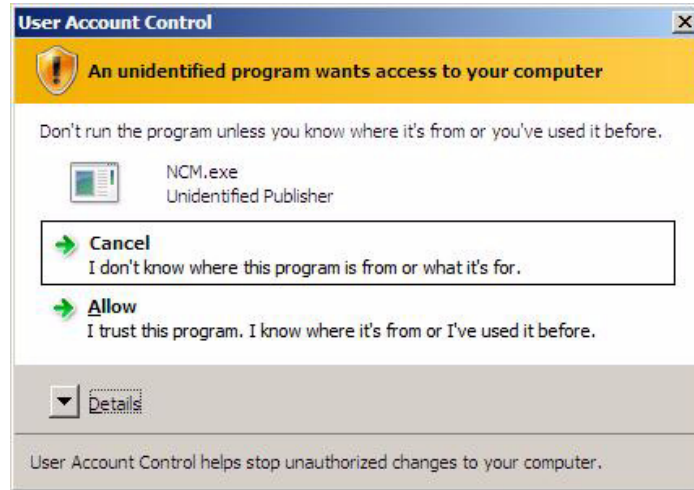
1.35.8 Consent Dialog

In order to meet User Account Control restrictions in Windows 7, Windows Vista, and Windows Server 2008, most of the Dialogic® administration utilities have been adapted and embed a request for administration privileges from the user invoking them. This is also known as requiring “elevation” or requesting “administration tokens” from invoker. The user must belong to the administrator group. The shield icon (shown below) will decorate the icon on any Dialogic® utility that requires elevation.



When the utility is invoked, it will request administration tokens, and if available, execution is granted. However, unless the user is the system's (built-in) administrator account (as opposed to belonging to the administrator group), a user consent dialog will still be presented by the operating system, and the user must confirm before execution can be started. This is the way Windows 7, Windows Vista, and Windows Server 2008 User

Account Control works; this is not unique to Dialogic® Software under these operating systems. An example of a consent dialog is:



1.35.9 UDD Not Supported

Dialogic® Diagnostics Software (UDD), a utility for testing Dialogic® Springware boards, is not supported on Windows 7, Windows Vista, and Windows Server 2008.

Most of the same UDD tests are performed during the download stage as part of the board startup process. For further information, see [Section 1.27, "Startup Error Codes for Dialogic® Springware Boards"](#), on page 72.

1.35.10 Remote DCM Not Supported

When you start the Dialogic® Configuration Manager (DCM), the Computer Name dialog box is displayed. When using Windows 7, Windows Vista, and Windows Server 2008, note that you can only connect to the local computer. Remote DCM is not supported.

1.35.11 Physical Address Extension (32-Bit OS Versions Only)

This release does not support systems running Windows with Physical Address Extension (PAE) enabled. The installation will warn when it detects a host machine CPU that supports PAE. This does not mean that PAE is enabled in the OS, but the user must ensure that it is not. If it is enabled, the user must disable PAE for proper Dialogic® System operation before any attempt to configure or start boards in the system.

1.35.12 Guidelines for Moving Applications to Windows 7, Windows Vista, or Windows Server 2008

- By default with Windows 7, Windows Vista, and Windows Server 2008, executables will run without administration privileges due to User Account Control (UAC) restrictions, even if the user is logged in with administrator privileges. This means that Dialogic applications that required administration privileges and ran successfully on an earlier Windows version may now fail with “permission denied” errors. The developer can overcome this situation by elevating the application execution level by granting an administrator token. One of the mechanisms for doing so is by providing the appropriate application manifest schema settings. Consult the Microsoft® .NET Framework Developer's Guide for details.
- Applications must be recompiled using Microsoft® Visual Studio® 2005 with Visual C++® Version 8.0 Service Pack 1. Refer to [Section 1.35.7, “Building Applications”](#), on page 107.
- Certain Dialogic® NCM APIs that change the state of the Dialogic System Service or start/stop Dialogic boards may require the application to run with elevated privileges. For information on Windows 7, Windows Vista, or Windows Server 2008 security and privilege elevation, see your operating system documentation.
- If you have been using hard-coded paths to locate Dialogic files, your application may need to be changed to use environment variables to locate these files. Refer to [Section 1.35.6, “Changes to Environment Variables”](#), on page 106.

1.36 Dialogic® DM3 Media Channel Reset Capability (Stuck Channel Recovery)

With the Service Update, whenever a media channel gets into a “stuck” state, there is a way to recover that channel without having to restart the application or redownload the board.

Note: A stuck channel is defined as a failure where the host application is unable to recover the channel and no further media operations are possible on that channel until the application is restarted or (in some cases) the board is redownloaded.

1.36.1 Feature Description

It has been observed, in rare occasions with high-density applications and high-load systems, that media channels have become stuck and no further processing would take place until the application is restarted or (in some cases) until the board is redownloaded.

This feature provides new API functions in the Dialogic® Voice library and in the Dialogic® Continuous Speech Processing (CSP) library that enable the application to recover from the stuck channel and return it to an idle and usable state.

Note: Not all stuck channels are recoverable. Also, not all errors are stuck channel errors. See [Section 1.36.3, “Restrictions and Limitations”](#), on page 117 for more information.

Supported Boards

All Dialogic® Media Span Boards support this media channel reset feature, namely Dialogic® DM/V, DM/V-A, DM/V-B, and DM/IP Boards.

New APIs

The two new API functions are:

- **dx_resetch()** - Call this API to recover the media channel when the channel is stuck and in a recoverable state. If the channel is recovered, a TDX_RESET event is generated to the application, which enables the application to reuse the channel for more media functions. If the channel is not in a recoverable state, a TDX_RESETERR event is sent back to the application indicating that the specific channel is not recoverable.
- **ec_resetch()** - Call this API to recover the CSP channel when the channel is stuck and in a recoverable state. If the channel is recovered, TDX_RESET and TEC_RESET events are generated to the application, which enables the application to reuse the channel for more media functions. If the channel is not in a recoverable state, TDX_RESETERR and TEC_RESETERR events are sent back to the application indicating that the specific channel is not recoverable. Note that the **ec_resetch()** function resets both the voice and the CSP channels.

Function reference information is provided next.

dx_reset()

Name: dx_reset (chdev, mode)

Inputs: int chdev • valid channel device handle
int mode • mode of operation

Returns: 0 if success
-1 if failure

Includes: `srllib.h`
`dxxplib.h`

Category: I/O

Mode: asynchronous or synchronous

Dialogic® DM3

Platform:

■ Description

The **dx_reset()** function recovers a channel that is “stuck” (busy or hung) and in a recoverable state, and brings it to an idle and usable state. This function blocks all other functions from operating on the channel until the function completes.

Parameter	Description
chdev	Specifies the valid device handle obtained when the channel was opened using dx_open()
mode	Specifies the mode of operation: <ul style="list-style-type: none"> • EV_ASYNC – asynchronous mode. The calling thread returns immediately so it can process media functionality on other channels. • EV_SYNC – synchronous mode. The calling thread waits until the channel is recovered or discovers that the channel is not in a recoverable state.

In synchronous mode, 0 is returned if the function completes successfully, and -1 is returned in case of error.

In asynchronous mode, the TDX_RESET event is generated to indicate that the channel was recovered and is in an idle and usable state. The TDX_RESETERR event is generated to indicate that the channel is not recoverable. Issuing any other media calls on this channel will result in an error.

■ Cautions

- The **dx_resetch()** function is intended for use on channels that are stuck and not responding. Do **not** use it in place of **dx_stopch()**. Use **dx_resetch()** only if you do not receive an event within 30 seconds of when it's expected. Overuse of this function creates unnecessary overhead and may affect system performance.

■ Errors

If the function returns -1, use the Dialogic® Standard Runtime Library (SRL) Standard Attribute function **ATDV_LASTERR()** to obtain the error code or use **ATDV_ERRMSGP()** to obtain a descriptive error message. One of the following error codes may be returned:

EDX_BADPARAM
Invalid parameter

EDX_FWERROR
Firmware error

EDX_NOERROR
No error

■ Example

```
#include <srllib.h>
#include <dxxlib.h>

main()
{
    int chdev, srlmode;
    /* Set SRL to run in polled mode. */
    srlmode = SR_POLLMODE;

    if (sr_setparm(SRL_DEVICE, SR_MODEID, (void *)&srlmode) == -1) {
        /* process error */
    }

    /* Open the channel using dx_open( ). Get channel device descriptor in
    * chdev.
    */

    if ((chdev = dx_open("dxxB1C1",NULL)) == -1) {
        /* process error */
    }

    /* continue processing */
    . .
    /* Force the channel to idle state. The I/O function that the channel
    * is executing will be terminated, and control passed to the handler
    * function previously enabled, using sr_enbhdr(), for the
    * termination event corresponding to that I/O function.
    * In asynchronous mode, dx_stopch() returns immediately,
    * without waiting for the channel to go idle.
    */

    if ( dx_stopch(chdev, EV_ASYNC) == -1) {
        /* process error */
    }

    /* Wait for dx_stopch() to stop the channel and return the termination event
    * for the present media function.
    */

    /* After waiting for 30 secs if the termination event is not returned, issue a
    * dx_resetch() to reset the channel.
    */

    if (dx_resetch(chdev, EV_ASYNC) <0 )
    {
        /*process error */
    }
}
```



```
    }  
  
    /* Wait for TDX_RESET or TDX_RESETERR events */  
}
```

■ **See Also**

- **ec_resetch()** in the *Dialogic® Continuous Speech Processing API Library Reference*

ec_reset()

Name: ec_resetch (chdev, mode)

Inputs: int chdev

int mode

- valid channel device handle
- mode of operation

Returns: 0 if success

-1 if failure

Includes: srllib.h

eclib.h

Category: I/O

Mode: asynchronous or synchronous

Dialogic® DM3

Platform:

■ Description

The **ec_reset**() function recovers a channel that is “stuck” (busy or hung) and in a recoverable state, and brings it to an idle and usable state. This function blocks all other functions from operating on the channel until the function completes. This function recovers both the CSP channel and the voice channel.

Parameter	Description
chdev	Specifies the valid device handle obtained when the channel was opened using dx_open()
mode	Specifies the mode of operation: <ul style="list-style-type: none"> • EV_ASYNC – asynchronous mode. The calling thread returns immediately so it can process media functionality on other channels. • EV_SYNC – synchronous mode. The calling thread waits until the channel is recovered or discovers that the channel is not in a recoverable state.

In synchronous mode, 0 is returned if the function completes successfully, and -1 is returned in case of error.

In asynchronous mode, the TDX_RESET and the TEC_RESET events are generated to indicate that the channel was recovered and is in an idle and usable state. The TDX_RESETER and the TEC_RESETER events are generated to indicate that the channel is not recoverable. Issuing any other media calls on this channel will result in an error.

■ Cautions

- The `ec_resetch()` function is intended for use on channels that are stuck and not responding. Do **not** use it in place of `ec_stopch()`. Use `ec_resetch()` only if you do not receive an event within 30 seconds of when it's expected. Overuse of this function creates unnecessary overhead and may affect system performance.

■ Errors

If the function returns -1, use the Dialogic® Standard Runtime Library (SRL) Standard Attribute function **ATDV_LASTERR()** to obtain the error code or use **ATDV_ERRMSGP()** to obtain a descriptive error message. One of the following error codes may be returned:

EDX_BADPARAM
Invalid parameter

EDX_FWERROR
Firmware error

EDX_NOERROR
No error

■ Example

```
#include <stdio.h>
#include <srllib.h>
#include <dxlib.h>
#include <eclib.h>
#include <errno.h> /* include in Linux applications only; exclude in Windows */

main()
{
    int chdev, srlmode;
    /* Set SRL to run in polled mode. */
    srlmode = SR_POLLMODE;
    if (sr_setparm(SRL_DEVICE, SR_MODEID, (void *)&srlmode) == -1) {
        /* process error */
    }

    /* Open the channel using dx_open( ). Get channel device descriptor
    * in chdev.
    */
    if ((chdev = dx_open("dxxxB1C1",0)) == -1) {
        /* process error */
    }
    /* continue processing */
    . .
    /* Force the channel to idle state. The I/O function that the channel
    * is executing will be terminated, and control passed to the handler
    * function previously enabled, using sr_enbhdlr(), for the
    * termination event corresponding to that I/O function.
    * In the asynchronous mode, ec_stopch() returns immediately,
    * without waiting for the channel to go idle.
    */
    if (ec_stopch(chdev, FULLDUPLEX, EV_ASYNC) == -1) {
        /* process error */
    }

    /* Wait for the termination events (TEC_STREAM and/or TDX_PLAY) */

    /* After waiting for 30 secs, if the channel is still in a busy state,
    * issue ec_reset() to reset both the CSP channel and the voice channel.
    * When issued in asynchronous mode, it will return both (TEC_RESET/TEC_RESETEERR)
    * and (TDX_RESET/TDX_RESETEERR) events.
    */

    if (ec_reset(chdev, EV_ASYNC) == -1) {
        /* process error */
    }
}
```

```

/* Wait for TEC_RESET/TEC_RESETErr and TDX_RESET/TDX_RESETErr */
}

```

■ See Also

- **dx_resetch()** in the *Dialogic® Voice API Library Reference*

1.36.2 Implementation Guidelines

The following guidelines apply when implementing the media channel reset capability using the Dialogic® Voice API:

- It is recommended that you issue the function in asynchronous mode for more efficient processing. In synchronous mode, the calling thread is blocked until the function completes, which may take up to a minute in worst-case scenarios.
- The **dx_resetch()** function is intended for use on channels that are stuck and not responding. Do **not** use it in place of **dx_stopch()**. Use **dx_resetch()** only if you do not receive an event within 30 seconds of when it's expected. Overuse of this function creates unnecessary overhead and may affect system performance.
- If you call **dx_resetch()** immediately following **dx_stopch()** without waiting at least 30 seconds for **dx_stopch()** to complete, you will not receive events, such as TDX_PLAY and TDX_RECORD, even if the stop operation is successful and the channel was not stuck. Instead, you will only receive the TDX_RESET event if the channel recovery is successful or the TDX_RESETErr event if the channel is not recoverable.
- If you call **dx_resetch()** without first using **dx_stopch()** to stop the channel, the Voice library will internally call **dx_stopch()** and wait 30 seconds for it to complete. If the internal stop channel is successful, you will receive the TDX_RESET event only. If the internal stop channel is unsuccessful, the Voice library will then call **dx_resetch()**. Once a reset is attempted, you will receive the TDX_RESET event if the channel recovery is successful or the TDX_RESETErr event if the channel is not recoverable.
- Unrecoverable channels are written to a log file in the DebugAngel tool or the Runtime Trace Facility (RTF) tool. See the *Dialogic® System Software Diagnostics Guide* for more information on these tools.

The following guidelines apply when implementing the media channel reset capability using the Dialogic® Continuous Speech Processing (CSP) API:

- The guidelines described for **dx_resetch()** and **dx_stopch()** apply to the **ec_resetch()** and **ec_stopch()** functions in the CSP API.
- For CSP applications, it is recommended that you use **ec_resetch()** since this function resets both the voice and the CSP channels. The **dx_resetch()** function resets the voice channels only.

1.36.3 Restrictions and Limitations

The following restrictions and limitations apply to the media channel reset feature:

- This feature only addresses scenarios where the firmware and the host library have lost synchronization or an event has not been propagated. DSP crashes, catastrophic firmware failures (killtasks), or unsynchronized firmware state machines are **not** recoverable without redownload of the board.
- This feature only addresses channels that become stuck while performing play and record, tone generation, or FSK operations. It also addresses channels that become stuck during CSP play or record operations.
- This feature does **not** address reset of IP media channels on Dialogic® DM/IP Boards. It only addresses the reset of voice channels on DM/IP Boards.
- The reset may not succeed if CPU utilization on the host system is close to 100 percent. It is recommended that the CPU usage be at a reasonable level (less than 70 percent) before you attempt a channel reset.

1.36.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Voice API, see the following documents:

- *Dialogic® Voice API Programming Guide*
- *Dialogic® Voice API Library Reference*

For more information about the Dialogic® Continuous Speech Processing (CSP) API, see the following documents:

- *Dialogic® Continuous Speech Processing API Programming Guide*
- *Dialogic® Continuous Speech Processing API Library Reference*

1.37 AMD Opteron Server Support

With the Service Update, Dialogic® System Release 6.0 PCI for Windows® has been validated for use with Advanced Micro Devices, Inc. (AMD) Opteron server processors.

1.38 Global DPD Enabled on Dialogic® Springware Boards

With the Service Update, Global Dial Pulse Detection (DPD) is now available by default via software. Previously, this feature had to be enabled from the factory or by ordering a separate GDPD enablement package to enable DPD on a board.

Global DPD is supported on Dialogic® Springware Boards, such as Dialogic® JCT Media Boards and Dialogic® D/4PCIU Media Boards. Global DPD is **not** supported on Dialogic® D/42JCT and D/82JCT PBX Integration Boards or on Dialogic® DM3 Media Boards.

For information about implementing Global DPD, see the *Dialogic® Voice API Programming Guide*.

1.39 Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs

With the Service Update, the user has the ability to detect new custom special information tones (SITs) on Dialogic® DM3 Boards using the Dialogic® Voice API and Dialogic® Global Call API. The new custom SITs are detected via the regular API events for detecting call progress analysis outcome, and in particular, SIT tone detection. In addition, create, query, and modify support of these new SIT tones and three existing default tones via the Voice API is now available.

1.39.1 Feature Description

Predictive dialing applications, which are widely used in call centers, need to detect a variety of SITs being used by Service Providers around the world. For this feature, the Voice and Global Call APIs each provide an additional 15 SITs with customizable SIT templates, which allow the user to detect a variety of nonstandard SITs used by Service Providers. When the board firmware detects an incoming SIT tone during call progress analysis, it tries to match it to one of the existing (default) templates. Tones that do not match the default templates will be matched against the custom SIT templates created by the user, and reported as such. If the SIT still does not fall into any of those two categories, custom or standard, it may still be collected and reported as undetected (SIT_ANY), and also reported back.

Voice API

For the Voice API, the 15 new custom tone templates (plus the existing default tone templates) are supported for detection and reporting by the **ATDX_CRTNID()** function. (For a description of the **ATDX_CRTNID()** function support on DM3 Boards, see [Section 1.89, “Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards”](#), on page 248.)

For this feature, full create, query, and modify support has been added for the new custom SITs and for three of the existing default SITs, via the **dx_createtone()**, **dx_querytone()**, and **dx_deletetone()** functions, as follows:

```
#define TID_CUSTOM_SIT1
#define TID_CUSTOM_SIT2
#define TID_CUSTOM_SIT3
#define TID_CUSTOM_SIT4
#define TID_CUSTOM_SIT5
#define TID_CUSTOM_SIT6
#define TID_CUSTOM_SIT7
```

```

#define TID_CUSTOM_SIT8
#define TID_CUSTOM_SIT9
#define TID_CUSTOM_SIT10
#define TID_CUSTOM_SIT11
#define TID_CUSTOM_SIT12
#define TID_CUSTOM_SIT13
#define TID_CUSTOM_SIT14
#define TID_CUSTOM_SIT15

#define TID_SIT_NC_INTERLATA
#define TID_SIT_RO_INTERLATA
#define TID_SIT_IO

```

For more information on modifying tone definitions, see the *Dialogic® Voice API Programming Guide*.

Global Call API

For the Global Call API, 15 new custom SITs are allowed and are reported to the application via the GCEV_DISCONNECTED event once any one of them is detected via Global Call. The following table maps the custom SIT tone ID to the Global Call values:

Global Call Result Value	Tone ID	Description
GCRV_SIT_UNKNOWN (GCRV_RESULT 0x70)	0x38F	Custom SIT tone 1 detected
	0x390	Custom SIT tone 2 detected
	0x391	Custom SIT tone 3 detected
	0x392	Custom SIT tone 4 detected
	0x393	Custom SIT tone 5 detected
	0x394	Custom SIT tone 6 detected
	0x395	Custom SIT tone 7 detected
	0x396	Custom SIT tone 8 detected
	0x397	Custom SIT tone 9 detected
	0x398	Custom SIT tone 10 detected
	0x399	Custom SIT tone 11 detected
	0x39A	Custom SIT tone 12 detected
	0x39B	Custom SIT tone 13 detected
	0x39C	Custom SIT tone 14 detected
	0x39D	Custom SIT tone 15 detected

In addition, four new default SITs can be detected via Global Call. The following table maps the Voice SITs to the new Global Call values:

Voice SIT	Global Call Result Value	Value	Global Call Error Code	Value	Description
TID_SIT_ANY	GCRV_SIT_UNKNOWN	(GCRV_RESULT 0x70)	EGC_SIT_UNKNOWN	0x162	Unknown SIT detected
TID_SIT_NC_INTERLATA	GCRV_NO_CIRCUIT_INTERLATA	(GCRV_RESULT 0x71)	EGC_NO_CIRCUIT_INTERLATA	0x163	No circuit interlata SIT detected
TID_SIT_RO_INTERLATA	GCRV_REORDER_INTERLATA	(GCRV_RESULT 0x72)	EGC_REORDER_INTERLATA	0x164	Reorder interlata SIT detected
TID_SIT_IO	GCRV_INEFFECTIVE_OTHER	(GCRV_RESULT 0x73)	EGC_INEFFECTIVE_OTHER	0x165	Ineffective other SIT detected

1.39.2 Supported Boards

The following boards support this feature:

- Dialogic® DMV-B Media Boards
- Dialogic® DMV300BTEPEQ, DMV600BTEPEQ, and DMV1200BTEPEQ Media Boards
- Dialogic® DISI Switching Boards
- Dialogic® DMV160LP Media Boards
- Dialogic® DMV and DMV-A Media Boards (ISDN or resource)

Note: DMV and DMV-A Media Boards running CAS, PDK (R2MF), and clear channel (ts16) do **not** support this feature. Dialogic® DM/IP, HDSI, VFN, DM3 Fax, and CPI Fax Boards do **not** support this feature. Refer to the table at the end of this section, [PCD Files That Do Not Support Enhanced Special Information Tones Feature](#), for a list of PCD files that are **excluded** from this feature. If you attempt to use this feature with a board using one of these PCD files, an error code is returned.

1.39.3 Example

The **dx_createtone()** function creates a new tone definition for a specific call progress tone. On successful completion of the function, the TONE_DATA structure is used to create a tone definition for the specified call progress tone.

Prior to creating a new tone definition with **dx_createtone()**, use **dx_querytone()** to get tone information for that tone, then use **dx_deletetone()** to delete that tone. The custom SIT tone templates have empty on-board firmware definitions after board initialization.

The following is a code example for the TONE_DATA data structure using TID_CUSTOM_SIT1 tone ID. The TONE_DATA structure is defined in *dxxlib.h*.

```
#include "srllib.h"
#include "dxxlib.h"
```



```

main()
{
    int brdhdl; /* physical board device handle */
    .
    .
    .
    /* Open physical board */
    if ((brdhdl = dx_open("brdB1",0)) == -1) {
        printf("Cannot open board\n");
        /* Perform system error processing */
        exit(1);
    }
    /* Get the Tone Information for the TID_CUSTOM_SIT1 tone*/
    int result;
    TONE_DATA tonedata;
    if ((result = dx_querytone(brdhdl, TID_CUSTOM_SIT1, &tonedata, EV_ASYNC)) == -1) {
        printf("Cannot obtain tone information for TID_CUSTOM_SIT1 \n");
        /* Perform system error processing */
        exit(1);
    }

    /* Delete the current TID_CUSTOM_SIT1 call progress tone before creating a new definition*/
    if ((result = dx_deletetone(brdhdl, TID_CUSTOM_SIT1, EV_ASYNC)) == -1) {
        printf("Cannot delete the TID_CUSTOM_SIT1 tone\n");
        /* Perform system error processing */
        exit(1);
    }

    /* Change call progress default CUSTOM SIT tone */

    tonedata.numofseg = 3; /* triple segment tone */
    tonedata.tn_rep_cnt = 1;
    tonedata.toneseg[0].tn_dflag = 0;
    tonedata.toneseg[0].tn1_min = 874;
    tonedata.toneseg[0].tn1_max = 955;
    tonedata.toneseg[0].tn2_min = 0;
    tonedata.toneseg[0].tn2_max = 0;
    tonedata.toneseg[0].tn_twinmin = 0;
    tonedata.toneseg[0].tn_twinmax = 0;
    tonedata.toneseg[0].tnon_min = 15;
    tonedata.toneseg[0].tnon_max = 30;
    tonedata.toneseg[0].tnoff_min = 0;
    tonedata.toneseg[0].tnoff_max = 5;

    tonedata.toneseg[1].tn_dflag = 0;
    tonedata.toneseg[1].tn1_min = 1310;
    tonedata.toneseg[1].tn1_max = 1410;
    tonedata.toneseg[1].tn2_min = 0;
    tonedata.toneseg[1].tn2_max = 0;
    tonedata.toneseg[1].tn_twinmin = 0;
    tonedata.toneseg[1].tn_twinmax = 0;
    tonedata.toneseg[1].tnon_min = 15;
    tonedata.toneseg[1].tnon_max = 30;
    tonedata.toneseg[1].tnoff_min = 0;
    tonedata.toneseg[1].tnoff_max = 5;

    tonedata.toneseg[2].tn_dflag = 0;
    tonedata.toneseg[2].tn1_min = 1845;
    tonedata.toneseg[2].tn1_max = 1950;
    tonedata.toneseg[2].tn2_min = 0;
    tonedata.toneseg[2].tn2_max = 0;
    tonedata.toneseg[2].tn_twinmin = 0;
    tonedata.toneseg[2].tn_twinmax = 0;
    tonedata.toneseg[2].tnon_min = 0;
    tonedata.toneseg[2].tnon_max = 0;
    tonedata.toneseg[2].tnoff_min = 0;
    tonedata.toneseg[2].tnoff_max = 0;

```

```

    if ((result = dx_createtone(brdhd1, TID_CUSTOM_SIT1, &tonedata, EV_SYNC)) == -1) {
        printf("create tone for TID_CUSTOM_SIT1 failed\n");
        /* Perform system error processing */
        exit(1);
    }
}

```

1.39.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Voice API, see the following documents:

- *Dialogic® Voice API Programming Guide*
- *Dialogic® Voice API Library Reference*

For more information about the Dialogic® Global Call API, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

Note: The following table lists PCD files that are **excluded** from this feature. If you attempt to create, query, or delete any of the custom tones with a board using one of these PCD files, error code EDX_TNQUERYDELETE is returned. Detection of the custom tones will not work either. The Description column in the table reflects the same text displayed in the Assign Firmware File dialog box when using the procedure described in Section 4.4, Selecting a Configuration File Set, in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*. For most products, the file names of the configuration file set reflect the media load supported. If a media load number (mlx) is not present in the file name, no media load is supported for that configuration. See Section 2.4.3, Media Load Configuration File Sets, in the DM3 Configuration Guide for details on each of the board families.

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
4x2_cas.pcd	DMV480_4T1 (BV 48 channels PSTN 4 Trunks CAS protocol)	ipvs_evr_2cas_311.pcd	DM/IP481-2T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml1b_qsa_cas.pcd	DMV960_4T1 (BV+ADSI/FSK 96 channels PSTN 4 Trunks CAS protocol)
4x2_r2mf.pcd	DMV600_4E1 (BV 60 channels PSTN 4 Trunks R2MF protocol)	ipvs_evr_2cas_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml1b_qsa_r2mf.pcd	DMV1200_4E1 (BV+ADSI/FSK 120 channels PSTN 4 Trunks R2MF protocol)
4xt_cas.pcd	DMT960_4T1 (PSTN 4 Trunks CAS protocol)	ipvs_evr_2cas_ml11_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml1b_qsa_ts16.pcd	DMV1200_4E1 (BV+ADSI/FSK 120 channels PSTN 4 Trunks TS16 protocol)
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
4xt_r2mf.pcd	DMT1200_4E1 (PSTN 4 Trunks R2MF protocol)	ipvs_evr_2isdn _4ess_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml2_dsa_cas.p cd	DMV480A_2T1 (BV+CSP 48 channels PSTN 2 Trunks CAS protocol)
at_hdsi.pcd	HDSI	ipvs_evr_2isdn _4ess_311c.pc d	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml2_dsa_r2mf. pcd	DMV600A_2E1 (BV+CSP 60 channels PSTN 2 Trunks R2MF protocol)
at_hdsi_48_pla y_rec.pcd	HDSI	ipvs_evr_2isdn _4ess_ml11_3 11c.pcd	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml2_dsa_ts16. pcd	DMV600A_2E1 (BV+CSP 60 channels PSTN 2 Trunks TS16 protocol)
at_hdsi_72_pla y_rec.pcd	HDSI	ipvs_evr_2isdn _5ess_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml2_qsa_cas.p cd	DMV960_4T1 (BV+CSP 96 channels PSTN 4 Trunks CAS protocol)
at_hdsi_96_pla y_rec.pcd	HDSI	ipvs_evr_2isdn _5ess_311c.pc d	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml2_qsa_r2mf. pcd	DMV1200_4E1 (BV+CSP 120 channels PSTN 4 Trunks R2MF protocol)
au_hdsi.pcd	HDSI	ipvs_evr_2isdn _5ess_ml11_3 11c.pcd	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml2_qsa_ts16. pcd	DMV1200_4E1 (BV+CSP 120 channels PSTN 4 Trunks TS16 protocol)
au_hdsi_48_pl ay_rec.pcd	HDSI	ipvs_evr_2isdn _dms_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	ml5bc_dsa_cas .pcd	DMV480A_2T1 (BV+CSP+64EC+CS PtoCTBus 48 channels Fax 12 channels PSTN 2 Trunks CAS protocol)
au_hdsi_72_pl ay_rec.pcd	HDSI	ipvs_evr_2isdn _dms_311c.pc d	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml5bc_dsa_r2 mf.pcd	DMV600A_2E1 (BV+CSP+64EC+CS PtoCTBus 60 channels Fax 12 channels PSTN 2 Trunks R2MF protocol)
au_hdsi_96_pl ay_rec.pcd	HDSI	ipvs_evr_2isdn _dms_ml11_31 1c.pcd	DM/IP481-2T1-100BT (DM/IPLINK- 2T1_NIC, 1 daughterboard, 48 channels)	ml5bc_dsa_ts1 6.pcd	DMV600A_2E1 (BV+CSP+64EC+CS PtoCTBus 60 channels Fax 12 channels PSTN 2 Trunks TS16 protocol)
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
be_hdsi.pcd	HDSI	ipvs_evr_2isdn_net5_311.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	mn_4xt_cas.pcd	DMT960_4T1 (PSTN 4 Trunks CAS protocol)
be_hdsi_48_play_rec.pcd	HDSI	ipvs_evr_2isdn_net5_311c.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	mn_4xt_r2mf.pcd	DMT1200_4E1 (PSTN 4 Trunks R2MF protocol)
be_hdsi_72_play_rec.pcd	HDSI	ipvs_evr_2isdn_net5_ml11_311c.pcd	DM/IP601-2E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	mn_4xt_ts16.pcd	DMT1200_4E1 (PSTN 4 Trunks TS16 protocol)
be_hdsi_96_play_rec.pcd	HDSI	ipvs_evr_2isdn_net5_ts16_311.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	mx_hdsi.pcd	HDSI
ch_hdsi.pcd	HDSI	ipvs_evr_2isdn_ni2_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	mx_hdsi_48_play_rec.pcd	HDSI
ch_hdsi_48_play_rec.pcd	HDSI	ipvs_evr_2isdn_ni2_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	mx_hdsi_72_play_rec.pcd	HDSI
ch_hdsi_72_play_rec.pcd	HDSI	ipvs_evr_2isdn_ni2_ml11_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	mx_hdsi_96_play_rec.pcd	HDSI
ch_hdsi_96_play_rec.pcd	HDSI	ipvs_evr_2isdn_ntt_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	my_hdsi.pcd	HDSI
cpi400bripcipm.pcd	CPi/400 BRI-PCI Point to Multipoint	ipvs_evr_2isdn_ntt_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	my_hdsi_48_play_rec.pcd	HDSI
cpi400bripcipp.pcd	CPi/400 BRI-PCI Point to Point	ipvs_evr_2isdn_ntt_ml11_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	my_hdsi_72_play_rec.pcd	HDSI
de_hdsi.pcd	HDSI	ipvs_evr_2isdn_qsige1_311.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	my_hdsi_96_play_rec.pcd	HDSI
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
de_hdsi_48_play_rec.pcd	HDSI	ipvs_evr_2isdn_qsige1_311c.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	nl_hdsi.pcd	HDSI
de_hdsi_72_play_rec.pcd	HDSI	ipvs_evr_2isdn_qsige1_ml11_311c.pcd	DM/IP601-2E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	nl_hdsi_48_play_rec.pcd	HDSI
de_hdsi_96_play_rec.pcd	HDSI	ipvs_evr_2isdn_qsigt1_311.pcd	DM/IP481-2T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 48 channels)	nl_hdsi_72_play_rec.pcd	HDSI
dk_hdsi.pcd	HDSI	ipvs_evr_2isdn_qsigt1_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	nl_hdsi_96_play_rec.pcd	HDSI
dk_hdsi_48_play_rec.pcd	HDSI	ipvs_evr_2isdn_qsigt1_ml11_311c.pcd	DM/IP481-2T1-100BT (DM/IPLINK-2T1_NIC, 1 daughterboard, 48 channels)	no_hdsi.pcd	HDSI
dk_hdsi_72_play_rec.pcd	HDSI	ipvs_evr_2r2mf_311.pcd	DM/IP601-2E1-100BT	no_hdsi_48_play_rec.pcd	HDSI
dk_hdsi_96_play_rec.pcd	HDSI	ipvs_evr_2r2mf_311c.pcd	DM/IP601-2E1-100BT (DM/IPLINK-E1_NIC)	no_hdsi_72_play_rec.pcd	HDSI
es_hdsi.pcd	HDSI	ipvs_evr_2r2mf_ml11_311c.pcd	DM/IP601-2E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	no_hdsi_96_play_rec.pcd	HDSI
es_hdsi_48_play_rec.pcd	HDSI	ipvs_evr_cas_311.pcd	DM/IP241-T1 (DM/IPLINK-T1_NIC)	nz_hdsi.pcd	HDSI
es_hdsi_72_play_rec.pcd	HDSI	ipvs_evr_cas_ml11_311.pcd	DM/IP241-T1 (DM/IPLINK-T1_NIC)	nz_hdsi_48_play_rec.pcd	HDSI
es_hdsi_96_play_rec.pcd	HDSI	ipvs_evr_isdn_4ess_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	nz_hdsi_72_play_rec.pcd	HDSI
fax24.pcd	DM/F240-PCI - 24 Ch. Fax	ipvs_evr_isdn_4ess_ml11_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	nz_hdsi_96_play_rec.pcd	HDSI
fax30.pcd	DM/F300-PCI - 30 Ch. Fax	ipvs_evr_isdn_5ess_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	pt_hdsi.pcd	HDSI
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
fn_isdn_4ess.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_5ess_ml11_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	pt_hdsi_48_pla_y_rec.pcd	HDSI
fn_isdn_5ess.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_dms_311.pcd	DM/IP241-1T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	pt_hdsi_72_pla_y_rec.pcd	HDSI
fn_isdn_dms.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_dms_ml11_311.pcd	DM/IP241-1T1 (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	pt_hdsi_96_pla_y_rec.pcd	HDSI
fn_isdn_net5.pcd	DM/F300-1E1-PCI - E1 w/30 Ch. Fax FN	ipvs_evr_isdn_net5_311.pcd	DM/IP301-1E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 30 channels)	qs_cas.pcd	DMV960_4T1 (BV 96 channels PSTN 4 Trunks CAS protocol)
fn_isdn_ni2.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_net5_ml11_311.pcd	DM/IP301-1E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 30 channels)	qs_r2mf.pcd	DMV1200_4E1 (BV 120 channels PSTN 4 Trunks R2MF protocol)
fn_isdn_ntt.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_ni2_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	se_hdsi.pcd	HDSI
fn_isdn_qsige1.pcd	DM/F300-1E1-PCI - E1 w/30 Ch. Fax FN	ipvs_evr_isdn_ni2_ml11_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 24 channels)	se_hdsi_48_pla_y_rec.pcd	HDSI
fn_isdn_qsigt1.pcd	DM/F240-1T1-PCI - T1 w/23 Ch. Fax FN	ipvs_evr_isdn_ntt_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 23 channels)	se_hdsi_72_pla_y_rec.pcd	HDSI
fn_r2mf.pcd	DM/F300-1E1-PCI - E1 w/30 Fax Channels FN	ipvs_evr_isdn_ntt_ml11_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 23 channels)	se_hdsi_96_pla_y_rec.pcd	HDSI
fn_t1.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN	ipvs_evr_isdn_qsige1_311.pcd	DM/IP301-1E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 30 channels)	sg_hdsi.pcd	HDSI
fn3_isdn_4ess.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_isdn_qsige1_ml11_311.pcd	DM/IP301-1E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 30 channels)	sg_hdsi_48_pla_y_rec.pcd	HDSI
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
fn3_isdn_5ess.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_isdn_qsigt1_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 23 channels)	sg_hdsi_72_pla_y_rec.pcd	HDSI
fn3_isdn_dms.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_isdn_qsigt1_ml11_311.pcd	DM/IP241-1T1-100BT (DM/IPLINK-T1_NIC, 1 daughterboard, 23 channels)	sg_hdsi_96_pla_y_rec.pcd	HDSI
fn3_isdn_net5.pcd	DM/F300-1E1-PCI - E1 w/30 Ch. Fax FN3	ipvs_evr_r_311.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	ul2_qsa_cas.pcd	DMV960_4T1 (BV+CSP 96 channels CONF+EC 15 channels Fax 4 channels PSTN 4 Trunks CAS protocol)
fn3_isdn_ni2.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_r_311_ml1a.pcd	DM/IP601-2E1 (DM/IPLINK-E1_NIC, 1 daughterboard, 60 channels)	ul1_qsa_*e1ISDNprot*.pcd	DMV1200_4E1 (BV 60 channels CONF+EC 60 channels Fax 8 channels PSTN 4 Trunks DPNSS protocol)
fn3_isdn_ntt.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_r_311c.pcd	DM/IP1200 (Resource Only board)	ul2_qsa_*t1ISDNprot*.pcd	DMV960_4T1 (BV+CSP 96 channels CONF+EC 15 channels Fax 4 channels PSTN 4 Trunks QSIGT1 protocol)
fn3_isdn_qsigt1.pcd	DM/F300-1E1-PCI - E1 w/30 Ch. Fax FN3	ipvs_evr_r_ml1_311c.pcd	DM/IP1200 (Resource Only board)	us_hdsi.pcd	HDSI
fn3_isdn_qsigt1.pcd	DM/F240-1T1-PCI - T1 w/23 Ch. Fax FN3	ipvs_evr_r2mf_311.pcd	DM/IP301-E1 (DM/IPLINK-E1_NIC)	us_hdsi_48_pla_y_rec.pcd	HDSI
fn3_r2mf.pcd	DM/F300-1E1-PCI - E1 w/30 Fax Channels FN3	ipvs_evr_r2mf_ml11_311.pcd	DM/IP301-E1 (DM/IPLINK-E1_NIC)	us_hdsi_72_pla_y_rec.pcd	HDSI
fn3_t1.pcd	DM/F240-1T1-PCI - T1 w/24 Ch. Fax FN3	ipvs_evr_ts16_ml11_311.pcd	DM/IP301-1E1-100BT (DM/IPLINK-E1_NIC, 1 daughterboard, 30 channels)	us_hdsi_96_pla_y_rec.pcd	HDSI
fr_hdsi.pcd	HDSI	it_hdsi.pcd	HDSI	vfn_isdn_4ess.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
fr_hdsi_48_play_rec.pcd	HDSI	it_hdsi_48_play_rec.pcd	HDSI	vfn_isdn_5ess.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
fr_hdsi_72_play_rec.pcd	HDSI	it_hdsi_72_play_rec.pcd	HDSI	vfn_isdn_dms.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
fr_hdsi_96_play_rec.pcd	HDSI	it_hdsi_96_play_rec.pcd	HDSI	vfn_isdn_net5.pcd	DM/VF300-1E1-PCI - E1 w/30 Ch. Fax VFN
gb_hdsi.pcd	HDSI	jp_hdsi.pcd	HDSI	vfn_isdn_ni2.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
gb_hdsi_48_play_rec.pcd	HDSI	jp_hdsi_48_play_rec.pcd	HDSI	vfn_isdn_ntt.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
gb_hdsi_72_play_rec.pcd	HDSI	jp_hdsi_72_play_rec.pcd	HDSI	vfn_isdn_qsige1.pcd	DM/VF300-1E1-PCI - E1 w/30 Ch. Fax VFN
gb_hdsi_96_play_rec.pcd	HDSI	jp_hdsi_96_play_rec.pcd	HDSI	vfn_isdn_qsigt1.pcd	DM/VF240-1T1-PCI - T1 w/23 Ch. Fax VFN
gdk_isdn_4ess.pcd	Cpi/2400CT-T1 ISDN 4ESS with 24 Fax Channels	lu_hdsi.pcd	HDSI	vfn_r2mf.pcd	DM/VF300-1E1-PCI - E1 w/30 Fax Channels VFN
gdk_isdn_5ess.pcd	Cpi/2400CT-T1 ISDN 5ESS with 24 Fax Channels	lu_hdsi_48_play_rec.pcd	HDSI	vfn_t1.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN
gdk_isdn_dms.pcd	Cpi/2400CT-T1 ISDN DMS with 24 Fax Channels	lu_hdsi_72_play_rec.pcd	HDSI	vfn3_isdn_4ess.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
gdk_isdn_net5.pcd	Cpi/3000CT-E1 ISDN NET5 with 30 Fax Channels	lu_hdsi_96_play_rec.pcd	HDSI	vfn3_isdn_5ess.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
gdk_isdn_ntt.pcd	Cpi/2400CT-T1 ISDN NTT with 24 Fax Channels	ml1_4x2_cas.pcd	DMV480_4T1 (BV 48 channels PSTN 4 Trunks CAS protocol)	vfn3_isdn_dms.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
gdk_t1_em.pcd	Cpi/2400CT-T1 CAS E&M with 24 Fax Channels	ml1_4x2_r2mf.pcd	DMV600_4E1 (BV 60 channels PSTN 4 Trunks R2MF protocol)	vfn3_isdn_net5.pcd	DM/VF300-1E1-PCI - E1 w/30 Ch. Fax VFN3
gdk_t1_gs.pcd	Cpi/2400CT-T1 with 24 Fax Channels	ml1_4x2_ts16.pcd	DMV600_4E1 (BV 60 channels PSTN 4 Trunks TS16 protocol)	vfn3_isdn_ni2.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
gdk_t1_ls.pcd	Cpi/2400CT-T1 T1 CAS Loop Start with 24 Fax Channels	ml1_qs_cas.pcd	DMV960_4T1 (BV 96 channels PSTN 4 Trunks CAS protocol)	vfn3_isdn_ntt.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
hk_hdsi.pcd	HDSI	ml1_qs_r2mf.pcd	DMV1200_4E1 (BV 120 channels PSTN 4 Trunks R2MF protocol)	vfn3_isdn_qsige1.pcd	DM/VF300-1E1-PCI - E1 w/30 Ch. Fax VFN3
hk_hdsi_48_play_rec.pcd	HDSI	ml1_qs_ts16.pcd	DMV1200_4E1 (BV 120 channels PSTN 4 Trunks TS16 protocol)	vfn3_isdn_qsigt1.pcd	DM/VF240-1T1-PCI - T1 w/23 Ch. Fax VFN3
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

PCD Files That Do Not Support Enhanced Special Information Tones Feature					
PCD File (Unsupported)	Description	PCD File (Unsupported)	Description	PCD File (Unsupported)	Description
hk_hdsi_72_pla y_rec.pcd	HDSI	ml10_dsa_cas. pcd	DMV480A_2T1 (BV+CSP 48 channels CONF+EC 60 channels PSTN 2 Trunks CAS protocol)	vfn3_r2mf.pcd	DM/VF300-1E1-PCI - E1 w/30 Fax Channels VFN3
hk_hdsi_96_pla y_rec.pcd	HDSI	ml10_dsa_r2mf .pcd	DMV600A_2E1 (BV+CSP 60 channels CONF+EC 60 channels PSTN 2 Trunks R2MF protocol)	vfn3_t1.pcd	DM/VF240-1T1-PCI - T1 w/24 Ch. Fax VFN3
ie_hdsi.pcd	HDSI	ml10_dsa_ts16 .pcd	DMV600A_2E1 (BV+CSP 60 channels CONF+EC 60 channels PSTN 2 Trunks TS16 protocol)	za_hdsi.pcd	HDSI
ie_hdsi_48_pla y_rec.pcd	HDSI	ml1b_dsa_cas. pcd	DMV480A_2T1 (BV+ADSI/FSK 48 channels PSTN 2 Trunks CAS protocol)	za_hdsi_48_pla y_rec.pcd	HDSI
ie_hdsi_72_pla y_rec.pcd	HDSI	ml1b_dsa_r2mf .pcd	DMV600A_2E1 (BV+ADSI/FSK 60 channels PSTN 2 Trunks R2MF protocol)	za_hdsi_72_pla y_rec.pcd	HDSI
ie_hdsi_96_pla y_rec.pcd	HDSI	ml1b_dsa_ts16 .pcd	DMV600A_2E1 (BV+ADSI/FSK 60 channels PSTN 2 Trunks TS16 protocol)	za_hdsi_96_pla y_rec.pcd	HDSI
Note: List of PCD files that do not support enhanced special information tones is subject to change with each Service Update.					

1.40 Troubleshooting Information for RTF Logs

To assist in troubleshooting, a table showing runtime and firmware errors that may appear in Dialogic® Runtime Trace Facility (RTF) logs is now available. You can get a description of errors and the suggested action to resolve the error. To access the table, use this link:

- [Error Code Table](#)

For runtime errors, the table provides the following information:

Internal error value

The error code detected internally by the library. In some of the libraries, more than one internal error is mapped to an end user error. When contacting support about failures, this information will be helpful to the support engineer because it provides more specific information about why the error was generated. This number may appear in the RTF log (with the end user error value).

Note: Sometimes the internal error value and end user error value are listed in the same trace entry. Sometimes the internal error value may appear as a separate entry.

End user error

The name of the constant that is documented in the library API reference.

End user error value

The numeric value of the constant that is documented in the library API reference. This is the value that will appear in the RTF log, which you can then search for in the table.

Description of the error

A textual description of the error.

Action to be taken

The suggested action to resolve the error.

For firmware errors, the table provides the following information:

Resource

The firmware entity in which the error occurred. A resource is technically called a DM3 resource and is a software entity that provides a service to other DM3 resources. You can use the resource information to better narrow down what activity was occurring when the error occurred.

Loc hex

The value that will appear in the RTF log (for example, 0x80000C), which you can then search for in the table.

Error class

A classification of the firmware error in broad categories. You can use this column to understand the type of action to take for a particular type of error. For example, if an error is classified as a memory error, action can be taken that is specific to this type of error (such as a pool configuration change).

Error subclass

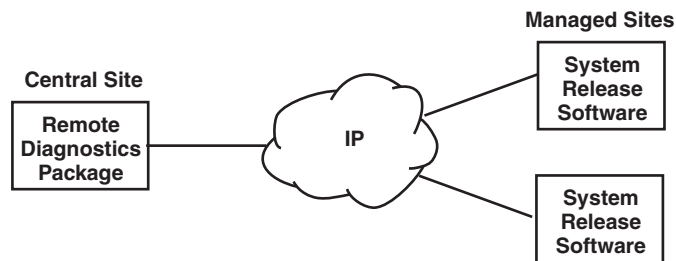
Provides a bit more specialization with regard to the error class. Whenever possible, if a class could be subdivided into more specific classifications, it was done. The use of the error subclass is the same as that of the error class.

Action to be taken

The suggested action to resolve the error.

1.41 Remote Diagnostics Package

A remote diagnostics package is now available that allows you to run Dialogic® diagnostics utilities remotely from a central site. The managed sites must have Dialogic® System Release 6.0 PCI for Windows® installed. The central site does **not** need Dialogic® System Release 6.0 PCI for Windows® installed.



The remote diagnostics package is a *subset* of the system release software. It is designed for managing multiple remote sites from a central site, where the central site does not need the system software release or any Dialogic® boards installed. Instead, the remote diagnostics package must be installed at the central site. The diagnostics utilities in the remote diagnostics package are the same as the diagnostics utilities in Dialogic® System Release 6.0 PCI for Windows®.

Note: As of Service Update 275, the Remote Diagnostics Package is no longer distributed since it is no longer supported for this or future Service Updates.

1.41.1 Diagnostics Utilities

The remote diagnostics package includes the following utilities:

- Diagnostics Management Console (DMC)
- Runtime Trace Facility Manager and Server application (RTFManager, RTFServer)

For information about these utilities, see the *Dialogic® System Software Diagnostics Guide*.

1.41.2 Installing the Remote Diagnostics Package

The remote diagnostics package can be downloaded from the Dialogic support website.

Requirements at central site:

- SSH client
- IP connectivity to managed sites
- Java Runtime Environment (JRE) version 1.5 or later

Requirements at managed sites:

- SSH server
- IP connectivity to central site
- Dialogic® System Release 6.0 PCI for Windows® installed

1.42 New Parameter for Adjusting Silence Threshold on Dialogic® DM3 Boards

With the Service Update, the user has the ability to adjust the silence threshold parameter on Dialogic® DM3 Boards to a value above or below the default value of -43 dBm0 while using play and record functions like **dx_play()**, **dx_record()**, and **ec_reciottdata()**. For instance, its adjustment affects the threshold for silence termination conditions in the R4 API TPT structure. It also affects silence detection via R4 unsolicited Standard Runtime Library (SRL) events.

The silence threshold is the level that defines whether the incoming data to a voice channel is recognized as silence or non-silence. The threshold is defined by the minimum energy level of a signal below which it is considered as silence. With this new feature, the user can statically adjust the silence threshold default value of -43 dBm0 via the DM3 firmware configuration file across all voice channels on a DM3 Board.

Configuration Example

To change the default value of the silence threshold, you must add a new parameter in the CONFIG file that was selected for your board. The parameter is **0x70B**, and must be added in the [sigDet] section of the CONFIG file. A value equal to the desired silence threshold, measured in dBm0, must be entered. For example:

```
[sigDet]

SetParm=0x70B, 0xffd3 ! SD_ParmMinEnergy in dBm0 (e.g. 0xffd3=-45, 0xffda=-38,
Default: 0xffd5=-43)
```

After the CONFIG file is saved, the changes take effect after downloading.

For further information about modifying DM3 CONFIG files, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.43 Support for PCI Express Boards - Dialogic® Station Interface Boards

With the Service Update, Dialogic® System Release 6.0 PCI for Windows® now supports the following Dialogic® Station Interface Boards in the PCI Express form factor:

Dialogic® DISI16-EW Switching Board

Provides connectivity for up to 16 station interfaces in a single, full-length PCI Express slot. Includes conferencing, voice play/record, tone detection and generation, and caller ID capabilities.

Dialogic® DISI24-EW Switching Board

Provides connectivity for up to 24 station interfaces in a single, full-length PCI Express slot. Includes conferencing, voice play/record, tone detection and generation, and caller ID capabilities.

Dialogic® DISI32-EW Switching Board

Provides connectivity for up to 32 station interfaces in a single, full-length PCI Express slot. Includes conferencing, voice play/record, tone detection and generation, and caller ID capabilities.

When configuring the system for the PCI Express form factor boards, use the same menu selections and configuration settings that are documented for the PCI version of the boards.

Note: When installing the Dialogic® DISI16-EW, DISI24-EW, and DISI32-EW Boards, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

1.44 Support for PCI Express Boards - Dialogic® DM/V-B Boards

Summary

With the Service Update, Dialogic® System Release 6.0 PCI for Windows® now supports the following Dialogic® DM/V-B Boards in the PCI Express form factor:

Dialogic® DMV300BTEPEQ Media Board

The DMV300BTEPEQ Board is a single span board with software selectable T1/E1.

- One digital network interface with 30+ channels of media processing.
- Support for universal media load with simultaneous voice, fax, and conferencing.
- Provides A-law/mu-law conversion and the ability to mix selected protocols on the board.
- PCI Express form factor.

Dialogic® DMV600BTEPEQ Media Board

The DMV600BTEPEQ Board is a dual span board with software selectable T1/E1 (per network interface).

- Two digital network interfaces with 60+ channels of media processing.
- Support for universal media load with simultaneous voice, fax, and conferencing.
- Provides A-law/mu-law conversion and the ability to mix selected protocols on the board.
- PCI Express form factor.

Dialogic® DMV1200BTEPEQ Media Board

The DMV1200BTEPEQ Board is a quad span board with software selectable T1/E1 (per network interface).

- Four digital network interfaces with 120+ channels of media processing.
- Support for universal media load with simultaneous voice, fax, and conferencing.
- Provides A-Law/Mu-Law conversion and the ability to mix selected protocols on the board.
- PCI Express form factor.

When configuring the system for the PCI Express form factor boards, use the same menu selections and configuration settings that are documented for the PCI version of the boards. Any differences are discussed below.

Note: When installing the Dialogic® DMV300BTEPEQ, DMV600BTEPEQ, and DMV1200BTEPEQ Boards, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

Features

The Dialogic® DMV300BTEPEQ, DMV600BTEPEQ, and DMV1200BTEPEQ Boards support the same features as the existing Dialogic® DM/V-B PCI Boards plus new media loads, lower latencies/increased performance, and first time support for a single span Dialogic® DM3 board.

Some of the features for these boards are listed below. Refer to the product data sheet, which is accessible at <http://www.dialogic.com/products>, for additional information about applications, configurations, features, and technical specifications.

- Software selectable T1/E1. Ability to mix T1 and E1 on each network interface.
- Ability to combine protocols on the same board. Protocols within a group can be mixed among network interfaces on the same board; however, protocols from different groups cannot be mixed on the same board.
 - Group 1: Mix any combination of 4ESS (T1), 5ESS (T1), NTT (T1), NI2 (T1), DMS (T1), QSIGT1 (T1), QSIGE1 (E1), NET5 (E1), T1CC (T1 Clear Channel), CAS (T1), E1CC (E1 Clear Channel), R2MF (E1) protocols on the same board.
 - Group 2: Mix any combination of DPNSS (E1) or DASS2 (E1) protocols on the same board.

- Ability to send alarm state to the network at all times from power-up to application start-up (i.e., trunk preconditioning).
- Universal load available (simultaneous voice + speech + fax + conferencing) on all Dialogic® DM/V-B Boards. All supported media loads are listed below.
- A-Law/Mu-Law conversion.

Note: Fixed routing configuration is not supported on Dialogic® DM/V-B Boards. Refer to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about configuration, media loads, and mixing of protocols for the above features and board support.

Media Loads

The media loads supported by the Dialogic® DMV300BTEPEQ, DMV600BTEPEQ, and DMV1200BTEPEQ Boards are listed below.

ML	Media Loads/Features Supported											
	Voice Only								Fax	Conferencing Only		
	Basic Voice	Transaction Record	Enhanced Coders	TrueSpeech	Enhanced Echo Cancellation†	CSP	CSP Streaming to CT Bus	FSK	Fax	Conferencing Parties	Conferencing - Tone Clamping	Conferencing - Echo Cancellation
Dialogic® DMV300BTEPEQ (Single Span Board)												
UL1	30	30	30	30	30	30	30	30	12	30	30	-
ML5	30	30	-	-	-	-	-	30	30	-	-	-
ML10	30	30	30	30	30	30	30	30	-	32	32	32
Dialogic® DMV600BTEPEQ (Dual Span Board)												
UL1	60	60	60	60	60	60	60	60	16	60	60	60
UL2	90	90	90	90	90	90	90	90	6	48	48	48
Dialogic® DMV1200BTEPEQ (Quad Span Board)												
UL1	120	120	120	120	120	120	120	120	12	30	30	-
Notes: For more information about media loads, refer to the <i>Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide</i> . Features within a resource group (headings marked as Voice Only, Fax, or Conferencing Only) are inclusive. Features across resource groups are additive. For example, on the Dialogic® DMV600BTEPEQ Board using UL1, there are 60 total voice resources, 16 fax resources, and 60 conferencing resources. This means that any combination of the listed voice resources (Voice Only subheadings marked as Basic Voice, Transaction Record, Enhanced Coders, TrueSpeech, Enhanced Echo Cancellation, CSP, CSP Streaming to CT Bus, and FSK) can be used up to a total of 60. For example, 30 Basic Voice plus 10 Enhanced Coders plus 10 TrueSpeech plus 10 CSP Streaming to CT Bus. In addition to these various voice resources, the UL1 media load can use 16 fax resources and 60 conferencing resources (with Tone Clamping and Echo Cancellation) simultaneously. ‡ Default configuration is EEC (enhanced EC, 32 ms) for CSP supported ML, unless otherwise indicated or set in the component named [0x2c] in the respective CONFIG file. You can only change it to a lower EC tail length, by changing the CSP parameter 0x2c03 accordingly in the respective CONFIG file. Conferencing EC, however, will always be 16 ms, regardless of the EC parameter setting. *16 ms only CSP. **There is no network interface support with these media loads. They behave as if the board is a resource-only board. Network interfaces are disabled.												

ML	Media Loads/Features Supported											
	Voice Only								Fax	Conferencing Only		
	Basic Voice	Transaction Record	Enhanced Coders	TrueSpeech	Enhanced Echo Cancellation†	CSP	CSP Streaming to CT Bus	FSK	Fax	Conferencing Parties	Conferencing - Tone Clamping	Conferencing - Echo Cancellation
UL2	120	120	-	-	-	-	-	120	12	120	120	-
UL3	120	120	120	-	-	120*	-	120	8	36	36	36
ML2	150	150	150	150	150	150	-	150	-	-	-	-
ML5	120	120	-	-	-	-	-	120	30	-	-	-
ML5B	120	120	120	120	120	120	120	120	12	-	-	-
ML9B**	-	-	-	-	-	-	-	-	-	160	160	160
ML9C**	-	-	-	-	-	-	-	-	-	576	-	-
ML9D**	-	-	-	-	-	-	-	-	-	270	270	-
ML10	120	120	120	-	-	120*	120	120	-	54	54	54
ML10B	120	120	-	-	-	-	-	120	-	120	120	120

Notes: For more information about media loads, refer to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.
Features within a resource group (headings marked as Voice Only, Fax, or Conferencing Only) are inclusive. Features across resource groups are additive. For example, on the Dialogic® DMV600BTEPEQ Board using UL1, there are 60 total voice resources, 16 fax resources, and 60 conferencing resources. This means that any combination of the listed voice resources (Voice Only subheadings marked as Basic Voice, Transaction Record, Enhanced Coders, TrueSpeech, Enhanced Echo Cancellation, CSP, CSP Streaming to CT Bus, and FSK) can be used up to a total of 60. For example, 30 Basic Voice plus 10 Enhanced Coders plus 10 TrueSpeech plus 10 CSP Streaming to CT Bus. In addition to these various voice resources, the UL1 media load can use 16 fax resources and 60 conferencing resources (with Tone Clamping and Echo Cancellation) simultaneously.
† Default configuration is EEC (enhanced EC, 32 ms) for CSP supported ML, unless otherwise indicated or set in the component named [0x2c] in the respective CONFIG file. You can only change it to a lower EC tail length, by changing the CSP parameter **0x2c03** accordingly in the respective CONFIG file. Conferencing EC, however, will always be 16 ms, regardless of the EC parameter setting.
*16 ms only CSP.
**There is no network interface support with these media loads. They behave as if the board is a resource-only board. Network interfaces are disabled.

1.45 Support for Dialogic® D/4PCI Voice Board

With the Service Update, the Dialogic® D/4PCI Voice Board that was supported in older system releases is now supported in Dialogic® System Release 6.0 PCI for Windows®. The D/4PCI Board has 4 voice channels (analog) and does not have CT Bus capabilities.

If present in the system, the D/4PCI Board will be detected and displayed in the Dialogic® Configuration Manager (DCM). Its default firmware file cannot be changed or configured.

For information about using DCM to configure and download Dialogic® Springware Boards, see the *Dialogic® Springware Architecture Products on Windows® Configuration Guide*.

1.46 File Management Enhancements for ISDNtrace Tool

With the Service Update, the user can specify new command line options provided with the Dialogic® ISDNtrace tool to set the output log file size and to create multiple backup log files to be archived.

1.46.1 Feature Description

This feature enhances the existing ISDN tracing file management for boards configured with an ISDN load. Currently, all data is logged to a single file that can get too large during a session, and the batch operations can copy over files that might be needed. With this feature, the user can set command line options for size so that the single file is a manageable size, and also set options to create multiple log files when the file reaches the designated file size. In addition, the standard log file name format now conveniently shows the date and time the log was created. The user also has an option to disable logging to STDOUT to help manage trace output.

New Command Line Options

Currently, the ISDNtrace tool supports the following command line options as described in the *Dialogic® System Software Diagnostics Guide*:

```
syntax: isdntrace -b# [-f xxxx] [-d#]
```

-b<n>

Logical ID of board (required). Use the listboards utility (Linux) or the Dialogic® Configuration Manager (DCM) (Windows®) to obtain the board's logical ID.

Note: The listboards utility is described in the Administration Guide for the release and DCM is described in the Configuration Guides for the (Windows®) release.

-d<n>

The D-channel number (trunk number) on the specified board. The default value is 1.

-f <file>

Output log file name (required to save output in a file).

Note: A space is used after the -f option but not after -b or -d options.

-h

displays the same help information available in the ISDNtrace help menu screen. Note that this option does not show on the syntax above; however it is available.

For the ISDNtrace tool, new command line options have been added and the -f option enhanced to allow the user to manage log file(s) as follows:

```
syntax: isdntrace [-a#] -b# [-d#] [-f xxxx] [-m#] [-s]
```

-a<n>

Log file array size, max=10, default=1, optional

-f <file>

Enable logging to file, optional

Note: A space is used after the -f option but not after -a, -b, -d, -m or -s options.

-m<n>

Max log file size (express in bytes; for example, 500,000 bytes is specified as -m500000), optional

Min=100 Kilobytes, max=100 Megabytes

Default=unlimited if log file array size=1, else 100 Megabytes

-s

Disable logging to STDOUT, optional

Details about these command line options follow:

-a<n>

This command line option allows the user to specify the maximum number of log files to maintain.

The user can specify a log file array size between 1 and 10. By default, the number of log files to be archived is 1. If the user specifies the -f command line option but does not specify this option (or specifies it with an array size of 1), then ISDNtrace creates a single log file that grows without bound (that is, no limit to the log file size).

If the user specifies this option with an array size greater than 1 (but less than or equal to 10), then ISDNtrace creates an initial log file at startup. When the log file reaches the maximum file size (either the default maximum log file size or the value specified via the -m command line option), the log file is closed and a new log file is created.

Whenever ISDNtrace attempts to open a new log file, it first checks to see if the current number of log files created is equal to the number of files specified for the log file array. If not, then the new log file is created. Otherwise, the oldest log file is deleted and a new log file is created to replace it.

It should be noted that any ISDNtrace log files that exist prior to running the ISDNtrace tool are not deleted or modified in any way. Due to the new log file naming convention (see -f option), all ISDNtrace log files have unique timestamps in their log file names and are not overwritten when ISDNtrace starts up.

-f <file>

This option existed in the previous versions of ISDNtrace. However, the processing associated with this option has been modified to include date and time information.

This command line option specifies the log file name of the log file into which the trace can be captured. If this option is not specified on the command line, then no trace output will be saved to a log file.

The naming of ISDNtrace log files has been modified to fit the following format:

<File>-MMDDYYYY-xxhyyzzs.log

where:

- MM - current month (01=Jan, 02=Feb, 03=Mar, ... 12=Dec)
- DD - current day of the month
- YYYY - current year (e.g. 2006)
- xx - current hour in day (24 Hour Format, 00-23)

- yy - current minute in hour (00 - 59)
- zz - current second in minute (00 - 59)

In the description above, the log file name is what the user specified on the command line. If the user specifies a -f command line option as the last parameter on the command line and does not specify a log file name, then the default log file name of ISDNTRACE will be used.

Note: In order to get a default log file name, the -f option has to be used at the end of the command line.

For example, if the user started ISDNtrace specifying the -f command line option without a log file name on January 17, 2007 at 03:11:27 pm, the log file created would be:

```
isdntrace-01172007-15h11m27s.log
```

Alternatively, the user can specify the -f command line option with a log file name specified as in the following example:

```
isdntrace -b0 -f test
```

In this example, if ISDNtrace was started on January 17, 2007 at 03:11:27 pm, the resultant log file name would be:

```
test-01172007-15h11m27s.log
```

It should be noted that since the log file name created by ISDNtrace has a .log extension appended to it, if the user specifies a log file name with a .log extension already appended to it, the resultant log file name will have the date and time inserted between the root log file name and the extension. For example, if the user issued the following command line:

```
isdntrace -b0 -f 4ess_test.log
```

Then the resultant log file name would be:

```
4ess_test-01172007-15h11m27s.log
```

-m<n>

The -m command line option is used to specify the maximum log file size. By default, the maximum log file size is 100 Megabytes. The valid range that can be specified for the maximum log file size is from 100 Kilobytes up to 100 Megabytes.

The format of the file size is specified as a long integer value. For example, to specify a maximum log file size of 250,000 bytes, the following command line should be specified:

```
isdntrace -b0 -m250000 -f test.log
```

It should also be noted that the -m command line option will have no effect if the log file array size is 1, in which case the log file will be allowed to grow in size without limit.

-s

The -s command line option can be specified to prevent trace output to STDOUT. When ISDNtrace attempts to capture a large amount of trace information in a short amount of time, its processing can fall behind if trace output is displayed to STDOUT. This will result in "enqueue fail" failures and the loss of trace information as seen in the example below:

```

                                Tue Jan 16 17:30:58 2007
                                TX Frame: Time = 2428.372
                                Command=1    SAPI=0x00
                                TEI=0x00
                                0x01 0xe6  Receive Ready
                                Hex Dump:
                                02 01 01 e6

Enqueue Failed

Tue Jan 16 17:30:58 2007
RX Frame: Time = 2428.372
Command=1    SAPI=0x00
TEI=0x00
0xe6 0xce  Information
PD=0x08 Dest=0 CR=0x1e2a
CALL DISCONNECT(0x45)
  1:          CAUSE(0x08)
  2:          IE Length(0x02)
  3:  1----- Extension Bit
      -00----- Coding Standard
      ---0----- Spare
      ----0010 Location
  4:  1----- Extension Bit
      -0010000 Cause Value
Hex Dump:
02 01 e6 ce 08 02 1e 2a 45 08
02 82 90
Enqueue Failed

```

In order to avoid loss of trace information and provide more robust performance of the ISDNtrace tool, the -s command line option should be specified to disable trace output to STDOUT whenever the capture of trace information for a large amount of calls is being performed, or “enqueue fail” failures occur.

1.46.2 Supported Boards

The following boards support this feature:

- Dialogic® DM3 Network Interface Boards

1.46.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the ISDNtrace tool, see the *Dialogic® System Software Diagnostics Guide*.

1.47 Support for Dialogic® DI/0408-LS-AR2 Board

With the Service Update, the Dialogic® DI/0408-LS-AR2 Board is now supported in Dual Processor systems.

1.48 Change in ipmedia.log Implementation

With the Service Update, the *ipmedia.log* file is no longer overwritten when the system is restarted.

The *ipmedia.log* file is generated whenever IP Media Services are run. If there is an existing log file when the system is restarted, it is saved and renamed *ipmedia.log.bak*. If *ipmedia.log.bak* already exists, it is overwritten (only one backup file is saved).

1.49 Adjusting Pre-Record Beep Tone Characteristics through the CONFIG File

With the Service Update, several Dialogic® Boards now support the ability to modify the pre-record beep tone characteristics. This new functionality is provided through the configuration file set. Changed values take effect at the time the firmware is downloaded to the board using the Dialogic® Configuration Manager (DCM) utility.

1.49.1 Supported Boards

The following boards support this feature:

- Dialogic® DI0408LSAR2 Switching Boards
- Dialogic® DM/V160LP Media Boards
- Dialogic® DM/V480A-2T1-PCI Media Boards
- Dialogic® DM/V600A-2E1-PCI Media Boards
- Dialogic® DM/V960A-4T1-PCI Media Boards
- Dialogic® DM/V1200A-4E1-PCI Media Boards
- Dialogic® DM/IP241-1T1-PCI-100BT IP Boards
- Dialogic® DM/IP301-1E1-PCI-100BT IP Boards
- Dialogic® DM/IP481-2T1-PCI-100BT IP Boards
- Dialogic® DM/IP601-2E1-PCI-100BT IP Boards

1.49.2 Feature Description

A beep tone is used in some applications to indicate the start of recording. This beep tone is enabled through the RM_TONE value in the **mode** parameter of various record functions (for example, **dx_reciottdata()**) in the Voice API library. The characteristics of the pre-record beep tone were previously hardcoded and differed on Dialogic® Springware Boards versus Dialogic® DM3 Boards.

With the Service Update, you can modify the beep tone values, such as the amplitude, in the Tone Templates [tonegen] section of a particular media load CONFIG file. Default values are provided that are consistent with previous service updates and system releases to preserve backward compatibility.

Pre-Record Beep Tone Characteristics and Default Values

Two pre-record beep tones are defined:

- A custom customer tone, BEEP_DGSD, defined as 444 Hz for 400 ms, and BEEP_DLGC, defined as 1000 Hz for 400 ms.
- The traditional pre-record beep tone, BEEP_DLGC, defined as 1000 Hz. This corresponds to the beep tone definition on Springware Boards and is the default setting.

The [recorder] section of the CONFIG file includes the following parameter, which specifies the tone to be used in the application:

BeepSignalID (Pre-Record Beep Tone)

Number: 0x203

Description: The BeepSignalID parameter is the signal identifier of the beep tone preceding the recording.

Values:

- 0x21: 444 Hz tone for 400 ms
- 0x22: 1000 Hz tone for 400 ms (default)

The pre-record beep tone characteristics for the two beep tones, stored in the Tone Templates [tonegen] section of the CONFIG file, are described as follows:

Record Beep Tone	Characteristic	Default Value
BEEP_DGSD	Signal Id	33
	Label	(blank)
	Segment Count	1
	Segment Signal Type	2
	Segment Frequency 1 (Hz)	444
	Segment Amplitude 1 (.25 dbm)	-40
	Segment Frequency 2 (Hz)	0
	Segment Amplitude 2 (.25 dbm)	0
	Segment On Duration (125 microsecs)	3200
	Segment Off Duration (125 microsecs)	320
	Segment Reps	1
	Next Segment	65535

Record Beep Tone	Characteristic	Default Value
BEEP_DLGC	Signal Id	34
	Label	(blank)
	Segment Count	1
	Segment Signal Type	2
	Segment Frequency 1 (Hz)	1000
	Segment Amplitude 1 (.25 dbm)	-40
	Segment Frequency 2 (Hz)	0
	Segment Amplitude 2 (.25 dbm)	0
	Segment On Duration (125 microsecs)	3200
	Segment Off Duration (125 microsecs)	320
	Segment Reps	1
	Next Segment	65535

Media Loads Supported

The following media loads support the new functionality to modify pre-record beep tone parameter values:

- On DI0408LSAR2 Boards, all media loads support the new functionality.
- On DMV160LP Boards, all media loads support the new functionality.
- On DM/V480A-2T1-PCI Boards, Media Loads 1b and 10 support the new functionality.
- On DM/V600A-2E1-PCI Boards, Media Loads 1b and 10 support the new functionality.
- On DM/V960A-4T1-PCI Boards, Media Loads 1b and 5 support the new functionality.
- On DM/V1200A-4E1-PCI Boards, Media Load 1b and Universal Media Load 1 support the new functionality.
- On DM/IP Boards, Media Load 11 supports the new functionality.

1.49.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about configuration files, configuration parameters, and configuration procedures, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.50 Reduced Dial Tone Delay with MWI

The **ms_SetMsgWaitInd()** function generates an FSK signal to illuminate the message waiting LED. When a user of a station goes off-hook before the **ms_SetMsgWaitInd()** function is complete, a slight delay occurs before hearing the dial tone. With the Service Update, this delay has been reduced by 12%.

1.51 Enhanced Diagnostics

The Service Update provides several new and enhanced diagnostics features. The following sections introduce some of the new features:

- [PSTN Diagnostics \(pstndiag\)](#)
- [Status Monitor \(statusmon\)](#)
- [New Dialogic® Diagnostics Management Console](#)
- [New Runtime Trace Facility \(RTF\) Manager](#)

Note: Java Runtime Environment (JRE) version 1.5 or later must be installed on your system in order to run the new diagnostics tools.

1.51.1 PSTN Diagnostics (pstndiag)

The PSTN Diagnostics tool (pstndiag) is a utility for diagnosing and troubleshooting call control issues on public switched telephone network (PSTN) connections.

The pstndiag tool has a graphical user interface (GUI). When you start the tool, a tree view of all installed Dialogic® DM3 Boards is displayed. The view can be expanded to show the lines (trunks) on each board and the channels on each line. At each level (board, line, channel), different diagnostics activities can be launched, for example:

- At the board level, you can display board configuration (board name, board number, number of lines, number of channels per line, and signaling type). You can also launch the statusmon tool. (The new statusmon tool is described in [Section 1.51.2, “Status Monitor \(statusmon\)”](#), on page 145.)
- At the line level, you can launch the lineadmin tool to put lines in/out of service, generate transmit alarms, enable/disable various types of loopbacks, and report bipolar violations, consecutively errored seconds, frame errors, and other saturation alarms.
- At the channel level, you can launch the phone tool to perform call control operations. You can also trace all call related activity on a given channel and store it in a columnar format based on timestamp deltas.

Running the PSTN Diagnostics Tool

To run the **new** version of pstndiag, enter the command:

- `pstndiag -j`

(The previous version of the tool is still supported and can be run by entering the command `pstndiag` without the `-j`.)

The new version of `pstndiag` includes the following changes:

- Faster startup
- Changes in the board tree view
- Additional features in the lineadmin tool: enabling all supported loopback modes and counters for saturation alarms
- Configurable modes of operation for the phone tool: basic, advanced, and expert

Note: More detailed information about the new version of `pstndiag` is planned to be provided in the *Dialogic® System Software Diagnostics Guide*, which is scheduled to be updated soon.

1.51.2 Status Monitor (statusmon)

The Status Monitor tool (`statusmon`) is a utility for monitoring the current activity on all lines and channels on a Dialogic® DM3 Board. The primary use case is as a long-term monitoring tool.

The `statusmon` tool displays the following information:

- Alarm status (red, yellow, LOS)
- Channel state
- Call state

Running the Status Monitor Tool

The `statusmon` tool is typically launched from `pstndiag`, but it can also be run on its own. To run the **new** version of `statusmon`, enter the command:

- `run_statusmon.sh -board #`

where `#` is the logical board number of the board to monitor.

(The previous version of the tool is still supported and can be run by entering the command `statusmon board` or `statusmon board trunk channel`.)

The new version of `statusmon` includes the following changes:

- No line (trunk) or channel mode. However, these capabilities are supported via the `pstndiag` tool.

Note: More detailed information about the new version of `statusmon` is planned to be provided in the *Dialogic® System Software Diagnostics Guide*, which is scheduled to be updated soon.

1.51.3 New Dialogic® Diagnostics Management Console

The Service Update introduces the Dialogic® Diagnostics Management Console (DMC) version 1.0. This GUI tool provides a means of quickly launching Dialogic® diagnostic utilities and viewing various log files created with those utilities.

The DMC:

- Provides a single portal for launching diagnostic tools:
 - AppMon
 - Castrace
 - Isdntrace
 - Dlgsnapshot
 - Dm3post
 - Debugangel
 - Getver
 - its_sysinfo
 - Pdktrace
 - Pstndiag
 - RTF Manager
 - StatusMon
- Supports local and remote execution of tools. Diagnostic tools are launched remotely via the standard remote control methods provided with the operating system, such as SSH or Remote Desktop.
- Lists the diagnostic logs available both locally and remotely for viewing.
- Launches appropriate viewers for displaying logged data.

For more information about the DMC, refer to the *Dialogic® System Software Diagnostics Guide*. The DMC also has online help.

1.51.4 New Runtime Trace Facility (RTF) Manager

The Service Update introduces the RTF Manager, a new GUI for the Runtime Trace Facility (RTF) diagnostic tool. RTF Manager allows users to easily configure logging and tracing levels. Previously, users had to manually edit the RTF configuration file.

For more information about the RTF Manager, refer to the *Dialogic® System Software Diagnostics Guide*.

1.52 Support for PCI Express Boards - Dialogic® Springware Boards

With the Service Update, Dialogic® System Release 6.0 PCI for Windows® now supports the following PCI Express boards:

- Dialogic® D/42JCT-EW and Dialogic® D/82JCT-EW PBX Integration Boards
- Dialogic® D/240JCT-T1-EW and Dialogic® D/300JCT-E1-EW Media Boards
- Dialogic® D/480JCT-EW and Dialogic® D/600JCT-EW Media Boards
- Dialogic® D/4PCIE-4S-W and Dialogic® D/4PCIE-4F-W Media Boards
- Dialogic® D/41JCT-LS-EW and Dialogic® VFX/41JCT-LS-EW Media Boards
- Dialogic® D/120JCT-LS-EW Media Board

When configuring the system for the PCI Express form factor boards, use the same menu selections and configuration settings that are documented for the PCI version of the boards. Any differences are discussed below.

Dialogic® D/42JCT-EW and Dialogic® D/82JCT-EW PBX Integration Boards

The Dialogic® D/42JCT-EW and Dialogic® D/82JCT-EW PBX Integration Boards offer advanced digital connectivity to many of today's most popular private branch exchanges (PBXs) for unified and Internet-ready call, voice, and fax processing in small- to medium-sized enterprises. The D/42JCT-EW Board is a 4-port voice processing board in a full-length PCI Express form factor. The D/82JCT-EW Board is an 8-port voice processing board in a full-length PCI Express form factor.

Note: When installing the D/42JCT-EW and D/82JCT-EW Boards, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

Dialogic® D/240JCT-T1-EW and Dialogic® D/300JCT-E1-EW Media Boards

The Dialogic® D/240JCT-T1-EW Media Board is a 24-channel voice and T1 network interface board in a full-length PCI Express form factor.

The Dialogic® D/300JCT-E1-EW Media Board is a 30-channel voice and E1 network interface board in a full-length PCI Express form factor. The board is available in a 75-Ohm version and a 120-Ohm version.

Note: When installing the D/240JCT-T1-EW and D/300JCT-E1-EW Boards, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.

Dialogic® D/480JCT-EW and Dialogic® D/600JCT-EW Media Boards

The Dialogic® D/480JCT-EW and Dialogic® D/600JCT-EW PCI Express form factor boards include the following models:

Dialogic® D/480JCT-1T1-EW Media Board

Provides up to 24 channels of combined media resources and a single T1 network interface in a single, full-length PCI Express slot.

Dialogic® D/480JCT-2T1-EW Media Board

Provides up to 48 channels of combined media resources and two T1 network interfaces in a single, full-length PCI Express slot.

Dialogic® D/600JCT-1E1-75-EW Media Board

Provides up to 30 channels of combined media resources and a single 75-ohm E1 network interface in a single, full-length PCI Express slot.

Dialogic® D/600JCT-1E1-120-EW Media Board

Provides up to 30 channels of combined media resources and a single 120-ohm E1 network interface in a single, full-length PCI Express slot.

Dialogic® D/600JCT-2E1-75-EW Media Board

Provides up to 60 channels of combined media resources and two, 75-ohm E1 network interfaces in a single, full-length PCI Express slot.

Dialogic® D/600JCT-2E1-120-EW Media Board

Provides up to 60 channels of combined media resources and two, 120-ohm E1 network interfaces in a single, full-length PCI Express slot.

- Notes:**
1. When installing the D/480JCT-EW and D/600JCT-EW PCI Express Boards, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.
 2. The D/480JCT-EW and D/600JCT-EW PCI Express Boards can be used with any System Release 6.0 PCI Windows Service Update release; it is not necessary to upgrade to a particular Service Update.

Dialogic® D/4PCIE-4S-W and Dialogic® D/4PCIE-4F-W Media Boards

The Dialogic® D/4PCIE-4S-W and Dialogic® D/4PCIE-4F-W Media Boards are combined media analog boards with four ports of voice, fax, and speech in a half-length PCI Express form factor. The D/4PCIE-4S-W Board has four ports of voice and speech, and the D/4PCIE-4F-W Board has four ports of voice and fax.

Dialogic® D/41JCT-LS-EW and Dialogic® VFX/41JCT-LS-EW Media Boards

The Dialogic® D/41JCT-LS-EW and Dialogic® VFX/41JCT-LS-EW Media Boards are combined media analog boards with H.100 connectivity and four ports of voice, fax, and speech in a full-length PCI Express form factor. The D/41JCT-LS-EW Board supports basic fax, and the VFX/41JCT-LS-EW Board supports enhanced fax.

Dialogic® D/120JCT-LS-EW Media Board

The Dialogic® D/120JCT-LS-EW Media Board is a 12-port analog telecom board in a full-length PCI Express form factor. The D/120JCT-LS-EW Board supports voice, fax, and software-based speech recognition processing in a single PCI Express slot, and provides 12 analog telephone interface circuits for direct connection to analog loop start lines.

- Notes:**
1. When installing the D/120JCT-LS-EW Board, be sure to refer to the Installation Guide (Dialogic® Quick Install Card) that is provided with each board for important information about power budgeting and guidelines for selecting the slot where a board can be installed.
 2. The D/120JCT-LS-EW Board can be used with any System Release 6.0 PCI Windows Service Update release; it is not necessary to upgrade to a particular Service Update.

1.53 PDK Trace Supports CAS/R2MF/Tone Tracing

With the Service Update, the Dialogic® DM3 PDK Protocol Trace (PDK Trace) tool has new functionality to log CAS, R2MF, and tone-on/tone-off information on supported boards. Formerly, the DM3 PDK Trace tool only logged SDL state transitions. Also, the tool for converting the binary output has been enhanced so the R2MF/CAS/tone-on/tone-off output, like the SDL data, can be converted into a readable format.

Note: See the *Dialogic® System Software Diagnostics Guide* for more information about the DM3 PDK Protocol Trace tool.

1.53.1 Feature Description

The functionality is enabled by using PDK Trace with a new command line option, `-e|E`. This enhanced option enables R2MF tone exchanges (when using R2MF protocol), CAS signaling changes, and tone-on/tone-off event tracing on supported boards. As with other PDK options, the new command option produces a default binary log file, *pdktrace.log*, which can be converted into readable files by contacting Dialogic technical support. The converted log is sent back to the user to interpret (see [Sample Output Logs](#)).

Enhanced tracing is not affected when a mixed ISDN/CAS configuration is used. As part of the processing done for tracing, the protocol type (PDK or ISDN) of the given trunk is queried. If it is a PDK trunk, then CAS, R2MF, and tone-on/tone-off events are traced. If the trunk is ISDN, tone-on/tone-off events are traced.

Note: For the Dialogic® DM/V-B Boards, **gc_Open()** must be called **prior** to starting enhanced tracing on a channel. If tracing is started prior to **gc_Open()** being called, PDK protocol tracing will function, but no CAS/ R2MF/TONE events will be detected.

New Option

Note: See the *Dialogic® System Software Diagnostics Guide* for a complete description of all the options and instructions for using the PDK Trace tool.

-e

This option enables the R2MF, CAS, and tone-on/tone-off event tracing on supported boards.

Example: `pdctrace -b0 -i -e /*basic protocol tracing and enhanced tracing enabled for channel 1 on trunk 1, where 0 is the logical board ID of the destination board */`

1.53.2 Supported Boards

The following boards support this feature:

- Dialogic® DM/V1200BTEP Media Boards
- Dialogic® DM/V600BTEP Media Boards
- Dialogic® DM/V3600BP Media Boards

1.53.3 Sample Output Logs

The following are examples and explanations of the converted output:

R2MF Outbound

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	3	11	RSMF	Un	TX:1000 RX:1011	R2MF tone (OUTBOUND): Trunk=3 Chan=11 Tone=7

This event is logged when an R2MF tone has been transmitted by a channel that is being traced. This tone would be considered a “backward” tone if the channel is the called party, or a “forward” tone if the channel is the calling party. The tone value given represents one of the 15 possible R2MF tone numbers in the forward or backward tone set. The tone numbers (1-15) represent tone pair frequencies defined in various ITU standards.

R2MF Inbound

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	3	11	RSMF	Un	TX:1000 RX:1011	R2MF tone (INBOUND): Trunk=3 Chan=11 Tone=5

This event is logged when an R2MF tone has been received by a channel that is being traced. This tone would be considered a “backward” tone if the channel is the calling party, or a “forward” tone if the channel is the called party. The tone value given represents one of the 15 possible R2MF tone numbers in the forward or backward tone set. The tone numbers (1-15) represent tone pair frequencies defined in various ITU standards.

CAS RX

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	3	11	CAS	Un	TX:0000 RX:1001	CAS Transition (RX) PreTransition Code: 0x1 PostTransition Code: 0x1

This event is logged when a new ABCD bit pattern is detected on the channel being traced. Any change in any of the ABCD bits will cause a new CAS RX event to be generated. The "PreTransition Code" is the value of the ABCD bits (bits 0-3) and the bit mask (bits 4-7) **prior** to the change. The "PostTransitionCode" represents the ABCD bits and the bit mask of the newly detected signaling pattern. The bit mask is used to denote which of the ABCD bits are of significance for the pattern being transmitted.

CAS TX

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	3	11	CAS	Un	TX:1001 RX:1001	CAS Transition (RX) PreTransition Code: 0x3d PostTransition Code: 0xd

This event is logged when a new ABCD bit pattern is transmitted on the channel being traced. Any change in any of the ABCD bits will cause a new CAS TX event to be generated. The "PreTransition Code" is the value of the ABCD bits (bits 0-3) and the bit mask (bits 4-7) **prior** to the change. The "PostTransitionCode" represents the ABCD bits and the bit mask of the newly transmitted signaling pattern. The bit mask is used to denote which of the ABCD bits are of significance for the pattern being transmitted.

Tone-on

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	2	5	TONE_ ON	Un	TX:1011 RX:1000	TONEON EVENT: ID=14bcc Freq1=1737 Freq2= 1499 OnTime =8 OffTime = 4

This event is logged when a new tone has been received and matches a defined tone template. The Event ID represents the tone ID of the tone template that was matched. Freq1 represents the first frequency of a dual tone. Freq2 represents the second frequency in the dual tone. These frequencies are given in Hz. If the tone is a single frequency tone, then Freq2 would be 0. Ontime represents the amount of time (in microseconds) that the tone was present. Offtime represents the minimum amount of time (in microseconds) that the tone was not present.

- Notes:**
1. Tone-on/tone-off events come in pairs.
 2. Ontime and Offtime values are defined in the [sigdet] section of the tone template in the CONFIG/FCD file, as well as via the Voice (dx) API.

Tone-off

File	Line	Level	Ser	Bo...	C...	SDL	Call	TxRx	Data
N/A	1	DEBUG	N/A	2	5	TONE_ OFF	Un	TX:1011 RX:1000	TONEOFF EVENT: ID=14bcc

This event is logged when a tone matching a tone template is no longer present. The Event ID represents the tone ID of the tone template that was previously matched and is no longer present.

1.53.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about PDK Trace, see the *Dialogic® System Software Diagnostics Guide*.

Note: The online bookshelf has not been updated for this feature, so the new option is not currently documented in the *Dialogic® System Software Diagnostics Guide*.

1.54 Ability to Lower or Disable White Noise

With the Service Update, the user can lower the white noise gain or disable the injection of white noise entirely by adding a new parameter to the CONFIG file.

1.54.1 Feature Description

Users can lower the white noise gain or disable the injection of the white noise entirely when the white noise produces a distracting “hiss” noise during conference calls. The user can control the amount of white noise by adding the parameter, **0x2c22**, to the CONFIG file and uncommenting out the desired option.

Number: 0x2c22

Description: Add the parameter to the CONFIG file to disable the injection of white noise entirely or to set a value that reduces the level of the white noise.

Values:

- 0 (disables white noise gain completely). Use this setting if white noise is not desired.
Note: When white noise is disabled, the user will have no “noise” to indicate that the application is still working; therefore, the user may want the 0xffff setting instead.
- 0xffff (sets white noise gain to a very low value). Use this setting if some small level of noise is desired so that there is not complete silence.

- 0x4285fc (sets the white noise gain to the default of -43 dB). This value does not have to be set by the user; it is the default value used if the parameter is omitted from the CONFIG file.

Example:

The following is an example for disabling white noise:

```
[0x2c]
SetParm=0x2c22, 0           ! Disables white noise gain
!SetParm=0x2c22, 0xffff      ! Sets the white noise gain to a very low value
!SetParm=0x2c22, 0x4285fc    ! Sets the white noise gain to the default of -43 dB
```

1.54.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about setting parameters in the CONFIG file, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the new option is not currently documented in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.55 Optional Use of Sharing of Timeslot (SOT) Algorithm

The Sharing of Timeslot (SOT) algorithm for Dialogic® DM3 Boards maximizes the efficiency of the internal timeslots used for external transmit reference, allowing a full 120 channel density for such features as continuous speech processing and transaction record. The SOT algorithm is enabled by default, regardless of whether continuous speech processing or transaction record functionality is needed. Its use places certain constraints on an application for performing listen/unlisten functions in a specific sequence.

For increased flexibility in application design, it is now possible to disable the SOT algorithm by adding a new parameter, **QKERNEL_DISABLE_TIMESLOT_SHARING**, to the board's CONFIG file.

Note: The SOT algorithm is now supported on the Dialogic® DM/V600-4E1 Board with media load ml1_4x2_r2mf.

For more detailed information about the SOT algorithm, guidelines for enabling or disabling the algorithm, and supported boards and media loads, see the technical note titled "Disabling the Sharing of Timeslot (SOT) Algorithm via DM3 config file change" on the Dialogic website at

<http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/2000/tn104.htm>

1.56 New FSK Transmit and Receive Signal Level Parameters

With the Service Update, there are new transmit and receive FSK parameters that let you change the volume level of the FSK modem signals sent and received by the board using the parameter control in the configuration/FCD files for Dialogic® DM3 Boards.

1.56.1 Feature Description

The FSK transmit (**FM_ParmFSKTxSignalLevel**) and receive (**FM_ParmFSKRxSignalLevel**) signal level parameters are described below.

FSK Transmit and Receive Signal Level

Number: 0x2a (0x2a04 for transmit) (0x2a00 for receive)

Description: Two-way Frequency Shift Keying (FSK) and ETSI FSK allow the exchange of small amounts of data between a telephone and the server using FSK as the transport layer. The two-way FSK functionality allows products to transmit and receive half-duplex FSK Bell 202 1200 bps data over the Public Switched Telephone Network (PSTN). ETSI FSK functionality is based on the specification ETSI 201 912.

The Transmit and Receive Signal Level parameters allow you to adjust the signal level of both the transmit and receive FSK signal levels.

Values:

- -50 to -5 dbm for FSK transmit signal level, -14 dbm (default)
- -60 to -5 dbm for FSK receive signal level, -46 dbm (default)

Guidelines for FSK Transmit: To set the signal level of the FSK transmit signal to other than the default value of -14 dbm, you must edit the applicable CONFIG file.

Example: To set the FSK transmit signal level to a value of -20 dbm, you need to add a new section [0x2a] at the end of the CONFIG file and include the FSK Transmit Signal Level parameter in that section as follows (shown in bold):

```
[0x2a]
SetParm=0x2a04, -20 !FM_ParmFSKTxSignalLevel
```

Guidelines for FSK Receive: To set the signal level of the FSK receive signal to other than the default value of -46 dbm, you need to edit the CONFIG file by adding the FSK Receive Signal parameter to the new [0x2a] section.

Example: To set the receive signal level to a value of -15 dbm, add the line shown in bold to the new section you created for the FSK Transmit Signal Level parameter:

```
[0x2a]
SetParm=0x2a04,-20      !FM_ParmFSKTxSignalLevel
SetParm=0x2a00,-15      !FM_ParmFSKRxSignalLevel
```

1.56.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about configuration files, configuration parameters, and configuration procedures, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so these new parameters are not currently documented in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.57 Support for Reporting Billing Type

With this Service Update, for Dialogic® DM3 Boards, there is now a way for the application to know which billing type (for a call on PDK R2 protocol) was received when the lines are available for call establishment. B tones are sent to indicate whether the line is available or not, and also to indicate the type of billing for the call (for example, CHARGE, NO CHARGE, or CHARGE WITH CLEARING FROM INBOUND).

This feature is already supported on Dialogic® Springware Boards; however, CHARGE WITH CLEARING FROM INBOUND is a new billing type that is also supported on Springware Boards now.

1.57.1 Feature Description

The user is notified of the billing type for a successful call establishment. The **gc_GetCallInfo()** function with info_id equal to CALLINFOTYPE is used to retrieve the billing type. The following mappings are implemented:

Group B Tone	Billing Type String Returned
GrpB - line free, charge	"CHARGE"
GrpB - line free, no charge	"NO CHARGE"
GrpB - line free, charge with clearing from inbound only	"CHARGE WITH CLEARING FROM INBOUND"

For B tones indicating unavailability of the line (call establishment failure), the following mappings are used for assigning cause values to the GCEV_DISCONNECT event:

Group B Tone	GC Cause Value	Description
GrpB - User Busy	GCRV_BUSY	"Line is busy"
GrpB - Network Congestion	GCRV_CONGESTION	"Congestion"
GrpB - Normal Clearing	GCRV_NORMAL	"Normal Clearing"
GrpB - UnAssigned Number	For DM3 Boards: GCRV_UNALLOCATED For Springware Boards: GCRV_NOT_INSERVICE	For DM3 Boards: "Number not allocated" For Springware Boards: "Number not in service"
GrpB - SIT	For DM3 Boards: GCRV_SIT_UNKNOWN For Springware Boards: GCRV_CEPT	For DM3 Boards: "Unknown SIT detected" For Springware Boards: "Operator intercept"
GrpB - Rejected	GCRV_REJECT	"Call Rejected"

Note: If the billing type is not supported on a protocol, then **gc_GetCallInfo(CALLINFOTYPE)** returns "UNKNOWN BILLING".

1.57.2 Supported Boards

DM3

The following Dialogic® DM3 Boards support this feature:

- Dialogic® DM/V-A Media Boards
- Dialogic® DM/V-B Media Boards

Springware

The following Dialogic® Springware Boards support this feature:

- Dialogic® D/300JCT-E1 Media Boards
- Dialogic® D/600JCT-1E1 Media Boards
- Dialogic® D/600JCT-2E1 Media Boards

1.57.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Global Call API, see the following documents:

- *Dialogic® Global Call API Library Reference*
- *Dialogic® Global Call API Programming Guide*

For features specific to E1 (R2) technology, see the following documents:

- *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*
- *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*

1.58 Runtime Control of Double Answer for R2MF

With this Service Update, a connection method called double answer is now supported for rejecting collect calls on a call-by-call basis. For further information about this feature, see the *Dialogic® Global Call E1/T1 CAS/R2 Technology Guide*.

1.59 Enhanced ISDN Trace Functionality for DPNSS Tracing

With the Service Update, the Dialogic® ISDNtrace tool now provides functionality to support DPNSS tracing.

1.59.1 Feature Description

This feature enhances the existing ISDN tracing functionality so that you can capture D-channel signaling information into an ASCII text readable form. The DPNSS tracing uses the same command line options already available in the ISDNtrace tool.

1.59.2 Sample DPNSS Trace Output

The following DPNSS sample trace shows ISRM(C) and NAM messages:

```
PROTOCOL TYPE : PRI DPNSS B-End
TRACE START TIME (MM/DD/YYYY) : 2/25/2003, 14:27:52.52

Time Stamp : 2/25/2003, 14:28:24.252
TRANSMIT
Timeslot 01
UI(COMMAND) Sequence 0(0x03)
Initial Service Request Msg-Complete(0x00)
Service Indicator Code
1: 0----- Extension Bit
   -001---- Type of Information
   ----0000 Speech/Data Rate
Selection Field
      *1#*50*8080808#*58*aziz#132838

Time Stamp : 2/25/2003, 14:28:24.252
RECEIVE
Timeslot 01
UI(RESPONSE) Sequence 0(0x03)
```

```
Time Stamp : 2/25/2003, 14:28:26.702
TRANSMIT
Timeslot 31
UI (RESPONSE) Sequence 0(0x03)

Time Stamp : 2/25/2003, 14:28:26.702
RECEIVE
Timeslot 31
UI (COMMAND) Sequence 0(0x03)
Number Acknowledge Msg(0x09)
Indication Field
*128A*32216070#*6#*50*32205505#
```

1.59.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For further information about the ISDNtrace tool, see the *Dialogic® System Software Diagnostics Guide*.

1.60 Notification of Layer 1 Alarm Events on SS7 Boards

With the Service Update, the support for alarm notification has been added for Dialogic® SS7 Boards. By adding support for alarm notification, applications are able to better determine which devices are available for making and receiving calls, or enabling/disabling voice activity.

For further information about this feature, see the *Dialogic® Global Call SS7 Technology Guide*.

1.61 Global Call Support for Time Slots on Dialogic® SS7 Boards Running in DTI Mode

With the Service Update, Dialogic® Global Call Software works with Dialogic® SS7 Boards that include trunks not configured for SS7 signalling (DTI mode); i.e., all the time slots on these trunks operate in clear channel mode.

For further information about this feature, see the *Dialogic® Global Call SS7 Technology Guide*.

1.62 Time Stamp for Tone-On/Off Events

With the Service Update, a new time stamp has been added to the existing DE_TONEON and DE_TONEOFF events. A new TN_TIMESTAMP structure has been added to the device header file *dxxlib.h*. This time stamp is used to associate, or group, certain tones in order to detect a particular country tone made up of two or more defined tone templates.

1.62.1 Feature Description

To test the various tones from various countries, the Tone-On/Off Call Status Transition (CST) event data have been modified to add a time stamp structure to the end of the TN_INFO structure. The CST event data are obtained by calling **sr_getdatalen()** and **sr_getevtdatap()**. A new structure, TN_TIMESTAMP, is in the device header file, *dxxlib.h*. If the event is for Tone-On, then the time stamp represents the tone-on time, and if the event is for Tone-Off, then it represents the tone-off time.

The Tone-On/Tone-Off messages are extended to add the “start time” and the “stop time,” respectively. These time stamps are used by the customer application to calculate the Tone-On/Tone-Off duration (cadence).

1.62.2 Supported Boards

The following boards support this feature:

- Dialogic® DM/V2400A Media Boards

1.62.3 Structure

TN_TIMESTAMP is as follows:

```
// Tone ON/OFF time stamp
typedef struct {

    unsigned long    tn_TimeStamp;    /* Time stamp for tone on/off event. The time stamp is in
                                      milliseconds from when the firmware was downloaded on the
                                      board. There is no co-relation to the system time. It wraps
                                      around every ~149 hours. */

} TN_TIMESTAMP;
```

Scenario

When a Tone-On CST event is received, the application gets the CST event data with the **sr_getdatalen()** and **sr_getevtdatap()** functions, as usual. The application then applies the TN_TIMESTAMP structure to the event data and obtains the time stamp of the tone-on event or tone-off event. The TN_TIMESTAMP structure is appended to the end of the TN_INFO structure. The CST event data comprises the DX_CST, TN_INFO, and TN_TIMESTAMP structures.

Sample

The following is an example for Tone-On. Tone-Off is done the same way.

```
DX_CST *datap;
TN_INFO *tonep;
TN_TIMESTAMP *tsp;
long timestamp; // time stamp in ms units

switch(sr_getevtttype(ehandle))
{
    case TDX_CST:
        datap = (DX_CST *) sr_getevtdatap(ehandle);

        if (datap->cst_event == DE_TONEON)
        {
            tonep = (TN_INFO*)(datap+1); // tone structure starts at end of CST structure
            tsp = (TN_TIMESTAMP*)(tonep+1); // time stamp structure starts at end of
                                           TN_INFO structure.
            timestamp = tsp->tn_TimeStamp; // get the time stamp
        }

        break;
    .
    .
}
```

1.62.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Standard Runtime Library and Voice APIs, see the following documents:

- *Dialogic® Standard Runtime Library API Library Reference*
- *Dialogic® Standard Runtime Library API Programming Guide*
- *Dialogic® Voice API Library Reference*
- *Dialogic® Voice API Programming Guide*

Note: The online bookshelf has not been updated for this feature, so the manuals above do not contain information relating to this feature.

1.63 New Fax Parameter for Modem Receive Level

With the Service Update, a new fax parameter, **FC_MDM_RX_LVL**, has been added to allow setting of the fax modem receiver sensitivity from -43 dBm to -47 dBm. This parameter is supported on Dialogic® Springware Fax Boards only.

The **FC_MDM_RX_LVL** parameter is set with the **fx_setparm()** function and can be retrieved with the **fx_getparm()** function. For further information, see the *Dialogic® Fax Software Reference*.

1.64 Ability to Send and Receive DPNSS End to End Messages

With the Service Update, the user has the ability to send and receive the entire raw Digital Private Network Signalling System (DPNSS) end to end message (EEM) using API control on Dialogic® DM3 Boards. A generic mechanism enables the user to add DPNSS supplementary services (like Single/Dual channel transfer services, Call Diversion, and Call Waiting) without needing outside support for those services first. This feature is only supported on ISDN DPNSS loads.

For further information about sending and receiving DPNSS end to end messages, see the *Dialogic® Global Call ISDN Technology Guide*.

1.65 Enhancements to the Configuration Process

With the Service Update, enhancements have been made to simplify the configuration process:

- [PDK Configuration Property Sheet](#)
- [Automatic FCD File Generation](#)

1.65.1 PDK Configuration Property Sheet

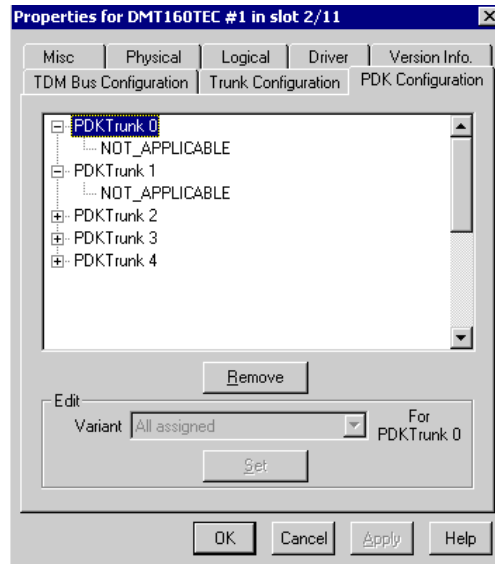
With the Service Update, a new PDK Configuration property sheet in the Dialogic® Configuration Manager (DCM) allows you to choose country dependent parameter (CDP) files for T1 trunks that use the CAS protocol or for E1 trunks that use the R2MF protocol. For each trunk selected, a list of applicable CDP file variants is presented, allowing you to assign a specific CDP file to that trunk.

The new PDK Configuration property sheet replaces the “Downloading the Protocol and CDP File on a Windows System” procedure documented in the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide*. With this new feature, it is no longer necessary to set up the *pdk.cfg* file to download the protocol and CDP file.

Note: This procedure only applies to boards having network interfaces, and to trunks that are configured for the CAS or R2MF protocols.

1. From the DCM main window, highlight the board you wish to configure and choose **Configure Device** from the **Device** drop-down menu. The property sheets for this board will appear.

2. Select the **PDK Configuration** property sheet.



3. If all of the trunks on the board have been configured for either the CAS or R2MF protocol, and you wish to assign the same country dependent parameter (CDP) variant file (other than the default value) to all trunks on the board, highlight PDKTrunk 0. Otherwise proceed to step 4.

3a. From the Variant drop-down menu, select a CDP variant file by highlighting the file and clicking the **Set** button.

Note: If you wish to remove a previously assigned CDP variant file, highlight the variant under that trunk in the window and click the **Remove** button.

3b. Repeat this step for each additional CDP variant file you wish to assign to all of the trunks on this board.

Note: When multiple CDP file variants are assigned to a trunk, an application can dynamically change variants on that trunk. In this case, for a given trunk, it is the last variant in the list that is taken as the default. For example, if one looks at a given trunk in the DCM/PDK Configuration window and sees a list:

PDKTrunk#

```
pdk_ar_r2_io.cdp
pdk_cn_r2_io.cdp
pdk_be_r2_io.cdp
```

Then, the “pdk_be_r2_io.cdp” will be taken as the default.

3c. Click the **Apply** button and then click the **OK** button to return to the DCM main window.

4. If not all trunks on the board have been configured for CAS or R2MF, or if you wish to assign different CDP variant files to individual trunks on a trunk-by-trunk basis:
 - 4a. Highlight the trunk to which you wish to assign a CDP variant file.
 - 4b. Choose a CDP variant file from the Variant drop-down list and click the **Set** button.

Note: If you wish to remove a previously assigned CDP variant file, highlight the variant under that trunk in the window and click the **Remove** button.
 - 4c. Repeat steps 4a and 4b for each trunk on the board that you wish to assign CDP variant files.
 - 4d. Click the **Apply** button and then click the **OK** button to return to the DCM main window.

See the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* for information about configuring the parameters contained in an individual CDP file.

The protocol package is included with the system software.

1.65.2 Automatic FCD File Generation

With the Service Update, the fcdgen utility is no longer required to generate the FCD file. When you download a PCD file and its corresponding CONFIG file to a board, the FCD file is automatically generated and also downloaded to the board. The FCD file is also copied into the data directory.

With this enhancement to the configuration process, it is no longer necessary to use the fcdgen utility to generate a modified FCD file. When you modify a CONFIG file, the modified FCD file is automatically created when the PCD file and CONFIG file are downloaded to the board.

1.65.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring DM3 boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for these features, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about the PDK Configuration property sheet or about automatic FCD file generation.

1.66 New Option for dm3post Utility

With the Service Update, the dm3post diagnostic utility now provides an option to run POST on a chassis level. By using the chassis option (-c), dm3post will retrieve the results of the last run POST for all Dialogic® DM3 Boards in the chassis. By using the chassis option with the reset (-r) option, you can run POST on all DM3 Boards in the system.

When using the chassis option, it is not necessary to provide the bus and slot numbers. Any option other than the reset option will be ignored when using the chassis option. In addition to output on the screen, more detailed output is logged to a log file, dm3post.log, by default.

For more information about the dm3post utility, see the *Dialogic® System Software Diagnostics Guide*.

1.67 New OAMIPC Mechanism Replaces CORBA

With the Service Update, a new OAMIPC mechanism replaces CORBA and CORBA will no longer be used. This mechanism changes the binary size of the oam binaries. The *ooc* directory under the *dialogic* directory will be removed if you are doing an upgrade install, or the *ooc* directory will not be installed in case of a new installation.

As part of the new OAMIPC, the TCP Port List for new installation and upgrade installation has changed. For new installations, you will see the Welcome screen with the message “Exclusive access to TCP ports 12001, 12004-5 for the loopback interface, and port 12002 for all network interfaces is required so ensure that these ports are available on your system.”

If you are performing an upgrade installation, you will not see the message, but you will still have to check that these TCP ports are available before you perform the upgrade.

Refer to the “Checking TCP Port Availability” section in the *Dialogic® System Release 6.0 PCI for Windows Software Installation Guide*.

1.68 Support for Mixed ISDN and Clear Channel on Additional Dialogic® DM3 Boards

With the Service Update, the ability to mix ISDN (Net5) and clear channel on the same board on a trunk by trunk basis is now supported on the following boards:

- Dialogic® DM/IP601-2E1-PCI IP Boards
- Dialogic® DM/N1200-4E1-PCI Digital Telephony Interface Boards
- Dialogic® DM/V600-4E1-PCI and DM/V1200-4E1-PCI Voice Boards

With the Service Update, a clear channel media load is now supported on the following boards:

- Dialogic® DM/IP301-1E1-PCI IP Boards

1.68.1 Feature Description

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. The new PCD/FCD/CONFIG files for supporting mixed ISDN and clear channel are:

Board	Media Load	Filename
DM/IP601-2E1-PCI	ML2	ipvs_evr_2isdn_net5_ts16_311.*
DM/N1200-4E1-PCI	N/A	4x0_isdn_net5_ts16.*
DM/V600-4E1-PCI	ML1	ml1_4x2_net5_ts16.*
DM/V1200-4E1-PCI	ML1	ml1_qs_net5_ts16.*
DM/IP301-1E1-PCI	ML11	ipvs_evr_ts16_ml11_311.*

Note: DM/IP301-1E1-PCI supports clear channel media load only.

For a description of the features provided in ML1, ML2, and ML11, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*. Note that ML2 supports only the basic coders on the PSTN side for the DM/IP601-2E1-PCI Board.

Trunks that are configured for clear channel will include 31 bearer channels. The application should be aware that there will be 31 devices detected on these trunks.

No additional voice channels will be provided to accommodate the additional bearer channel(s). For example, when in clear channel mode on a DM/IP301-1E1-PCI Board, the PSTN side of the board will have 31 bearer channels and no signaling channel, but only 30 voice channels.

When in clear channel mode, the time slot 16 mapping is as follows:

- NI TS1-NI TS15 map to dtiB1T-dtiB1T15
- NI TS17-NI TS31 map to dtiB1T16-dtiB1T30
- NI TS16 maps to dtiB1T31

Note: The application should expect a GCEV_UNBLOCKED event when **gc_open()** is called on trunks set for clear channel.

1.68.2 Configuring the Software

In the CONFIG file, the **Signaling Type** parameter (0x1602) allows you to configure a trunk for ISDN or clear channel. All trunks are set to Net5 by default. To switch a trunk to clear channel, the **SignalingType** parameter should be changed to 6 (Clear) in the [lineAdmin] section for that trunk in the CONFIG file. All CONFIG file parameters are described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

The new configuration files can be selected by using the Dialogic® Configuration Manager (DCM). This procedure, which must be performed before the boards are started, is also described in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.68.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring Dialogic® DM3 Boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about these new configuration files.

1.69 Detection of Unsupported Boards

With the Service Update, if an unsupported board (i.e., a board that is not supported in Dialogic® System Release 6.0 PCI for Windows®) is detected by the software, an error message about the unsupported board will appear in a log file in *dialogic/log* directory with the following filename *rtf*.txt* (for example, *rtflog-10072005-14h47m25.639s.txt*). System Release 6.0 PCI Windows will not prevent you from installing an unsupported board. However, the Dialogic® Configuration Manager (DCM) will not show any unsupported boards.

1.70 PBX Integration Support for Nortel BCM

The Service Update adds support for the Nortel Business Communications Manager (BCM) when using the Dialogic® D/82JCT-U Board. For detailed information including programming requirements, see the *Dialogic® PBX Integration Board User's Guide*.

1.71 Enhancements to Runtime Trace Facility (RTF) Logging

The Service Update provides enhancements to Runtime Trace Facility (RTF) logging. The RTF tool provides a mechanism for tracing the execution path of Dialogic® runtime libraries. The trace information can be captured in a log file or sent to a system-specific debug stream (e.g., debug console on Windows®). The resulting log file/debug stream output helps troubleshoot runtime issues for applications that are built with Dialogic® software.

For detailed information about RTF logging, see the *Dialogic® System Software Diagnostic Guide*.

1.72 Dynamically Retrieving and Modifying Selected Protocol Parameters When Using Dialogic® DM3 Boards

With the Service Update, the ability to dynamically retrieve or modify certain protocol-specific parameter values stored by the Dialogic® DM3 Board firmware is provided. The boards that support this feature are:

- Dialogic® DM/V-A Media Boards
- Dialogic® DM/V-B Media Boards

This feature allows a user to dynamically (at runtime) retrieve and/or modify the following parameter values:

- Protocol ID
- CAS signal definitions
- CDP variable values
- Line type (E1_CRC, D4, ESF) and coding (B8ZS, HDB3, AMI) for a trunk
- Protocol for a trunk

For further information about this feature, see the *Dialogic® Global Call API Programming Guide*.

1.73 Analog Line Adaptation Utility (LineAdapt)

This section provides detailed information on how to use the line adaptation utility. The following topics are covered:

- [Supported Products](#)
- [Feature Description](#)
- [Line Adaptation Utility Overview](#)
- [Line Adaptation Procedures](#)
- [LineAdapt Utility Command Line Interface](#)
- [Documentation](#)

1.73.1 Supported Products

The line adaptation utility (LineAdapt) is supported on the following analog front-end boards.

Springware Boards:

- Dialogic® D/41JCT-LS Media Boards (North American version)
- Dialogic® D/120JCT-LS Rev. 2 Media Boards (North American version)
- Dialogic® D/41JCT-LSEU Media Boards (European version)

DM3 Boards:

- Dialogic® DMV160LP Media Boards (but not the Dialogic® DMV160LPHIZ high impedance, or HiZ version)
- Dialogic® DI0408LSAR2 Switching Boards (this is the Rev. 2 version)

1.73.2 Feature Description

The line adaptation utility is a configuration utility for tuning the impedance level on analog front-ends to reduce transmitter side line echo due to degraded analog telephone lines that deviate from their designed impedance range. (Some impedance deviation is present in all analog telephone lines.) The utility helps to correct trunk environments where the analog telephone line and the analog board front end impedance do not conform. In some extreme cases, this situation can cause a transmitter side line echo that disrupts perceived voice quality and triggers DTMF termination events. The utility normalizes the impedance mismatch by discovering the optimum settings for individual channels or ports on the analog board and initializing the board to use the optimum settings.

1.73.3 Line Adaptation Utility Overview

Line adaptation consists of running the host-based LineAdapt utility to discover and store the optimum impedance settings for individual channels on analog boards that are connected to analog telephone lines. The stored settings are then used whenever the boards are downloaded, such as at system startup when the Dialogic® System Services are started on the boards.

Therefore, the line adaptation process consists of the following parts:

- Configuration: Discovery and storage of optimum settings (typically performed once)
- Initialization: Using the stored optimum settings at startup (performed whenever the boards are downloaded or initialized)

Line adaptation procedures and related information are described in [Section 1.73.4, “Line Adaptation Procedures”](#), on page 169.

The command line interface for the utility is documented in [Section 1.73.5, “LineAdapt Utility Command Line Interface”](#), on page 176.

1.73.4 Line Adaptation Procedures

This section contains the following topics:

- [Location and Description of the Utility and Component Files](#)
- [Line Adaptation Procedure](#)
- [Configuration File Tasks](#)

1.73.4.1 Location and Description of the Utility and Component Files

The following list provides a brief description and the location of the line adaptation utility along with its required components and associated files. All locations are relative to the Dialogic® Software home directory as specified by the %INTEL_DIALOGIC_DIR% environment variable.

LineAdapt.exe

The line adaptation utility executable, which provides a command line interface.

Location: **bin** directory.

LineAdapt.log

The utility log file. Contains information output during execution of the LineAdapt utility, including results, errors, and warnings. Location: **log** directory.

LineAdaptDefCoefficients.xml

The data file used by the line adaptation utility during the optimum coefficient discovery process. It contains the list of boards supported and the default coefficient sets used for discovery. Location: **cfg** directory.

Note: Do not edit or modify the *LineAdaptDefCoefficients.xml* file. The list of boards and the default data sets are preset and must not be changed.

LineAdaptOptCoef.xml

The configuration file used by the line adaptation utility. As a result of running the LineAdapt utility in discovery mode, the utility stores in this file the optimum Quad Subscriber Line Audio-processing Circuit (QSLAC) filter coefficients for specific boards and lines. These optimum coefficients are then used to initialize the board at startup. Location: **cfg** directory. For related information on the file, see [Section 1.73.4.3, “Configuration File Tasks”](#), on page 173.

LineAdapt Tone Files

The tone files (e.g., LineAdapt510.WAV, LineAdapt1020.WAV, and LineAdapt2020.WAV) used by the utility during optimum coefficient discovery. Location: **cfg** directory.

Note: Do not edit or modify the tone files.

1.73.4.2 Line Adaptation Procedure

This section provides information on the following topics:

- [Requirements for Line Adaptation](#)
- [Set Up the System and Configure Target Boards for Discovery](#)
- [Execute the LineAdapt Utility to Discover Optimum Settings](#)
- [Post-Discovery: Reconfigure and Initialize the Boards, and Test the System for Normal Use](#)

Requirements for Line Adaptation

You must meet the following requirements for the line adaptation discovery phase.

- The analog telephone lines and boards that require adaptation have been identified (referred to as the **target** boards/lines).
- The target boards are configured and able to function.
- The telephone lines are attached to the target boards/channels.
- There must be no inbound telephone calls during execution of the LineAdapt utility (the incoming calls should be deactivated at the central office prior to running the utility).
- Application and other programs must not access the target boards and telephone lines during execution of the utility.
- Prior to line adaptation, you must perform the procedures in [Set Up the System and Configure Target Boards for Discovery](#). Afterwards, you must perform the procedures in [Post-Discovery: Reconfigure and Initialize the Boards, and Test the System for Normal Use](#).
- The instructions in this section assume that you are familiar with the Dialogic® Configuration Manager (DCM). For information on using DCM, you can use the DCM online help and you can also refer to the documentation in the Configuration Guide for your board (separate configuration guides are provided for Dialogic® Springware Boards and for Dialogic® DM3 Boards). The *Dialogic® System Software for PCI Products on Windows® Administration Guide* may also be of use.

Set Up the System and Configure Target Boards for Discovery

Use the following procedure to configure the target boards with Continuous Speech Processing (CSP) firmware for performing adaptation discovery:

1. If the target boards are running, use DCM to stop them.
2. Select the target board in DCM, open the “Misc” property sheet, and locate the parameter that specifies the firmware file for the board. For **DM3** Boards, the firmware file is identified by the **PCDFileName** parameter, and for **Springware** Boards, it is identified by the **FirmwareFileName** parameter.
3. Before making any changes, *make note of your existing firmware file name*. Then select one of the following firmware file names that is applicable to your board (if different from the existing file name).

Note: Proper optimization requires that one of the following firmware files, which support CSP, be downloaded to the board for the discovery procedure.

Board	PCDFileName (DM3 Boards)	FirmwareFileName (Springware Boards)
D/41JCT-LS		D41JCSP.FWL
D/41JCT-LSEU		D41JCSP.FWL
D/120JCT-LS		D120CSP.FWL
DMV160LP	DMV160LP.PCD	
DI0408LSAR2	DI0408LSA_REV2_ML2.PCD DI0408LSA_REV2_ML3.PCD DI0408LSA_REV2_ML4.PCD	

4. **For D/41JCT-LSEU Boards only:** Open the “Country” property sheet, set the **Country** parameter to “EU” and click OK. **Failure to do so will cause the incorrect default QSLAC filter coefficients to be loaded, and the LineAdapt Utility will not be able to properly adapt the line.**
5. Save the configuration and repeat the configuration procedure for all target boards.
6. Start the target boards using DCM.

Execute the LineAdapt Utility to Discover Optimum Settings

Use the following procedure to execute the LineAdapt utility and discover the optimum settings for the target boards:

1. Open a command window.
2. Execute the LineAdapt utility (located in the **bin** directory) in **Prompting Mode** to select and adapt the target boards and channels as follows:

LineAdapt

Note: For running the utility in **Command Mode** or to use command line parameters, see [Section 1.73.5, “LineAdapt Utility Command Line Interface”](#), on page 176.

- The utility displays a list of all supported boards that are recognized (started) and shows the logical ID (for DM3 Boards) or board ID (for Springware Boards), location (bus/slot), and the number of channels for each board, along with a prompt for selecting the target boards, similar to the following:

Please Enter the Boards you would like to Adapt. 'A' for All or 'Q' to Quit

BoardNumber	BUS	SLOT	BoardName
01	00	10	D/41JCT-LS #0 in Slot 0/10 Number Of Channels = 4
02	02	04	D/120JCT-LS-Rev2 #1 in slot 2/4 Number Of Channels = 12
03	01	03	DI0408-LS-A-R2 #2 in slot 1/3 Number Of Channels = 4

Selected Board Options >

Note: To quit the utility at any time, type **Q** or **q** and press the Enter key. All keyboard entries are case-insensitive.

- To select **all boards**, type **A** or **a** and press the Enter key.

To select **one or more individual boards**, type the board numbers (listed in the first column) separated by a space (e.g., to select the D/41JCT-LS and the DI0408LSAR2 Boards, type **1 3** and press the Enter key).

To select a **range of boards**, type the board numbers (listed in the first column) separated by a dash or hyphen (e.g., to select the D/41JCT-LS and the D/120JCT-LS Boards, type **1-2** and press the Enter key).

Note: You can run the utility again later and select individual boards to add to the configuration.

For each board selected, the utility displays a prompt for selecting the target channels, similar to the following:

Enter the Channels you would like to adapt on <boardname> #<id> in slot <bus>/<slot>. 'A' for All or 'Q' to Quit >

- To select **all channels** on the specified board, type **A** or **a** and press the Enter key.
To select **one or more individual channels**, type the channel numbers separated by a space (e.g., to select the last channels on the D/41JCT-LS Board, type **3 4** and press the Enter key).
To select a **range of channels**, type the channel numbers separated by a dash or hyphen (e.g., to select the first three channels on the D/41JCT-LS Board, type **1-3** and press the Enter key).
- After you select the channels for each board, the utility displays progress messages as it performs tests on the selected targets. It takes the target channels off-hook, detects dial tone, dials a digit to obtain silence, and then performs tests to measure and calculate the best settings. It selects the optimum QSLAC filter coefficients that will adapt the channels to their particular analog telephone lines and stores these settings in the *LineAdaptOptCoef.xml* file in the *cfg* directory. The utility records the results and any warnings or errors in the *LineAdapt.log* file in the *log* directory, and it initializes (downloads) the boards with the optimum settings.
- After the discovery process is complete, check the *LineAdapt.log* in the *log* directory for errors or warnings to ensure that the adaptation was successful.

Post-Discovery: Reconfigure and Initialize the Boards, and Test the System for Normal Use

After discovery has been successfully completed, perform the following steps to reconfigure, initialize, and test the system:

1. Use DCM to stop the target boards.
2. Restore the firmware file name back to the original file name that was used before you changed it according to the instructions in the section on [Set Up the System and Configure Target Boards for Discovery](#).
3. Start the target boards and then test the system to confirm that the adaptation was successful. Verification testing should include running a user application program to ensure that line echo performance is acceptable.

Note: The boards will be initialized with the optimum line impedance configuration upon startup as long as the *LineAdaptOptCoef.xml* file is present in the *cfg* directory, and it contains the optimum coefficients discovered from running the utility.

1.73.4.3 Configuration File Tasks

The following list describes some important tasks for using the LineAdapt utility and its configuration file. These tasks relate to certain actions that affect the contents of the configuration file. For more information on these actions and their effects, see [Discovery, Initialization, and Storage of Optimum Settings](#) in [Section 1.73.5, "LineAdapt Utility Command Line Interface"](#), on page 176.

Back up the configuration file

It is good practice to back up the *LineAdaptOptCoef.xml* when adaptation is complete. Having a backup copy of the file is a good idea especially if you remove a board and replace it later, or if you move a board to a different slot.

Add to the configuration

You can add optimum coefficients to the configuration at a later time. You can run the utility multiple times and select individual boards to add to the configuration without changing or replacing the configuration of targets that have already been optimized. When you run the utility, simply select the new targets to adapt (boards/channels) and these will be added to the configuration.

Remove a board from the configuration **or**

Remove selected channels from the configuration

You can remove from the configuration file the line adaptation settings for all channels on a target board and return that board to its default configuration. You do this by physically removing the board from the chassis and then running the utility to adapt any channel on an existing board. You can also remove a board or selected channels from the configuration by editing the *LineAdaptOptCoef.xml* configuration file (see the following topic on [Board and Channel Identification in the LineAdaptOptCoef.xml Configuration File](#)).

Note: To remove the optimum settings for all boards, you can delete the *LineAdaptOptCoef.xml* file or execute `LineAdapt -r`.

Replace a board in the chassis (in case of board failure)

If you replace a board with the same type of board in the same slot and attach the trunk cables to the same port locations on the board, you do not need to make any changes to the configuration file or re-adapt for the new board. The same optimum settings apply to the new board, because optimum settings apply to the board type in a given slot and to the line conditions on the trunk.

Move a board to another slot (in case of a slot failure) **or**

Move analog trunks/lines to another board of same type

If you want to move a board that has optimum settings existing in the *LineAdaptOptCoef.xml* configuration file to another slot, as when a slot failure occurs, you can edit the *LineAdaptOptCoef.xml* configuration file to change its location. This allows you to reconfigure the board for the new location without the necessity of running the LineAdapt utility to rediscover its optimum settings. You can change the slot number only if the same telephone lines remain attached or are re-attached to the same ports on the board.

Similarly, if you want to move the analog trunks/lines from one board that has optimum settings existing in the *LineAdaptOptCoef.xml* configuration file to another board of the same type but in different slot, you can edit the *LineAdaptOptCoef.xml* configuration file to specify the slot location of the board. You can change the slot number only if the same telephone lines are attached to the same port locations on the same type of board.

See the following topic on [Board and Channel Identification in the LineAdaptOptCoef.xml Configuration File](#).

Note: You must also change other configuration files in which the board is identified. For information on making other configuration changes, see the *Dialogic® System Software for PCI Products on Windows® Administration Guide* and also the Configuration Guide for your board (separate configuration guides are provided for Dialogic® Springware Boards and for Dialogic® DM3 Boards). If a board is in a slot that becomes defective or fails, moving the board to another slot is treated the same as removing the board and then adding it to the system.

Board and Channel Identification in the LineAdaptOptCoef.xml Configuration File

The following information describes the valid format for identifying boards and channels in the *LineAdaptOptCoef.xml* configuration file. This information is provided in case you need to edit an existing board identification line to change its logical ID (for DM3 Boards) or board ID (for Springware Boards), and bus/slot location, or in case you wish to delete existing board or channel settings from the file. The configuration file is located in the *cfg* directory.

Warning: The *LineAdaptOptCoef.xml* configuration file is generated by the LineAdapt utility, and proper board functioning depends upon its integrity. If you change the file, you run the risk of introducing an error into the file and you do so at your own risk.

- Notes:**
1. You must use an XML editor to edit the *LineAdaptOptCoef.xml* configuration file properly. You must not edit or modify any data other than the data specified below. Do not attempt to edit the optimum coefficient values.
 2. Make sure to create a backup copy of the configuration file before attempting any changes.
 3. Make sure to keep a record of your changes.
 4. If you introduce an error into the file, try reverting to your backup copy of the file or run the discovery procedure according to the instructions in [Section 1.73.4.2, "Line Adaptation Procedure"](#), on page 170.

Board Identification

The *BOARD* keyword and its parameters identify the board name, logical ID (for DM3 Boards) or board ID (for Springware Boards), bus/slot location, and architecture type. The *BOARD* identification line is followed by a channel identification line and the optimum coefficient settings that apply to the channel. The format of the *BOARD* identification line is shown through the following examples:

```
<<BOARD Name="DI/0408-LS-A-R2 #0 in slot 1/11" Type="DM3">
```

```
<<BOARD Name="D/41JCTls #1 in slot 2/3" Type="Springware">
```

The #0 and #1 represent the logical ID or board ID. The slot 1/11 and slot 2/3 represent the bus and slot numbers, which identify the unique location of the boards. See the following valid values for the *Name* and *Type* parameters.

Warning: Do not change the board *Name* or *Type*. The optimum settings are specific to the category of board (board name and architecture type). The values for these parameters are only shown to help you identify specific boards.

Valid **DM3** Board names for **Name** parameter:

- DI/0408-LS-A-R2
- DMV160LP

Valid **Springware** Board names for **Name** parameter:

- D/41JCT-LS
- D/41JCT-EU
- D/120JCT-LS-Rev 2

Valid values for **Type** parameter:

- DM3
- Springware

Channel Identification

The *Channel number* keyword identifies the channel on the board. The channel identification line is followed by the optimum coefficient settings that apply to the channel. The format of the channel identification line is shown through the following example:

```
<Channel number="1">
```

This specifies channel number 1.

Note: Do not attempt to edit the optimum coefficient values.

Terminator for End of Board Data Section

Each board section is terminated by an end-board line as follows:

```
</BOARD>
```

1.73.5 LineAdapt Utility Command Line Interface

For the location of the utility program executable and its files, see [Section 1.73.4.1, “Location and Description of the Utility and Component Files”](#), on page 169.

This section provides information on the following topics:

- [Prompting Mode and Command Mode](#)
- [Discovery, Initialization, and Storage of Optimum Settings](#)
- [LineAdapt Command Line Parameters](#)

Prompting Mode and Command Mode

The LineAdapt utility can run in either Prompting Mode or Command Mode:

Prompting Mode

Displays a list of boards and channels and prompts the user to select the adaptation targets. You can invoke the utility in Prompting Mode by running it without any command line parameters. You can also use the -d, -t, and -v parameters in Prompting Mode (see Table 1). After you select adaptation targets in Prompting Mode, the utility performs discovery, stores the optimum settings in the *LineAdaptOptCoef.xml* file for future initializations, and initializes the boards with the settings. For details on Prompting Mode operation, see [Execute the LineAdapt Utility to Discover Optimum Settings](#) in [Section 1.73.4.2, “Line Adaptation Procedure”](#), on page 170.

Command Mode

Executes the command line and does not prompt for user input. Command Mode can be used for batch files or scripts, or for direct interaction with a user. You can invoke the utility in Command Mode by specifying the -a parameter to perform discovery on all supported and recognized boards.

Note: All parameters can be used in Command Mode (see Table 1).

Table 1. LineAdapt Utility Parameters Applicable to Prompting and Command Modes

Option	Command Mode	Prompting Mode
<none>	no	yes
-a	yes	no
-b	yes	no
-c	yes	no
-d	yes	yes
-h	yes	no
-l	yes	no
-n	yes	no
-r	yes	no
-s	yes	no
-t	yes	yes
-v	yes	yes

Discovery, Initialization, and Storage of Optimum Settings

The following describes adaptation information related to discovery, initialization, and storage of optimum settings:

- The utility adapts a board to the conditions on the trunk or telephone lines. The optimum settings apply to the line conditions on the trunk for the given board type in a specific slot. If you replace a board with the same type of board in the same slot and attach the trunk cables to the same port locations on the board, you do not need to make any changes to the configuration file or re-adapt for the new board. The same optimum settings apply to the new board.
- If you perform discovery with the utility, it always results in board initialization with the optimum settings discovered.
- Storage of optimum settings depends upon the command line parameter used. If you execute the utility in Command Mode with the -t parameter for temporary discovery, the optimum settings discovered **are not stored** in the *LineAdaptOptCoef.xml* configuration file for future initializations. If you execute the utility in Prompting Mode, or in Command Mode with the -a parameter or the -b -s parameters, the optimum settings discovered **are stored** in the *LineAdaptOptCoef.xml* configuration file for future initializations.
- You can execute the utility more than once to add to or change the settings stored in the *LineAdaptOptCoef.xml* configuration file. If you perform adaptation on a new target, the settings will be added to the configuration file. If you perform adaptation on any target that already exists in the configuration file, those settings will replace the ones in the configuration file.

- If you physically remove from its slot a board that has optimum settings existing in the *LineAdaptOptCoef.xml* configuration file and then perform **line adaptation** with stored results for any target, the settings for the “missing” board will be **deleted from the file**. This is true whether you remove the board from the chassis or move it to another slot. However, if you do not perform line adaptation with storage and only perform a system startup or initialize the boards with or without the utility, an error message is recorded in the *LineAdapt.log* file, but it will not delete the settings for the missing board from the *LineAdaptOptCoef.xml* configuration file.

Note: To remove the optimum settings for all boards, you can delete the *LineAdaptOptCoef.xml* file or execute `LineAdapt -r`.

- If you disable, stop, or do not start a board that has optimum settings existing in the *LineAdaptOptCoef.xml* configuration file, and then you perform line adaptation for any target, an error message is recorded in the *LineAdapt.log* file, but it will not delete the settings for the disabled board from the *LineAdaptOptCoef.xml* configuration file.

LineAdapt Command Line Parameters

Command Line: `LineAdapt [-parameter [value] -parameter [value] ...]`

Square brackets indicate optional items. An ellipsis (...) indicates that the preceding items can be repeated. A vertical bar or pipe symbol (|) indicates that the items on either side of the bar are mutually exclusive.

This utility supports the following command line parameters. Most of the parameters are flags. If more than one parameter is used, they must be separated by a space. For parameters that specify values, a space between the parameter and its value is optional; however, for readability they are shown without a space in examples (so as to distinguish the parameter/value pairs from one another more easily).

Note: All parameters can be used in Command Mode.

<no parameters>

When the command line does not specify any parameters, it executes the utility in **Prompting Mode**, which displays a list of boards and channels and prompts the user to select the adaptation targets. You can also use the -d, -t, and -v parameters in Prompting Mode (see Table 1). For operation details, see [Execute the LineAdapt Utility to Discover Optimum Settings](#) in [Section 1.73.4.2, “Line Adaptation Procedure”](#), on page 170.

-a

Adapts *all* channels on *all* supported and recognized boards. Performs discovery, stores the optimum settings in the *LineAdaptOptCoef.xml* file for future initializations, and initializes the boards with the settings. The -a parameter is mutually exclusive with the -b, -s, and -c parameters, which specify target boards and channels, and with the -n parameter, which does not perform discovery.

-b <bus number> -s <slot number> [-c <channel target>] ...

The -b parameter specifies the *bus* number in the chassis where the target board resides. This parameter must be combined with the -s parameter in the order shown; together they identify a specific board as the target for adaptation. When you specify target boards, the utility performs discovery, stores the optimum settings in the *LineAdaptOptCoef.xml* file for future initializations, and initializes the boards with the settings. If desired, you can add the -c parameter following the -b -s parameters to specify target channels on the board (see the -c parameter for details on how to specify more than one channel). You can include more than one target board on the command line by specifying more than one set of -b -s parameters. The -b, -s, and -c parameters specify target boards and channels and are mutually exclusive with the -a parameter, which specifies all applicable boards, and they are mutually exclusive with the -n parameter, which does not perform discovery. Syntax example:

```
LineAdapt -b0 -s1 -b0 -s2 -c1 -b1 -s1 -c1 -c2
```

This command adapts the following targets:

- All channels on the target board in bus 0, slot 1.
- Channel 1 on the target board in bus 0, slot 2.
- Channels 1 and 2 on the target board in bus 1, slot 1.

The command performs discovery on the specified targets, stores the optimum coefficients in the *LineAdaptOptCoef.xml* file for initialization with future downloads, and initializes the boards with the settings.

-c <channel target> ...

Specifies a *channel* target on the board identified by the -b -s parameters. If the -c parameter is used, it must follow the slot number (see the -b parameter for details). The channel target can be a single channel number or a range of channel numbers. In either case, you can include more than one channel target on the command line by specifying more than one -c parameter (i.e., the -c parameter can be repeated). The format to specify a range of channel numbers is to specify a starting channel number and ending channel number separated by a dash or hyphen. Channel numbers must be within the range of channels on the board (use the -l parameter to display the channel numbers on the board). If channel targets are not specified (i.e., if the -c parameter is not used), the default is all channels on the board. Syntax example:

```
LineAdapt -b0 -s1 -c1 -c2 -c8-12
```

This command adapts channels 1 and 2 and channels 8 through 12 on the target board in bus 0, slot 1. The command performs discovery on the specified targets, stores the optimum coefficients in the *LineAdaptOptCoef.xml* file for initialization with future downloads, and initializes the boards with the settings.

-d <dial string>

Specifies a valid *dial string* to connect to a known silent termination when the utility takes the channel off-hook to perform testing. If not specified, the default is DTMF digit 3, which is used to silence the dial tone. Alternatively, another DTMF digit can be specified in the dial string to silence the dial tone (e.g., *LineAdapt -d5*). The -d parameter can also be used in Prompting Mode.

-h

Displays online *help* showing all the possible command line arguments. This parameter is not used with any other parameters (it is a stand-alone parameter), but if any other parameters are specified, it takes precedence over them.

- l

Lists board information for supported and recognized (started) boards, including the bus number, slot number, and channels. This parameter is not used with any other parameters (it is a stand-alone parameter).
- n [-DM3 | -Springware]

Specifies *no discovery* (and thus also no storage). This parameter uses the current configuration in the *LineAdaptOptCoef.xml* file to initialize the boards with their optimum coefficients. Since this parameter requires optimum settings in the *LineAdaptOptCoef.xml* file, the utility must have been executed previously for discovery and storage of optimum settings. This parameter is used internally by DCM in the download or system startup sequence, although it can be used independently of it as well. To initialize only DM3 Boards, specify *LineAdapt -n -DM3*; or to initialize only Springware Boards, specify *LineAdapt -n -Springware*; otherwise the -n parameter applies to all board types. The -n parameter is mutually exclusive with the -b, -s, and -c parameters, which perform discovery on target boards and channels, and with the -a parameter, which performs discovery on all applicable boards.
- r

Removes (deletes) the *LineAdaptOptCoef.xml* file, which restores the default configuration for channel impedance (no gain) which existed prior to any adaptation. That is, the boards will be downloaded with the default coefficients from the CONFIG or PRM file. This parameter is not used with any other parameters (it is a stand-alone parameter).
- s <slot number>

Specifies the *slot* number in the chassis where the target board resides. Must be used with the -b parameter (see the -b parameter description for details).
- t

Specifies *temporary* discovery and initialization. With this parameter, the optimum coefficients found out are not stored in the *LineAdaptOptCoef.xml* file, although summary information is recorded in the *LineAdapt.log* file. The optimum settings discovered are used to initialize the target boards when the discovery is complete. However, since the settings are not stored, they will not be used to initialize the target boards in the next download or system startup. If the -t parameter is **not** specified, the utility will discover the optimum coefficients for the specified channels and store them in the *LineAdaptOptCoef.xml* file for initialization with future downloads. The -t parameter can also be used in Prompting Mode. When using the -t parameter in Command Mode, the -b, -s, and -c parameters can be used to specify target boards and channels for discovery; otherwise, the -t parameter applies to all supported and recognized (started) boards.
- v

Specifies the flag to turn *verbose* display **on**, which displays activity messages on the screen. The -v parameter can also be used in Prompting Mode to display more detail than when verbose is off. By default verbose is off (suppressed).

1.73.6 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about configuring Dialogic® Springware and DM3 Boards, see the *Dialogic® Springware Architecture Products on Windows® Configuration Guide* and the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the Configuration Guides do not currently include information about the line adaptation utility.

1.74 New QSIG Channel Mapping Parameter for E1 Boards

The Service Update provides a new QSIG channel mapping parameter for Dialogic® Boards that support E1 technology. This parameter specifies that bearer channel time slots be numbered sequentially from 1 to 30 for the QSIG protocol. This mapping scheme is the same as the one used on Dialogic® Springware Boards, and facilitates migration to the newer generation DM3 Boards.

This new functionality is supported on the following Dialogic® Boards:

- Dialogic® DM/V600A-2E1-PCI Media Boards
- Dialogic® DM/V1200A-4E1-PCI Media Boards
- Dialogic® DMV600BTEP Media Boards
- Dialogic® DMV1200BTEP Media Boards

1.74.1 Feature Description

Currently, bearer channel time slots on DM3 Boards are numbered from 1 to 15 and 17 to 31 for the QSIG protocol. Channel 16 is reserved for signaling. Thus, the QSIG stack will reject any calls with the channel identification information element set to 16, as it assumes that channel 16 is reserved for signaling data.

With the Service Update, you can specify that bearer channel time slots use a sequentially-ordered logical channel numbering scheme, from 1 to 30, for the QSIG protocol. This scheme conforms to the ECMA QSIG specification. (See [Section 1.74.2, "Documentation"](#), on page 182 for reference information on this specification.)

This functionality is available through a new parameter in the CONFIG file and is enabled on a trunk by trunk basis. You must **manually add** this parameter in the appropriate [CCS.x] section of the CONFIG file and turn the feature on. Next, update the corresponding FCD file by downloading the firmware to the board using the Dialogic® Configuration Manager (DCM). Changed values take effect at the time the firmware is downloaded to the board. For more information about modifying FCD file parameters, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

The new QSIG parameter is described below.

CCS_ALTQSIGCHANMAP_FLAG (Alternate QSIG Channel Mapping)

Number: 0x26

Description: This parameter enables bearer channel time slots to use a sequentially-ordered logical channel numbering scheme, from 1 to 30, for the QSIG protocol. If not enabled, bearer channel time slots are numbered from 1 to 15 and 17 to 31. In this mode, channel 16 is invalid as it is reserved for signaling.

Note: This parameter only applies to E1 boards.

Values:

- 0 (disabled) (default value)
- 1 (enabled)

Guidelines: To enable the alternate QSIG channel mapping scheme, add this new QSIG parameter in the [CCS.x] section of a CONFIG file and set to 1.

Example: This example shows the new QSIG parameter added and enabled in the [CCS.1] section of a CONFIG file:

```
...
[CCS.1]
...
SetParm=0x26,1          ! Enable QSIG sequential channel mapping scheme
```

1.74.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about configuration files, configuration parameters, and configuration procedures, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so this new parameter is not currently documented in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

For more information about the QSIG protocol standard, see the ECMA Private Integrated Services Network (PISN), Circuit Mode Bearer Services, Inter-Exchange Signaling Procedures and Protocol (QSIG-BC) specification on the ECMA International website at the following link: www.ecma-international.org

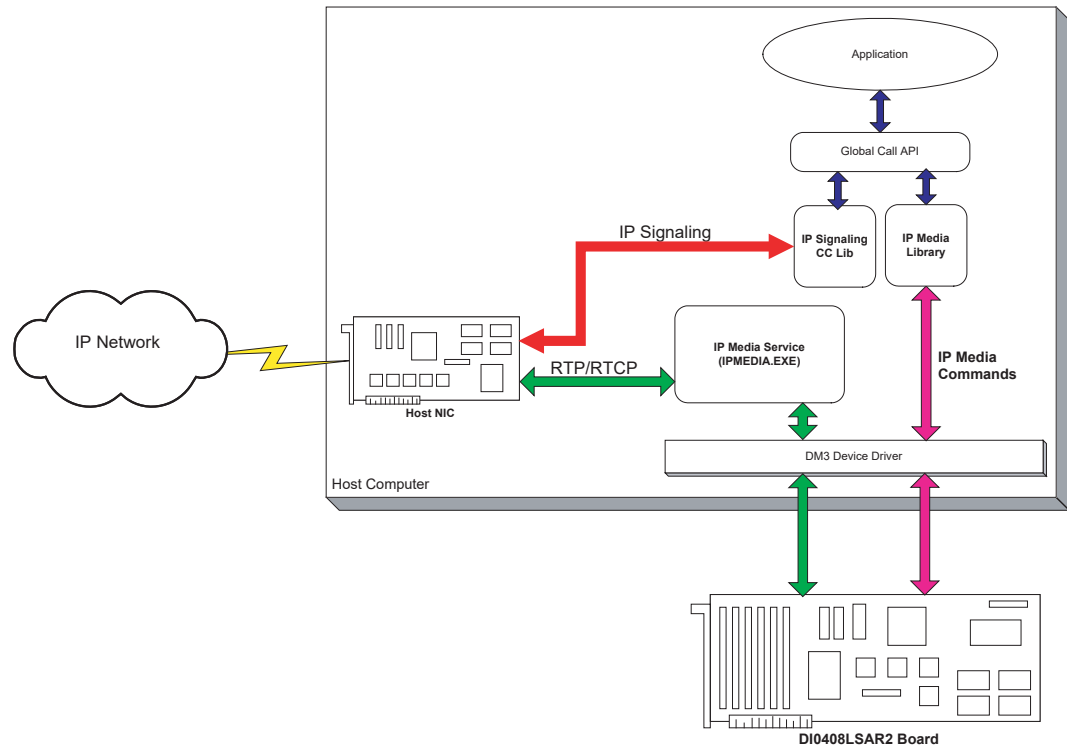
1.75 IP Support on Dialogic® DI0408LSAR2 Boards

This release supports Voice over IP (VoIP) capability on Dialogic® DI0408LSAR2 Switching Boards. This capability allows a VoIP call to be connected to the CT Bus. Using the DI0408LSAR2 Board equipped with a PSTN network front end, you can build a single-board IP-to-PSTN gateway application.

The IP resource implementation of the DI0408LSAR2 Board is equivalent to that developed for the Dialogic® DM/IP Boards as defined in the following documents:

- *Dialogic® Global Call IP Technology Guide*
- *Dialogic® IP Media Library API Programming Guide*
- *Dialogic® IP Media Library API Library Reference*

The IP resource implementation of the DI0408LSAR2 Board has unique design elements illustrated in the following figure. Unlike the DM/IP Board implementation, there is no on-board Ethernet NIC interface on the DI0408LSAR2 Board; therefore, both the IP call control and media processing are done through the host Ethernet NIC. The IP call control is implemented by host-based stack technology (call control library, IPT CCLib). The media processing of the RTP/RTCP packets is performed by the IP Media Service developed for DI0408LSAR2 media loads 3 and 5.



Note: It is also possible to specify one NIC for RTP/RTCP and, via Global Call, assign a different NIC for signaling and data. See [Section 1.76, “Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs”](#), on page 190.

1.75.1 Feature Description

This release introduces support for media load 3 on the DI0408LSAR2 Board. Media load 3 provides the same features as media load 2 with the addition of IP. (For more information about media loads, see the [DI0408LSAR2 Media Loads](#) section below. There is also an IP-only media load, media load 5.) The following new features are supported on the DI0408LSAR2 Board when using media load 3:

- Call control implemented on the host by host-based stack technology (call control library, IPT CCLib). Media processing (RTP/RTCP processing) performed on the host, implemented via the IP Media Service developed for DI0408LSAR2 media load 3.
- Host-based IP stacks
- Global Call API support for IP
- IPML support for IP
- RADVISION stack; compliant with ITU-T H.323 V.4 specification, including provision for periodic registration with gatekeeper

- RADVISION SIP stack; compliant with IETF RFC 3261, the Session Initiation Protocol (SIP)
- Full-duplex communication with all coders. Supported coders are:

Coder	Frames per Packet	Frame Size (milliseconds)	VAD
G.711	1	20, 30	N/A
G.723.1, 5.3 kbps	2, 3	30	Supported
G.723.1, 6.3 kbps	2, 3	30	Supported
G.729 Annex A	2-4	10	Disabled
G.729 Annex A with Annex B	2-4	10	Enabled
GSM FR	2, 3		Supported

- H.245 tunneling
- Fast Start and Slow Start compatibility
- QoS/ToS
- RFC 2833
- IP Service Quality - jitter and packet loss
- Threshold alarms
- Simple Network Management Protocol (SNMP): TCP/IP level SNMP
- Support for standard Internet protocols, including TCP/IP, UDP, and RTP/RTCP
- Object ID support when sending non-standard command
- Support for non-standard information element in the Facility message over Q.931 port
- Vendor-specific information sending during call setup
- Voice quality parameters
- Basic DTMF and MF detection

The following features, supported in Dialogic® System Release 6.0 PCI for Windows® for DM/IP Boards, are **not** supported on the DI0408LSAR2 Board using media load 3:

- G.711 with 10 msec frame size. It is recommended that applications use 20 or 30 msec frame size with G.711. RTP/RTCP processing on the host system may cause voice quality issues at 10 msec frame size under heavy system loading.
- Multicasting
- T.38
- Single board start/stop (SBSS)
- Multiprocessor systems

DI0408LSAR2 Media Loads

Media loads are pre-defined sets of features supported by DM3 Boards. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and associated firmware loads that are downloaded to each board. In most cases, the PCD/FCD/CONFIG file names indicate the associated media load and protocol. For example, the files for media load 3 are *di0408lsa_REV2_ML3.pcd*, *di0408lsa_REV2_ML3.fcd*, and *di0408lsa_REV2_ML3.config*. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads and configuration file sets.

There are five media loads for the DI0408LSAR2 Board. The feature sets available in each media load are described below:

Media Load 1

Media load 1 provides the following features:

- Trunks: call control, caller ID, and dedicated voice (player, recorder, tone generator, signal detector) for the four analog loop start interfaces
- Stations: call control, caller ID, and dedicated voice (player, recorder, tone generator, signal detector) for the eight analog station interfaces
- Capability to switch the signal from the audio input to the CT Bus/SCbus
- Support for up to three conferences with a total of nine parties max between all conferences. Conference resources are shareable across the system via the CT Bus/SCbus. The ability to bridge conference resources for larger conferences is supported; see [Section 1.84, "Conference Bridging on Dialogic® DI Boards"](#), on page 242.
- Two channels of V.17 fax shareable across the system via the CT Bus/SCbus

Media Load 2

Media load 2 provides the following features:

- Eight channels of voice (player, recorder, tone generator, signal detector) shareable across the system via the CT Bus/SCbus
- Trunks: call control, caller ID, and dedicated tone generation and signal detection capability for the four analog loop start interfaces
- Stations: call control, caller ID, and dedicated tone generation and signal detection capability for the eight analog station interfaces
- Capability to switch the signal from the audio input to the CT Bus/SCbus
- Support for up to three conferences with a total of nine parties max between all conferences. Conference resources are shareable across the system via the CT Bus/SCbus. The ability to bridge conference resources for larger conferences is supported; see [Section 1.84, "Conference Bridging on Dialogic® DI Boards"](#), on page 242.
- Two channels of V.17 fax shareable across the system via the CT Bus/SCbus

Media Load 3

Media load 3 provides the same features as media load 2 with the addition of:

- Four channels of IP telephony shareable across the system via the CT Bus/SCbus

Media Load 4

Media load 4 provides the same features as media load 2 with the addition of:

- Four channels of continuous speech processing (CSP)

Media Load 5

Media load 5 provides the following features:

- Twelve channels of IP telephony shareable across the system via the CT Bus/SCbus

DI0408LSAR2 Devices

For the DI0408LSAR2 media loads, device enumeration follows the rules listed below.

Note: The scenario below assumes that the DI0408LSAR2 Board is the only board in the system. Call the **dx_getfeaturelist()** function to return information about the features supported on the device. (Refer to the *Dialogic® Voice API Library Reference* for function details.)

- **IPT Board Device** - A virtual entity that represents a NIC or NIC address (if one NIC supports more than one IP address). The format of the device name is **iptBx**, where **x** is the logical board number that corresponds to the NIC or NIC address. See the *Dialogic® Global Call IP Technology Guide* for more information.
- **IPT Network Device** - Represents a logical channel over which calls can be made. This device is used for call control (call setup and tear down). The format of the device name is **iptBxTy**, where **x** is the logical board number and **y** is the logical channel number. See the *Dialogic® Global Call IP Technology Guide* for more information.
- **IP Media Device** - Represents a media resource that is used to control RTP streaming, monitoring Quality of Service (QoS), and the sending and receiving of DTMF digits. The format of the device name is **ipmBxCy**, where **x** is the logical board number and **y** is the logical channel number. See the *Dialogic® Global Call IP Technology Guide* and the *Dialogic® IP Media Library API Programming Guide* for more information.
- The four loop start analog interfaces are enumerated as dtiB1T1-dtiB1T4. Trunk call control is supported via Global Call APIs.
- Voice devices associated with the four loop start interfaces are dxxxB1C1-dxxxB1C4. For media load 1, a subset of the dx_ APIs provides support for basic voice functionality. For media loads 2, 3, and 4, a subset of the dx_ APIs provides tone generation and detection support.
- The eight analog station interfaces are enumerated as msiB1C1-msiB1C8. Station call control is supported via the msi_ APIs.
- Voice devices associated with the eight analog station interfaces are dxxxB2C1-dxxxB2C4 and dxxxB3C1-dxxxB3C4. For media load 1, a subset of the dx_ APIs provides support for basic voice functionality. For media loads 2, 3, and 4, a subset of the dx_ APIs provides tone generation and detection support.
- For media loads 2, 3, and 4, eight channels of voice are enumerated as dxxxB4C1-dxxxB4C4 and dxxxB5C1-dxxxB5C4. A subset of the dx_ APIs provides support for basic voice, including transaction record.
- The audio input is enumerated as aiB1. Switching is controlled via the ai_ APIs.

- Conferencing is enumerated as dcbB1D1. Application control of conferencing is provided by either the dcb_ APIs or the ms_ conferencing APIs.
- The two fax channels are enumerated as follows:
 - For media load 1: dxxxB4C1 and dxxxB4C2
 - For media load 2: dxxxB6C1 and dxxxB6C2
 - For media load 3: dxxxB6C1 and dxxxB6C2
 - For media load 4: dxxxB7C1 and dxxxB7C2

Application control is provided by the fx_ APIs.

- For media load 3 only: the four channels of IP are designated as follows:
 - For IPT network devices: iptB1T1-iptB1T4
 - For IP media devices: ipmB1C1-ipmB1C4
 - For multiple DI0408LSAR2 Board configurations:
 - board 2: IPT network devices: iptB1T5-iptB1T8; IP media devices: ipmB2C1-ipmB2C4
 - board 3: IPT network devices: iptB1T9-iptB1T12; IP media devices: ipmB3C1-ipmB3C4
 - ...
- For media load 5 only: the 12 channels of IP are designated as follows:
 - For IPT network devices: iptB1T1-iptB1T12
 - For IP media devices: ipmB1C1-ipmB1C12
- For media load 4 only: the four channels of continuous speech processing (CSP) are enumerated as dxxB6C1-dxxB6C4. Application control is provided by the ec_ APIs.

1.75.2 Configuring the Software

This section contains information about configuring IP parameters on DI0408LSAR2 Boards; this information supplements the configuration information in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Selecting a Firmware File

The first time you run the Dialogic® Configuration Manager (DCM) with a DM3 Board in your system, you are prompted to select the firmware files (PCD and FCD) to be downloaded to each board. As discussed above in the [DI0408LSAR2 Media Loads](#) section, the PCD/FCD files determine the media load supported by the board.

DCM displays a list of PCD files. Select the PCD file for the media load that you want, for example, *di0408lsa_REV2_ML3.pcd* for media load 3. The selected PCD file and corresponding FCD file will be downloaded when the boards are started.

Setting the ToS Parameter in DCM

With this release, a new parameter for enabling or disabling ToS has been added to DCM for DI0408LSAR2 Boards. The parameter is called **DI_TOS** and it appears on the Misc property sheet. The default value for **DI_TOS** is Enable. If **DI_TOS** is set to Disable, the IP Media Service disables ToS processing for RTP packets transmitted from IP Media channels. In this configuration, all RTP packets transmitted from DI0408LSAR2 Board IP Media channels will have the ToS field in their IP packet header set to zero.

Configuring ToS in the CONFIG File

With this release, a new parameter for configuring ToS has been added to the DI0408LSAR2 Board CONFIG files that support IP. Previously, this parameter was applicable to DM/IP Boards only.

Note: For more detailed information about modifying the CONFIG file and generating a new FCD file, refer to the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Type of Service (ToS) is a category of Quality of Service (QoS) that performs Layer 3 tagging of packets to improve the mobility of the packets. When the ToS feature is used, four bits are specified in the packet header to determine the type of service as follows:

- 1000: minimize delay
selects a minimum delay link or circuit for the datagram
- 0100: maximize throughput
selects a high throughput link or circuit for the datagram
- 0010: maximize reliability
selects a high reliability link or circuit for the datagram
- 0001: minimize monetary cost
selects a minimum cost link or circuit for the datagram
- 0000: normal service (not activated)
the datagram has no priority assigned

The above are defined RFC-1349 specified values. Note that other values are valid; however, they have not been explicitly characterized in the RFC-1349 specification. The feature allows setting of any combinations of the four bits. The processing of packets with such combinations is assumed understood by the administrator and downstream routers.

There are two ways to implement the ToS feature (the same as when using ToS with DM/IP Boards):

- ToS can be activated on a channel by channel basis at run time by using the Global Call API functions **gc_SetConfigData()**, **gc_SetUserInfo()**, and **gc_MakeCall()**. The Set ID = IPSET_CONFIG and the Parameter ID = IPPARM_CONFIG_TOS. For further information, see the *Dialogic® Global Call IP Technology Guide*. Settings made at run time are not persistent.
- ToS can be set at the board level, before board initialization, via the CONFIG file. This causes the ToS bits to be set to the designated value in all RTP packets transmitted.

To specify the ToS in the CONFIG file, set the following parameter:

```
[0x1d]
SetParm=0x1d01,0    ! PrmTOS (LOWDELAY 0x10 THROUGHPUT 0x08 RELIABILITY
0x04 MINCOST 0x02 No Priority 0)
```

This parameter sets the ToS bits in the IP header of transmitted datagrams to improve the mobility of packets. Values are:

- 0x10: LOWDELAY
selects a minimum delay link or circuit for the datagram
- 0x08: THROUGHPUT
selects a high throughput link or circuit for the datagram
- 0x04: RELIABILITY
selects a high reliability link or circuit for the datagram
- 0x02: MINCOST
selects a minimum cost link or circuit for the datagram
- 0x00: No Priority
the datagram has no priority assigned

1.75.3 Restrictions and Limitations

The following restrictions and limitations exist for IP support on the DI0408LSAR2 Boards:

- Single processor systems only – DI0408LSAR2 ML3 and ML5 are not supported on multiprocessor systems.
- PTR 30285: When using VAD with G.729A/B codec, the application must explicitly set the VAD field in the IP_AUDIO_CAPABILITY structure to GCPV_ENABLE. Otherwise, the application could hang when invoking **gc_AnswerCall()**.

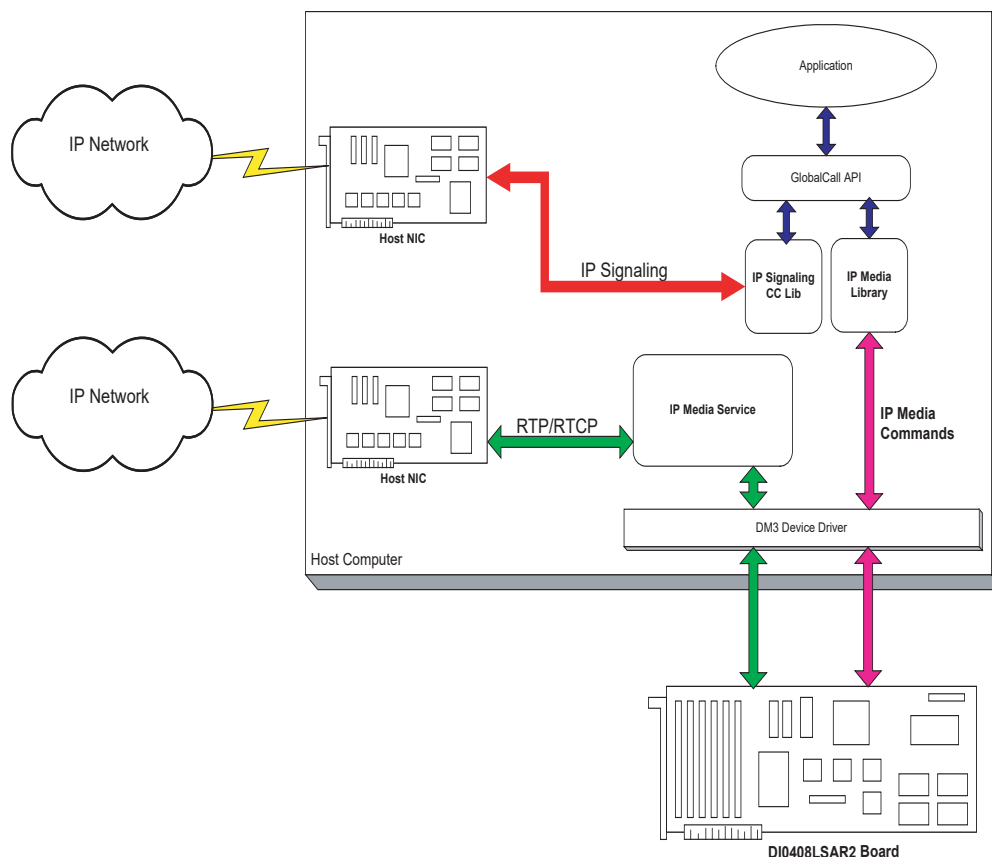
1.76 Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs

This release provides the capability to specify an explicit IP address for use by all Dialogic® DI0408LSAR2 Boards for RTP/RTCP processing in the system. If an explicit IP address is not specified, the first Network Interface Card (NIC) address returned from the socket function call **gethostbyname()** is selected automatically and assigned as the IP address.

The explicit IP address can be set with the Dialogic® Configuration Manager (DCM) as well as with the NCM API (**NCM_SetValue()** and **NCM_GetValue()** functions).

The new parameter is **HostIpMediaNetworkAddress** and appears on the Misc property sheet in DCM. It is a global-level parameter that applies to all DI0408LSAR2 Boards in the system. Enter the parameter value using standard decimal notation, xxx.xxx.xxx.xxx.

Note: This is the IP address for the IP media (not the IP call control signaling) and only for boards using the Host IP Media Service (not Dialogic® DM/IP Boards with on-board NICs). Refer to the figure below.



The IP Media Service uses the specified NIC IP address when establishing RTP media sessions. If no IP address was specified, the selection is done automatically as explained above.

The user-specified address is validated at board initialization to ensure that the address is recognized by the operating system. If the specified address is not valid, board initialization will fail with the reason for failure logged (i.e., invalid NIC IP address).

As with other configuration parameters, the **HostIpMediaNetworkAddress** parameter can be changed at any time; however, the change will not take effect until the system has been stopped and restarted.

1.77 Support for QSIG NCAS Calls on Dialogic® DM3 Boards

With the Service Update, the ability to initiate Non-Call Associated Signaling (NCAS) calls is supported for the QSIG protocol (E1 or T1) on Dialogic® DM3 Boards. The DM3 Boards that support this feature are:

- Dialogic® DMV1200BTEP Media Boards
- Dialogic® DMV600BTEP Media Boards
- Dialogic® DMV960A-4T1 Media Boards
- Dialogic® DMV1200A-4E1 Media Boards

The feature is only supported on media loads that use the QSIG T1 or E1 protocol, for example, ml2_qs2_qsige1.

For further information about NCAS on DM3 Boards, see the *Dialogic® Global Call ISDN Technology Guide*.

1.78 Loop Current Reversal Detection on Dialogic® DMV160LP Boards

The Service Update adds support for loop current reversal detection on the Dialogic® DMV160LP Media Board. For further information about this feature, see the *Dialogic® Global Call Analog Technology Guide*.

1.79 Adjusting DTMF Characteristics through the CONFIG File

With the Service Update, Dialogic® DM/V-A and DM/V-B Media Boards now support the ability to modify DTMF parameter values. This new functionality is provided through the configuration file set. Changed values take effect at the time the firmware is downloaded to the board using the Dialogic® Configuration Manager (DCM) utility.

This new functionality is supported by the following boards:

- Dialogic® DM/V480A-2T1 Media Boards
- Dialogic® DM/V600A-2E1 Media Boards
- Dialogic® DM/V960A-4T1 Media Boards
- Dialogic® DM/V1200A-4E1 Media Boards
- Dialogic® DMV600BTEP Media Boards
- Dialogic® DMV1200BTEP Media Boards
- Dialogic® DMV3600BP Media Boards

1.79.1 Feature Description

Previously, DTMF characteristics were hardcoded and not adjustable by the user. With the Service Update, you can now adjust DTMF parameter values, such as amplitudes and on/off durations, in the Tone Templates [tonegen] section of a particular media load CONFIG file. Default values are provided that are consistent with previous service updates and system releases to preserve backward compatibility.

After adjusting one or more DTMF parameter values in a CONFIG file, you must download the firmware to the board using the Dialogic® Configuration Manager (DCM). For more information on modifying FCD file parameters, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

DTMF parameter values are not modifiable through API functions.

Note: Use caution when modifying DTMF parameter values. The DCM does not prevent you from specifying values outside of industry specifications.

1.79.2 DTMF Characteristics and Default Values

The DTMF characteristics, such as amplitudes and on/off durations, are described as follows for each DTMF:

Table 2. DTMF Characteristics and Default Values

DTMF	Characteristic	Default Value
DTMF 1	Signal Id	58977
	Label	1
	Segment Count	1
	Segment Signal Type	2
	Segment Frequency 1 (Hz)	697
	Segment Amplitude 1 (.25 dbm)	-24
	Segment Frequency 2 (Hz)	1209
	Segment Amplitude 2 (.25 dbm)	-24
	Segment On Duration (125 µs)	800
	Segment Off Duration (125 µs)	400
	Segment Reps	1
	Next Segment	65535
DTMF 2	Signal Id	58978
	Label	2
	Segment Frequency 1	697
	Segment Frequency 2	1336

Table 2. DTMF Characteristics and Default Values (Continued)

DTMF	Characteristic	Default Value
DTMF 3	Signal Id	58979
	Label	3
	Segment Frequency 1	697
	Segment Frequency 2	1477
DTMF 4	Signal Id	58980
	Label	4
	Segment Frequency 1	770
	Segment Frequency 2	1209
DTMF 5	Signal Id	58981
	Label	5
	Segment Frequency 1	770
	Segment Frequency 2	1336
DTMF 6	Signal Id	58982
	Label	6
	Segment Frequency 1	770
	Segment Frequency 2	1477
DTMF 7	Signal Id	58983
	Label	7
	Segment Frequency 1	852
	Segment Frequency 2	1209
DTMF 8	Signal Id	58984
	Label	8
	Segment Frequency 1	852
	Segment Frequency 2	1336
DTMF 9	Signal Id	58985
	Label	9
	Segment Frequency 1	852
	Segment Frequency 2	1477
DTMF 0	Signal Id	58986
	Label	0
	Segment Frequency 1	931
	Segment Frequency 2	1336

Table 2. DTMF Characteristics and Default Values (Continued)

DTMF	Characteristic	Default Value
DTMF 3	Signal Id	58979
	Label	3
	Segment Frequency 1	697
	Segment Frequency 2	1477
DTMF 4	Signal Id	58980
	Label	4
	Segment Frequency 1	770
	Segment Frequency 2	1209
DTMF 5	Signal Id	58981
	Label	5
	Segment Frequency 1	770
	Segment Frequency 2	1336
DTMF 6	Signal Id	58982
	Label	6
	Segment Frequency 1	770
	Segment Frequency 2	1477
DTMF 7	Signal Id	58983
	Label	7
	Segment Frequency 1	852
	Segment Frequency 2	1209
DTMF 8	Signal Id	58984
	Label	8
	Segment Frequency 1	852
	Segment Frequency 2	1336
DTMF 9	Signal Id	58985
	Label	9
	Segment Frequency 1	852
	Segment Frequency 2	1477
DTMF 0	Signal Id	58986
	Label	0
	Segment Frequency 1	931
	Segment Frequency 2	1336

Table 2. DTMF Characteristics and Default Values (Continued)

DTMF	Characteristic	Default Value
DTMF a	Signal Id	58987
	Label	A
	Segment Frequency 1	697
	Segment Frequency 2	1633
DTMF b	Signal Id	58988
	Label	B
	Segment Frequency 1	770
	Segment Frequency 2	1633
DTMF c	Signal Id	58989
	Label	C
	Segment Frequency 1	852
	Segment Frequency 2	1633
DTMF d	Signal Id	58990
	Label	D
	Segment Frequency 1	941
	Segment Frequency 2	1633
DTMF #	Signal Id	58991
	Label	#
	Segment Frequency 1	941
	Segment Frequency 2	1477
DTMF *	Signal Id	58992
	Label	*
	Segment Frequency 1	941
	Segment Frequency 2	1209

Table 2. DTMF Characteristics and Default Values (Continued)

DTMF	Characteristic	Default Value
DTMF comma	Signal Id	58993
	Label	CommaHack
	Segment Count	1
	Segment Signal Type	1
	Segment Frequency 1 (Hz)	0
	Segment Amplitude 1 (dbm)	0
	Segment Frequency 2 (Hz)	0
	Segment Amplitude 2 (dbm)	0
	Segment On Duration (125 μ s)	0
	Segment Off Duration (125 μ s)	20000
	Segment Reps	1
	Next Segment	65535

1.79.3 Media Loads and CAS Protocols Supported

On DM/V-A Boards, the following media loads support the new functionality to modify DTMF parameter values: media load 2 and media load 5bc for T1 and E1 protocols.

On DM/V-B Boards, all media loads support the new functionality except for media loads 9b, 9c, and 9d (these support conferencing only).

The following CAS protocols support the new functionality: pdk_us_ls_fxs_io (T1 CAS), pdk_us_mf_io (T1 CAS), pdk_sw_e1_mcls_io (E1 CAS), and pdk_sw_e1_luls_io (E1 CAS).

1.79.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about configuration files, configuration parameters, and configuration procedures, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about adjusting DTMF characteristics through the CONFIG file.

1.80 Single Board Start/Stop for Selected Dialogic® JCT Boards

The ability to stop and start a single Dialogic® JCT Board (after the system has initially started) is now supported. With this feature, it is not necessary to shut down the entire system while repairing a defective board or resetting a blocked channel.

Related to this is another new feature, firmware assert notification for JCT Boards. With this feature, an application can be notified when a firmware assert takes place, so the application can stop sending calls to the board. Previously, the application had to wait for time-outs, open failures, etc., to determine that a board was not working.

Single board start/stop is supported on the following boards:

- Dialogic® D/41JCT-LS Media Boards
- Dialogic® D/120JCT-LS Media Boards
- Dialogic® D/82JCT-U Media Boards
- Dialogic® D/480JCT-2T1 Media Boards
- Dialogic® D/600JCT-2E1 Media Boards

Other JCT Boards can co-exist with these boards, but they will not be capable of single board start/stop.

1.80.1 Stopping and Starting Boards

Single boards can be stopped and started using the **NCM_StopBoard()** and **NCM_StartBoard()** functions. Single boards can also be stopped and started using **Stop Device** and **Start Device** in the Dialogic® Configuration Manager (DCM).

For single board start/stop capable boards to be stopped and started, the entire system must be downloaded first. The system must be started, and only those boards that have been detected, downloaded, and enabled are candidates for single board start/stop.

Boards that are disabled or did not start during the system initialization cannot be started using the single board start/stop feature. The entire system must be stopped and then restarted with all desired boards up and running prior to any single board start/stop activity.

Changing a board's characteristics (e.g., increasing/decreasing the number of devices) is not allowed when performing a single board start/stop operation. No loads or any parameter changes that could impact the density are allowed, otherwise download will fail. If this has to be done, then the entire system has to be stopped and restarted.

Addressable unit identifiers (AUIDs) may change for virtual boards (e.g., dxxxB4) and virtual devices (e.g., dtiB2C3) after a single board stop/start. After each single board stop/start, the board name (e.g., brdBx) and AUID should be retrieved in order to perform any board operations (**brd_SendAlive()**, **brd_Open()**, etc.).

For information about AUIDs, see the *Dialogic® System Software for PCI Products on Windows® Administration Guide*. For information about **brd_SendAlive()** and other brd_ operations, see the *Dialogic® Board Management API Library Reference*.

- Notes:**
1. To use the single board start/stop feature, each board in the system must have a unique Board ID. For information about setting Board IDs, see the Dialogic® Quick Install Card that comes with the board.
 2. Single board start/stop does **not** work if **Start Selective (Good Devices Only)** has been specified from the DCM Settings menu.
 3. Single board start/stop is supported only in H.100 (CT Bus) mode. The bus mode is specified by the **TDM Bus Type (User Defined)** parameter in DCM.

Recommended and Mandatory Operations

This section describes mandatory and recommended procedures that must/should be followed when performing a single board stop/start operation.

- Before stopping any board, all active devices (i.e., devices that have been opened and have a valid handle opened returned from the open request) **must be closed** prior to issuing the stop request. It is the responsibility of the calling application to ensure that each device associated with the target board is closed via a device_close API call (e.g., **dx_close ()**).
- It is recommended that a stop also be invoked on any active device prior to issuing a stop board request. In the case of a firmware assert, this is not required, as there is no guarantee that a response will be sent from the firmware. Nevertheless, it is good practice to issue both a stop, and then a close prior to issuing a stop board request. The **recommended** sequence is as follows:
 - a. Perform a stop on all active devices (e.g., **dx_stop()**).
 - b. Perform a close on all active devices (e.g., **dx_close()**).
- It is **mandatory** that the application perform a device close on all active devices.

Note: Performing a single board stop/start could potentially result in unrecoverable memory (approximately 5K per active device) if active devices are not closed prior to the single board stop/start. This could eventually lead to degraded system performance over extended periods of time.

1.80.2 Stand-Alone Configuration

A new feature is supported for system configuration, with each board functioning independently without TDM bus connectivity. Each board is configured as a Primary Master, deriving its clock reference either externally via its first network interface (digital boards) or by using its internal oscillator (analog boards). No inter-board connectivity (i.e., routing or resource sharing) is possible. This configuration is considered a stand-alone configuration that will eliminate a single point of failure with respect to clocking. This feature is intended for D/41JCT-LS, D/120JCT-LS, and D/82JCT-U system configuration.

This configuration is supported only in H.100 (CT Bus) mode. Single board start/stop may also be performed on the boards listed above. Each board can be stopped or started without affecting clocking for any other board. An option must be selected prior to system initialization. (See description of **Using Cable Mode** parameter below.)

Note: There cannot be a mixed CT Bus and non-CT Bus configuration (e.g., three boards cabled and two boards not attached).

The following new parameters have been added.

NFASPrimary

The **NFASPrimary** parameter, which is only for single board start/stop capable boards, is read-only parameter with a value of Yes or No. The default value is No. The value is Yes if the user has configured even one span of a board to be the NFASPrimary. Programmatically, an application can query the parameter value via **NCM_GetValueEx()** prior to invoking **NCM_StopBoard()** on a board chosen to be stopped. With DCM, if a board that is an NFAS Master is being stopped, a warning dialog box is displayed and the user has the option to continue stopping the board or to exit without stopping the board. This option is applicable to ISDN capable boards only (e.g., D/480JCT-2T1, D/600JCT-2E1).

Using Cable Mode

The **Using Cable Mode** parameter has been added to the Bus-0 page under TDM Bus in DCM. Its value is initialized to Default, which applies to a configuration where the boards are connected using the CT Bus cable. Other possible values are Yes and No. (Yes is the same as Default.) This parameter is intended to be set when operating in stand-alone configuration. To operate in stand-alone configuration, this parameter has to be set to No and the CT Bus cable physically removed. If the value is set to No and the CT Bus cable is not removed, download will fail.

In stand-alone configuration, each board is configured as a Primary Master.

The following restrictions apply when using stand-alone configuration:

- Stand-alone configuration can be used only with the following boards: D/41JCT-LS, D/120JCT-LS, and D/82JCT-U.
- Each board is downloaded as a Primary Master capable of producing its own clock. References to Secondary Master, Reference Master, and Slaves are not applicable in this configuration.
- The TDM Bus 0 information should be ignored for all clocking related information.

1.80.3 Firmware Assert Notification

In order to enable the firmware assert notification feature, an application should call **brd_Open()** with new a **mode** parameter, **BRD_FW_ASSERT_ENABLE**. (Previously, the **mode** parameter was documented as reserved for future use.) The new **mode** parameter is found in *devmgmt.h* header. The application will need to link with the device management library (libdevmgmt).

Each physical board that the application wants firmware assert notification for must be opened with **brd_Open()**. If a firmware assert occurs, a new event, DMEV_FW_ASSERT, will be posted to the application. This event is found in *devmgmt.h*.

The application should poll for this event and when an assert occurs, close all devices on this board before doing a single board stop/start. Closing should include **brd_Close()** as well as the specific technology close such as **dx_close()** or **dt_close()**.

The firmware assert notification is available for all Dialogic® Springware JCT Boards.

Example Code

```
#include <windows.h> /* For Windows applications only */
#include "srllib.h"
#include "dxxxlib.h"
#include "devmgmt.h"

void main( )
{
    int nDev, nDev1, nRet, nEvtType;

    nDev = dx_open("dxxxB1C1", 0);

    if (nDev == -1)
    {
        printf("open failed err = %d %s\n", ATDV_LASTERR(nDev), ATDV_ERRMSGP(nDev));
        exit(0);
    }

    printf("opened %d\n", nDev);

    nDev1 = brd_Open("brdB1", BRD_FW_ASSERT_ENABLE); // enable fw assert notification

    if (nDev1 == -1)
    {
        printf("Brd open failed err = %d %s\n", ATDV_LASTERR(nDev1), ATDV_ERRMSGP(nDev1));
        exit(0);
    }

    nRet = sr_waitevt(10000);

    printf("waitevt returned\n");

    if(nRet == -1)
    {
        // ERROR
        printf("srl timeout error\n");
    }

    nEvtType = sr_getevtttype(0);

    printf("event %x\n", nEvtType);

    printf("data: %s\n", sr_getevtdatap());

    dx_close(nDev);
    brd_Close(nDev1);
}
```

1.80.4 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about **NCM_StopBoard()**, **NCM_StartBoard()**, and other NCM API functions, see the following documents:

- *Dialogic® Native Configuration Manager API Programming Guide*
- *Dialogic® Native Configuration Manager API Library Reference*

For information about the **brd_Open()**, **brd_Close()**, and other board management functions, see the following document:

- *Dialogic® Board Management API Library Reference*

1.81 SIP Call Transfer

With the Service Update, SIP call transfer on Dialogic® DM/IP Boards is now supported.

The six Global Call API functions that support IP call transfer are documented in the *Global Call API Library Reference*; protocol-specific information about the individual call transfer APIs is presented in the subsections of [Section 1.81.4, “SIP Variances for Call Transfer Functions”](#), on page 230.

1.81.1 Call Transfer Scenarios When Using SIP

The following topics describe the call transfer capabilities provided when using the SIP call transfer supplementary service:

- [General Conditions for SIP Call Transfers](#)
- [Endpoint Behavior in Unattended SIP Call Transfers](#)
- [Successful Unattended SIP Call Transfer Scenarios](#)
- [Endpoint Behavior in Attended SIP Transfers](#)
- [Successful SIP Attended Call Transfer Scenarios](#)
- [Unsuccessful Call Transfer Scenarios](#)

1.81.1.1 General Conditions for SIP Call Transfers

SIP call transfer uses the REFER method (with NOTIFY support) to reroute a call (a SIP dialog) after the call has been established; in other words, after two endpoints have an established media path.

There are two fundamental types of call transfer:

- Unattended transfer, which is referred to as “blind transfer” in most other technologies and protocols. In this type of transfer the transferring party (called the Transferor in SIP) has a call (or SIP dialog) with the transferred party (called the Transferee in SIP) but not with the transferred-to party (called the Transfer Target in SIP).
- Attended transfer, which is referred to as “supervised transfer” in most other technologies and protocols. In this type of transfer, the Transferor has a dialog with both the Transferee and the Transfer Target.

In its simplest terms, a SIP call transfer involves the Transferor issuing a REFER to the Transferee to cause the Transferee to issue an INVITE to the Transfer Target. The Transferee and Transfer Target negotiate the media without regard to the media that had been negotiated between the Transferor and the Transferee, just as if the Transferee had initiated the INVITE on its own.

Once a transfer request is accepted by the Transferee, the Transferor is not allowed to send another transfer request to the Transferee. Only if a transfer request is rejected or fails is the Transferor allowed to attempt another transfer request to Transferee.

The disposition of the media streams between the Transferor and the Transferee is not altered by the REFER method. A successful REFER transaction does not terminate the session between the Transferor and the Transferee; if those parties wish to terminate their session, they must do so with a subsequent BYE request.

In the SIP call transfer protocol the Transferor is notified when the Transferee accepts the REFER transfer request. The Dialogic® Global Call Library allows this notification to be signaled to the application as a GCEV_INVOKE_XFER_ACCEPTED event. This event is optional, and is disabled (or masked) by default. The party A application can enable and disable this event at any time after the line device is opened using the **gc_SetConfigData()** function. See [Section 1.81.3.1, “Enabling GCEV_INVOKE_XFER_ACCEPTED Events”](#), on page 225, for more information.

When performing a call transfer operation, all involved call handles must be on the same stack instance. This imposes the following application restrictions for call transfer operations:

- When performing an attended call transfer at party A, both the consultation line device and the transferring line device must be on the same virtual board.
- When performing a call transfer (either attended or unattended) at party B, both the transferring line device and the transferred line device must be on the same virtual board.
- When performing an attended call transfer at party C, both the consultation line device and the transferred-to line device must be on the same virtual board.

Interoperability Issues

The latest standards for the SIP REFER method are defined in IETF RFC 3515, published in April 2003. The current Global Call implementation is compliant with RFC 3515, but many existing implementations of REFER are based on the previous draft of the REFER method and are not fully compliant. The most significant non-compliance issues are:

- No initial NOTIFY after sending out 202 accept to REFER request.
- No subscription state information in NOTIFY message.
- No NOTIFY generated by the Transferee (Transferred party) after the call is terminated.
- Any NOTIFY received by the Transferor (Transferring party) after the subscription is terminated or the call is terminated will be rejected. Note that the subscription can be terminated implicitly after receiving NOTIFY of 180 Ringing.

1.81.1.2 Endpoint Behavior in Unattended SIP Call Transfers

The precondition for unattended call transfer (commonly referred to as “blind call transfer” in other technologies and protocols) is that the transferring endpoint (party A, or Transferor in SIP terminology) and the transferred endpoint (party B or Transferee in SIP terms) are participating in an active call, known as the primary call. From the perspective of the Global Call API, both parties are in the GCST_CONNECTED state. Completion of a successful unattended transfer results in the eventual termination of the primary call, and the creation of the transferred call between party B and the Transfer Target (party C).

Transferor or Transferring Endpoint (Party A)

The Transferor (party A) initiates an unattended transfer by calling the **gc_InvokeXfer()** function on the CRN of the primary call (CRNp), which results in the sending a REFER message to the Transferee (party B). The Refer-To header in the REFER request is constructed from either the char *numberstr or the GC_MAKECALL_BLK *makecallp parameter in the **gc_InvokeXfer()** function, following the same rules as **gc_MakeCall()**. The Referred-By header is automatically constructed with the local URI—the same as the From or To header, depending on the direction of the initial call INVITE. Optionally, the Transferor can override the default Referred-By header by inserting a Referred-By header in the **gc_InvokeXfer()** parm block. Party A will be notified if REFER is accepted or rejected by transferred endpoint (party B).

If party A receives a 2xx response to the REFER (indicating that it was accepted by party B), a GCEV_INVOKE_XFER_ACCEPTED event may optionally be generated. This optional event is disabled by default; after the line device has been opened, the event can be enabled or disabled at any time by use of the **gc_SetConfigData()** function.

The primary call may be terminated by either party before transferred call is completed. Note that in an H.450.2 implementation, party A will actually get INVOKE_XFER_REJ event locally if party A terminates the primary call before receiving final status from party B. Unlike an H.450.2 transfer, party A in a SIP transfer will **not** get any transfer termination event if party A terminates the primary call before receiving final status from party B. This is because there is no way to be sure if the transfer is successful or if it failed and it is party A's responsibility to update the application transfer states in this case. This is a common scenario in blind transfer where party A does not care about the transferred call status and drops the primary call immediately after receiving a INVOKE_XFER_ACCEPTED event.

When the REFER subscription is terminated, party A rejects subsequent NOTIFY messages. Any of the following events terminate the REFER subscription:

- a NOTIFY with subscription state terminated is received
- a NOTIFY of 180 Ringing is received
- a 2xx-6xx final response is received
- the primary call is terminated

If the primary call remains connected and the REFER subscription is alive, party A **may** be notified of the final status of transferred call from party B. The notification of transferred call status is optional depending on party B.

From party A's perspective, a call transfer is considered successful as long as GCEV_INVOKE_XFER_ACCEPTED (if enabled) and GCEV_INVOKE_XFER events are received. If the optional GCEV_INVOKE_XFER_ACCEPTED event type is enabled, that event is generated by receiving a 2xx response (to the REFER request) from party B. The GCEV_INVOKE_XFER event is generated by receiving from party B either a NOTIFY of termination of the REFER subscription or a NOTIFY of 180 Ringing or 2xx final status on the transferred call.

The REFER subscription will be terminated and the primary call will also be disconnected locally immediately after generating a GCEV_INVOKE_XFER event. From the Global Call API perspective, the primary call is terminated at the transferring endpoint as indicated by the GCEV_DISCONNECTED event implying the Transferor endpoint is then responsible for dropping and releasing the primary call.

Transferee or Transferred Endpoint (Party B)

The endpoint to be transferred (party B, or Transferee in SIP terms) is notified of the request to transfer from the initiating endpoint via a GCEV_REQ_XFER event on CRNp. If party B accepts the transfer request via **gc_AcceptXfer()** function call on CRNp, a 202 Accepted response is sent to party A. Sending 202 Accepted to party A starts the REFER subscription, whereupon party B automatically sends a NOTIFY of 100 Trying (with default expiration time of 300 seconds) to party A on CRNp. No further notification of 100 Trying is sent from party B to party A during the call transfer process.

Party B retrieves the destination address information from the unsolicited transfer request via the GC_REROUTING_INFO structure passed with the GCEV_REQ_XFER event.

Party B uses the rerouting address information (Refer-To address) to initiate a call to the new destination party via **gc_MakeCall()** on CRNt. From the perspective of the application, this transferred call is treated in the same manner as a normal singular call and the party receives intermediate call state events as to the progress of the call (e.g., GCEV_DIALING, GCEV_ALERTING, GCEV_PROCEEDING, and GCEV_CONNECTED).

If the CRNp number is included during the **gc_MakeCall()** on CRNt and the primary call is in the connected state, then a GCEV_XFER_CMPLT event is generated on CRNp once the transferred call is connected. If the CRNp number is not included, there will be no notification to the primary call and/or party A of the transferred call status. The CRNp number must not be included in the **gc_MakeCall()** if primary call was disconnected prior to making transferred call.

When party B receives any provisional response except 100 Trying from Party C and if the REFER subscription is still alive, party B automatically sends NOTIFY to party A with such transferred call status.

When party B receives the indication from party C that the call transfer was successful (200 OK), the party B application is notified of the success via a GCEV_XFER_CMPLT event on CRNp. If the primary call is still connected, party B will notify party A of the transfer status (200 OK) and terminate the REFER subscription. Then party B implicitly, without user/application initiation, disconnects the primary call with the party A. Although the primary call to party A is implicitly dropped, the call itself must still be explicitly dropped via **gc_DropCall()** and released via **gc_ReleaseCallEx()** to resynchronize the local state machine.

Either the party A or party B application may terminate the primary call after party B accepts the transfer request. If the primary call is terminated by party A before receiving any call transfer termination event (GCEV_INVOKE_XFER or GCEV_INVOKE_XFER_FAIL), party B will not notify party A of the transfer status. If the primary call is terminated by party B before receiving any transferred call provisional or final response from party C, party B *will* send NOTIFY to party A with 200 OK and terminate the REFER subscription before sending BYE to party A.

If the primary call is disconnected before making the transferred call to party C, party B must not include the primary call CRN (CRNp) when making the transferred call to party C. Otherwise, a Global Call error will be returned.

Note that the primary call can be disconnected prior to making the transferred call only during an unattended transfer because the transferred call can be established independently from the primary call. During an attended transfer, the transferred call cannot be established after the primary call is disconnected because the primary call database contains the Replaces information that is required by the transferred call.

If the Referred-By header exists in the REFER message, it is passed to the application via the GCEV_REQ_XFER event if SIP message information access was enabled (by setting the IP_SIP_MSGINFO_ENABLE in the sip_msginfo_mask field of the IP_VIRTBOARD data structure) when the virtual board was started.

Transfer Target or Transferred-To Endpoint (Party C)

From the perspective of party C, the transferred call is, for the most part, treated as a typical incoming call. The call is first notified to the application by a GCEV_DETECTED or GCEV_OFFERED event on CRNt. The GCRV_XFERCALL cause value is provided in the event to alert the application that this call offering is the result of a transfer, but only if the incoming INVITE contains Referred-By or Replaces information indicating a new transferred call. Referred-By and Replaces information, if present, is also attached to GCEV_OFFERED events if SIP header access was enabled (by setting the IP_SIP_MSGINFO_ENABLE value in the sip_msginfo_mask field of the IP_VIRTBOARD data structure) when the virtual board was started.

At that point, the application may retrieve the typical calling party information on CRNt. Party C is then provided the same methods of action as a typical incoming call, namely to alert party B that the call is proceeding (typically for gateways), ringback notification that the local user is being alerted, or simply that the call is answered. The only behavior change from this endpoint over typical non-transferred calls is whether to handle the calling party information any differently because it is the result of a transfer.

1.81.1.3 Successful Unattended SIP Call Transfer Scenarios

This section describes various scenarios for successful call transfers under the SIP protocol. The scenarios include:

- [Successful Transfer with Notification of Connection](#)
- [Successful Transfer with Notification of Ringing](#)
- [Successful Transfer with Early Termination of REFER Subscription](#)
- [Successful Transfer with Primary Call Cleared prior to Transfer Completion](#)

All of the scenarios indicate all three common naming conventions for the three parties involved in a call transfer: parties (A, B, and C), endpoints (transferring, transferred, and transferred-to), and SIP roles (Transferor, Transferee, and Transfer Target). “IP CClib” refers to the call control library and SIP stack portions of Dialogic® Global Call Software. “Non-Global Call” is used to represent a User Agent that might behave legally but differently than Global Call. Pre and post conditions are explicitly listed in each scenario, but the common pre-condition for all scenarios is that the Transferor (party A) and the Transferee (party B) are participating in an active (primary) call and are in the GCST_CONNECTED state from the perspective of the Global Call API.

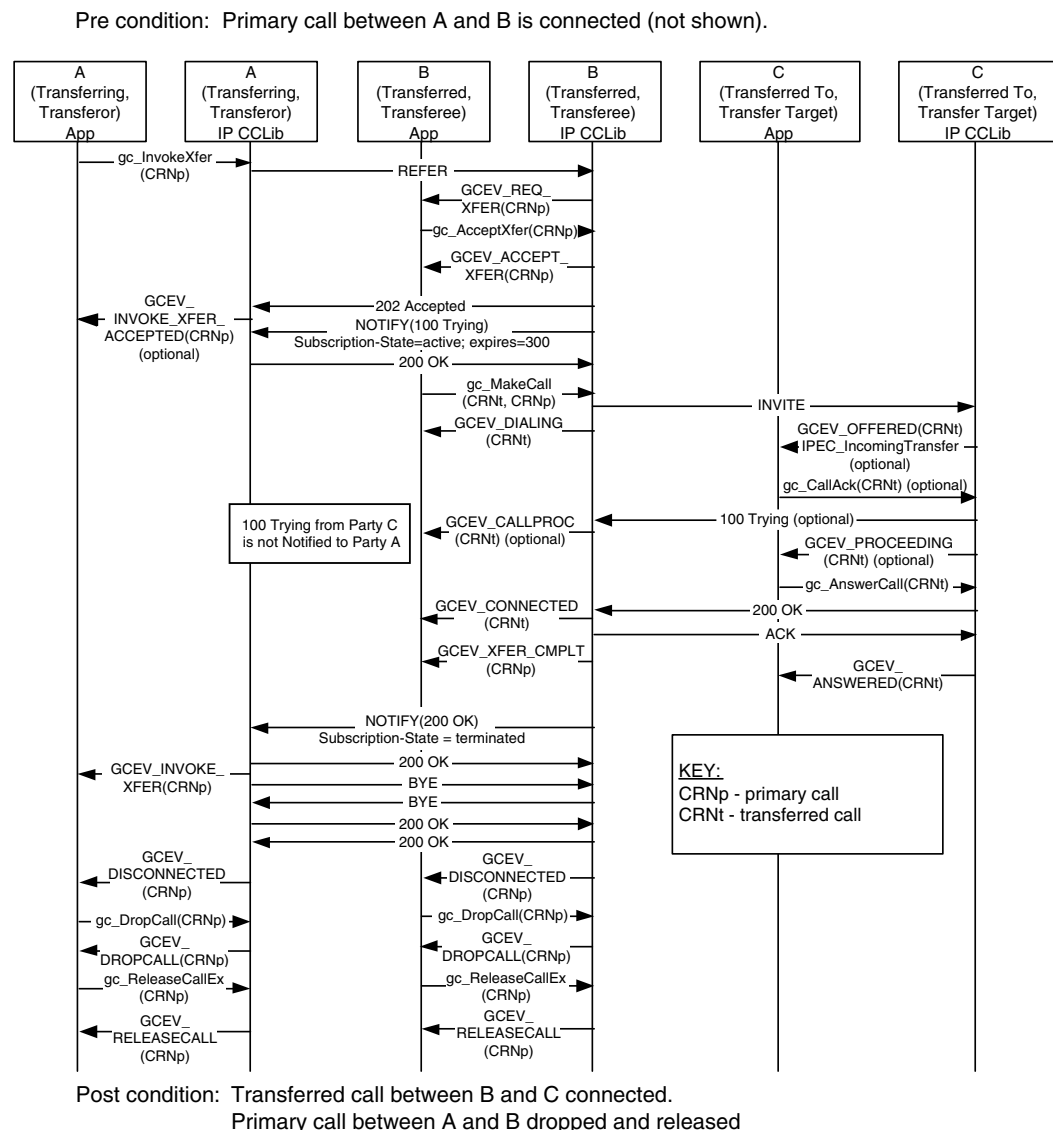
For simplification purposes, none of the figures indicate the opening and closing of logical channels (and the associated media sessions) because the control procedures are consistent with typical non-transfer related SIP calls.

All of the following scenarios illustrate the optional GCEV_INVOKE_XFER_ACCEPTED event, which is disabled by default. The party A application can enable and disable this event at any time after the line device is opened using the **gc_SetConfigData()** function.

Successful Transfer with Notification of Connection

Figure 1 illustrates the basic successful scenario, with party A receiving notification from party B after the transferred call between party B and party C has been connected. The SIP dialog for the primary call between party A and party B is automatically disconnected, and both parties then tear down the call using **gc_DropCall()** and **gc_ReleaseCallEx()**.

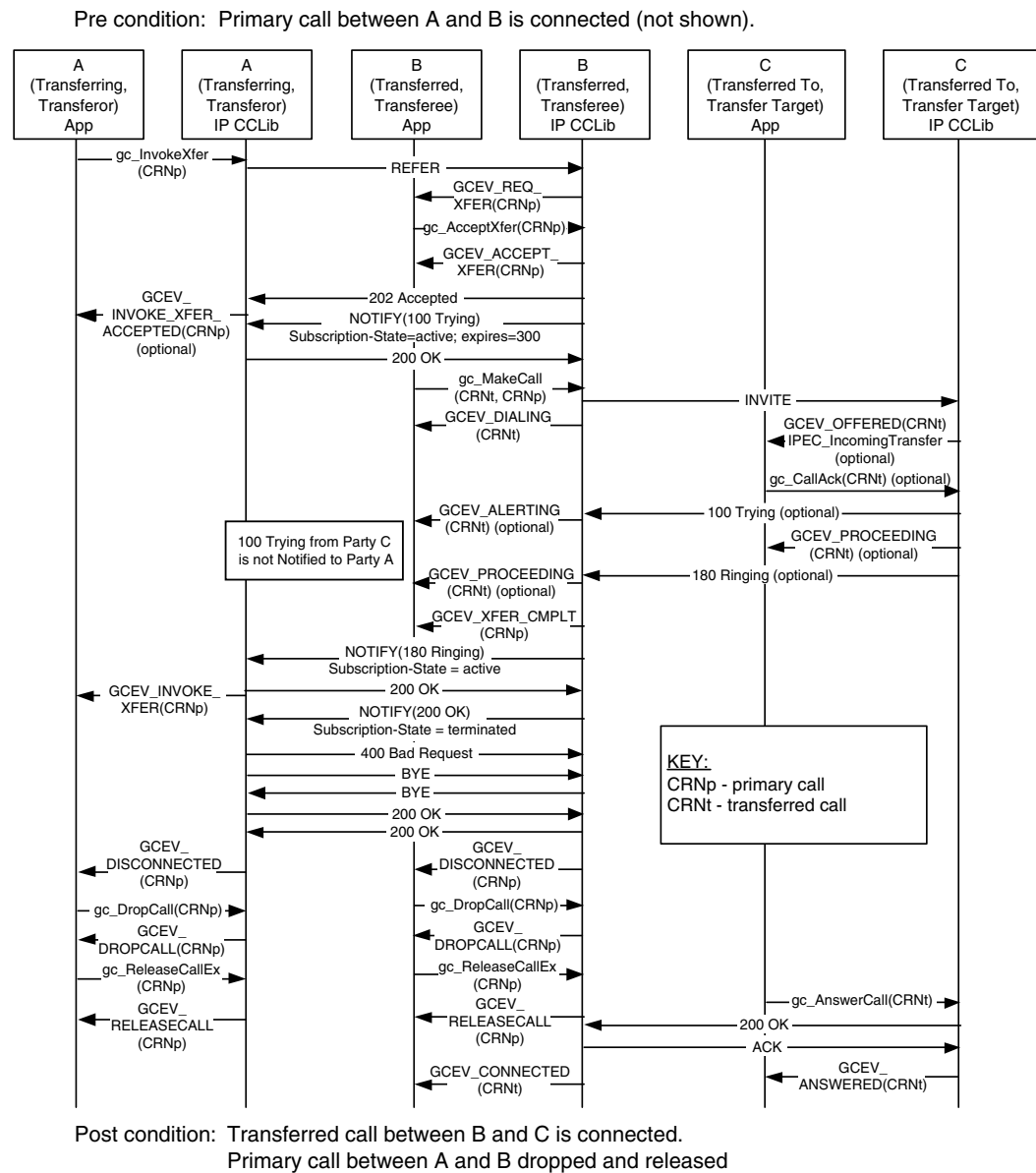
Figure 1. Successful SIP Unattended Call Transfer, Party A Notified with Connection



Successful Transfer with Notification of Ringing

Figure 2 illustrates a scenario where party B notifies party A that the transfer has completed as soon as party C responds to the INVITE with a 100 Trying or 180 Ringing. The Call Control Library at Party A disconnects the primary call with party B after the notification and the application then must tear down the call using **gc_DropCall()** and **gc_ReleaseCallEx()**.

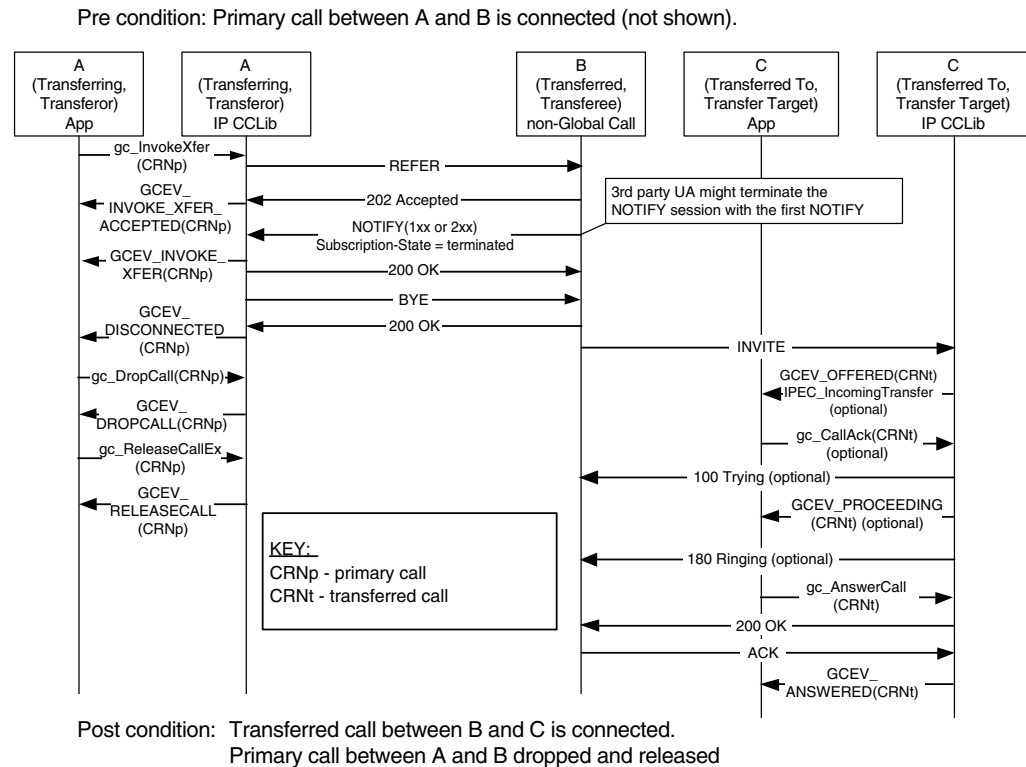
Figure 2. Successful SIP Unattended Call Transfer, Party A Notified with Ringing



Successful Transfer with Early Termination of REFER Subscription

Figure 3 illustrates a valid scenario for which Global Call does not support the party B role. In this scenario, party B terminates the REFER subscription with the first NOTIFY, before party A can be notified of the transferred call status. The Call Control Library at Party A disconnects the primary call with party B after the terminating NOTIFY and the application then must tear down the call using **gc_DropCall()** and **gc_ReleaseCallEx()**.

Figure 3. Successful SIP Unattended Call Transfer, Party B Terminates REFER Subscription prior to Notification of Transferred Call Status



Successful Transfer with Primary Call Cleared prior to Transfer Completion

The SIP protocol supports unattended transfer scenarios where the primary call is cleared or dropped before the transfer completes. In some other technologies and protocols, these scenarios are referred to as “unattended blind transfers” as opposed to “attended blind transfers” where the primary call is maintained until completion. Note that scenarios similar to these are not supported by the H.450.2 protocol.

Figure 4 illustrates a scenario in which party A drops the primary call with party B as soon as it receives notification that party B has accepted the transfer request. In this scenario, party A does not receive any notification that the transfer has completed.

Figure 4. Successful SIP Unattended Call Transfer, Party A Clears Primary Call prior to Transfer Completion

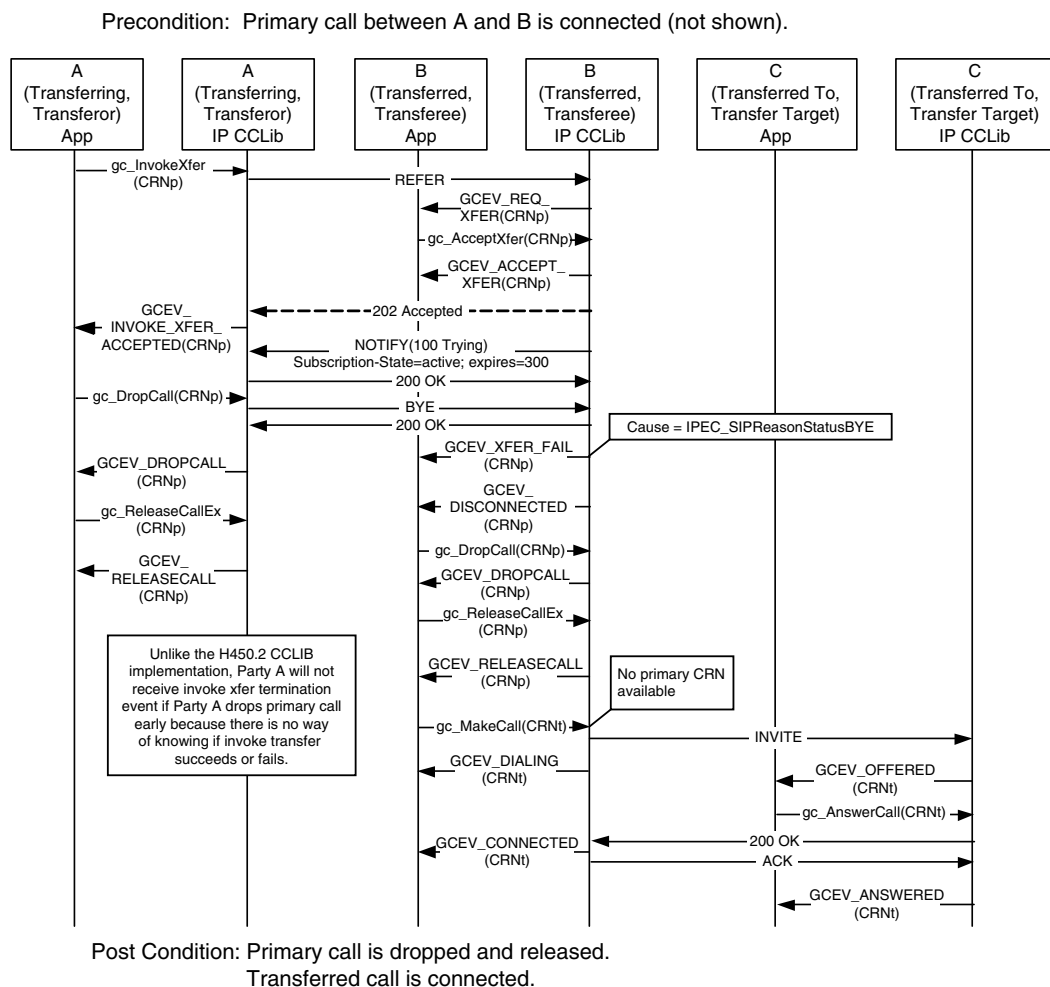
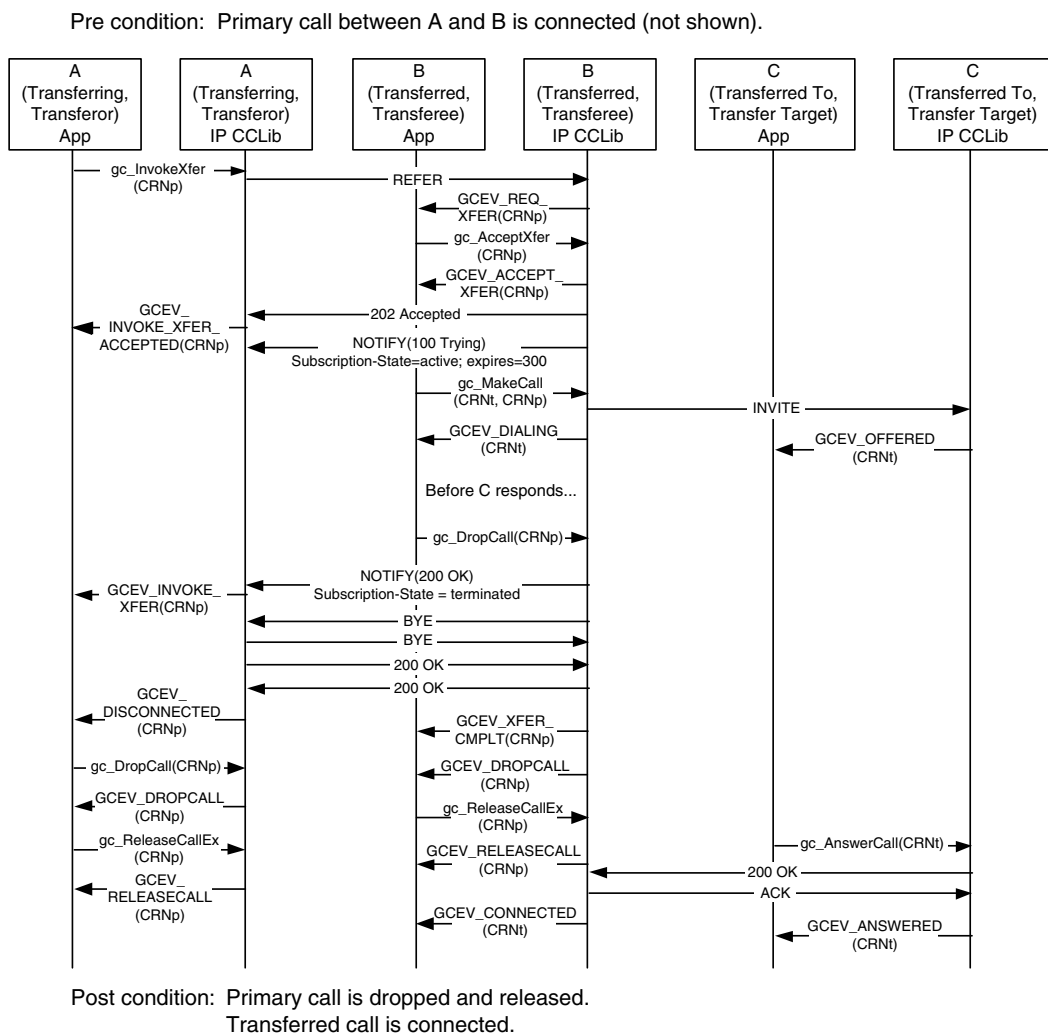


Figure 5 illustrates a scenario in which party B drops the primary call with party A after accepting the transfer request and issuing INVITE to party C, but before receiving any response from party C. In this scenario, party B does notify party A, but this notification only signifies that party B has acted on the transfer request and not that the transfer has actually completed.

Figure 5. Successful SIP Unattended Call Transfer, Party B Clears Primary Call prior to Transfer Completion



1.81.1.4 Endpoint Behavior in Attended SIP Transfers

The assumed preconditions for attended SIP call transfer (commonly referred to as “supervised call transfer” in other technologies and protocols) are:

- The transferring endpoint (party A, or Transferor in SIP terminology) and the transferred endpoint (party B, or Transferee in SIP terms) are participating in an active call, known as the primary call. From the perspective of the Global Call API, party A and party B are both in the GCST_CONNECTED state.
- The Transferor and the transferred-to party (party C or the Transfer Target in SIP terminology) are participating in an active call, known as the secondary or consultation call. From the perspective of the Global Call call control library, party A and party C are both in the GCST_CONNECTED state.

Completion of a successful attended transfer results in the eventual termination of the primary and secondary calls, and the creation of the transferred call between party B and the party C.

Transferor or Transferring Endpoint (Party A)

SIP does not support or require a transfer initiation process to obtain the rerouting number as in H.323/H.450.2 supervised transfer. To be consistent with the generic Global Call supervised transfer scenario, the party A application in a SIP attended transfer can call **gc_InitXfer()**, but no request / response messages will be exchanged between party A and party C as a result. Following this function call, party A always receives a GCEV_INIT_XFER completion event with a dummy rerouting address. To alert party C of incoming transfer process, party A can only notify party C by application data or human interaction outside of SIP protocol.

Just as in the case of unattended transfers, an attended transfer is actually initiated when the Transferor calls the **gc_InvokeXfer()** function. The difference between unattended and attended transfer usage is the inclusion of the CRN of the secondary (consultation) call as a parameter in the function call. When the Transferor calls **gc_InvokeXfer()** with two CRN values, a REFER message with a replace parameter in the Refer-To header is sent to the Transferee (party B).

From this point onward, the behavior at this endpoint is similar to that of a unattended transfer, except that the application must also drop the secondary/consultation call at transfer completion. Unlike H.450.2, Global Call will not disconnect the secondary/consultation call once the transferred call is answered at party C.

Because SIP does not require any pre-invocation setup for attended call transfers, the Transferor (party A) can actually treat either of the two active calls as the primary call, and can send the REFER to either of the remote endpoints. This fact provides a recovery mechanism in case one of the remote endpoints does not support the REFER method, as illustrated in the scenarios in the following section.

Protecting and Exposing the Transfer Target

The ability to direct the REFER to either of the parties to which the Transferor provides the opportunity to protect the Transfer Target.

To protect the Transfer Target, the Transferor simply reverses the primary and secondary call CRNs when calling **gc_InvokeXfer()** to reverse the roles of the two remote parties. The original Transfer Target will now send INVITE to the original Transferee, so that the Transferee is effectively “called back” by the Transfer Target. This has the advantage of hiding information about the original Transfer Target from the original transferee, although the Transferee’s experience in this scenario will be different that in current systems PBX or Centrex systems.

To expose the Transfer Target and provide an experience similar to current PBX and Centrex systems, the Transferor uses the secondary call to alert the Transfer Target to the impending transfer, but then disconnects the secondary call and completes the transfer as an unattended transfer. In this case, the **gc_InvokeXfer()** call only includes the CRN of the primary call.

Transferee or Transferred Endpoint (Party B)

This endpoint behaves in the same manner as in unattended transfer with one exception: the INVITE that is sent from Party B to Party C for the transferred call contains a Replaces header that is obtained from the replace parameter in the Refer-To header of the REFER from Party A.

Note that the primary call cannot be disconnected prior to making the transferred call during an attended transfer because the primary call database contains the Replaces information that is required to establish the transferred call.

Transfer Target or Transferred-To Endpoint (Party C)

This endpoint behaves in much the same manner as in an unattended transfer with one additional feature and one additional responsibility.

If the Replaces header exists in the incoming INVITE, Global Call automatically matches the Replaces value with any existing connected call on Party C. If a matching call (the secondary or consultation call) is found, that call's CRNs is passed to the application as a GCPARM_SECONDARYCALL_CRN parameter in the GC_PARM_BLK that is attached to the GCEV_OFFERED event.

The party C application must also drop the secondary/consultation call when the transfer completes. Unlike H.450.2 call transfer, Global Call does not automatically disconnect the secondary call once the transferred call answered at the party C.

1.81.1.5 Successful SIP Attended Call Transfer Scenarios

This section describes the basic scenario for successful SIP call transfer and the scenarios for recovery from two conditions that can block transfer completion. The scenarios include:

- [Successful SIP Attended Call Transfer](#)
- [Attended Transfer When REFER Is Not Globally Supported](#)
- [Attended Transfer When Contact URI Is Not Globally Routable](#)

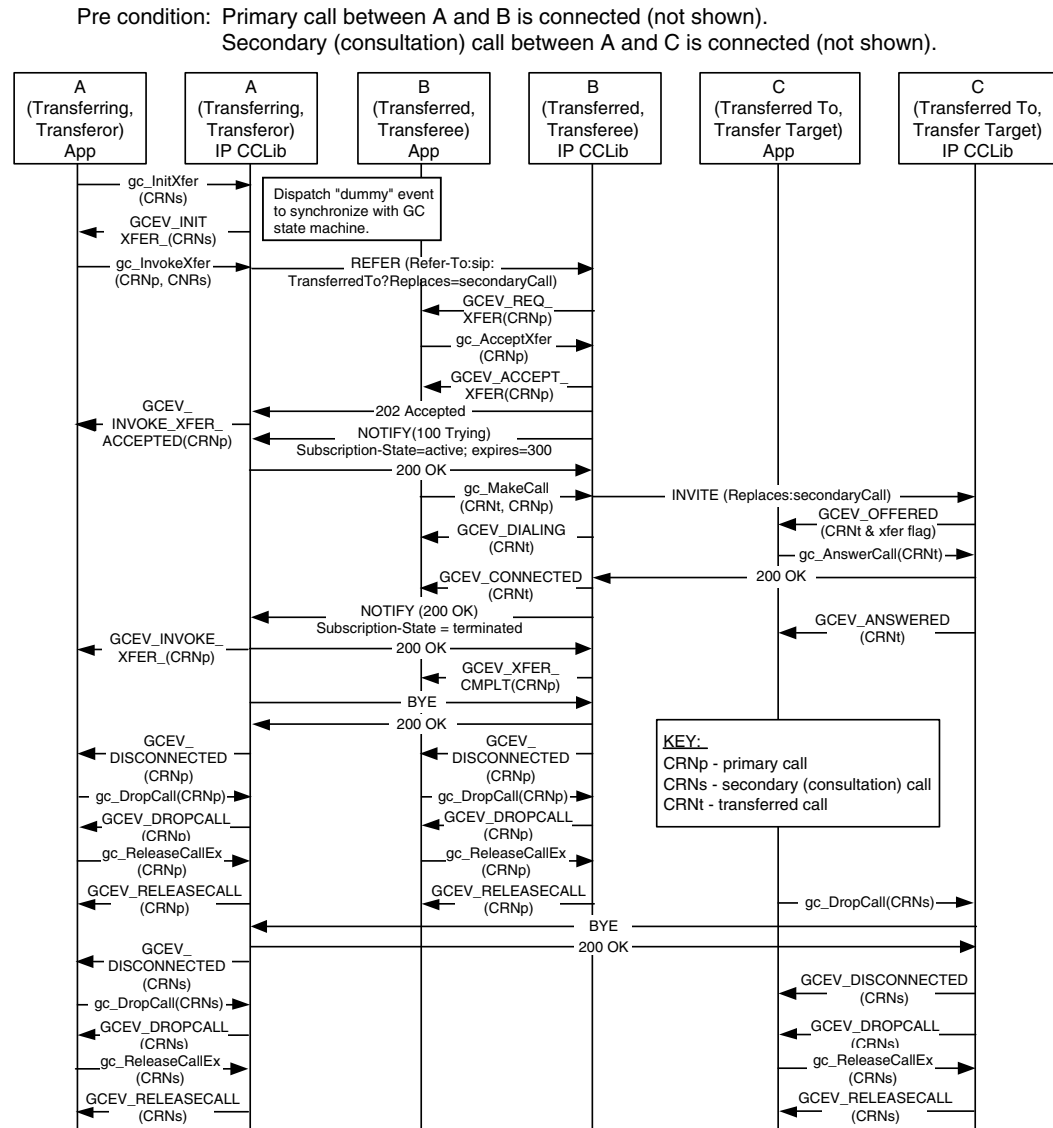
The scenarios all illustrate the optional GCEV_INVOKE_XFER_ACCEPTED event, which is disabled by default. The Transferor application can enable and disable this event at any time after the line device is opened using the **gc_SetConfigData()** function.

For simplification purposes, none of the figures indicate the opening and closing of logical channels (and the associated media sessions) because the control procedures are consistent with typical non-transfer related SIP calls.

Successful SIP Attended Call Transfer

Figure 6 illustrates the basic scenario for successful SIP attended call transfer. The scenario illustrates the use of a **gc_InitXfer()** function call, which is not required in SIP. The GCEV_INIT_XFER completion event in this case contains a dummy rerouting address.

Figure 6. Successful SIP Attended Call Transfer

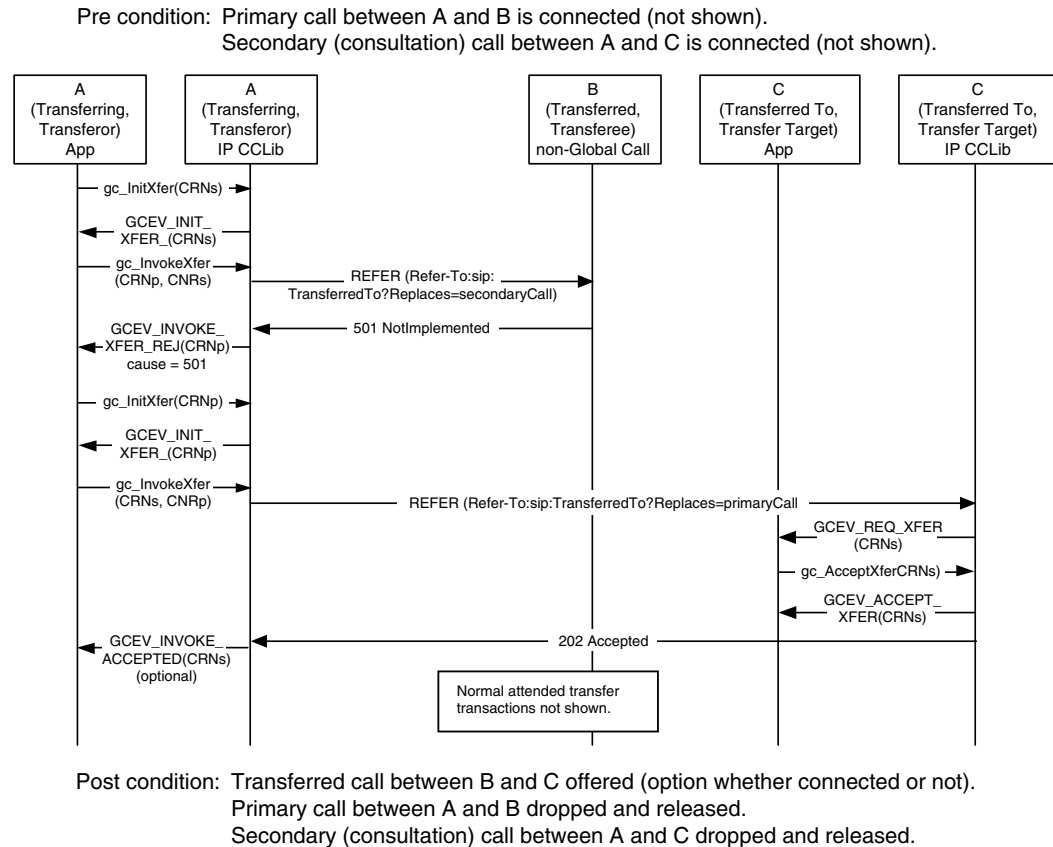


Post condition: Transferred call between B and C offered (option whether connected or not).
 Primary call between A and B dropped and released.
 Secondary (consultation) call between A and C dropped and released.

Attended Transfer When REFER Is Not Globally Supported

If protecting or exposing the Transfer Target is not a concern, it is possible to complete an attended transfer when only the Transferor and one other party support REFER. Note that a 405 Method Not Allowed might be returned instead of the 501 Not Implemented response.

Figure 7. SIP Attended Call Transfer, Recovery from REFER Unsupported



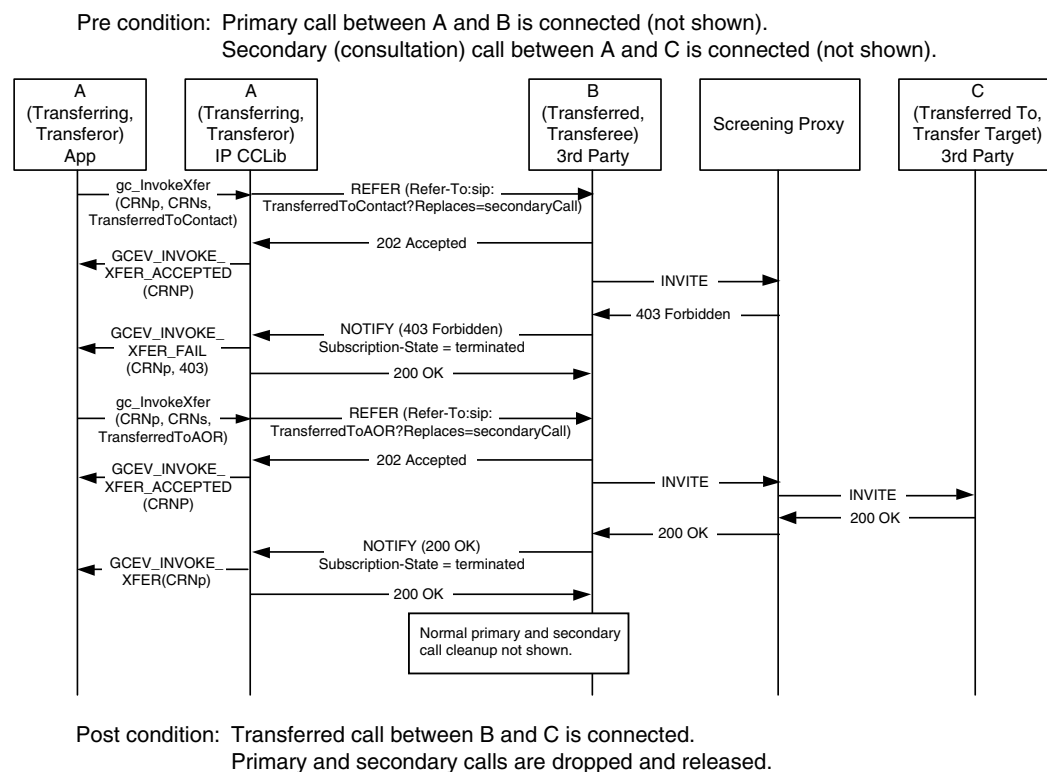
Attended Transfer When Contact URI Is Not Globally Routable

It is a requirement of RFC3261 that a Contact URI be globally routable even outside the dialog. However, due to RFC2543 User Agents and some architectures (NAT/firewall traversal, screening proxies, ALGs, etc.), this will not always be the case. As a result, the methods of attended transfer shown in Figure 6 and Figure 7 may fail since they use the Contact URI in the Refer-To header field. Figure 8 shows such a scenario involving a Screening Proxy in which the transfer initially fails but succeeds on a second try. The failure response (403 Forbidden, 404 Not Found, or a timeout after no response) is communicated back to the Transferor. Since this may be caused by routing problems with the Contact URI, the Transferor retries the REFER, this time with Refer-To containing the Address of Record (AOR) of the Target (the same URI the Transferor used to reach the Transfer Target).

However, the use of the AOR URI may result in routing features being activated such as forking or sequential searching which may result in the triggered INVITE reaching the wrong User Agent. To prevent an incorrect UA answering the INVITE, a Require: replaces header field is included in the Refer-To. This ensures that only the UA which matches the Replaces dialog will answer the INVITE, since any incorrect UA which supports Replaces will reply with a 481 and a UA which does not support Replaces will reply with a 420.

Note that there is still no guarantee that the correct endpoint will be reached, and the result of this second REFER may also be a failure. In that case, the Transferor could fall back to unattended transfer or give up on the transfer entirely. Since two REFERs are sent within the dialog, creating two distinct subscriptions, the Transferee uses the 'id' parameter in the Event header field to distinguish notifications for the two subscriptions.

Figure 8. SIP Attended Call Transfer, Recovery from URI Not Routable



1.81.1.6 Unsuccessful Call Transfer Scenarios

All of the scenarios in this section apply to both unattended (blind) transfer and attended (supervised) SIP call transfers. The **gc_InitXfer()** function call and GCEV_INIT_XFER termination event are “dummy” operations that are only used to synchronize the Global Call state machine and can safely be ignored in this context.

Transfer failures can be caused by any of transfer endpoints as shown in scenarios. In all cases, the transferring endpoint (Transferor or party A) is notified by either INVOKE_XFER_REJ or INVOKE_XFER_FAIL event with cause. No NOTIFY will be sent from party B to party A if REFER is not accepted by 202 Accepted from party B. The primary call and secondary call, if any, remain in connected state after any transfer failure.

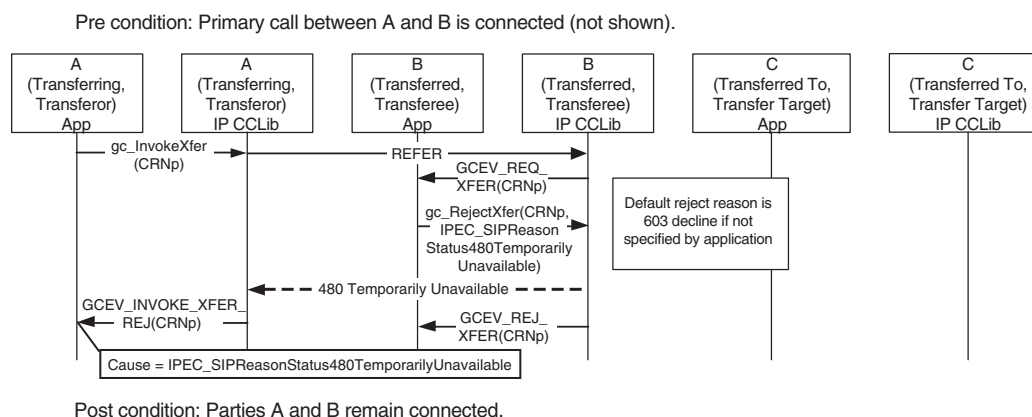
The most common transfer failure scenarios are described in the following topics:

- [Party B Rejects Call Transfer](#)
- [No Response from Party B](#)
- [No Initial NOTIFY after REFER Accepted](#)
- [REFER Subscription Expires](#)
- [No Response from Party C](#)
- [Party B Drops Transferred Call Early](#)
- [Party C Is Busy When Transfer Attempted](#)

Party B Rejects Call Transfer

Figure 9 illustrates a scenario in which the application at the transferred endpoint (Transferee or party B) calls **gc_RejectXfer()** to signal the Transferor (party A) that it cannot participate in a transfer. The application may specify any valid SIP rejection reason, such as the 480 Temporarily Unavailable shown in the figure; if no reason is specified, the default reason sent is 603 Decline. As a result of the rejection, the GCEV_INVOKE_XFER_REJ termination event is received at the Transferor application (party A). The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both party A and party B.

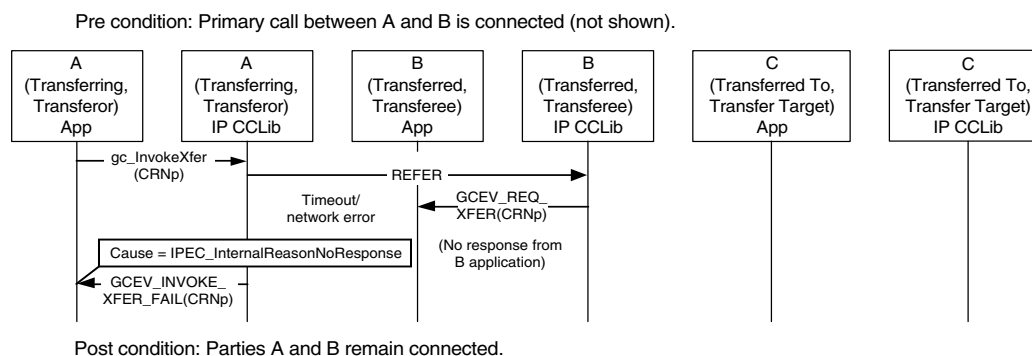
Figure 9. SIP Call Transfer Failure - Party B Rejects Call Transfer



No Response from Party B

Figure 10 illustrates a scenario in which the Transferee (party B) does not respond to the REFER, causing the T3 timer at the party A (configured as 20 seconds) to expire. After the timeout, the Transferor application receives the GCEV_INVOKE_XFER_FAIL termination event. The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both party A and party B.

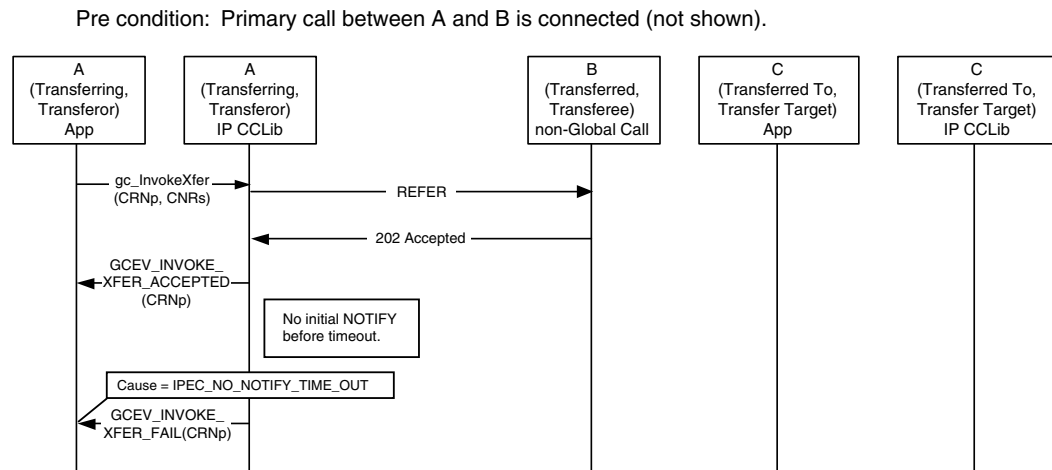
Figure 10. SIP Call Transfer Failure - No Response from Party B



No Initial NOTIFY after REFER Accepted

Figure 11 illustrates a scenario in which the Transferee (party B) does not send a NOTIFY after it accepts the REFER, causing the timer at party A to expire. The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both party A and party B.

Figure 11. SIP Call Transfer Failure - No Initial NOTIFY after REFER Is Accepted

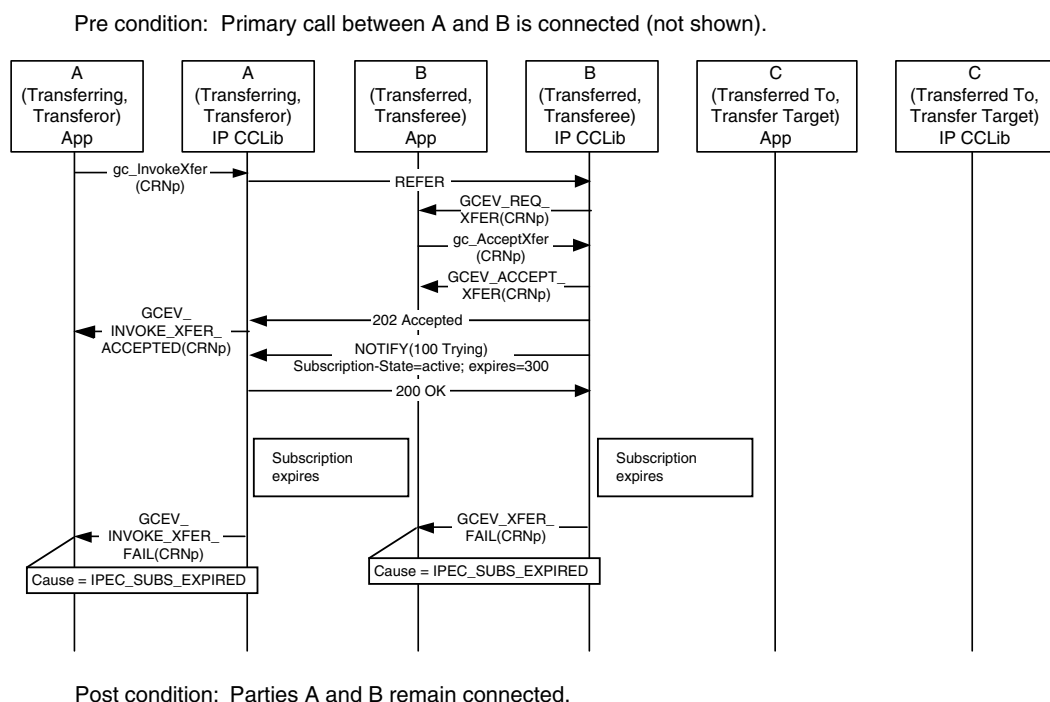


Post condition: Parties A and B remain connected.

REFER Subscription Expires

Figure 12 illustrates a scenario in which the REFER subscription expires, causing both party A and party B to time out. After the timeout, the Transferee application receives a GCEV_XFER_FAIL termination event and the Transferor application receives a GCEV_INVOKE_XFER_FAIL termination event. The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both party A and party B.

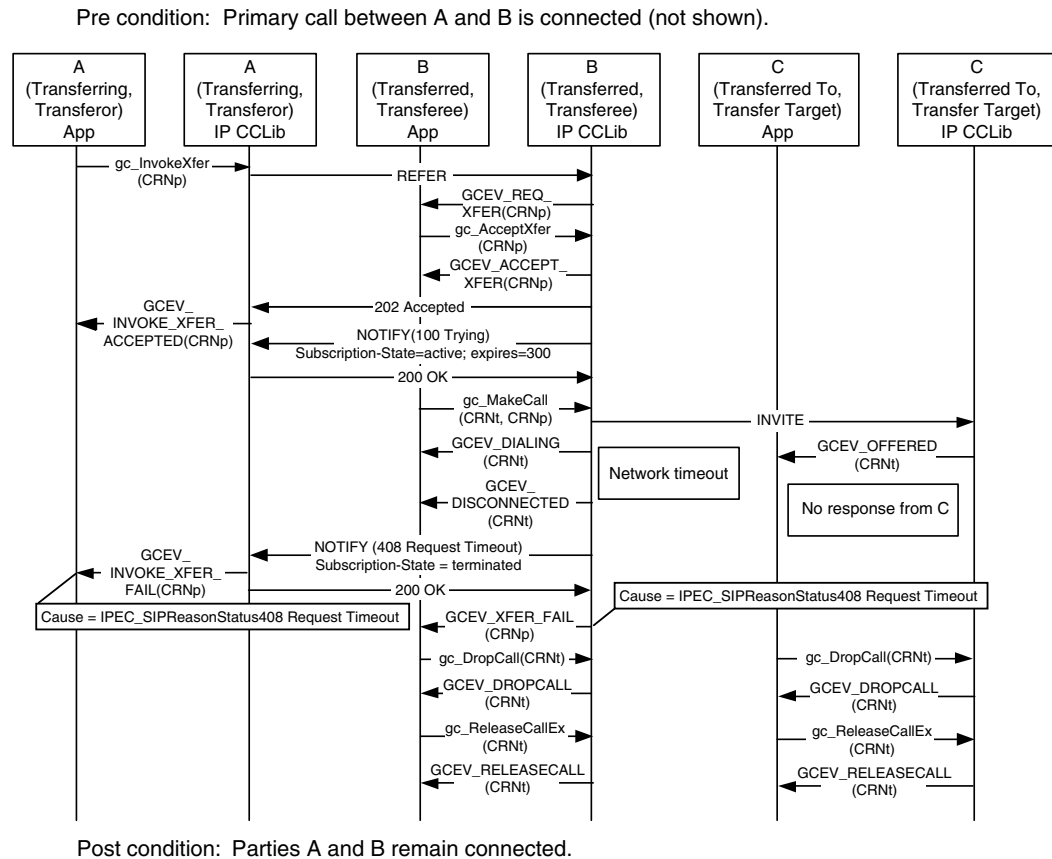
Figure 12. SIP Call Transfer Failure - REFER Subscription Expires



No Response from Party C

Figure 13 illustrates a scenario in which the Transfer Target (party C) does not respond to the incoming call from the Transferee (party B) which causes the T4 timer at party B (configured as 20 seconds) to expire. As a result, the Transferee application (party B) receives the GCEV_DISCONNECT event for the transferred call timeout. The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both A and B.

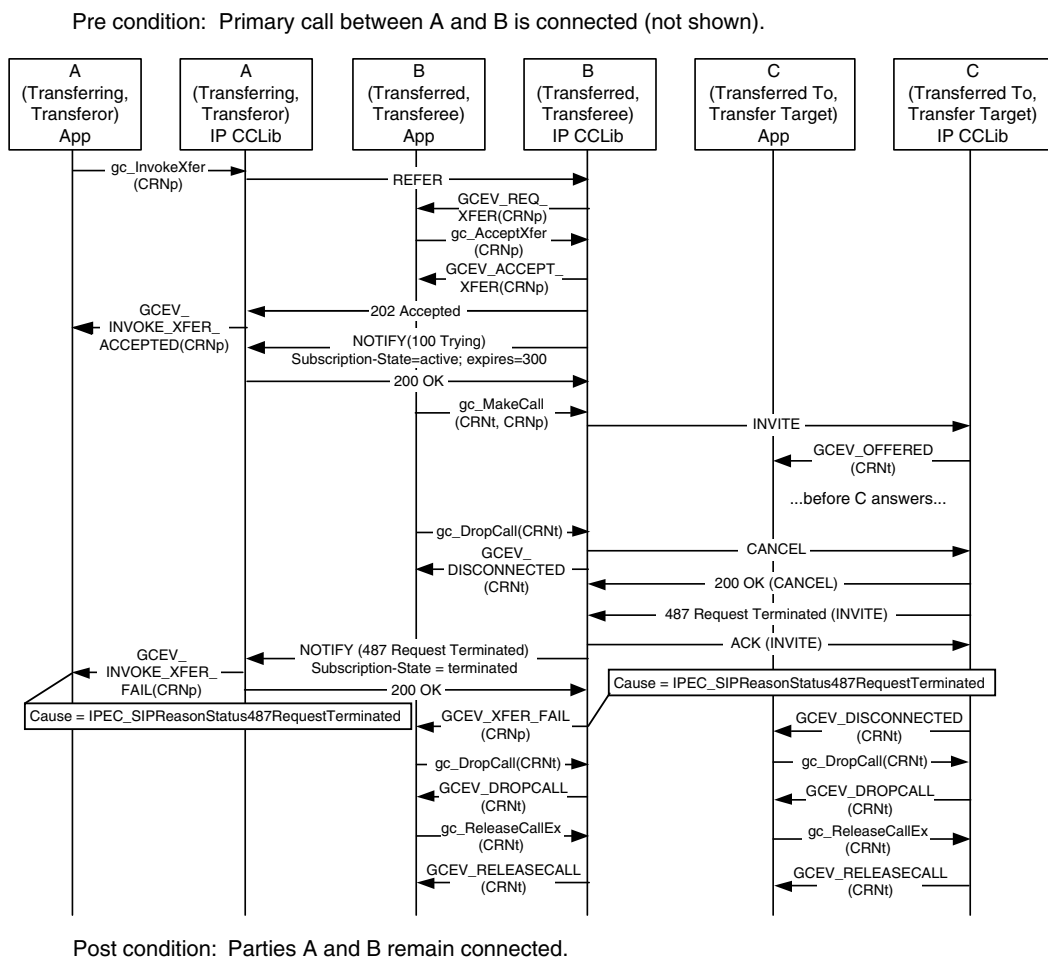
Figure 13. SIP Call Transfer Failure - No Response from Party C



Party B Drops Transferred Call Early

Figure 14 illustrates a scenario in which the Transferee (party B) drops the transferred call before receiving a response to the INVITE it sent to party C. As a result, the GCEV_INVOKE_XFER_FAIL termination event is received at the Transferor (party A) and the GCEV_XFER_FAIL termination event is received at the Transferee (party B). The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both A and B.

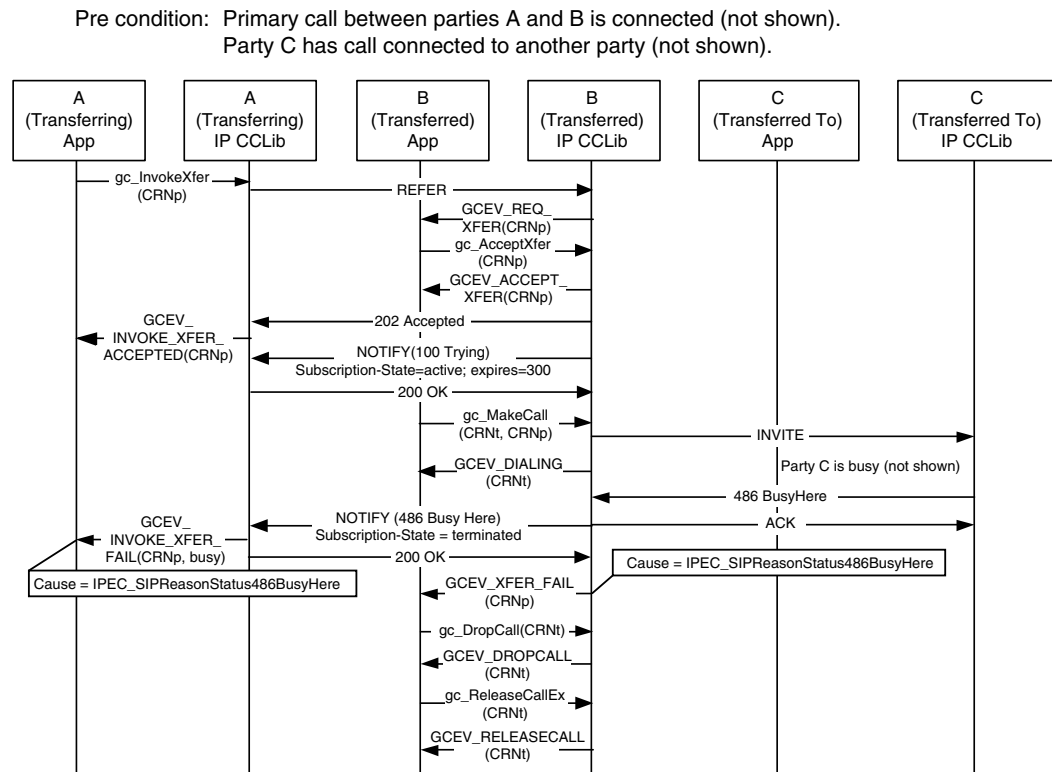
Figure 14. SIP Call Transfer Failure - Party B Drops Transferred Call Early



Party C Is Busy When Transfer Attempted

Figure 15 illustrates a scenario in which the Transfer Target (party C) is busy at the time the transfer is requested. (This primarily applies to unattended transfers, since the Transferor would be aware that the Transfer Target is busy in an attended transfer.) In this case, the Transferor (party A) receives a GCEV_INVOKE_XFER_FAIL termination event and the Transferee (party B) receives a GCEV_XFER_FAIL termination event. The original primary call is left connected and in the GCST_CONNECTED state from the perspective of both party A and party B.

Figure 15. SIP Call Transfer Failure - Party C Is Busy When Transfer Attempted



1.81.2 Enabling Call Transfer

The call transfer supplementary service is a feature that must be enabled at the time the **gc_Start()** function is called. Both H.450.2 and SIP call transfer services are enabled at the same time.

The **INIT_IPCCLIB_START_DATA()** and **INIT_IP_VIRTBOARD()** functions, which must be called before the **gc_Start()** function, populate the **IPCCLIB_START_DATA** and **IP_VIRTBOARD** structures, respectively, with default values. The default value of the **sup_serv_mask** field in the **IP_VIRTBOARD** structure disables the call transfer service for both H.323 and SIP protocols. The default **sup_serv_mask** field value must therefore be overridden with the value **IP_SUP_SERV_CALL_XFER** for each Dialogic® IPT Board device on which call transfer is to be enabled. The following code snippet provides an example for two virtual boards:


```

.
.
INIT_IPCCLIB_START_DATA(&ipcclibstart, 2, ip_virtboard);
INIT_IP_VIRTBOARD(&ip_virtboard[0]);
INIT_IP_VIRTBOARD(&ip_virtboard[1]);
ip_virtboard[0].sup_serv_mask = IP_SUP_SERV_CALL_XFER; /* override supp services default */
ip_virtboard[1].sup_serv_mask = IP_SUP_SERV_CALL_XFER; /* override supp services default */
.
.

```

Note: If the application tries to use one of the six IP call transfer functions when call transfer was not explicitly enabled via the IP_VIRTBOARD structure during **gc_Start()**, the function call fails with an IPERR_SUP_SERV_DISABLED indication.

1.81.3 Using SIP Call Transfer

This section describes specific call transfer procedures when using SIP protocol. The topics covered here include:

- [Enabling GCEV_INVOKE_XFER_ACCEPTED Events](#)
- [Invoking an Unattended Call Transfer](#)
- [Invoking an Attended Call Transfer](#)
- [Processing Asynchronous Call Transfer Events](#)
- [Handling a Transfer Request](#)
- [Making a Transferred Call](#)

1.81.3.1 Enabling GCEV_INVOKE_XFER_ACCEPTED Events

The following code snippet illustrates how to enable the GCEV_INVOKE_XFER_ACCEPTED event type, which is optionally used to notify the application at party A that party B has accepted a transfer request. This event type is disabled by default. This event can be enabled for an individual line device at any time after the line device is opened. The event is enabled in the party A (Transferor) application, and need only be enabled if the application wishes to receive the events. Note that there is no equivalent event in H.450.2.

```

//enable GCEV_INVOKE_XFER_ACCEPTED event

GC_PARM_BLK *t_pParmBlk = NULL;
long request_id;

gc_util_insert_parm_val(&t_pParmBlk, GCSET_CALLEVENT_MSK, GCACT_ADDMSK,
    sizeof(long), GCMSK_INVOKEXFER_ACCEPTED);

gc_SetConfigData(GCTGT_GCLIB_CHAN, ldev, t_pParmBlk, 0, GCUPDATE_IMMEDIATE, &request_id, EV_SYNC);

gc_util_delete_parm_blk(t_pParmBlk);

```

Disabling the event is done in exactly the same way except that the parameter ID that is set in the GC_PARM_BLK would be GCACT_SUBMSK instead of GCACT_ADDMSK.

1.81.3.2 Invoking an Unattended Call Transfer

The following code snippet illustrates how to invoke an unattended (blind) transfer on a channel that is in the connected state. In this example, the Refer-To header field of the REFER message that is sent is set to "sip:500@192.168.1.10", while the Referred-By header field is automatically populated by Global Call.

```
int Gc_InvokeXfer(int channel)
{
    INT32 rc;
    GCLIB_MAKECALL_BLK t_gclibmakecallblk;
    GC_MAKECALL_BLK t_gcmakecallblk = {0};
    char invokeaddr[] = "192.168.1.10"; // party C (TRTSE)
    char phonelist[] = "500";

    /* Invoke transfer */
    memset(&t_gclibmakecallblk, 0, sizeof(GCLIB_MAKECALL_BLK));
    strcpy(t_gclibmakecallblk.destination.address, invokeaddr);
    t_gclibmakecallblk.destination.address_type = GCADDRTYPE_IP;
    t_gclibmakecallblk.destination.address_plan = GCADDRPLAN_UNKNOWN;
    t_gcmakecallblk.gclib = &t_gclibmakecallblk;

    gc_util_insert_parm_ref(&t_pParmBlk, IPSET_CALLINFO, IPPARM_PHONELIST,
                          sizeof(phonelist), phonelist);

    t_gclibmakecallblk.ext_datap = t_pParmBlk;

    rc = gc_InvokeXfer(session[channel].crn, 0, 0, &t_gcmakecallblk, 0, EV_ASYNC);

    gc_util_delete_parm_blk(t_pParmBlk);

    if(GC_SUCCESS != rc)
    {
        printf("GC_APP : [%d] Invoke Xfer failed!!!\n", channel);
        return GC_ERROR;
    }

    return GC_SUCCESS;
}
```

1.81.3.3 Invoking an Attended Call Transfer

Note that it is necessary for the consultation call to be in the connected state at **both** parties before the transfer operation is invoked. If the transferred-to party (party C) is a Global Call application and is not in the connected state when the transfer is invoked, it may fail to receive the Global Call event for the transfer request, which will cause a GCEV_TASKFAIL.

The following code snippet illustrates how a party that is connected to two remote parties, a primary call and a secondary call, invokes a call transfer by sending a REFER to one of the remote parties. The Refer-To, Replaces, and Referred-By header fields in the REFER are automatically filled in by Global Call. Note that the application does not have to specify the Refer-To information in an attended transfer because the secondary call already contains that information.

```
int Gc_InvokeXfer(int primaryChannel, int secondaryChannel)
{
    INT32 rc;
```

```

/* Invoke transfer */
rc = gc_InvokeXfer(session[primaryChannel].crn, session[secondaryChannel].crn,
                  0, 0, 0, EV_ASYNC);

if(GC_SUCCESS != rc)
{
    printf("GC_APP : [%d] Invoke Xfer failed!!!\n",primaryChannel);
    return GC_ERROR;
}

return GC_SUCCESS;
}

```

1.81.3.4 Processing Asynchronous Call Transfer Events

The following code snippets illustrate how to handle the asynchronous events that notify applications of the call transfer status as a SIP call transfer proceeds.

```

INT32 processEvtHandler()
{
    METAEVENT    metaEvent;
    GC_PARM_BLK  *parmbldp = NULL;
    :

    int  rc = gc_GetMetaEvent(&metaEvent);
    if (GC_SUCCESS != rc)
    {
        printf("GC_APP : gc_GetMetaEvent() failed\n");
        return rc;
    }

    long evtType = sr_getevtttype();
    long evtDev = sr_getevtdev();
    int  g_extIndex = g_lArray[g_evtdev];

    switch (evtType)
    {
        //////////////////////////////////////////////////
        // Party A events
        //////////////////////////////////////////////////

        case GCEV_INVOKE_XFER_ACCEPTED:
            // remote party has accepted REFER by 2xx response
            printf("Invoke Transfer Accepted By Remote\n");
            break;

        case GCEV_INVOKE_XFER:
            // remote party has notified transfer success in NOTIFY
            printf("Invoke Transfer Successful\n");
            break;

        case GCEV_INVOKE_XFER_FAIL:
            // Invoke Transfer failed by remote NOTIFY or locally
            PrintEventError(&metaEvent);
            break;

        case GCEV_INVOKE_XFER_REJ:
            // Invoke Transfer Rejected by Remote party
            PrintEventError(&metaEvent);
            break;

        //////////////////////////////////////////////////
        // Party B events
        //////////////////////////////////////////////////
    }
}

```

```

case GCEV_REQ_XFER:
    // Incoming transfer request
    GC_REROUTING_INFO *pRerouteInfo = (GC_REROUTING_INFO *)metaEvent.extevtdatap;
    printf("Reroute number = %s\n", pRerouteInfo->rerouting_num);

    if(NULL != pRerouteInfo->parm_blkp)
    {
        // Handle parm blocks
    }

    strcpy(session[g_extIndex].rerouting_num,pRerouteInfo->rerouting_num);
    session[g_extIndex].rerouting_addrblk = *pRerouteInfo->rerouting_addrblkp;

    GC_HandleXferReq(g_extIndex)
    break;

case GCEV_ACCEPT_XFER:
    // Accepted incoming transfer request
    break;

case GCEV_ACCEPT_XFER_FAIL:
    // Failed to accept incoming transfer request
    PrintEventError(&metaEvent);
    break;

case GCEV_REJ_XFER:
    // Rejected incoming transfer request
    break;

case GCEV_REJ_XFER_FAIL:
    // Failed to reject incoming transfer request
    PrintEventError(&metaEvent);
    break;

case GCEV_XFER_CMPLT:
    // completed transferred call
    break;

case GCEV_XFER_FAIL:
    // Failed to complete the transferred call
    PrintEventError(&metaEvent);
    break;

////////////////////////////////////////
// Party C events
////////////////////////////////////////

case GCEV_OFFERED:
    // Received incoming call
    // Normall incoming call handling
    ...
    break;

    ...
}
...
}

void PrintEventError(METAEVENT* pEvent, long evtDev)
{
    int gcError;    /* GlobalCall Error */
    int ccLibId;    /* CC Library ID */
    long ccError;   /* Call Control Library error code */
    char *GCerrMsg; /* GC pointer to error message string */
    char *errMsg;   /* CCLIB pointer to error message string */

```

```

        if(gc_ResultValue(pEvent, &gcError, &ccLibId, &ccError) == GC_SUCCESS)
        {
            gc_ResultMsg(LIBID_GC, (long) gcError, &GCerrMsg);
            gc_ResultMsg(ccLibId, ccError, &errMsg);

            printf("Id 0x%lx, GC (%d) %s, CC (%ld) %s, (%s)\n",
                evtDev, gcError, GCerrMsg, ccError, errMsg, ATDV_NAMEP(evtDev));
        }
    }
}

```

1.81.3.5 Handling a Transfer Request

The following code snippet illustrates how party B handles an incoming transfer request (REFER). Party B can either reject the request or accept it. Note that if no rejection reason is specified, the default reason, 603 Decline, is used.

```

int Gc_HandleXferReq(int channel)
{
    if(session[channel].ConfigFileParm.autoRejectCallXfer)
    {
        printf("GC_APP : [%d] Reject call xfer request\n",channel);
        if(GC_SUCCESS != gc_RejectXfer(session[channel].crn, IPEC_SIPReasonStatus502BadGateway,
            0, EV_ASYNC))
        {
            printf("GC_APP : [%d] Reject call xfer failed on device 0x%lx\n", channel,
                session[channel].ldev);
            PrintEventError(g_evtdev);
            return GC_ERROR;
        }
    }
    else
    {
        printf("GC_APP : [%d] Accept call xfer request\n",channel);
        if(GC_SUCCESS != gc_AcceptXfer(session[channel].crn, 0, EV_ASYNC))
        {
            printf("GC_APP : [%d] Accept call xfer failed on device 0x%lx\n", channel,
                session[channel].ldev);
            PrintEventError(g_evtdev);
            return GC_ERROR;
        }
    }

    return GC_SUCCESS;
}

```

1.81.3.6 Making a Transferred Call

The following code snippet illustrates how party B makes the transferred call to party C after accepting transfer request from party A

```

int Gc_MakeXferCall(int channelPrimary, int channelXfer)
{
    GC_PARM_BLK          * t_pParmBlk = NULL;
    GCLIB_MAKECALL_BLK   t_gclibmakecallblk ;
    GC_MAKECALL_BLK      t_gcmakecallblk = {0};
    t_gcmakecallblk.gclib = &t_gclibmakecallblk;
    int                  channelXfer;

    memset(&t_gclibmakecallblk, 0, sizeof(GCLIB_MAKECALL_BLK));
}

```

```

gc_util_insert_parm_val(&t_pParmBlk, GCSET_SUPP_XFER, GCPARM_PRIMARYCALL_CRN,
    sizeof(unsigned long), session[channelPrimary].crn);

t_gclibmakecallblk.ext_datap = t_pParmBlk;
t_gclibmakecallblk.destination = session[channelPrimary].rerouting_addrblk;

int frc = gc_MakeCall(session[channelXfer].ldev, &session[channelXfer].crn,
    NULL, &t_gcmakecallblk, 0, EV_ASYNC);

if((GC_SUCCESS != frc) || (0 == session[channelXfer].crn))
{
    printf("GC_APP : [%d] Gc_MakeCall failed: : crn 0x%lx\n", channelXfer,
        session[channelXfer].crn);
    PrintGCErrors(session[channelXfer].ldev);
}

gc_util_delete_parm_blk(t_pParmBlk);

return GC_SUCCESS;
}

```

1.81.4 SIP Variances for Call Transfer Functions

1.81.4.1 **gc_AcceptInitXfer()** Variances for IP

This function is only available if the call transfer supplementary service was enabled via the `sup_serv_mask` field in the `IP_VIRTBOARD` structure when the board device was started.

Variance for SIP

This function does not apply to SIP call transfer. In SIP, party A does not notify party C in advance of requesting an attended (supervised) transfer operation with **gc_InvokeXfer()**, so there is no opportunity for party C to accept or reject the transfer at the initiation stage.

1.81.4.2 **gc_AcceptXfer()** Variances for IP

This function is only available if the call transfer supplementary service was enabled via the `sup_serv_mask` field in the `IP_VIRTBOARD` structure when the board device was started.

The **parmbldkp** parameter is ignored for IP technology and should be set to NULL.

The **gc_AcceptXfer()** function can be used at party B only after receiving a `GCEV_REQ_XFER` event. The application can obtain information on the rerouting number or address in a `GC_REROUTING_INFO` data structure dereferenced from the `extevtdatap` in the `METAEVENT` structure.

Both the `rerouting_num` (type `char *`) and the `rerouting_addr` (type `GCLIB_ADDRESS_BLK`) fields of the `GC_REROUTING_INFO` structure contain the same rerouting address string that was explicitly signaled from party A in SIP call transfers or H.450.2 blind call transfers, or from party C via **gc_AcceptInitXfer()** in H.450.2 supervised call transfers.

The rerouting number to be used in the subsequent **gc_MakeCall()** at party B can be copied from either element, but must not be a concatenation of both elements because they each contain the same character string.

The remaining elements of the GCLIB_ADDRESS_BLK structure dereferenced from rerouting_addr contain the following:

```
address_type
    GCADDRTYPE_IP

address_plan
    GCADDRPLAN_UNKNOWN

sub_address
    0 (unused)

sub_address_type
    0 (unused)

sub_address_plan
    0 (unused)
```

Variance for SIP

When party B (Transferee or Transferred party) accepts a transfer request via **gc_AcceptXfer()**, a 202 Accepted message and a NOTIFY(100 Trying) message with Subscription-State= Active is sent to party A (the Transferor or Transferring party). The call control library at party A may optionally generate a GCEV_INVOKE_XFER_ACCEPTED event to notify the application of the acceptance if that event has been enabled for that line device with **gc_SetConfigData()**.

1.81.4.3 **gc_InitXfer()** Variances for IP

This function is only available if the call transfer supplementary service was enabled via the sup_serv_mask field in the IP_VIRTBOARD structure when the board device was started.

The **parmbldp** and **ret_rerouting_infopp** parameters are ignored and should be set to NULL. The **gc_InitXfer()** function returns -1 if invalid parameter are specified.

Variance for SIP

The **gc_InitXfer()** function does not cause any SIP message to be sent to either of the remote parties, and is used only for purposes of synchronizing the Global Call state machine. The GCEV_INIT_XFER termination event that the Transferor receives on the specified CRN after calling **gc_InitXfer()** is a “dummy” event whose only purpose is to allow synchronization of the Global Call state machine.

1.81.4.4 **gc_InvokeXfer() Variances for IP**

This function is only available if the call transfer supplementary service was enabled via the `sup_serv_mask` field in the `IP_VIRTBOARD` structure when the board device was started.

Variance for SIP

The application at party A may optionally be notified by a `GCEV_INVOKE_XFER_ACCEPTED` event that the transfer request has been accepted by the remote party to which it was sent. (This event has no equivalent in H.450.2.) This event is optional, and is disabled by default. The event may be enabled and disabled on a per-line-device basis via the **gc_SetConfigData()** function as shown in the following code example.

```
//enable GCEV_INVOKE_XFER_ACCEPTED event for SIP call transfer
GC_PARM_BLK *t_pParmBlk = NULL;
long request_id;

gc_util_insert_parm_val(&t_parmBlk1, GCSET_CALLEVENT_MSK, GCACT_ADDMSK,
                      sizeof(long), GCMSK_INVOKE_XFER_ACCEPTED);

gc_SetConfigData(GCTGT_GCLIB_CHAN, ldev, t_pParmBlk, 0, GCUPDATE_IMMEDIATE, &request_id, EV_SYNC);

gc_util_delete_parm_blk(t_pParmBlk)
```

The specific meaning of the `GCEV_INVOKE_XFER` termination event for successful transfers is dependant on the application and the transfer scenario(s) it uses. The possible outcomes when Global Call is used by all parties include the following:

- If party A drops the primary call in unattended transfers before the transfer completes, party A does not receive any `GCEV_INVOKE_XFER` event at all.
- If party B drops the primary call in unattended transfers before the transfer completes, party A receives a `GCEV_INVOKE_XFER` event that only signifies that party B has sent `INVITE` to party C.
- For attended transfers or unattended transfers where the primary call is maintained during the transfer, party A receives a `GCEV_INVOKE_XFER` event which indicates that the transferred call was actually connected between party B and party C.

Table 3 identifies the protocol-specific variances in parameters for **gc_InvokeXfer()**.

Table 3. gc_InvokeXfer() Supported Parameters for SIP

Parameter	Meaning
crn	The CRN of the call between party A and the remote party receiving the transfer request. This is the primary call in an unattended (blind) call transfer, but may be either call for an attended (supervised) transfer.
extracrn	For an attended (supervised) call transfer, the CRN of the call between party A and the remote party <i>not</i> receiving the transfer request (i.e. the call not specified in the crn parameter). For unattended (blind) call transfers, must be zero.

Table 3. gc_InvokeXfer() Supported Parameters for SIP (Continued)

Parameter	Meaning
numberstr	<p>For attended (supervised) call transfers, this parameter is ignored. Set to NULL.</p> <p>For an unattended (blind) call transfer, the address of party C (the rerouting address, which will be signaled to party B) as a string. This address is of the form <code>user@host; param=value</code> where:</p> <ul style="list-style-type: none"> • <code>user</code> is a user name or phone number • <code>host</code> is a domain name or IP address • <code>param=value</code> is an optional additional parameter <p>Note: When using the GC_MAKECALL_BLK <code>*makecallp</code> parameter to specify the rerouting address, this parameter must be set to NULL.</p>
makecallp	<p>For attended (supervised) call transfers, this parameter is ignored. Set to NULL.</p> <p>For an unattended (blind) call transfer, the address of party C (the rerouting address, which will be signaled to party B) as a GC_MAKECALL_BLK data structure.</p> <p>Note: When using the char <code>*numberstr</code> parameter to specify the rerouting address, this parameter must be set to NULL.</p>
timeout	Ignored. Set to NULL.

1.81.4.5 gc_RejectInitXfer() Variances for IP

This function is only available if the call transfer supplementary service was enabled via the `sup_serv_mask` field in the `IP_VIRTBOARD` structure when the board device was started.

Variance for SIP

This function does not apply to SIP call transfer. The SIP stack does not contact the Transfer Target or Transferred-To party (party C) until party A calls **gc_InvokeXfer()**, so there is no issue of accepting or rejecting the transfer at the initiation stage.

1.81.4.6 gc_RejectXfer() Variances for IP

This function is only available if the call transfer supplementary service was enabled via the `sup_serv_mask` field in the `IP_VIRTBOARD` structure when the board device was started.

The parameter **parmbldp** is ignored for IP technology.

The **gc_RejectXfer()** function can only be used at party B, and only after the receipt of a `GCEV_REQ_XFER` event.

Variance for SIP

The value of the **reason** parameter must be between `IPEC_SIPReasonStatusMin` and `IPEC_SIPReasonStatusMax`, as defined in the `gcip_defs.h` header file.

1.82 Early Media

With the Service Update, early media when using H.323 on Dialogic® DM/IP Boards is now supported.

1.82.1 Enabling Early Media

To enable early media on a board level, add the following **PrmEarlyMedia** parameter content in the CONFIG file that corresponds to the PCD file in use on your board:

```
[0x40]
SetParm=0x400a,1          ! PrmEarlyMedia (0=Disabled, 1=Enabled)
```

After the parameter is added, generate an updated FCD file and start system services on the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information on CONFIG files, PCD files, and FCD files.

Note: Early media support can only be enabled/disabled at the board level via the CONFIG file. Early media support cannot be set at runtime and cannot be set at the channel level.

1.82.2 Early Media Call Setup Scenarios in Global Call

When using IP technology, the establishment of RTP media streaming is normally one of the final steps in establishing and connecting a call. This is in contrast to the public switched telephone network (PSTN), where call progress signaling is commonly provided to the calling party via audible, in-band call progress tones, such as ringback, busy signal, and SIT tones. When implementing a VoIP gateway, it is often imperative to initiate media (RTP) streaming from the local endpoint to the calling party before the call is connected. This capability is commonly referred to as *early media*.

The Dialogic® Global Call IP call control library automatically enables media streaming at the earliest possible point in the pre-connect process. This is generally the earliest point at which the remote endpoint provides the remote RTP/RTCP transport addresses and media capabilities. The precise point at which media can be enabled is dependant on a large number of factors, and the following figures illustrate some common best-case scenarios. Each figure illustrates the Global Call library's behavior from the application's perspective, either in the calling party role or in the called party role.

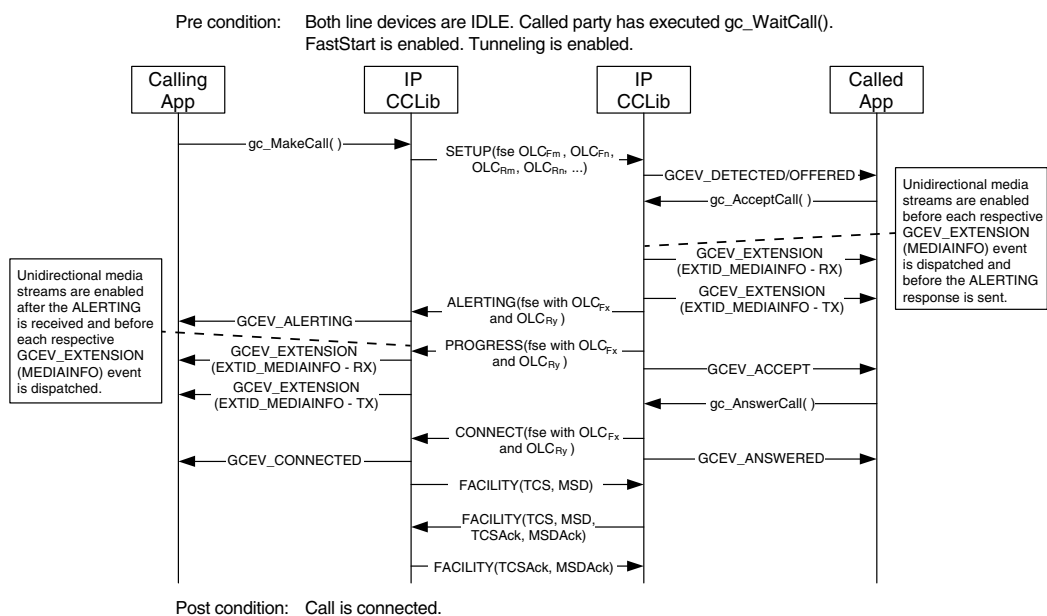
Note that in some cases it is possible to enable streaming in one direction significantly earlier than in the other direction. To take full advantage of this fact, the Global Call IP call control library initially enables a temporary unidirectional connection, then modifies the connection to be full duplex as soon as that is possible. Note that this capability is only supported on Dialogic® IPT Boards, however.

1.82.2.1 H.323 FastStart Mode

The library's default for H.323 operation enables the Global Call FastStart mode, in which the channel capability information is embedded in a fastStart element (indicated in the figure as "FSE") that can be sent within the messages of the H.225 Setup exchange rather than using the H.245 messages. (This minimizes the number of round-trip message exchanges and avoids the latency of H.245 channel establishment.) As a calling endpoint, the Global Call library enables media after Alerting is received if the called endpoint supports the fastStart mode. As a called endpoint, the Global Call library enables media in a fastStart connection after the application calls **gc_AcceptCall()**.

If the calling endpoint sets the MediaWaitForConnect element in the Setup message, the Global Call library does not enable media transmission for a called endpoint until the Connect message is sent. In the case of hardware other than a Dialogic® IPT Board, this means that media is not enabled at all until Connect.

Figure 16. H.323 Early Media, FastStart Mode



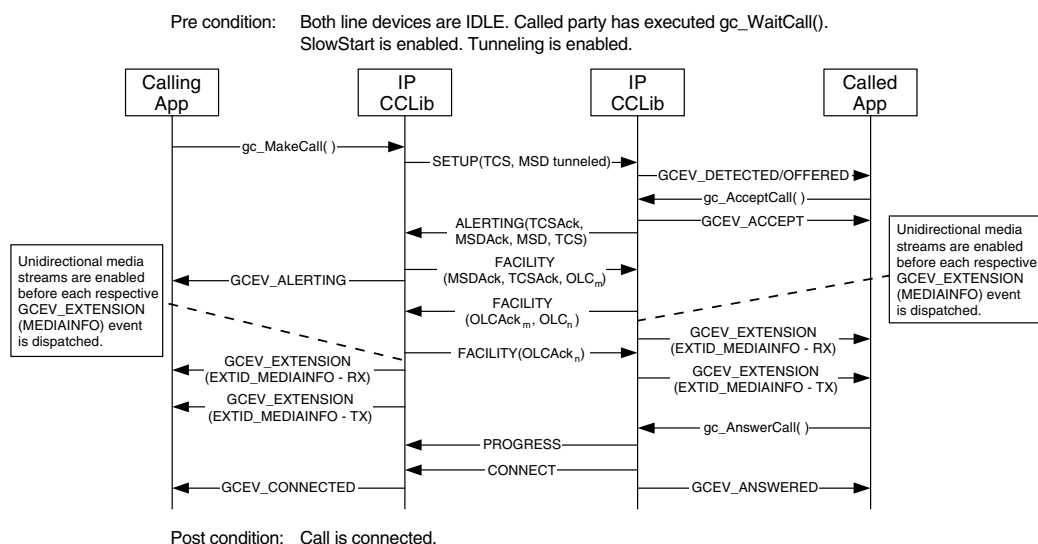
1.82.2.2 H.323 SlowStart Mode

When the application specifies the optional Global Call SlowStart mode, or when one endpoint does not support H.323 fastStart mode, media transmission cannot begin at either endpoint until the remote endpoint has sent its Ack to the appropriate OpenLogicalChannel command.

If the OLCAck that either endpoint receives contains a FlowControlToZero flag parameter that is true, media transmission is not enabled until a subsequent FlowControl message is received. In the case of hardware other than a Dialogic® IPT Board, this means media is not enabled at all until the Flow Control message is received.

If the calling endpoint sets the MediaWaitForConnect element in the Setup message, the called endpoint does not enable media transmission until the Connect message is sent. In the case of hardware other than an IPT Board, this means that media is not enabled at all until Connect.

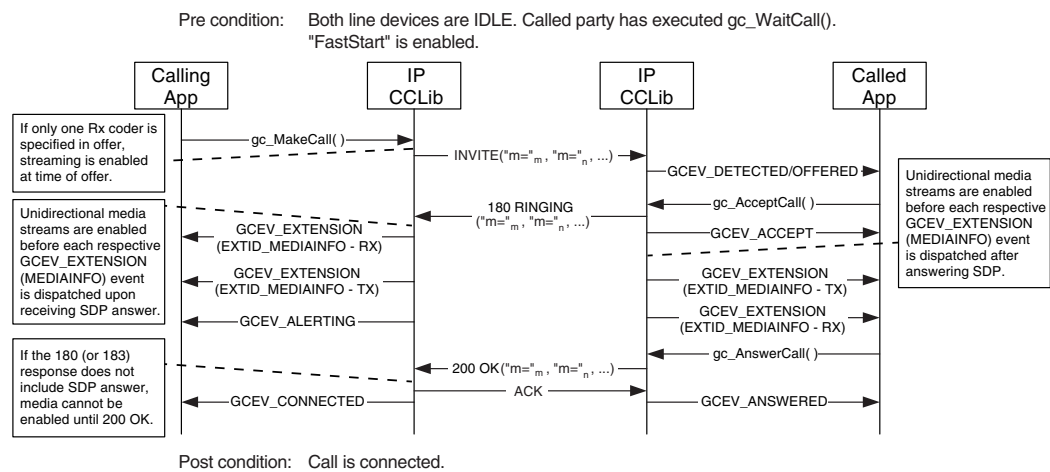
Figure 17. H.323 Early Media, SlowStart Mode



1.82.2.3 SIP FastStart Mode (Calling UA Offers SDP)

The SIP protocol does not define distinct “fast start” and “slow start” modes as does H.323, but the Global Call library uses the same FastStart/SlowStart parameter interface to allow applications to specify whether the calling UA offers SDP in its INVITE message or whether it allows the called UA to offer SDP. In the default “FastStart” mode, the calling endpoint offers SDP and the called UA answers.

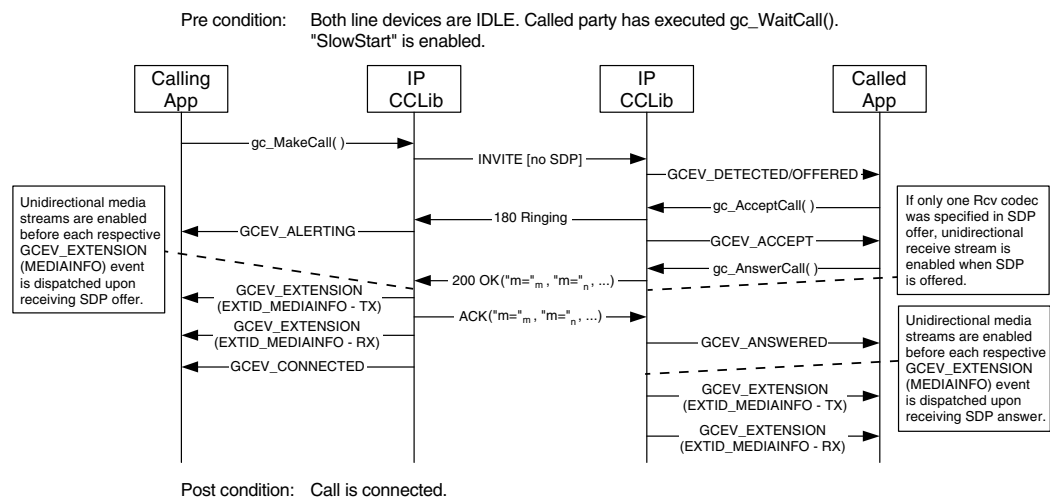
Figure 18. SIP Early Media, Calling UA Offers SDP



1.82.2.4 SIP SlowStart Mode (Calling UA Answers SDP)

When a SIP application sets the optional SlowStart parameter, it specifies that the INVITE message it sends will not contain SDP, so that it is up to the called UA to offer SDP which the calling UA will subsequently answer. In SIP terminology, this is known as *delayed offer*.

Figure 19. SIP Early Media, Calling UA Answers SDP



1.82.3 Early Media with Non-Global Call Applications

The **ipm_ModifyMedia()** function can be used to implement early media from non-Global Call applications (i.e. directly from IPML). Function reference information is given below.

ipm_ModifyMedia()

Name: int ipm_ModifyMedia(nDeviceHandle, *pMediaInfo, eDirection, usMode)

Inputs:

int nDeviceHandle	• IP Media device handle
IPM_MEDIA_INFO *pMediaInfo	• pointer to media information structure
eIPM_DATA_DIRECTION eDirection	• data flow direction
unsigned short usMode	• async or sync mode setting

Returns: 0 on success
-1 on failure

Includes: srllib.h
ipmlib.h

Category: Media Session

Mode: asynchronous or synchronous

■ Description

The **ipm_ModifyMedia()** function modifies various properties of an active media session. This function allows the application to modify the following media session properties:

- direction of the media stream
- IP address and port
- coder properties

For this function to complete successfully, the stream associated with the IP device must be in either active or suspended mode.

The media session properties are changed on the local endpoint as soon the function is called, and this may result in a perceptible artifact (for example, a click or a brief silence) until the remote endpoint makes the corresponding change. For example, if the coder is being changed by the function call, the local endpoint begins transmitting packets using the new coder and stops accepting packets that it receives which use the old coder as soon as the function executes.

Parameter	Description
nDeviceHandle	handle of the IP Media device
pMediaInfo	pointer to structure that contains local channel RTP/RTCP ports and IP address information (or T.38 port and IP address information) See the IPM_MEDIA_INFO data structure page for details.

Parameter	Description
eDirection	media operation enumeration The eIPM_DATA_DIRECTION data type is an enumeration which defines the following values: <ul style="list-style-type: none"> • DATA_IP_RECEIVEONLY – receive data from the IP network but do not send data • DATA_IP_SENDOONLY – send data to the IP network but do not receive data • DATA_IP_TDM_BIDIRECTIONAL – full duplex data path between IP network and TDM • DATA_IP_INACTIVE – allow RTCP while blocking RTP packets • DATA_IP_NULL – do not modify the direction of the current session; the previous direction remains in effect. This value is used when changing the coder and/or IP address without changing the direction.
usMode	operation mode Set to EV_ASYNC for asynchronous execution or to EV_SYNC for synchronous execution

■ Termination Events

In asynchronous mode, the function returns 0 if the operation was initiated successfully. Completion of the operation is indicated by receipt of a termination event:

IPMEV_MODIFY_MEDIA

Indicates successful completion; that is, modified media information was set and the session has been started.

IPMEV_MODIFY_MEDIA_FAIL

Indicates that the modify media operation failed. The characteristics of the media session remain as they were before the function was called.

■ Cautions

None.

■ Errors

If the function returns -1 to indicate failure, call **ATDV_LASTERR()** and **ATDV_ERRMSGP()** to return one of the following errors:

EIPM_BADPARAM

Invalid parameter

EIPM_BUSY

Channel is busy

EIPM_INTERNAL

Internal error

EIPM_INV_MODE

Invalid mode

EIPM_INV_STATE

Invalid state. Initial command did not complete before another function call was made.

EIPM_SYSTEM

System error

■ Example

The following sample code changes the coder from G.711 mu-law to G.711 A-law and also changes the direction.

```
#include <stdio.h>
#include <string>
#include <srllib.h>
#include <ipmlib.h>

typedef long int (*HDLR) (unsigned long);
void CheckEvent();

void main()
{
    /*
     *
     * Main Processing
     *
     */

    /*
     * Set the media properties for a remote party using IP device handle, nDeviceHandle.
     * ASSUMPTION: A valid nDeviceHandle was obtained from prior call to ipm_Open().
     */

    IPM_MEDIA_INFO MediaInfo;
    MediaInfo.unCount = 4;

    MediaInfo.MediaData[0].eMediaType = MEDIATYPE_REMOTE_RTP_INFO;
    MediaInfo.MediaData[0].mediaInfo.PortInfo.unPortId = 2328;
    strcpy(MediaInfo.MediaData[0].mediaInfo.PortInfo.cIPAddress, "111.21.0.9\n");

    MediaInfo.MediaData[1].eMediaType = MEDIATYPE_REMOTE_RTCP_INFO;
    MediaInfo.MediaData[1].mediaInfo.PortInfo.unPortId = 2329;
    strcpy(MediaInfo.MediaData[1].mediaInfo.PortInfo.cIPAddress, "111.41.0.9\n");

    MediaInfo.MediaData[2].eMediaType = MEDIATYPE_REMOTE_CODER_INFO;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.eCoderType = CODER_TYPE_G711ULAW64K;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.eFrameSize = (eIPM_CODER_FRAME_SIZE) 30;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.unFramesPerPkt = 1;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.eVadEnable = CODER_VAD_DISABLE;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.unCoderPayloadType = 0;
    MediaInfo.MediaData[2].mediaInfo.CoderInfo.unRedPayloadType = 0;

    MediaInfo.MediaData[3].eMediaType = MEDIATYPE_LOCAL_CODER_INFO;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.eCoderType = CODER_TYPE_G711ULAW64K;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.eFrameSize = (eIPM_CODER_FRAME_SIZE) 30;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.unFramesPerPkt = 1;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.eVadEnable = CODER_VAD_DISABLE;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.unCoderPayloadType = 0;
    MediaInfo.MediaData[3].mediaInfo.CoderInfo.unRedPayloadType = 0;
```



```

if (ipm_StartMedia(nDeviceHandle, &MediaInfo, DATA_IP_TDM_BIDIRECTIONAL, EV_SYNC) == -1)
{
    printf("ipm_StartMediaInfo failed for device name = %s with error = %d\n",
        ATDV_NAMEP(nDeviceHandle), ATDV_LASTERR(nDeviceHandle));
    /*
    .
    .
    Perform Error Processing
    .
    .*/
}
/*
.
. Continue processing
.
*/

MediaInfo.unCount = 2;
MediaInfo.MediaData[0].eMediaType = MEDIATYPE_REMOTE_CODER_INFO;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.eCoderType = CODER_TYPE_G711ALAW64K;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.eFrameSize = (eIPM_CODER_FRAME_SIZE) 30;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.unFramesPerPkt = 1;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.eVadEnable = CODER_VAD_DISABLE;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.unCoderPayloadType = 0;
MediaInfo.MediaData[0].mediaInfo.CoderInfo.unRedPayloadType = 0;

MediaInfo.MediaData[1].eMediaType = MEDIATYPE_LOCAL_CODER_INFO;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.eCoderType = CODER_TYPE_G711ALAW64K;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.eFrameSize = (eIPM_CODER_FRAME_SIZE) 30;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.unFramesPerPkt = 1;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.eVadEnable = CODER_VAD_DISABLE;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.unCoderPayloadType = 0;
MediaInfo.MediaData[1].mediaInfo.CoderInfo.unRedPayloadType = 0;

if (ipm_ModifyMedia(nDeviceHandle, &MediaInfo, DATA_IP_SENDOONLY, EV_SYNC) == -1)
{
    printf("ipm_Modify failed for device name = %s with error = %d\n",
        ATDV_NAMEP(nDeviceHandle), ATDV_LASTERR(nDeviceHandle));
    /*
    .
    .
    Perform Error Processing
    */
}

/*
.
.
continue processing
.
*/
}

```

■ See Also

- **ipm_StartMedia()**

1.83 Global Call SS7 Enhancements

The Service Update includes some enhancements to Dialogic® Global Call SS7:

- Enhances the robustness against an abrupt Global Call application exit
- Brings the **gc_MakeCall()** function **timeout** behavior in line with the Global Call specification, i.e., specifies the time interval (in seconds) during which the call must be established

1.84 Conference Bridging on Dialogic® DI Boards

With the Service Update, the ability to bridge conference resources across Dialogic® DI Boards is now supported. This feature is applicable to the following boards:

- Dialogic® DI0408LSAR2 Switching Boards
- Dialogic® DISI16R2, DISI24R2, and DISI32R2 Switching Boards

1.84.1 Feature Description

Conference bridging allows the parties from separate conferences to speak with and/or listen to one another. Conference bridging can be used to effectively expand a conference beyond the maximum size allowed by your particular configuration.

The following table shows the conference densities for DI Boards with bridging and without bridging. Note that the creation of a conference bridge consumes a conference resource on each end of the bridge. For example, bridging of two 5-party conferences consumes a total of 12 conference resources. For this reason, the maximum number of parties per board is reduced by at least one if bridging is used.

Table 4. Conference Densities on Dialogic® DI Boards

Board	Max. Conferences Per Board	Max. Parties Per Board	Max. Parties Per Conference		Notes (EC = Echo Cancellation)
			Without Bridging	With Bridging†	
DISI16R2	5	16	16	30	with or without EC
DISI24R2	5	16	16	30	with or without EC
DISI32R2	5	16	16	30	without EC
	5	12	12	22	with EC
DI0408LSAR2	3	9	9	16	with or without EC
†Values in this column are for two boards being used with a single bridge (i.e., two conferences bridged together). The maximum parties per board remains unchanged, and the new density is achieved by creating a separate conference on each board and then bridging the two conferences. Larger conferences can be created by bridging more than two conferences using a star configuration. See the <i>Dialogic® Audio Conferencing API Programming Guide</i> for further information.					

On DI Boards, bridging is supported via the Dialogic® Audio Conferencing (DCB) API. The **dcb_CreateBridge()** function establishes a conference bridge, and the **dcb_DeleteBridge()** function deletes a conference bridge. The conference bridging feature uses the TS_BRIDGECDT data structure to provide information about the conference bridge.

- Notes:**
1. Since the DI Boards support fixed routing, all resources (player, recorder, etc.) are permanently coupled to the station interface device and cannot be routed to a conference. This means that prompts cannot be played into a conference using resources from these boards. Routable voice resources are needed from another board (e.g., Dialogic® DM/V2400A Boards) in order to play prompts into a conference or record a conference.
 2. See the Conference Bridging chapter in the *Dialogic® Audio Conferencing API Programming Guide* for other limitations and for further information about conference bridging.

1.84.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Audio Conferencing (DCB) API, see the following documents:

- *Dialogic® Audio Conferencing API Programming Guide*
- *Dialogic® Audio Conferencing API Library Reference*

1.85 New Parameter for Order of DNIS and ANI

A new parameter, **CDP_In_ANIBeforeDNIS**, has been added to the country dependent parameter (CDP) files for all countries/protocols that use the pdk_r2_io protocol module. The **CDP_In_ANIBeforeDNIS** parameter specifies the order of DNIS, ANI, and Category digits. The order in which a switch sends DNIS, ANI, and Category information may be different from the default behavior for a country/protocol.

See the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* for further information about this parameter and about CDP files.

1.86 New Channel Block Timer for NTT Protocol

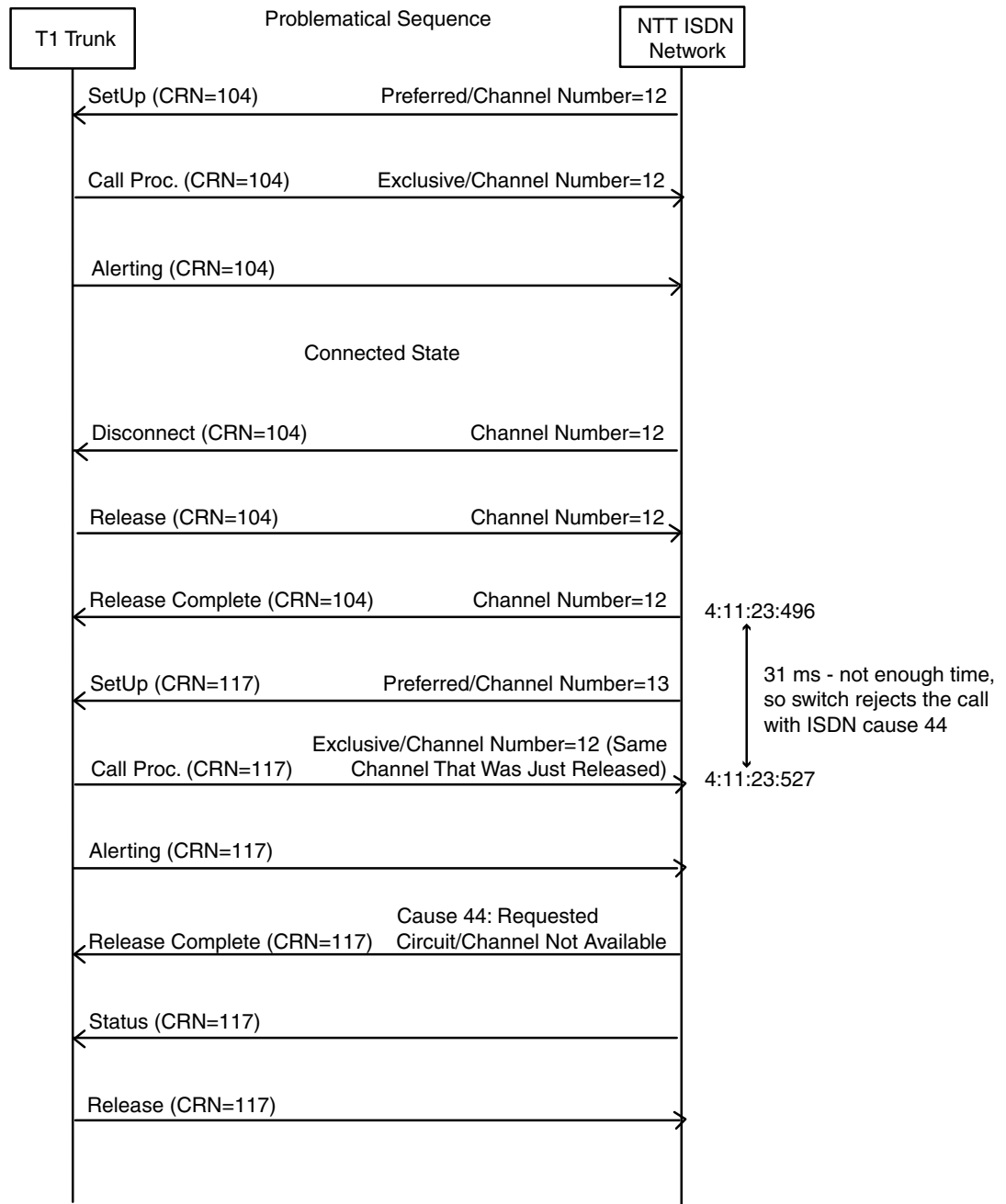
A new channel block timer parameter has been added to the *ntt.prm* file for the ISDN NTT protocol. The purpose of this timer is to block the first response (i.e., PROCEEDING, ALERTING, or CONNECT) to an incoming call (i.e., SETUP message) on a channel, if that same channel has just recently had a previous call released. The channel is blocked for the amount of time specified by this new channel block timer parameter.

This feature is supported on Dialogic® D/240JCT-T1, D/480JCT-1T1, and D/480JCT-2T1 Media Boards:

1.86.1 Feature Description

On some NTT switches, if a call initiated from the switch is responded to with a PROCEEDING message too quickly (i.e., response to the SETUP message) on a recently released channel, the switch rejects the call with ISDN cause 44 (requested circuit/channel not available) and sends an error message (voice message) to the subscriber. This also applies to other first response messages like ALERTING and CONNECT.

For example, the following figure gives an example of a problematical sequence where ISDN cause 44 is returned when channel 12 is reassigned in 31 milliseconds.



For compatibility with these NTT switches, the new channel block timer can be used in order to avoid sending the first response to the B channel that was just released by the previous call. The channel block time is the amount of time to hold off the first response message from being sent out too quickly to the network on a recently released channel. The amount of channel block time that the switches typically need is in the range of 0.7-1.0 second. This helps to prevent the call rejection described above.

Since not all switches operate this way, setting the channel block timer is optional.

When enabled, the channel block timer is started upon the sending or receiving of the final clearing message on a particular channel (clearing message could be RELEASE or RELEASE COMPLETE), and that channel will not be able to accept another call until this timer has expired.

- If a call is received on a channel while the channel block timer is still running, and if the Channel ID IE is set to "Preferred" or "Any Channel", then the call is simply routed to the next available B channel.
- However, if the Channel ID IE is set to "Exclusive", or if no B channel on the board is available for which the block timer condition is met, then the call is rejected with ISDN cause 44.

1.86.2 New Parameter

The new parameter in the *ntt.prm* file to set the channel block timer is:

```
;--- The NTT Channel Block Delay value. LSB is 10 ms.  
;--- This is a 2 byte value, but the maximum that will be considered is 255, or 0xFFH.  
;--- If a value more than 255 is specified then 255 will be considered.  
;  
;--- The default value is 00H.  
003C 00
```

The channel block delay time (003C parameter) can be set from 0 to 255, where the values are increments of 10 milliseconds. For example, a setting of 255 = 255 x 10 milliseconds or 2.55 seconds of delay. Parameter values must be entered in hexadecimal, so 255 would be entered as FF.

Typical values for this timer have been found to lie in the range of 0.7-1.0 second.

Any non-zero value enables the channel blocking feature for the specified time. The default value for the parameter is zero, which disables the channel blocking feature.

The *ntt.prm* file is installed in the *data* subdirectory of the Dialogic® Software home directory (normally *C:\Program Files\Dialogic\data*). For further information about JCT board configuration, see the *Dialogic® Springware Architecture Products on Windows® Configuration Guide*.

1.87 Mixing ISDN and CAS on Dialogic® DM/V-B Boards

With the Service Update, you can now mix ISDN and CAS protocols on the same Dialogic® DMV600BTEP or DMV1200BTEP Media Board, with automatic A-law/Mu-law conversion.

1.87.1 Feature Description

The Trunk Configuration property sheet of the Dialogic® Configuration Manager (DCM) contains parameters for configuring the interfaces on a DMV600BTEP or DMV1200BTEP Board. The procedure is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Previously, there were five different groups of protocols; now there are only two groups. As before, only protocols within the same group can be used on the same board. The groups are:

Group 1	Group 2
4ESS (T1)	DPNSS
5ESS (T1)	DASS2
NTT (T1)	
NI2 (T1)	
DMS (T1)	
QSIGT1 (T1)	
QSIGE1 (E1)	
NET5 (E1)	
T1CC (T1)	
CAS (T1)	
E1CC (E1)	
R2MF (E1)	

Each of the trunks on a DMV600BTEP or DMV1200BTEP Board must be assigned one of the protocols listed above. You can assign a different value to each trunk, but all the values must have the same group number. This allows you to mix ISDN and CAS protocols on the same board. Only DPNSS and DASS2 protocols cannot be mixed with the other protocols.

Note: The DM/V-B Boards also allow the mixing of T1 and E1 protocols on the same board, with automatic A-law/Mu-law conversion. The following considerations apply.

You can set the network interfaces to T1 or E1 in the same system, regardless of the CT Bus PCM encoding method (A-law or Mu-law). For example, if the PCM encoding method on the CT Bus is set to A-law, a DMV600BTEP or DMV1200BTEP Board that has some or all of its network (front end) interfaces configured for T1 will automatically convert the A-law data sent to and received from the CT Bus to Mu-law for transmitting and receiving on the T1 configured front ends. The board will always transmit to and receive from each front end using the PCM encoding method determined by the network interface setting.

1.87.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring DMV600BTEP and DMV1200BTEP Boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about mixing ISDN and CAS protocols on the same board.

1.88 Implementation of ROLM Call Waiting LED

When using Dialogic® D/42JCT-U and D/82JCT-U PBX Integration Boards and PBX Integration software, the **d42_indicators()** function can now return the LED status of the Call Waiting LED for the ROLMphone 400. For further information about the **d42_indicators()** function, see the *Dialogic® PBX Integration Software Reference*. For further information about using Dialogic® PBX Integration Boards with the Siemens ROLM PBX and ROLMphone 400, see the *Dialogic® PBX Integration Board User's Guide*.

1.89 Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards

This release provides the following enhancements to Special Information Tone (SIT) frequency detection on Dialogic® DM3 Boards:

- Broader default SIT sequence definitions to allow greater coverage for SIT sequences detected in the field.
- Three new SIT sequence definitions in the SIT tone set for DM3 Boards. The new SIT sequences are: InterLATA no circuit (TID_SIT_NC_INTERLATA), InterLATA reorder tone (TID_SIT_RO_INTERLATA), and ineffective other (TID_SIT_IO).
- A new catch all SIT sequence definition to cover SIT sequences that fall outside the range of the defined SIT sequences.
- DM3 Board support for the **ATDX_CRTNID()** function to allow retrieval of the SIT ID.

Details on these enhancements are provided next.

1.89.1 New SIT Sequence Definitions

The table below provides the default tone definitions for SIT sequences used on DM3 Boards. This information is not currently documented in the *Dialogic® Voice API Library Reference* in the Dialogic® System Release 6.0 PCI for Windows® bookshelf.

The table describes existing SIT sequences that have broader definitions as well as new SIT sequences.

This table is explained in further detail:

- The values in the Freq. column represent minimum and maximum values in Hz.
- Time refers to minimum and maximum on time in 10 msec units; the maximum off time between each tone is 5 (or 50 msec).
- The repeat count is 1 for all SIT segments.
- N/A means not applicable.
- For TID_SIT_ANY, the frequency and time of the first and second segments are open; that is, they are ignored. Only the frequency of the third segment is relevant.
- The tone IDs have aliases:
 - TID_SIT_NO_CIRCUIT (TID_SIT_NC)
 - TID_SIT_OPERATOR_INTERCEPT (TID_SIT_IC)
 - TID_SIT_VACANT_CIRCUIT (TID_SIT_VC)
 - TID_SIT_REORDER_TONE (TID_SIT_RO)
 - TID_SIT_NO_CIRCUIT_INTERLATA (TID_SIT_NC_INTERLATA)
 - TID_SIT_REORDER_TONE_INTERLATA (TID_SIT_RO_INTERLATA)
 - TID_SIT_INEFFECTIVE_OTHER (TID_SIT_IO)

Table 5. Special Information Tone Definitions (DM3 Boards)

SIT		1st Segment		2nd Segment		3rd Segment	
Tone ID	Description	Freq.	Time	Freq.	Time	Freq.	Time
TID_SIT_NC	No Circuit Found	950/1020	32/45	1400/1450	32/45	1740/1850	N/A
TID_SIT_IC	Operator Intercept	874/955	15/30	1310/1430	15/30	1740/1850	N/A
TID_SIT_VC	Vacant Circuit	950/1020	32/45	1310/1430	15/30	1740/1850	N/A
TID_SIT_RO	Reorder (system busy)	874/955	15/30	1400/1450	32/45	1740/1850	N/A
TID_SIT_NC_INTERLATA	InterLATA No Circuit Found	874/955	32/45	1310/1430	32/45	1740/1850	N/A
TID_SIT_RO_INTERLATA	InterLATA Reorder (system busy)	950/1020	15/30	1310/1430	32/45	1740/1850	N/A
TID_SIT_IO	Ineffective Other	874/955	32/45	1400/1450	15/30	1740/1850	N/A
TID_SIT_ANY	Catch all tone definition	Open	Open	Open	Open	1725/1825	N/A

1.89.2 ATDX_CRTNID() Support on Dialogic® DM3 Boards

The **ATDX_CRTNID()** function is now supported on Dialogic® DM3 Boards. This information is not currently documented in the *Dialogic® Voice API Library Reference* in the Dialogic® System Release 6.0 PCI for Windows® bookshelf.

On DM3 Boards, the following new tone IDs can now be returned by **ATDX_CRTNID()**:

Tone ID	Description
TID_SIT_IC	Operator intercept SIT sequence
TID_SIT_OPERATOR_INTERCEPT	
TID_SIT_IO	Ineffective other SIT sequence
TID_SIT_INEFFECTIVE_OTHER	
TID_SIT_NC	No circuit found SIT sequence
TID_SIT_NO_CIRCUIT	
TID_SIT_NC_INTERLATA	InterLATA no circuit found SIT sequence
TID_SIT_NO_CIRCUIT_INTERLATA	
TID_SIT_RO	Reorder (system busy) SIT sequence
TID_SIT_REORDER_TONE	
TID_SIT_RO_INTERLATA	InterLATA reorder (system busy) SIT sequence
TID_SIT_REORDER_TONE_INTERLATA	
TID_SIT_VC	Vacant circuit SIT sequence
TID_SIT_VACANT_CIRCUIT	
TID_SIT_ANY	Catch all (returned for a SIT sequence that falls outside the range of known default SIT sequences)

Updated example code is provided for this function as follows.

```
#include <stdio.h>
#include <srllib.h>
#include <dxxplib.h>

main()
{
    DX_CAP cap_s;
    int ddd, car;
    char *chnam, *dialstrg;
    long tone_id;

    chnam = "dxxxB1C1";
    dialstrg = "L1234";

    /*
     * Open channel
     */
    if ((ddd = dx_open( chnam, NULL )) == -1 ) {
        /* handle error */
    }

    /*
     * Dial
     */
    printf("Dialing %s\n", dialstrg );
    car = dx_dial(ddd,dialstrg,(DX_CAP *)&cap_s,DX_CALLP|EV_SYNC);
    if (car == -1) {
        /* handle error */
    }

    switch( car ) {
    case CR_NODIALTONE:
        switch( ATDX_DTNFAIL(ddd) ) {
        case 'L':
            printf(" Unable to get Local dial tone\n");
            break;
        case 'I':
```

```

        printf(" Unable to get International dial tone\n");
        break;
    case 'X':
        printf(" Unable to get special eXtra dial tone\n");
        break;
    }
    break;

case CR_BUSY:
    printf(" %s engaged - %s detected\n", dialstrg,
        (ATDX_CRTNID(ddd) == TID_BUSY1 ? "Busy 1" : "Busy 2") );
    break;

case CR_CNCT:
    printf(" Successful connection to %s\n", dialstrg );
    break;

case CR_CEPT:
    printf(" Special tone received at %s\n", dialstrg );
    tone_id = ATDX_CRTNID(ddd); //ddd is handle that is returned by
dx_open()

    switch (tone_id) {

    case TID_SIT_NC:
        break;
    case TID_SIT_IC:
        break;
    case TID_SIT_VC:
        break;
    case TID_SIT_RO:
        break;
    case TID_SIT_NC_INTERLATA:
        break;
    case TID_SIT_RO_INTERLATA:
        break;
    case TID_SIT_IO:
        break;
    case TID_SIT_ANY:
        break;
    }
    break;

default:
    break;
}

/*
 * Set channel on hook
 */
if ((dx_sethook( ddd, DX_ONHOOK, EV_SYNC )) == -1) {
    /* handle error */
}

dx_close( ddd );
}

```

1.89.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Voice API, see the following documents:

- *Dialogic® Voice API Programming Guide*
- *Dialogic® Voice API Library Reference*

Note: The online bookshelf has not been updated for this feature. The following observations are worth noting:

- In the *Dialogic® Voice API Programming Guide*, the section about SIT Frequency Detection is superseded by the information in this Release Update.
- In the *Dialogic® Voice API Library Reference*, the description of the **ATDX_CRTNID()** function does not currently indicate that it is supported on DM3 Boards, with the new tone IDs shown in this Release Update.

1.90 Enhanced GCAMS on Dialogic® DM3 Boards

This release provides the following enhancements to the Global Call Alarm Management System (GCAMS) for Dialogic® DM/V and DM/V-A Media Boards:

- Ability for the application to be notified of several new T1/E1 alarms, supported on ISDN, CAS, and R2MF protocols through existing GCEV_ALARM, GCEV_BLOCKED, and GCEV_UNBLOCKED
- Ability to change default threshold values for the new alarms through the configuration file
- Ability for the GCAMS functions in the Dialogic® Global Call API library to recognize the new alarms
- Default values of non-blocking and “no notify” for each new alarm with the ability to change each value via **gc_SetAlarmConfiguration()**
- Alarm reporting behavior for the new alarms is the same as the behavior on Springware boards

Details on these enhancements are provided next.

1.90.1 New E1 Alarms

The following table lists new alarms for E1 technology. These new alarms are non-blocking and not received by default. To change these default values, use the **gc_SetAlarmConfiguration()** function.

Table 6. New Alarms for E1 Technology (DM3 Boards)

Alarm	Meaning	Default Threshold Value	Range
DTE1_BPVS	Bipolar violation count saturation	255	0 to 255
DTE1_CECS	CRC4 error count saturation	255	0 to 255
DTE1_ECS	Frame sync bit error count saturation	0	0 to 255

1.90.2 New T1 Alarms

The following table lists new alarms for T1 technology. These new alarms are non-blocking and not received by default. To change these default values, use the **gc_SetAlarmConfiguration()** function.

Table 7. New Alarms for T1 Technology (DM3 Boards)

Alarm	Meaning	Default Threshold Value	Range
DTT1_BPVS	Bipolar violation count saturation	255	0 to 255
DTT1_ECS	Frame bit error count saturation	0	0 to 255
DTT1_FERR	Two out of four consecutive frame bits (F bit) in error	0	0 to 255
DTT1_OOF	Out of frame error count saturation	0	0 to 255

1.90.3 Modifying Default Threshold Values for New Alarms

If desired, you can change the default threshold value of a new T1/E1 alarm by adding a parameter in the CONFIG file that corresponds to the PCD file in use on your board. The change is made per span. After threshold parameters are added, generate an updated FCD and start system services on the board. If threshold parameters are not added, default threshold values are in effect. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information on CONFIG files, PCD files, and FCD files.

To modify default threshold values for E1 alarms, add one or more of the following parameters (sample value of 100 shown) to the [lineAdmin.x] section of a CONFIG file:

```
SetParm=0x1639,100 ! BPVS threshold range 0 - 255, default 255
SetParm=0x163c,100 ! ECS threshold range 0 - 255, default 0
SetParm=0x163d,100 ! CECS threshold range 0 - 255, default 255
```

To modify default threshold values for T1 alarms, add one or more of the following parameters (sample value of 100 shown) to the [lineAdmin.x] section of a CONFIG file:

```
SetParm=0x1639,100 ! BPVS threshold range 0 - 255, default 255
SetParm=0x163a,100 ! OOF threshold range 0 - 255, default 0
SetParm=0x163b,100 ! FERR threshold range 0 - 255, default 0
SetParm=0x163c,100 ! ECS threshold range 0 - 255, default 0
```

1.90.4 Support for New Alarms in GCAMS Functions

The new alarms are supported by the GCAMS API functions as documented in the *Dialogic® Global Call API Library Reference* in the Dialogic® System Release 6.0 PCI for Windows® bookshelf.

1.91 Telecom Subsystem Summary Tool (its_sysinfo)

The Telecom Subsystem Summary Tool (its_sysinfo) provides a way to collect information about systems built using Dialogic® products. The its_sysinfo tool collects data from the system on which you execute it and provides information about the system environment: the operating system, computer architecture, System Release software, and operational logs.

For detailed information about the its_sysinfo tool, see the *Dialogic® System Software Diagnostic Guide*. The following sections describe new features in the Service Update for its_sysinfo:

- [Disable Collection of Board Memory Dumps](#)
- [Windows® Package Info Added to its_sysinfo](#)

1.91.1 Disable Collection of Board Memory Dumps

With the Service Update, a new option can be used to disable collection of board memory dumps for Dialogic® Springware Boards when its_sysinfo is run. The option is available from the command line and from the graphical user interface (GUI).

Command Line

The new command line option is **-d**:

```
its_sysinfo [filename.zip] [-d] [-?]
```

where:

filename.zip

Name of the file where the collected system information will be stored. Default is *its_sysinfo.zip*.

-d

Disables the collection of the board memory dumps. By default, board memory dumps for Springware Boards are collected under *its_sysinfo.htm*, which is one of the files that is included in the zip file.

-?

Shows the usage screen.

GUI

On the GUI, a new **Settings** menu offers the following selection, which can be toggled off and on (default is on, that is, enabled):

Enable Board Mem Dump

1.91.2 Windows® Package Info Added to its_sysinfo

With the Service Update, the *its_sysinfo.htm* file now includes a Windows® Package Info section at the beginning of the file. For example:

```
WindowsPackageInfo

Active System Release

Dialogic(R) System Release 6.0 PCI for Windows Build 125 (System Release)

Build Type: System Release
Install Location: C:\Program Files\Dialogic
Install Date: 2-20-2007 at 15:52:30
Installed By: Computing Customer

Installed Features
    Devel
    Runtime

Previously Installed System Release

Dialogic(R) System Release 6.0 PCI for Windows Build 123 (System Release)

Build Type: System Release
Install Location: C:\Program Files\Dialogic
Install Date: 1-15-2007 at 15:29:40
Installed By: Computing Customer

Installed Features
    Devel
    Runtime
```

1.92 Windows® Hardware Quality Labs (WHQL) Certification

Note: WHQL certification for Dialogic® System Release 6.0 PCI for Windows® Service Update is not currently valid. The product is getting recertified.

1.93 Single Echo Canceller Convergence

The Service Update allows you to set single echo canceller convergence on Dialogic® DMV160LP Media Boards, which reduces the number of false barge-ins and incorrect speech recognitions occurring in speech-enabled applications. A new channel parameter, ECCH_CONVERGE, provides this capability. Use **ec_setparm()** with the ECCH_CONVERGE channel parameter to switch from continuous to single echo canceller convergence.

Dialogic® D/41JCT-LS Media Boards, and all other JCT Boards that use a continuous speech processing firmware load, function with single echo canceller convergence by default. Therefore it is not necessary to use the ECCH_CONVERGE channel parameter with these boards.

1.93.1 Feature Description

Speech-enabled applications that re-enable continuous speech processing and have loud prompts experience bursts of excessive echo in the streamed audio on each play file, causing application malfunction. These excessive echo bursts are caused by continuous echo canceller (EC) convergence, which is re-initialized and re-converges on each new **ec_stream()** function. This results in several hundred milliseconds of excessive play echo at the beginning of each play file, which confuses the host-based recognizer, degrading the operation of the application system.

Single EC convergence can help with this problem. With single EC convergence, the addressed echo canceller will converge once, after the first **ec_stream()** function is issued, and from then on the convergence coefficients are saved for the subsequent **ec_stream()** functions. The echo canceller should be set to re-converge on the first call to **ec_stream()** of each new phone call. This provides consistent echo cancellation and optimized barge-in performance.

The following sections describe how single EC convergence works on DMV160LP and JCT Boards.

1.93.1.1 Single EC Convergence for DMV160LP Boards

Using the new channel parameter, ECCH_CONVERGE, you can switch from continuous to single EC convergence. ECCH_CONVERGE can take a value of ON or OFF. The default value is ON (continuous EC convergence), which means that the echo canceller will re-converge, or retrain, on every new call to **ec_stream()**. The ECCH_CONVERGE parameter supports applications that issue a new **ec_stream()** function with each play file. This echo convergence mode setting is unaffected by the **ec_stopch()** function.

Note: These parameter operations cannot be issued when any voice I/O function is active on that channel. A TDX_BUSY error will be returned if it is attempted.

Single EC convergence is set for DMV160LP Boards as follows:

1. At the beginning of each new phone call, the application must set ECCH_CONVERGE to ON to allow the echo canceller to adapt to the connected trunk's characteristics.
2. Immediately after the first **ec_stream()** for the phone call, set the ECCH_CONVERGE to OFF.
3. Reset ECCH_CONVERGE to ON for the next phone call.
4. After the first **ec_stream()**, set ECCH_CONVERGE to OFF.
5. Repeat for each phone call.

Note: Once the **ec_setparm()** is issued with the ECCH_CONVERGE value set to OFF, the addressed voice channel's echo canceller will no longer track changes in the trunk characteristics. At the beginning of each new phone call, the application must set ECCH_CONVERGE to ON to allow the echo canceller to adapt to the connected trunk's characteristics. Failure to do this can result in poor echo cancellation, which affects important voice channel functions.

1.93.1.2 Single EC Convergence for JCT Boards

Dialogic® D/41JCT-LS Media Boards, and all other JCT boards using a continuous speech processing firmware load, function with single echo canceller convergence by default. Therefore it is not necessary to use the ECCH_CONVERGE channel parameter to obtain single EC convergence. The equivalent to setting the ECCH_CONVERGE parameter to ON for JCT Boards is to reset the echo canceller prior to every call to **ec_stream()** by setting the DXCH_EC_TAP_LENGTH parameters.

Note: Calling the ECCH_CONVERGE parameter with JCT Boards will return an error indicating that this function is not supported.

JCT Boards will function with single EC convergence if you set all the CSP parameters once at the beginning of each new phone call prior to the first call to **ec_stream()**.

If you need continuous EC convergence, set the parameter DXCH_EC_TAP_LENGTH prior to each call to **ec_stream()**. Setting this parameter resets the echo canceller and forces the echo canceller to reconverge.

1.93.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about **ec_stream()**, **ec_setparm()**, **ec_stopch()**, and other Dialogic® Continuous Speech Processing API functions and parameters, refer to the following documents:

- *Dialogic® Continuous Speech Processing API Programming Guide*
- *Dialogic® Continuous Speech Processing API Library Reference*

Note: The online bookshelf has not been updated for this feature, so the Continuous Speech Processing API documentation does not currently include information about the ECCH_CONVERGE parameter.

1.94 New Features in Dialogic® Global Call Protocols Package

A number of new features have been added to the Dialogic® Global Call Protocols Package, which is now part of the System Release software.

The following new protocols are supported:

- Bulgaria R2
- Croatia R2
- Kuwait R2
- Lithuania R2
- Uzbekistan R2
- Korea T1/R2
- Lebanon R2
- Poland R2
- Samsung PBX Lineside E1

There are also enhancements to existing protocols:

New parameters for Nortel Meridian Lineside E1 protocol

New parameters have been added to specify whether the protocol will wait for IDLE, wait for ReleaseGuard, and wait for SEIZEACK.

Send blocking pattern when channel is put OOS

A new parameter, CDP_BlockOnLOOS, has been added to the CDP files for several protocols to send a blocking pattern when a channel is put out-of-service. The protocols with this new parameter are:

- Alcatel 4400 Lineside E1
- Alcatel VPS 4x00 Lineside
- Ericsson MD110 PBX Lineside E1
- Korea GDS Lineside E1
- Lucent Lineside E1
- NEC Lineside E1
- Nortel Meridian Lineside E1
- T1 FXS Ground Start
- United States T1 FXS/LS

Call transfer functionality

The ability to transfer calls on switches using MELCAS Lineside protocol is now supported.

An updated version of the *Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide* providing more detailed information about these new features has been added to the documentation bookshelf.

1.95 New Operating System Support

In addition to the supported operating systems listed in the Release Guide, the following operating system versions are now supported with this Service Update:

- Windows Vista® Business SP1
- Windows Vista® Ultimate SP1
- Windows Server® 2008 Enterprise
- Windows Server® 2008 Standard, Full Version

Note: See [Section 1.35, “Support for Windows® 7, Windows Vista®, and Windows Server® 2008 Operating Systems”](#), on page 103 for information about running System Release 6.0 PCI Windows on Windows Vista and Windows Server 2008, as opposed to running on other Windows® operating systems.

- Windows® XP SP2
- Windows Server® 2003 SP1 and SP2
- Windows Server® 2003 R2
- Windows Server® 2003 R2 SP2
- Windows® 2000 Update Rollup 1 for SP4

Note: Terminal Services Application Server Mode and Active Directory Application Server Mode are not supported on any operating systems.

1.96 New Station Interface Alarms

The Service Update provides the ability to monitor the communication links between a board and its associated Station Interface Box (SIB). If power to the SIB is lost or if any communication links between the board and the SIB are accidentally disconnected (e.g., cable is disconnected), an alarm event is sent to the application. With this new alarm event, the application can now be notified when a station interface is not online, so the application can stop sending calls to station interfaces that are no longer in service. The application can also be notified when the problem is corrected.

This feature is applicable to the following boards:

- Dialogic® HDSI/480, HDSI/720, HDSI/960, and HDSI/1200 Station Interface Boards
- Dialogic® DI0408LSAR2 Switching Boards
- Dialogic® DISI16R2, DISI24R2, and DISI32R2 Switching Boards

For further information about the station interface alarms, see the *Dialogic® Modular Station Interface API Programming Guide* and *Dialogic® Modular Station Interface API Library Reference*.

1.97 Support for ANI Category Digit Retrieval on Dialogic® DM3 Boards

The Service Update provides support for ANI category digit retrieval on Dialogic® DM3 Boards. The **gc_GetCallInfo()** function, which retrieves information associated with a call, can now be used to retrieve the category digit for DM3 Boards. Formerly, the **gc_GetCallInfo()** CATEGORY_DIGIT parameter was supported on Dialogic® Springware Boards only. For further information about the **gc_GetCallInfo()** function, see the *Dialogic® Global Call API Library Reference*.

1.98 New Media Load for Dialogic® DMV3600BP Boards

The Service Update provides a new media load, ML9B-LC, for the Dialogic® DMV3600BP Media Board. This new media load is a conferencing only media load, supporting large conferences. It provides 128 conferencing resources with echo cancellation and tone clamping. The maximum conference size without bridging is 64 parties. The maximum conference size with bridging is 126 parties per board.

Media load ML9B-LC is an addition to the ML9x series of media loads for conferencing. For example, media load ML9B can still be used for applications that require higher overall density without the need for large conference sizes. The conferencing features available with media load ML9B are: 160 conferencing resources with echo cancellation and tone clamping, maximum conference size of 16 parties without bridging, and maximum conference size of 142 parties with bridging.

1.98.1 Feature Description

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads.

The features and channel densities provided by the new media load ML9B-LC for the DMV3600BP Board are as follows:

Features Supported	Rich Conferencing with Echo Cancellation and Tone Clamping	Maximum Conference Size without Bridging	Maximum Conference Size per Board with Bridging
Channel Density	128	64	126

For information about bridging, see the Conference Bridging chapter in the *Dialogic® Audio Conferencing API Programming Guide*.

Note: Voice resources are **not** included in the ML9x media loads.

1.98.2 Configuring the Software

The new media load can be selected by using the Dialogic® Configuration Manager (DCM). This procedure, which must be performed before the boards are started, is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.98.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring DMV3600BP Boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about media load ML9B-LC.

For information about the Dialogic® Audio Conferencing (DCB) API, see the following documents:

- *Dialogic® Audio Conferencing API Programming Guide*
- *Dialogic® Audio Conferencing API Library Reference*

1.99 New Media Loads for Dialogic® DMV1200BTEP Boards

The Service Update provides new media loads for the Dialogic® DMV1200BTEP Media Board:

QSB-U3

Provides rich conferencing (conferencing, echo cancellation, and tone clamping) with enhanced voice, FSK, transaction record, and fax.

QSB-ML10

Provides rich conferencing (conferencing, echo cancellation, and tone clamping) with enhanced voice, FSK, and transaction record.

QSB-ML10-LC

Provides rich conferencing (conferencing, echo cancellation, and tone clamping) with enhanced voice, FSK, and transaction record. Supports larger conferences than QSB-ML10.

QSB-U2

Provides increased density for standard conferencing while also providing basic voice, FSK, and fax.

10b

Provides rich conferencing (conferencing, echo cancellation, and tone clamping) while also providing full density basic voice with transaction record and FSK.

Note: For information about basic voice features and enhanced voice features, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.99.1 Feature Description

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads.

Media Load QSB-U3

The features and channel densities provided by media load QSB-U3 are as follows:

Features Supported	Enhanced Voice	Transaction Record	FSK	Fax	Conferencing with Echo Cancellation and Tone Clamping
Channel Density	120	120	120	8	36

There are 120 total voice resources. Any combination of the voice features (enhanced voice, transaction record, and FSK) can be used up to a total of 120. In addition to these voice resources, 36 conferencing resources (with echo cancellation and tone clamping) and 8 fax resources can be used.

- Notes:**
1. Conference size is limited to 18 parties without bridging. Conference bridging can be used to effectively expand a conference beyond the maximum size. Conference bridging consumes conferencing resources, reducing overall board conference density.
 2. Although it is usually part of the enhanced voice media load features, TrueSpeech is not supported with media load QSB-U3.
 3. QSB-U3 no longer supports CSP streaming to CT Bus. This frees up CT Bus time slots that can be allocated to other boards, allowing for higher system density. Applications that require CSP streaming to CT Bus can use QSB-ML10 or QSB-U1.

Media load QSB-U3 can be used with all protocols supported on the DMV1200BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

Media Load QSB-ML10

The features and channel densities provided by media load QSB-ML10 are as follows:

Features Supported	Enhanced Voice	Transaction Record	FSK	Conferencing with Echo Cancellation and Tone Clamping
Channel Density	120	120	120	54

There are 120 total voice resources. Any combination of the voice features (enhanced voice, transaction record, and FSK) can be used up to a total of 120. In addition to these voice resources, 54 conferencing resources (with echo cancellation and tone clamping) can be used.

- Notes:**
1. Conference size is limited to 18 parties without bridging. Conference bridging can be used to effectively expand a conference beyond the maximum size. Conference bridging consumes conferencing resources, reducing overall board conference density.
 2. Although it is usually part of the enhanced voice media load features, TrueSpeech is not supported with media load QSB-ML10.

Media load QSB-ML10 can be used with all protocols supported on the DMV1200BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

Media Load QSB-ML10-LC

Media Load QSB-ML10-LC is similar to QSB-ML10 but with larger conference sizes (38 parties instead of 18 parties without bridging). QSB-ML10 can still be used for applications that don't need larger conference sizes. To allow for higher system density, QSB-ML10-LC does not support CSP streaming to CT Bus.

The features and channel densities provided by media load QSB-ML10-LC are as follows:

Features Supported	Enhanced Voice	Transaction Record	FSK	Conferencing with Echo Cancellation and Tone Clamping
Channel Density	120	120	120	38

There are 120 total voice resources. Any combination of the voice features (enhanced voice, transaction record, and FSK) can be used up to a total of 120. In addition to these voice resources, 38 conferencing resources (with echo cancellation and tone clamping) can be used.

- Notes:**
1. Conference size is 38 parties without bridging.
 2. Although it is usually part of the enhanced voice media load features, TrueSpeech is not supported with media load QSB-ML10-LC.

Media load QSB-ML10-LC can be used with all protocols supported on the DMV1200BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

Media Load QSB-U2

The features and channel densities provided by media load QSB-U2 are as follows:

Features Supported	Basic Voice - FSK	Fax	Conferencing - Tone Clamping
Channel Density	120	12	120

Note: Echo cancellation is not supported with media load QSB-U2 and should not be enabled by the application.

Media load QSB-U2 can be used with all protocols supported on the DMV1200BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

Media Load 10b

The features and channel densities provided by media load 10b are as follows:

Features Supported	Basic Voice	Transaction Record	FSK	Conferencing with Echo Cancellation and Tone Clamping
Channel Density	120	120	120	120

There are 120 total voice resources. Any combination of the voice features (basic voice, transaction record, and FSK) can be used up to a total of 120. In addition to these voice resources, 120 conferencing resources (with echo cancellation and tone clamping) can be used.

Note: Conference size is limited to 20 parties without bridging. Conference bridging can be used to effectively expand a conference beyond the maximum size. Conference bridging consumes conferencing resources, reducing overall board conference density.

Media load 10b can be used with all protocols supported on the DMV1200BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

1.99.2 Configuring the Software

The new media loads can be selected by using the Dialogic® Configuration Manager (DCM). For DMV1200BTEP Boards, the **MediaLoad** parameter appears on the Trunk Configuration property sheet.

In addition to specifying the media load, the Trunk Configuration property sheet allows you to individually configure network trunks on the DMV1200BTEP Board with different T1 or E1 protocols. Based on your selections on this property sheet, DCM creates a composite configuration file set (PCD, FCD, and CONFIG files). This procedure, which must be performed before the board is started, is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.99.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring DMV1200BTEP Boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about media loads QSB-U3, QSB-ML10, QSB-U2, and 10b.

1.100 New Media Load for Dialogic® DMV600BTEP Boards

The Service Update provides a new media load, DSB-U2, for the Dialogic® DMV600BTEP Media Board. This new media load provides rich conferencing (conferencing, echo cancellation, and tone clamping) with enhanced voice, FSK, transaction record, and fax.

1.100.1 Feature Description

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads.

The features and channel densities provided by media load DSB-U2 are as follows:

Features Supported	Enhanced Voice	Transaction Record	FSK	Fax	Conferencing with Echo Cancellation and Tone Clamping
Channel Density	90	90	90	6	48

There are 90 total voice resources. Any combination of the voice features (enhanced voice, transaction record, and FSK) can be used up to a total of 90. In addition to these voice resources, 48 conferencing resources (with echo cancellation and tone clamping) and 6 fax resources can be used.

Note: Conference size is limited to 16 parties without bridging. Conference bridging can be used to effectively expand a conference beyond the maximum size. Conference bridging consumes conferencing resources, reducing overall board conference density.

Media load DSB-U2 can be used with all protocols supported on the DMV600BTEP Board, e.g., T1 ISDN, T1 CAS, E1 ISDN, E1 R2MF, and DPNSS/DASS2.

1.100.2 Configuring the Software

The new media load can be selected by using the Dialogic® Configuration Manager (DCM). For DMV600BTEP Boards, the **MediaLoad** parameter appears on the Trunk Configuration property sheet.

In addition to specifying the media load, the Trunk Configuration property sheet allows you to individually configure network trunks on the DMV600BTEP Board with different T1 or E1 protocols. Based on your selections on this property sheet, DCM creates a composite configuration file set (PCD, FCD, and CONFIG files). This procedure, which must be performed before the board is started, is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.100.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For detailed information about configuring DMV600BTEP Boards, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about media load DSB-U2.

1.101 Call Transfer Support on the Dialogic® DMV160LP Board

The Service Update adds support for supervised call transfer on the Dialogic® DMV160LP Media Board. For further information about this feature, see the *Dialogic® Global Call Analog Technology Guide*.

1.102 dx_reciottdata() Enhancements

The Service Update provides the following enhancements to the **dx_reciottdata()** function:

- Initial silence compression
- Voice activity detector (VAD) with event notification

These enhancements are applicable to the following boards:

- Dialogic® DM/V, DM/V-A, DM/V-B, DM/VF, and DMV160LP Media Boards
- Dialogic® DM/IP Boards

1.102.1 Feature Description

The **dx_reciottdata()** function, used to record voice data, has two new modes:

RM_VADNOTIFY

generates an event on detection of VAD during the recording operation. The new event is TDX_VAD.

Note: TDX_VAD is not an indication of function termination; it is an unsolicited event.

RM_ISCR

adds initial silence compression to the VAD detection capability.

Note: The RM_ISCR mode can only be used in conjunction with RM_VADNOTIFY.

To enable these modes, OR them to the **dx_reciottdata()** function mode parameter. For example:

```
t_Return=dx_reciottdata(DevHandle, Iott, Tpt, &t_Xpb, EV_ASYNC|RM_VADNOTIFY);
```

```
t_Return=dx_reciottdata(DevHandle, Iott, Tpt, &t_Xpb, EV_ASYNC|RM_VADNOTIFY|RM_ISCR);
```

When these two modes are used together, no data is recorded as output until voice activity is detected on the line. The TDX_VAD event indicates the initiation of voice. The output file will be empty before the VAD is detected, although some initial silence may be included as specified in the FCD file.

Initial silence is the amount of silence on the line before VAD is detected. When using RM_ISCR, the default value for the amount of allowable silence is 3 seconds. Any initial silence longer than that will be truncated. This default value can be changed by modifying a parameter in the CONFIG file for the board and then generating a new FCD file. See [Section 1.102.2, "Configuring the Software"](#), on page 268.

Supported Coders

These enhancements to the **dx_reciottdata()** function are supported for the following encoding methods and sampling rates:

- OKI ADPCM, 6 kHz with 4-bit samples (24 kbps) and 8 kHz with 4-bit samples (32 kbps), VOX and WAVE file formats
- Linear PCM, 8 kHz sampling 64 Kbps (8 bits), 8 kHz sampling 128 Kbps (16 bits)
- G.711 PCM, 6 kHz with 8-bit samples (48 kbps) and 8 kHz with 8-bit samples (64 kbps) using A-law or mu-law coding, VOX and WAVE file formats
- G.721 at 8 kHz with 4-bit samples (32 kbps), VOX and WAVE file formats
- G.726 bit-exact voice coder at 8 kHz with 2-, 3-, 4-, or 5-bit samples (16, 24, 32, 40 kbps), VOX and WAVE file formats

1.102.2 Configuring the Software

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads.

The initial silence compression and VAD event notification features are available in any media load that has voice functionality.

To change the default value for the amount of allowable silence when using RM_ISCR, you must add a new parameter in the CONFIG file that was selected for your board. The parameter is **0x416**, and must be added in the [encoder] section of the config file. The initial silence value for the parameter is specified directly in seconds, for example:

```
[encoder]
SetParm=0x416,6
```

This sets the maximum amount of allowable silence to 6 seconds. Any initial silence longer than that will be truncated.

Whenever a CONFIG file has been modified, a new FCD file must be generated. This procedure is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.102.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Voice API, see the following documents:

- *Dialogic® Voice API Programming Guide*
- *Dialogic® Voice API Library Reference*

Note: The online bookshelf has not been updated for this feature. The following observations are worth noting:

- The description of the **dx_reciottdata()** function in the *Dialogic® Voice API Library Reference* does not currently show the RM_ISCR and RM_VADNOTIFY modes.
- The Events chapter in the *Dialogic® Voice API Library Reference* does not currently include the TDX_VAD event.
- The *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about the **0x416** parameter.

1.103 Trunk Preconditioning

The Service Update provides the capability for trunk preconditioning, which allows boards to be placed in an alarm state during board initialization.

These enhancements are applicable to the following boards:

- Dialogic® DM/V, DM/V-A, DM/V-B, and DM/VF Media Boards
- Dialogic® DM/N Digital Telephony Interface Boards
- Dialogic® DM/IP Boards

1.103.1 Feature Description

While Dialogic® Boards are starting up and are connected to network trunks, there is a period where the digital network interface begins transmitting frames and idle CAS signaling. This state can exist for a minute or more before the board and application program are prepared to handle calls. During this time, a service provider (CO) may begin alerting (ringing) for inbound calls, but the calls cannot be answered because the board or application has not finished initializing. This results in lost calls.

A new configuration parameter, referred to here as the Initial Alarm State parameter, allows you to place trunks in an alarm state while the board is being initialized. This prevents the service provider from sending calls. The alarm clears and the trunks go in-service as soon as the first **gc_OpenEx()** (or **gc_Open()**) function for a trunk is executed in the application. (For T1 trunks, alarms clear after a 15-second delay to verify valid signaling.)

The possible values for the new Initial Alarm State parameter are:

Value	Description
0	Default - No alarm is transmitted on the trunk; all trunk time slots signal Out of Service.
1	TransmitAIS - An Alarm Indication Signal (AIS) alarm is transmitted on the trunk.
2	TransmitRAI - A Remote Alarm Indication (RAI) alarm is transmitted on the trunk.

Note: The default behavior also applies if the Initial Alarm State parameter is not used. Behavior is the same in both ISDN and CAS environments.

For more detailed information about configuring the Initial Alarm State parameter, see [Section 1.103.2, “Configuring the Software”](#), on page 270.

The Initial Alarm State parameter setting applies only upon board initialization. After the initial alarm state is cleared (by **gc_OpenEx()** or **gc_Open()**), trunks do not return to the initial alarm state unless you restart the board. Stopping the board or unloading the application does not return a board to its initial alarm state.

Note: An RAI alarm could result from a response to a loss of sync from the network side. If the Initial Alarm State parameter is set to 2, but a loss of sync (or similar condition) persists even after the board is initialized and **gc_OpenEx()** or **gc_Open()** is invoked, the RAI will continue to be transmitted until the network condition is cleared.

A board could transmit other alarms, as a response to a network condition, that are unrelated to this parameter. Those alarms will persist until the network condition is cleared.

1.103.2 Configuring the Software

Predefined sets of features for Dialogic® Boards are provided in media loads. A media load consists of a configuration file set (PCD, FCD, and CONFIG files) and the associated firmware that is downloaded to the board. See the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* for more information about media loads.

In order to use the Initial Alarm State parameter, it must be manually added to the CONFIG file that was selected for your board. The hexadecimal parameter number is **0x1626**, and must be added in the [lineAdmin] section for each trunk. For example:

```
[lineAdmin.1]
SetParm=0x1626,1    ! InitialAlarmState (None=0, AIS=1, RAI=2)

[lineAdmin.2]
SetParm=0x1626,1    ! InitialAlarmState (None=0, AIS=1, RAI=2)

[lineAdmin.3]
SetParm=0x1626,1    ! InitialAlarmState (None=0, AIS=1, RAI=2)

[lineAdmin.4]
SetParm=0x1626,1    ! InitialAlarmState (None=0, AIS=1, RAI=2)
```

Note: The lineAdmin section for each trunk can specify its own trunk preconditioning.

Whenever a CONFIG file has been modified, a new FCD file must be generated. This procedure is described in detail in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

1.103.3 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about **gc_OpenEx()** and other Dialogic® Global Call API functions, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

Note: The online bookshelf has not been updated for this feature, so the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* does not currently include information about the Initial Alarm State (**0x1626**) parameter.

1.104 Extended Board Management API Support for Dialogic® DM3 Boards

The Dialogic® Board Management API provides runtime fault monitoring and management of boards. For example, in the event of an application or host crash, channels can be set out-of-service to prevent the switch in the CO from sending calls to a board if there is no application to process them. This prevents the acceptance of unwanted calls and the potential of being unnecessarily tarified.

Formerly, the Board Management API was supported only for T1 North American ISDN protocols (4ESS, 5ESS, DMS100, DMS250, and NI2). The Service Update extends support of the Board Management API to DM3 Boards using E1/T1 CAS (PDK protocols), additional T1 ISDN (NTT and QSIG-T1), E1 ISDN (NET5 and QSIG-E1), DPNSS, and DASS2.

These enhancements are applicable to the following boards:

- Dialogic® DM/V, DM/V-A, DM/V-B, and DM/VF Media Boards
- Dialogic® DM/IP Boards

1.104.1 Feature Description

The **brd_SendAliveEnable()** function enables host fault monitoring on the specified board. When enabled, the board monitors the host computer for the presence of a repeated “heartbeat,” or “ping.” The heartbeat is sent to the board by the **brd_SendAlive()** function from an application on the host computer. If the board does not receive the “heartbeat” or “ping” message within the required parameters defined in the **brd_SendAliveEnable()** function, the board treats it as a host failure. When this occurs, the board takes its network interface out-of-service, thus preventing the network from offering calls to the failed system. The board also releases/drops all active calls and frees associated memory.

The network interface is taken out-of-service by sending an Alarm Indication Signal (AIS) toward the network. This is the ITU recommended mechanism for informing the CO or network that the trunk is not available. In addition, for the T1 ISDN protocols that support it, the Q.931 maintenance message SERVICE (Out-Of-Service) is also used to inform the network that the channels are no longer available. The AIS alarm (and SERVICE message when applicable) are cleared automatically when the trunk is put in-service using **gc_OpenEx()** or **gc_Open()** on the trunk device (dtiBn) or a channel (dtiBnTm) in any given trunk, following the host or application crash.

In the event that an AIS alarm was being transmitted on some other trunks prior to the crash, then the AIS alarm on those trunks will not be cleared when the other trunks are put back in-service. In this case, the application needs to clear the alarm using the Global Call Alarm Management System (GCAMS) functions; see the Alarm Handling section in the *Dialogic® Global Call API Programming Guide* for information.

1.104.2 Documentation

The online bookshelf provided with Dialogic® System Release 6.0 PCI for Windows® contains information about all system release features including features for application development, configuration, administration, and diagnostics.

For more information about the Dialogic® Board Management API, see the *Dialogic® Board Management API Library Reference*. There are no API changes because of this feature; the only changes are:

- Support for E1/T1 CAS and E1 ISDN protocols in addition to T1 ISDN on DM3 Boards
- Sending an AIS alarm for all protocols rather than a protocol-specific out-of-service condition

For more information about GCAMS, see the following documents:

- *Dialogic® Global Call API Programming Guide*
- *Dialogic® Global Call API Library Reference*

1.105 New Boards Supported

The following new boards are supported in Dialogic® System Release 6.0 PCI for Windows® with this Service Update:

- Dialogic® D30E1P Voice Board
- Dialogic® D/4PCIU4S Media Board
- Dialogic® D/42-NE2 PCI PBX Integration Board

The D/4PCIU4S is a 4-port analog loop start media processing board that can support either voice with CSP, or voice with fax, based on the firmware file selected. The firmware file is specified in DCM using the **FirmwareFile** parameter on the **Misc** property sheet.

The default firmware file is d4u.fwl for voice with fax. For voice with CSP, select the d4ucsp.fwl firmware file.

Note: The D/4PCIU4S Board is displayed as D/4PCIU in DCM.

The D/42-NE2 PCI PBX Integration Board was supported in older system releases and is now supported in Dialogic® System Release 6.0 PCI for Windows®. The following documents have been added to the online bookshelf to support the use of this board:

- *Dialogic® D/42 Series Software API Library Reference*
- *Dialogic® D/42 Series Boards User's Guide*

Release Issues

The table below lists issues that can affect the hardware and software supported in Dialogic® System Release 6.0 PCI for Windows®. The following information is provided for each issue:

Issue Type

This classifies the type of release issue based on its effect on users and its disposition:

- **Known** – A minor hardware or software issue. This category includes interoperability issues (i.e., issues relating to combining different Dialogic® products in the same system) and compatibility issues (i.e., issues that affect the use of Dialogic® products in with third-party software or hardware). Known issues are still open but may or may not be fixed in the future.
- **Known (permanent)** – A known hardware or software issue or limitation that will not be fixed in the future.
- **Resolved** – A hardware or software issue that was resolved (usually either fixed or documented) in this release.

Defect No.

A unique identification number that is used to track each issue reported via a formal Change Control System.

PTR No.

Number from problem tracking system used prior to March 27, 2006. For customer convenience, both the PTR number and the corresponding defect number are shown. For issues reported after March 27, 2006, this column contains "--" and only the defect number is used to track the issue.

SU No.

For defects that were resolved in a Service Update, indicates the Service Update number. For defects that were resolved when the base release was generally available (before any Service Updates), a "--" is shown. For non-resolved issues, this information is left blank.

Product or Component

The product or component to which the issue relates, typically one of the following:

- A system-level component; for example, Host Admin
- A hardware product; for example, Dialogic® DM/V Boards
- A software product; for example, the Dialogic® Global Call library

Description

A summary description of the issue. For non-resolved issues, a workaround is included when available.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows®

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	SR-3	--	275	Host Library	The software contains Unquoted Service Path Enumeration for Dialogic services registry entries.
Resolved	SR-2	--	275	Installation	When system path environment variable is longer than 1024 bytes, it is not possible to install or uninstall the software.
Resolved	SR-4	--	275	PBX	PBXpert crashes during disconnect tone test.
Resolved	SR-1	--	275	PBX	After running the tone wizard in PBXpert after a period of time, the software locks up and crashes.
Known	SR-46	--	275	Global Call	Internal regression testing of D600JCT/D300JCT E1 JCT to E1 JCT ISDN is showing sporadic but consistent Call Progress basic and perfect call errors, while expecting "No Answer" response from the stimulus. Note: The test expected "No Answer" but instead received "Operator Intercept".
Known	SR-17	--	275	Host Admin	If using Digital Dual Span JCT boards with a modified .prm file for the ParameterFile field, it is recommended the ParameterFile2 field is also configured with a .prm file when not being used for ISDN.
Known	SR-60	--	275	Installation	Complete uninstall of the software may leave artifacts of the <i>WdfDlgsJCT.sys</i> driver on the system. In this case, it is recommended to rerun the <i>dlgc_rel_clean.bat</i> file from the original <i>cd_image\cleanup</i> dir with elevated Administrator privileges.
Known	SR-41	--	275	Installation	Some diagnostic utilities will not function until version 1.5.0 or later of Java Runtime Environment is installed. The software only supports the x86 (i586) version of JRE irrespective of the target platform.
Known	SR-14	--	275	Installation	Windows 2008 Server with User Account Control (UAC) set to OFF should also have the Group Policy / Computer Configuration / Administrative Templates / Windows Components / Terminal Services / Terminal Server / Temporary Folders / Do not use temporary folders per session = Enabled, or there will be an impact on <i>DlgsInstall.log</i> file preservation and <i>dlgc_rel_clean.bat</i> execution from the Users temp dir.
Known	SR-45	--	275	Runtime Trace Facility (RTF)	Internal ISDN regression testing of D600JCT/D300JCT is showing various Error/ERR1 prints in the RTF logs for "dti" devices, such as gc_GetCallInfo() , cc_GetANI() , cc_GetCRN() , even though the test passes with no failures. Note: The errors originate in libisdn.so, spwrgcis, and gc components.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	SR-11	--	275	Voice	T1/E1 JCT configured with PDK will fail the systst voice quality (vqual) test case due to receiving an unexpected CST event.
Resolved	IPY00102756	--	271	DM3Insight	Dm3Insight diagnostic tool will fail to start trace on Windows 2012 and Windows 2008 64-bit operating systems.
Resolved	IPY00100131	--	271	Springware CSP	ec_setparm() treats DXCH_BARGEINONLY, ECCH_XFERBUFFERSIZE parameter size as 4 bytes which does not match with document description.
Resolved	IPY00100956	--	271	Springware PDK	Dial tone not detected on outbound calls when using gc_Attach() .
Resolved	IPY00102109	--	271	Springware PSTN	gc_ReleaseCall() fails when completing supervised transfer call attempt.
Resolved	IPY00098919	--	271	Standard Runtime Library (SRL)	An access violation crash occurs in libsrmt.dll library every few days.
Known	IPY00101039	--	271	Springware Firmware	When setting the DXCH_XFERBUFFERSIZE parameter through the dx_setparm() function, the parameter value should be twice the firmware buffer size. For more details on the firmware buffer size, refer to Section 3.11 "Setting the Firmware Buffer Size" in the <i>Springware Configuration Guide</i> document. The minimum value that can be set for the DXCH_XFERBUFFERSIZE parameter is 512.
Known	IPY00102871	--	271	Springware Voice	dx_setparm() / dx_getparm() treats DXCH_RXDATABUFSIZE parameter size as 2 bytes which does not match with document description in <i>Voice API Library Reference</i> of 4 bytes.
Known	IPY00102755	--	271	Status Monitor	StatusMon.exe diagnostic tool does not seem to provide call state or bit information properly; user is unable to 'click on a line' to see bit info and the call state does not refresh in timely manner.
Resolved	IPY00094295	--	269	Board Download	The SS7HD PCI Express board is not detected in DCM.
Resolved	IPY00099876	--	269	CSP	ATEC_TERMMSK() fails to provide proper CSP termination condition for ec_reciottdata() or ec_stream() [on JCT boards].
Resolved	IPY00099099	--	269	Fax	The fax component crashes while receiving a digital command signal (DCS) frame resulting in the application being unable to receive a fax until the Dialogic service is restarted.
Resolved	IPY00094517	--	269	Fax	The message confirmation (MCF) fax tone is incorrectly detected by DM3 as a partial page sent (PPS) tone.
Resolved	IPY00092912	--	269	Fax	An access violation occurs while processing a T.38 fax call.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00093022	--	269	Global Call IP	Under a load condition, an incoming INVITE is sometimes rejected immediately with a 603 DECLINE message.
Resolved	IPY00093771	--	269	Global Call IP (SIP)	A rare access violation occurred during gc_XXXModifyMedia().
Resolved	IPY00093540	--	269	PSTN Call Control	The DPNSS protocol fails to send out the Diversion IE on the line.
Resolved	IPY00091411	--	269	SIP Call Control	A Re-INVITE with multiple m-lines only reports capabilities from the second "m=" line in the GCSET_CHAN_CAPABILITY / IPPARM_LOCAL_CAPABILITY SetID / ParmID pairs in the GCEV_REQ_MODIFY_CALL event.
Resolved	IPY00099257	--	267	Board Download	Dialogic Services fail to start when using media load 10B with a mixed ISDN/CAS configuration.
Resolved	IPY00099304	--	267	Configuration	A blue screen results with no specific pattern/error observed in the RTF logs when using a new chassis model with the Dialogic DMN160TEC and DMV4800BC boards.
Resolved	IPY00099303	--	267	CSP	Gaps of silence result when buffers of data are not sent to the ec_stream() function.
Resolved	IPY00092052	--	267	CSP	Bad audio is heard when both EC_RESOURCE and CSP_EXTRATIMESLOTS are ON using CSP firmware with Dialogic Springware boards. Refer to the Documentation Updates section in the Document Revision History for Service Update 267.
Resolved	IPY00099067	--	267	PSTN Call Control	Digital T1 ISDN channel lock up is caused by incorrect parsing of certain misconstrued High Layer Compatibility IEs received in the D-channel.
Resolved	IPY00099487	--	267	Springware Voice	A single frequency dial tone is not recognized by the Dialogic D/120JCT board.
Resolved	IPY00099221	--	267	Voice	While streaming the audio file (stored in the network drive and not locally) to play back, the play function terminates due to end of file even though there is enough data/buffer in the file. A restart of the play function results in choppy audio.
Resolved	IPY00098937	--	267	Voice	The application hangs when playing a voice file from disk in Windows® 7 and Windows® Server 2008 due to an internal lseek() error.
Resolved	IPY00093957	--	267	Voice	A memory exception results when the application attempts to allocate 10 bytes for the DX_XPB data structure and pass it to the dx_playiotdata() function.
Resolved	IPY00094629	--	266	DMV160LP Boards	Using CSP with the Dialogic® DMV160LP board results in hung channels after receiving unsolicited TEC_STREAM events. This is specific to 64-bit versions only.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00094436	--	266	Drivers	Under certain conditions, host applications start to stall due to memory allocation. Note: Applies only to DM3 64 bit Windows drivers.
Resolved	IPY00094129	--	264	Conferencing (DCB)	The dc_b_remfromconf() function fails to return an error when removing the last party in the conference.
Resolved	IPY00093235	--	264	Dialogic® Springware JCT Boards	The TEC_STREAM event is never sent to the application after a recording has terminated.
Resolved	IPY00094025	--	264	DM3 Voice	Termination events are not being returned to the application.
Resolved	IPY00094416	--	264	Global Call IP (SIP)	Errors occur when the application exits.
Resolved	IPY00093627	--	264	PSTN Call Control	Incorrect Diversion IE. Scenario: An outbound call is made and the switch informs that the number is diverted. The board needs to make the second call AND set the DIVERSION_IE to tell the new switch what number was originally dialed.
Resolved	IPY00094190	--	264	Voice	CSP channels hang after the system clock is moved ahead by 20 seconds or more.
Resolved	IPY00093701	--	263	DM3 CSP	After running for approximately four hours, CSP devices get in a stuck state and the ec_stream() function fails to start.
Resolved	IPY00093643	--	263	DM3 CSP	The ec_stream() function fails to start.
Resolved	IPY00093413	--	263	DM3 CSP	TEC_STREAM event is not returned to the application when ec_stopch() is called.
Resolved	IPY00094025	--	263	DM3 Voice	Termination events are not being returned to the application.
Resolved	IPY00093815	--	263	DM3 Voice	A blue screen occurs during heavy memory usage with no notification to the application. See Section 1.13, "New TDX_DRVNOEM Event" , on page 56.
Resolved	IPY00093451	--	263	DM3 Voice	The dx_stopch() function does not return an event to the application.
Resolved	IPY00093596	--	263	DMV600BTEPE Boards	A blue screen occurs when two Dialogic® DMV600BTEPE boards are in use.
Resolved	IPY00093843	--	263	Drivers	A blue screen occurs during runtime when using Anti-Virus software.
Resolved	IPY00093749	--	263	Drivers	A blue screen occurs during heavy memory usage.
Resolved	IPY00093595	--	263	Drivers	A blue screen occurs during heavy memory usage.
Resolved	IPY00093552	--	263	PSTN Call Control	DCM fails to start when the SS7HDC board is used for bearer trunks under a SIGTRAN configuration.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00092854	--	263	PSTN Diagnostics	The PSTNDiag GUI is not visible when the <code>pstndiag</code> command is run on a 64-bit Windows® Server 2008 operating system.
Resolved	IPY00094216	--	263	Springware	Springware drivers are not digitally signed with 64-bit Windows® Server 2008 R2 Security.
Resolved	IPY00093453	--	263	Voice	The <code>dx_wtring()</code> function fails to return to the calling thread during a synchronous mode multithreading application.
Resolved	IPY00093375	--	261	Diagnostics	The <code>its_sysinfo</code> tool hangs when executed on 64-bit systems.
Resolved	IPY00093234	--	261	Diagnostics	The <code>its_sysinfo</code> tool does not collect data for the <code>rsrvbuildinfo.ini</code> file.
Resolved	IPY00092594	--	261	Diagnostics	The <code>its_sysinfo</code> tool fails to collect RTF logs when the log file is opened by <code>rtfserver</code> .
Resolved	IPY00093235	--	261	Dialogic® JCT Boards	The <code>TEC_STREAM</code> event is never sent to the application after a recording has terminated.
Resolved	IPY00093054	--	261	DM3 Driver	A driver memory leak results in missed events when using 64-bit versions of operating systems.
Resolved	IPY00092493	--	261	DM3 Fax	Received fax pages contain either an incorrect "TO:" ID or the "TO:" header line is left blank.
Resolved	IPY00092578	--	261	PBX	The <code>d42_dial()</code> function fails after porting an existing application to Windows 2008 (x32 and x64).
Resolved	IPY00092283	--	261	PSTN Call Control	The <code>gc_SetConfigData()</code> function in asynchronous mode does not return the <code>GCEV_SETCONFIGDATA</code> event when setting <code>CCSET_CALLANALYSIS</code> setID on the <code>GCTGT_CCLIB_CHAN</code> target.
Resolved	IPY00091022	--	261	SS7	SS7 software fails to start due to a tracing function defect.
Resolved	IPY00092546	--	258	Configuration	<code>SRLGetSubDevicesOnVirtualBoard</code> returns <code>TYPE_R4_DCB_BOARD</code> (514) for <code>dcbB1D1</code> when it should return <code>TYPE_R4_DCB_DSP</code> (529).
Resolved	IPY00092833	--	258	Dialogic® JCT Boards	Calling the <code>dx_play()</code> function with <code>DXCH_TXDATABUFSIZE=1024</code> causes audio glitches.
Resolved	IPY00092535	--	258	DM3	In certain cases, <code>gc_MakeCall()</code> reports <code>GCRV_NOANSWER</code> or <code>GCRV_TIMEOUT</code> before the timeout passed to the <code>gc_MakeCall()</code> function.
Resolved	IPY00092204	--	258	Installation	The software uninstall utility hangs for up to 30 minutes as it removes the <code>/dialogic</code> folder.
Resolved	IPY00092055	--	257	Fax	The Dialogic® JCT Fax header information is not received when sending a fax on Windows® Vista, Windows® 7, and Windows® Server 2008.
Resolved	IPY00091379	--	257	Global Call IP (SIP)	A crash might occur in the SIP runtime library due to invalid memory access.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00091039	--	257	Global Call IP (SIP)	Ingress/Egress calls are rejected because no call objects are available.
Resolved	IPY00055688	--	257	Global Call IP (SIP)	1PCC SIP reINVITE Codec reporting appears wrong and/or corrupted.
Resolved	IPY00092618	--	257	Installation	The <i>sctools.h</i> header file is missing from the dialogic/inc folder in Windows® Vista, Windows® 7, and Windows® Server 2008 builds.
Resolved	IPY00092250	--	257	Installation	INVALID HANDLE prints are repeatedly written to the <i>dlgagent.log</i> file.
Resolved	IPY00092212	--	257	IP Host	An 18x (0.0.0.0) response to multiple codec offers causes incorrect handling of the INVITE.
Resolved	IPY00091670	--	257	Voice	A crash might occur in the voice runtime library due to improper handling of the device descriptor in the dx_unlisten() function.
Resolved	IPY00091954	--	256	Installation	A compilation/link error occurs when using the DlgAdminConsumer API on Windows® Vista, Windows® 7, and Windows® Server 2008 systems.
Resolved	IPY00092122	--	256	PSTN Call Control	A glare condition causes a DPNSS TaskFail error when using Dialogic® JCT boards.
Resolved	IPY00092039	--	256	PSTN Call Control	Intermittent disconnect problems occur with the gc_MakeCall() function while using the DPNSS protocol with Dialogic® Springware boards.
Resolved	IPY00091862	--	256	PSTN Call Control	The application is unable to retrieve CLI from DPNSS SSRM(I).
Resolved	IPY00091956	--	256	Springware Fax	When a Dialogic® VFX/41JCT-LS Board is receiving fax, 256 bytes at end of page image appear to be missing.
Resolved	IPY00091142	--	253	Installation	During Dialogic rebranding, the Intel tag was not removed.
Resolved	IPY00091077	--	253	Voice	The TDX_CST data field is always equal to 0 when the event is DE_SILOFF or DE_SILON on DM3 boards.
Resolved	IPY00091108	--	252	Call Control	A Q.Sig Status message causes the Dialogic® D600JCT1E1 board to disconnect while making outbound ISDN calls which traverse through the switch to the non-ISDN endpoint.
Resolved	IPY00090952	--	252	Configuration	The dx_playiottdata() function fails due to a DSP failure. This only occurs with a Dialogic® DMV1200BTEP board in the system.
Resolved	IPY00090737	--	252	Configuration	Call progress analysis fails to complete successfully using the dx_dial() function on the Dialogic® DMV1200BTEP board.
Resolved	IPY00090871	--	252	DM3 Fax	All calls to fx_rcvfax2() fail after running for a few days.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00090734	--	252	DM3 Fax	The fx_sendfax() function returns -1, with error code 9. As a result, the Dialogic® DMV fax resource cannot be used.
Resolved	IPY00080931	--	252	Fax	A memory access violation error occurs when using fax resources and running an application in debug mode.
Resolved	IPY00090898	--	252	Global Call	When calling the gc_MakeCall() function on Dialogic® DM3 Boards, the call state moves to MAKINGCALL_DELAYED and never moves out of that state to begin the call.
Resolved	IPY00082212	--	252	Global Call	An access violation occurs in the libdm3cc.dll dynamic link library.
Resolved	IPY00091183	--	252	Voice	Board failure is encountered when all multiple channels are performing call progress analysis and a large number of simultaneous SIT tones are detected.
Resolved	IPY00090745	--	252	Voice	The driver fails when the host does not provide data (underrun).
Resolved	IPY00081518	--	243	DM3	DIVERSION_IE and DIVERSION_VALIDATION_IE are not received when calling the gc_GetSigInfo() after receiving GCEV_OFFERED and GCEV_PROCEEDING events.
Resolved	IPY00082087	--	243	DM3 Voice	A blue screen occurs when issuing an asynchronous call and exiting a thread. Fault points to dlgcmpd.sys.
Resolved	IPY00081776	--	243	DM3 Voice	An exception occurs when using the dx_reciottdata() function with CreateFile() for opening the file and UIO on a DTMF terminated recording.
Resolved	IPY00082084	--	243	Springware DTI	The dt_close() function results in a blue screen.
Resolved	IPY00081554	--	241	Drivers	The following issues were reported: <ul style="list-style-type: none"> • The ATDX_TRCOUNT() function reported an incorrect byte count. • Changes in the Springware firmware buffer size caused poor audio quality.
Resolved	IPY00081381	--	241	PSTN Call Control	The gctlload command shuts down after 10 seconds of not being able to establish the communication with the SS7G21 Signaling Server. (See the related Documentation Update in the Dialogic® System Release 6.0 PCI for Windows® Release Guide section.)
Resolved	IPY00081672	--	241	Voice	The following issues were reported: <ul style="list-style-type: none"> • A clicking noise occurred during the dx_pause() function. • The dx_txiottdata() function failed while sending FSK data with frames larger than 254 bytes.
Resolved	IPY00080184	--	241	Voice	No TDX_RECORD event is returned after issuing the dx_stopch() function twice successively.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00080927	--	239	PSTN Call Control	Outbound dialing fails if multiple channels are used with fax devices allocated and opened.
Resolved	IPY00080661	--	237	Drivers	Issues with systems containing CPUs with more than two cores were resolved in Service Update 228. These issues included BSOD, missing events, and stuck channels.
Resolved	IPY00080822	--	237	Firmware	The Dialogic® D82JCT-U board fails to start with CSP firmware in Service Update 235.
Resolved	IPY00080636	--	237	PBX Call Control	The application is unable to retrieve the original call when the consultation call fails to connect using the gc_SetupTransfer() function.
Resolved	IPY00079154	--	237	PSTN Call Control	An ISDN glare condition results in a GCEV_TASKFAIL event, but no GCEV_DROPCALL event is received.
Resolved	IPY00080753	--	237	Voice	The synchronous mode functions dx_wtring() and dx_getevt() do not work as expected.
Resolved	IPY00080210	--	237	Voice	The dx_gtcalled() function fails to parse caller ID information on incoming calls.
Resolved	IPY00079716	--	235	Global Call IP (SIP)	Incoming calls are rejected with a GCEV_TASKFAIL (IPERR_INVALID_PHONE_NUMBER) event.
Resolved	IPY00079691	--	235	Global Call IP (SIP)	The application responds to a reINVITE but loses RFC2833 indication on 200_OK.
Resolved	IPY00079668	--	235	Global Call IP (SIP)	On a reINVITE, the IP_CAPABILITY structure reported G729A instead of G729AB.
Resolved	IPY00079651	--	235	Global Call IP (SIP)	The gc_AcceptModifyCall() function fails with IPERR_BAD_PARAM.
Resolved	IPY00079648	--	235	Global Call IP (SIP)	On a reINVITE, the IP_CAPABILITY structure reported at GCEV_REQ_MODIFYCALL has an incorrect "audio.frames_per_packet" field value when using a low bit rate codec (G729A/AB/G723).
Resolved	IPY00079393	--	235	Global Call IP (SIP)	The SIP Allow header is omitted in response messages to inbound calls.
Resolved	IPY00079365	--	235	Global Call IP (SIP)	IP host channel locks when it fails to connect to remote media address.
Resolved	IPY00079108	--	235	Global Call IP (SIP)	IPPARM_OFFERED_FASTSTART_CODER/GCSET_CHAN_CAPABILITY reporting for SIP G723.1 is always chosen at the default bit rate of 6.3k if remote side does not specify the bit rate.
Resolved	IPY00080244	--	235	PSTN Call Control	A memory leak occurs while receiving H.323 calls with a Global Call-based application.
Resolved	IPY00080252	--	235	Voice	Media intensive (plays/records) caused the play and record functions to fail. TDX_ERROR events with reason 0x80000 (system error) were observed.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00080145	--	235	Voice	The voice channel remains in a PLAYING state after the dx_playiotdata() function returns a failure (-1) when called asynchronous mode.
Resolved	IPY00045524	--	230	Device Management	The dev_connect() function fails when used between M3G and DNI devices.
Resolved	IPY00074292	--	230	PBX Call Control	The application receives TDX_UNKNOWN and TDX_ERROR messages, eventually causing RNA on all ports.
Resolved	IPY00079866	--	230	PSTN	No response is sent back to the application upon receipt of a user-to-user service 1 or 2 request.
Resolved	IPY00079825	--	230	PSTN	When receiving an IAM with the continuity check indicator set to spare (illegal value), the application handles it as if a "continuity check required" indicator was received.
Resolved	IPY00079797	--	230	PSTN	Nothing happens on the line after calling the gc_MakeCall() function.
Resolved	IPY00080020	--	230	SNMP	OID data type returned by the DLGHWINF, DLGSRPRF, DLGR4DEV, and DLGDS1 agents does not always match the type definitions in their respective MIB files.
Resolved	IPY00080009	--	230	Voice	An Access Violation is observed on a Windows Vista system.
Resolved	IPY00079561	--	230	Voice	ATDX_CRTNID returns a 0 instead of the proper value.
Resolved	IPY00079353	--	230	Voice	Audio is missing at the end of recorded files.
Resolved	IPY00079212	--	230	Voice	ATDX_BUFDIGS reports an incorrect value of digits in the buffer.
Resolved	IPY00079703	--	229	DM3 Voice	In the DV_TPT data structure, the tp_flags=TF_SETINIT flag to enable initial silence time (in tp_data) using the tp_termno=DX_MAXSIL termination condition has no effect on play, record or CSP with Dialogic® DM3 Boards, and will be ignored. This resolves IPY0079022, a known problem, which has been removed from this table.
Resolved	IPY00079399	--	228	Fax	When the QFC3 or QFC2 tries to destroy the handle of a closed stream, the operation fails and causes a KILLTASK.
Resolved	IPY00079551	--	228	PSTN	IAM messages exceed the maximum allowed.
Resolved	IPY00079477	--	228	PSTN	In an NFAS configuration, both the RESTART (RX) and RESTART ACKNOWLEDGE (TX) in isdntrace have different Interface IDs.
Resolved	IPY00079590	--	228	SNMP	An incorrect Enterprise ID is returned

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00079523	--	228	Voice	While retrieving board status, d42_getbrdstatus crashes in debug mode and returns an incorrect value in release mode.
Resolved	IPY00079414	--	227	Drivers	The dx_setparm() function failed while setting the DXBD_FLASHTM parameter on a Dialogic® D/4PCIUF Board, and the abnormal termination of the application was not handled correctly.
Resolved	IPY00079275	--	227	Drivers	Dialogic® System Release 6.0 PCI for Windows® drivers leak non-page pool kernel memory.
Resolved	IPY00078535	--	223	CPI Fax	When running GDK-based fax application on Dialogic® CPI/3000-1E1 Fax Board, after some time of normal operation, the channel gets stuck and a restart is necessary to make it work again.
Resolved	IPY00079345	--	223	DM3 Call Control	Missing GCEV_DROPCALL event when using DPNSS with Dialogic® DM3 Board. The application made an outbound call using gc_makeCall() and the call was dropped with no answer. Then gc_DropCall() was issued after receiving GCEV_DISCONNECTED, but GCEV_DROPCALL was not received.
Resolved	IPY00079160	--	223	DM3 Call Control	When using NI2 protocol on Dialogic® DM3 Boards, gc_GetCallInfo() did not retrieve the ANI when Numbering Plan ID was "Private"; it returned with a blank ANI.
Resolved	IPY00079213	--	223	DM3 Firmware	See the description for IPY00078576 .
Resolved	IPY00078445	--	223	DM3 Firmware	When using Dialogic® DM3 DM/V-B Boards, DSP crashes "KillTask" were seen in the DebugAngel log during standard playback; the affected channels could not be recovered without a board reinitialization.
Resolved	IPY00079095	--	223	DM3 Voice	Under certain race conditions, a dx_playiottdata() caused an internal thread deadlock in the Voice library, leading to an application core dump.
Resolved	IPY00078576	--	223	PDK	<p>When the Brazil R2 Bidirectional protocol (pdk_br_r2_io) is configured for overlap send and the switch wants "silence" instead of "F" to represent end of DNIS, the ANI digits aren't sent after DNIS communication completes. When the first ANI digit was requested, no digits were sent. The protocol then timed out and the call failed.</p> <p>Note: A new parameter, CDP_SKIP_A3_AND_A4_PULSE, has been added to the <i>pdk_br_r2_io.cdp</i> file to handle this situation. For information about the new parameter, see the Documentation Updates section for the Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00078519	--	223	SIP Call Control	The application sets a 5.3 Kbps bit rate for the G.723.1 transmit codec; however, the 6.3 Kbps rate for the codec is RTP transmitted instead, and reported as such by IPPARM_FASTSTART_CODER event.
Resolved	IPY00078799	--	218	Springware CSP	Automatic gain control (AGC) was purposely disabled when using CSP to avoid audio samples alteration. As a consequence, AGC had no effect on the audio level streamed with the ec_stream() or equivalent function. AGC is now enabled with Dialogic® Springware Boards only when AGC is explicitly enabled.
Resolved	IPY00045456	--	215	Diagnostics	The ISDNtrace tool failed to work for Dialogic® DM3 Boards configured for DASS2. Note: Contrary to the way ISDNtrace displays the data for Q.931 protocols, DASS2 link data is not translated and is provided raw, displayed as hex values instead.
Resolved	IPY00045442	--	215	DM3 CSP	Dialogic® DM3 Board channel hangs when failing to listen to a TDM bus time slot prior to invoking the ec_stream() function.
Resolved	IPY00045376	--	215	DM3 DTI	After setting event masks and then trying to retrieve the masks using dt_getevtmask() , this function failed with "Unknown error" as the reason.
Resolved	IPY00045440	--	215	DM3 Firmware	Dialogic® DM/V-B Board could not detect DTMF digits when digits are on about 0 dB per frequency.
Resolved	IPY00045388	--	215	DM3 Firmware	Playing a wave file with an invalid byte count in the header caused Dialogic® DM3 firmware to crash.
Resolved	IPY00045293	--	215	DM3 Voice	Dialogic® DM3 Board channel hangs when failing to listen to a TDM bus time slot prior to invoking a record operation (dx_reciottdata() or similar voice recording function).
Resolved	IPY00045184	--	214	DM3 Conferencing	The dcb_dsprescount() function returned the incorrect number of resources for Dialogic® DM/IP241-1T1 Boards.
Resolved	IPY00045277	--	214	DM3 Firmware	An intermittent, partial PCM data stream corruption on network interface channels on Dialogic® DM/V1200BTEP Media Boards was observed during a local loopback mode test where every channel loops back its incoming stream out to the network.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	--	--	214	Host Install	<p>A problem has been observed on multiple Windows® 2003 systems where an error occurs during the installation of the Dialogic® System Release Software. A pop-up error message box is displayed when the installation of the DetectorsProj service fails. It has been determined that this error is due to some other software package de-registering the Microsoft® <i>ATL.DLL</i> file. This file is not delivered as part of the Dialogic® System Release Software. If you observe this failure, the following steps can be used to resolve the problem:</p> <ol style="list-style-type: none"> 1. Change into the Windows System32 directory. 2. Run "regsvr32 atl.dll". 3. Change into the Dialogic\bin directory. 4. Run "DetectorsProj -service". <p>This can be done once the Dialogic® System Release Software installation has completed with the above error, before rebooting. Since this service is not started automatically, the above commands can also be done after reboot, but before the Dialogic® boards are started.</p> <p>It is only necessary to perform this procedure one time.</p>
Resolved	IPY00044544	--	214	IP Host	Placing a SIP call that sends an INVITE message with certain length SIP diversion header field contents may result in a Dialogic® IP library exception if gc_h3r RTF logging module was enabled in the <i>RtfConfigWin.xml</i> RTF configuration file. This was caused by excessive log printing.
Resolved	IPY00045292	--	214	SNMP	When using SNMP and querying the dlglSdnSigProtocol OID in the DLGCISDN MIB, it returns "4ess"; the proper string returned should be "4ess/Ni2" instead.
Resolved	IPY00045074	--	214	Springware Fax	Improper retraining during error correction mode (ECM) receive with noisy phone lines would cause the Dialogic® VFX/41JCT-LS Media Board to keep requesting the same set of ECM frames to be transmitted; thus, the time to receive a faxed document became very long.
Resolved	IPY00045478	--	214	Springware ISDN	When using Ni2 protocol on Dialogic® Springware Boards, and a RELEASE COMPLETE is not returned by the switch after a successful call, improper handling of T308 timer expiration would cause any subsequent incoming calls to fail on that channel, hanging on gc_AnswerCall() .
Resolved	IPY00078411	--	214	Springware PSTN	When using PDK_US_LS_FXS_IO protocol on Dialogic® Springware Boards, gc_DropCall() did not generate a GCEV_DROPCALL event after a glare condition.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00045323	--	214	Springware Voice	When dx_play() family of playback functions were called several times in succession in EV_SYNC mode, the functions started operating in EV_ASYNC mode from the second call to that function. It would return success immediately but the file would still be playing. The next call returned "device busy" because the previous file was still playing, despite the synchronous mode setting.
Resolved	IPY00045239	--	214	SS7	The small window of time between the receipt of a GCEV_UNBLOCKED and gc_WaitCall() completion was enough to miss GC/SS7 calls; the library discarded calls received during that window.
Resolved	IPY00045224	--	214	SS7	Dialogic® Global Call SS7 application did not work properly the first time after the Dialogic® SS7 Boards were initialized; the application needed to be torn down and brought up again for it to work properly.
Resolved	IPY00044425	--	214	SS7	A GCEV_OFFERED event was sent before the application issued gc_WaitCall() ; this is not the correct call flow order in Global Call.
Resolved	IPY00044100	--	214	SS7	The GC SS7 server log level configuration in <i>gcss7.cfg</i> was not working; whether the debug level was set to "All," "None," or "Errors," the log file was the same as "All."
Resolved	IPY00045159	--	211	Diagnostics	When using the PSTN Diagnostics tool (pstndiag), the following error occurs after clicking on a channel of an installed Dialogic® DM3 PSTN Board: "Error: Can't read alarms Trans (0x1616): no such element in array."
Resolved	IPY00045132	--	211	DM3 Call Control	Under heavy load on certain Dialogic® DM3 PSTN Boards, calls that are offered to channels might get dropped immediately. They moved from Answering to Disconnected state due to an overlapping of call indexes among multiple network interfaces.
Resolved	IPY00044730	--	211	DM3 Call Control	When using Dialogic® DM3 Boards and ISDN protocol, the incorrect number of called subaddress digits is received by the application. An 8-digit called subaddress was initially sent by the switch, but the application received a 6-digit called subaddress.
Resolved	IPY00044832	--	211	DM3 Firmware	Under certain conditions and tone templates for a dx_playtone() in asynchronous mode, the application does not receive the TDX_PLAYTONE event on the voice channel.
Resolved	IPY00044932	--	211	DM3 Voice	A voice stuck channel occurred during a playback operation while running an application that is media intensive (plays/records) due to an internal race condition. No TDX_PLAY event is returned to the application after dx_playiottdata() is issued.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00044811	--	211	DM3 Voice	A voice stuck channel occurred during a playback operation while running an application that is media intensive (plays/records) due to an internal race condition. No TDX_PLAY event is returned to the application after dx_playiottdata() is issued.
Resolved	IPY00044614	--	211	DM3 Voice	A potential voice stuck channel condition that could occur on Dialogic® DM/V-B Boards during a record (dx_reciottdata()) operation was caused by a race condition in the record data stream handling when a stop channel (dx_stopch()) is issued to terminate the operation.
Resolved	IPY00044561	--	211	DM3 Voice	A voice stuck channel condition occurred, caused by the unhandling of tone creation failures during the setting of tone termination conditions for a playback (dx_playiottdata()) or record (dx_reciottdata()) operation. In asynchronous mode the TDX_PLAY or TDX_RECORD events, respectively, would never be received.
Resolved	IPY00045191	--	211	ISDN	Application error occurs when cc_StartTrace() is called right after cc_StopTrace() .
Resolved	IPY00044251	--	211	PBX Integration	A firmware assert occurred on the Dialogic® D/82JCT-U PBX Integration Board, when setting the MWI on a Nortel Norstar phone system PBX.
Resolved	IPY00045176	--	211	Springware Drivers	When using the Dialogic® System Release Software version for Windows Vista® and Windows Server® 2008, DCM does not detect Dialogic® Springware Boards in a Windows Server 2008 system.
Resolved	IPY00045146	--	211	Springware Drivers	Problems occur when shutting down a Windows Server® 2008 system with Dialogic® Springware Boards and a USB modem installed. The system does not shut down completely, and a blue screen occurs.
Resolved	IPY00045128	--	211	Springware Drivers	Blue screen occurs on a specific PCI system using Windows® 2003 SP1 or SP2, when detecting Dialogic® D/240JCT-T1 Board in DCM.
Resolved	IPY00045136	--	211	Springware Firmware	When using Dialogic® D/120JCT Media Board under heavy CSP channel utilization, a firmware assert occurred.
Resolved	IPY00043700	--	203	CPI Fax	When running GDK-based fax application on Dialogic® CPI/3000-1E1 Fax Board, after some time of normal operation, the channel gets stuck and a restart is necessary to make it work again.
Resolved	IPY00044132	--	203	DM3 Conferencing	The dc_b_unmonconf() function removes the wrong conferee (party) from the conference. Instead of removing the monitor conferee, the most recently added conferee is removed from the conference.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00044432	--	203	DM3 Voice	A firmware stream corruption was seen during the execution of a very intensive media application under specific conditions; this would cause a single voice channel not to return a TDX_RECORD event after dx_reciottdata() function had been issued, causing the channel to be stuck.
Resolved	IPY00044363	--	203	DM3 Voice	A firmware DSP crash occurred during the running of an application that is media intensive (plays/records) due to an internal race condition; at some point plays start to fail simultaneously on multiple voice channels with RTF logs showing "Std_MsgError in PlayerStartingPlayer : Error Message 0x128" on groups of voice channels when attempting to execute a dx_play() API call; similar results would occur on any other I/O voice function.
Resolved	IPY00044185	--	203	DM3 Voice	The dx_setevtmask() function with DM_DIGOFF only disabled events if DM_DIGITS was used first, i.e., they had to be first enabled; thus default user-defined tones could not be disabled.
Resolved	IPY00043907	--	203	DM3 Voice	A dx_stopch() issued during a narrow window of time from a dx_play() start caused the voice channel to get stuck in this state and never return a termination event TDX_PLAY.
Resolved	IPY00044257	--	201	CSP	With Dialogic® D/41JCT-LS Board, the MD_GAIN parameter for automatic gain control has effect on the recording with dx_reciottdata() , but has no effect on the recording with ec_reciottdata() .
Resolved	IPY00044452	--	201	DI Boards	Dialogic® DI/SI16 Board does not start properly when the DISI16_R2_JP config file is used. A KILLTASK error is reported in the DebugAngel log; the DI/SI16 Board does not initialize properly afterwards.
Resolved	IPY00044325	--	201	Springware Voice	When using the dx_setuio() function, dx_playiottdata() fails to play a GSM WAVE file with error message "Unsupported wave file."
Resolved	IPY00043806	--	201	Springware Voice	The dx_stopch(EV_SYNC) function stops the I/O operation but returns -1 (i.e., for failure) when started from a parallel thread. If started from the main thread, the problem is not seen.
Resolved	IPY00043826	--	197	DI Boards	The Dialogic® DI/SI32 Board does not detect hook flash when the DISI_R2_JP config file is used.
Resolved	IPY00043825	--	197	DI Boards	Dialogic® DI/SI16 Boards are detected as DI0816LSA in Dialogic® Configuration Manager (DCM).
Resolved	IPY00043609	--	197	DM3 Firmware	When ms_listen() is called on more than 15 station interface devices of a Dialogic® DI/SI32 Switching Board, dx_playiottdata() returns TDX_ERROR and playback is not possible on the first 16 voice resources of the DI/SI32.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00043545	--	197	DM3 Host Runtime Library	Call to ipm_Close() hangs with Dialogic® DI/0408-LS Switching Board if there are no additional DM3 voice resources in the system.
Resolved	IPY00043701	--	197	DM3 Voice	No TDX_PLAY event is ever returned from dx_stopch() when the stop is issued during a playback operation and the time of the request coincides with some internal playback setup states timing window on the affected channel.
Resolved	IPY00043515	--	197	Springware Call Control	Outbound calls made by a Dialogic® D/480JCT-2T1 Media Board with NI2 firmware fail intermittently. The call SETUP is successful, but after receiving a STATUS message, the board sends a CALL DISCONNECT message to disconnect the call with an indication of Protocol Error.
Resolved	IPY00043764	--	197	Springware ISDN	When trying to start the isdiag utility, the following error occurs: Error opening device dtiB1 INITIALIZATION ERROR Closing all devices, quitting.
Resolved	IPY00043880	--	197	Windows Vista	Prior to Service Update 197, the value of the internal product version used by the Dialogic® System Release 6.0 PCI for Windows Vista® installation program was incorrectly set to 7.1. <i>buildnum</i> when it should have been 6.1. <i>buildnum</i> . Note: Because of this issue, if you installed a System Release version for Windows Vista prior to Service Update 197, and you now want to install Service Update 197 (or later), you must uninstall the older version and then do a full installation of the newer Service Update.
Resolved	IPY00040086	--	197	Windows Vista	Dialogic® Configuration Manager (DCM) does not have help files that are compatible with Windows Vista®. After opening DCM and going to the contents item under the help menu, there is a message "Failed to execute DCM online help (config.hlp)."
Resolved	IPY00043443	--	193	DM3 Fax	Fax TIFF files are received with incorrect width; half pages are received.
Resolved	IPY00043240	--	193	DM3 Fax	An exception is generated during fax call tear-down process after fx_stopch() is issued, causing the application to stop running.
Resolved	IPY00043077	--	193	DM3 Firmware	Inbound ISDN calls made from cell phone failed to get answered on system connected to NET5 line. The calls get rejected with STATUS message with cause value of "100", which indicates invalid information element contents. The Progress Indicator IE containing Progress Description 16 and Progress Location 1 is being rejected.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00043432	--	193	DM3 Voice	The dx_playiottdata() function returns TDX_ERROR when attempting to play an empty wave file on Dialogic® DM3 Boards.
Resolved	IPY00043434	--	193	Modular Station Interface (MSI)	MSI firmware times out on Dialogic® DI/0408-LS Switching Board when load testing multiple calls to ms_SetMsgWaitInd() on station devices. This causes application thread to hang, and system eventually becomes unresponsive.
Resolved	IPY00043254	--	193	PBX Call Control	Caller ID is not working with the Dialogic® DI/0408-LS Switching Board when using the UK configuration file <i>DI0408LSA_REV2_UK.config</i> .
Resolved	IPY00041808	--	193	PDK	When running with any PDK protocol and the application is abruptly shut down, the existing calls are not dropped; furthermore, noise is heard at the terminating end due to in-band non-idle data being transmitted as a result of media exit sequence.
Resolved	IPY00043029	--	193	Springware Firmware	When using CTR firmware with Dialogic® D/600JCT-2E1 Media Board, one or two ports become inoperable and are unable to answer incoming calls under heavy load.
Resolved	IPY00043083	--	193	Springware Voice	Using dx_sendevt() causes a dangling thread on termination. The process stays in Windows® Task Manager for almost 5 minutes.
Resolved	IPY00043230	--	193	Standard Runtime Library (SRL)	An access violation occurs during sr_waitevtEx() processing.
Resolved	IPY00042934	--	191	DM3 Fax	Application exception occurs when calling fx_setuio() and causes application to stop running.
Resolved	IPY00042845	--	191	DM3 Voice	Single channel play failures occur when running an application that handles a lot of plays/records concurrently and repeatedly in a live environment. At some point, a single play fails to return a TDX_PLAY event, and even calling dx_stopch() will leave that channel in a stuck state.
Resolved	IPY00042828	--	191	DM3 Voice	Indexed wave file doesn't play as per the given indexes to dx_playiottdata() ; instead, the complete file is played.
Resolved	IPY00042584	--	191	OA&M	Dialogic® DM3 Boards were showing incorrect PCI slot/bus numbers in the installed boards configuration section of the <i>its_sysinfo</i> tool, as compared to the initial assignments given by NCM/DCM.
Resolved	IPY00040902	--	190	PBX Call Control	Failure to transition hook state when attempting to complete transfers on Mitel PBX. On some occasions, the result of these failures is that the PBX stops delivering calls to the Dialogic® D/82JCT-U Board.
Resolved	IPY00042681	--	190	PBX Expert (previously called PBXpert)	PBX Expert fails with certain TSF files. The message "Cannot start Test process" is received after clicking "Test."

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00042609	--	190	PSTN Call Control	For GCRV_PROTOCOL errors, some of the error conditions are not given in the header file (<i>pdkerror_list.h</i>).
Resolved	IPY00042601	--	190	PSTN Call Control	Segmentation fault happens when gc_util_insert_parm_val() is called before gc_Start() . Instead of a segmentation fault, the error should be reported gracefully.
Resolved	IPY00041300	--	190	SIP Call Control	SIP calls are rejected with a "486 Busy Here" due to incorrect handling of the scenario when a previous call was terminated due to bad incoming SDP.
Resolved	IPY00041118	--	190	SIP Call Control	The application is unable to make a SIP call using the gc_MakeCall() function on the same channels previously used to make an H.323 call.
Resolved	IPY00039965	--	190	SIP Call Control	Outbound IP call fails with "IPEC_SIPReasonStatus503ServiceUnavailable" when the hostname is passed as the destination address in the dialstring. The outbound call using gc_MakeCall() is not able to resolve the hostname to an IP address for the call to complete successfully.
Resolved	IPY00039707	--	190	SIP Call Control	Automatic SIP re-INVITE when media switches from audio to fax causes a glare condition that disconnects the call. Note: To resolve this issue, new Global Call parameters have been added to disable/enable the sending of the automatic SIP re-INVITE message upon media switch. For information about this feature, see Section 1.29, "Disabling Automatic re-INVITE Message when Switching between Fax and Audio" , on page 77.
Resolved	IPY00042862	--	190	Springware Call Control	GCEV_UNBLOCKED event doesn't arrive for individual channels, even though GCEV_BLOCKED was delivered to individual channels, after AIS alarms occur and are then cleared.
Resolved	IPY00042730	--	190	Springware Call Control	Glare condition causes calls to be dropped immediately after answering when using ISDN 5ESS protocol, firmware file <i>spis5ess.fwl</i> .
Resolved	IPY00042408	--	190	Springware Call Control	After calling gc_BlindTransfer() , application receives GCEV_TASKFAIL event followed by GCEV_BLINDTRANSFER event. The expected result is one event or the other, but not both.
Resolved	IPY00042940	--	190	Springware Fax	Channel on Dialogic® VFX/41JCT-LS Board stays in "fax receiving" status due to improper handling of a "busy tone" although the call is disconnected. The hung channel does not go back to idle state unless application calls fx_stopch() .

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00042752	--	190	Springware Fax	GTD was disabled during a fax receive session (fx_rcvfax()), thus preventing the disconnect tone resulting from a hang-up on the far end being detected by the voice channel, leaving the line busy until the fax receive idles out. This can occur, for example, when a call is made by a voice caller who hangs up after hearing the fax receive tones.
Resolved	IPY00042579	--	190	Springware PBX	Using d42_gtcallid() causes a memory leak.
Resolved	IPY00042985	--	190	Springware Voice	After upgrading to a new Service Update, DTMF digits sent from some specific phone terminal could not be detected by Dialogic® Springware Boards.
Resolved	IPY00041339	--	183	CSP	CSP echo cancellation ec_getxmitslot() function always returns 0 when using a Dialogic® VFX/41JCT Board.
Resolved	IPY00042168	--	183	Protocols	When running United States T1 Bidirectional protocol (pdk_us_mf_io), blind transfer failure scenario is not handled properly. In a failing scenario where gc_BlindTransfer() yields a GCEV_DISCONNECTED event to the application, a subsequent gc_DropCall() produced no GCEV_DROPCALL event as it should have.
Resolved	IPY00042208	--	183	Springware Call Control	GCEV_PROGRESSING message with 0x02 Progress Description is not detected when using the DMS protocol.
Resolved	IPY00041407	--	182	DM3 Call Control	When setting up NFAS for the 4 lines on a Dialogic® DM3 T1 Board using DMS protocol, the board does not respond to a RESTART ACKNOWLEDGEMENT transmitted.
Resolved	IPY00041740	--	182	DM3 Firmware	Local pool size for GTD needs to be increased for Dialogic® DMV-B Boards.
Resolved	IPY00041580	--	182	DM3 Firmware	Over time (usually past 24 hours), dialed DTMFs get corrupted. When a '5' is dialed, the digit might get repeated in fragmented stutter and/or followed by an '8' even though never specified in the dialstring.
Resolved	IPY00037905	--	182	PBX Integration	The D4BD_M1_DISPLAYWIDTH parameter, which allows boards to support extended displays that can be provided by the M1 PBX, was not included in the <i>d42lib.h</i> header file and documentation.
Resolved	IPY00041855	--	182	Protocols	Call could not be completed because the Mexico R2 protocol failed to send additional DNIS digits.
Resolved	IPY00042003	--	182	Springware Call Control	The METAEVENT associated with GCEV_DETECTED always returns 0 as a CRN value; it does not return the correct CRN.
Resolved	IPY00041987	--	182	Springware Call Control	gc_BlindTransfer() fails to return any events in failing blind transfer scenarios.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00041959	--	182	Springware Call Control	Intermittent problem when trying to retrieve user attributes with gc_GetMetaEvent() .
Resolved	IPY00041792	--	182	Springware Call Control	Incorrect cause code is sent to application upon GCEV_DISCONNECT event. The cause code is 'non-selected user clearing' while link trace shows 'normal clearing' instead.
Resolved	IPY00040874	--	181	Board Download	Dialogic® DMV1200BTEPE Board fails to start on Service Update 155.
Resolved	IPY00041421	--	181	DM3 Fax	Fax channels may hang when a stop is issued at the end of a send fax page.
Resolved	IPY00041079	--	181	DM3 Fax	The fx_rcvfax() function returns -1 error after the system is running for several days, and the system is not able to receive faxes.
Resolved	IPY00041426	--	181	Springware Fax	The ATDV_ERRMSGP() function returns a "Null" string if the fx_sendfax() function fails with ATDV_LASTERR() error code 0x114 when attempting to send an invalid TIFF file. The error string returned by the former should reflect a valid string that relates to the error value from the latter.
Resolved	IPY00041178	--	178	Diagnostics	When Dialogic® System Release 6.0 PCI for Windows® is installed on a partition other than C, the d82diagutil application cannot locate the <i>voxcfg</i> file because it is looking for it on the C drive instead of the drive where the Dialogic® System Release is installed.
Resolved	IPY00041078	--	178	DM/IP Boards	Unknown audio or DTMF is being sent from a Dialogic® DM/IP Board at the beginning of a SIP call, which precedes the expected audio to be heard from the file played.
Resolved	IPY00041233	--	178	DM3 Call Control	When a call is terminated in the GCST_DETECTED state, a fake GCEV_OFFERED event should not be generated if the application has enabled the GCEV_DETECTED event.
Resolved	IPY00041209	--	178	DM3 Call Control	GCEV_UNBLOCKED event doesn't arrive for individual channels, even though GCEV_BLOCKED was delivered to individual channels, after AIS alarms occur and are then cleared.
Resolved	IPY00040536	--	178	OA&M	While application is running, message is logged in the Windows® event log: Faulting application OAMEventService.exe, version 1.0.0.21,
Resolved	IPY00041082	--	178	PBX Expert (previously called PBXpert)	Manual mode is grayed out on PBX Expert. Note: Manual mode has been restored to PBX Expert in Dialogic® System Release 6.0 PCI for Windows®; it is applicable to Dialogic® Springware Boards only.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00041345	--	178	Springware ISDN Firmware	Firmware assert occurs due to zero length User-User IE message, and Dialogic® board stops responding to the switch.
Resolved	IPY00039334	--	178	Standard Runtime Library (SRL)	An application crash occurred; the stack trace shows SRL library at the top of the stack.
Resolved	IPY00038391	--	174	DM/IP Boards	Dialogic® DM/IP Board stops returning events due to a DSP failure.
Resolved	IPY00039661	--	174	DM3 Fax	ATFX_RESLN() sometimes returns 0, which is an invalid value. (According to the documentation, the only valid values are 98 and 196.) Note: A documentation update has been added in the Documentation Updates section for the Dialogic® Fax Software Reference . Please refer to it for information relevant to this defect resolution. There are additional return values for ATFX_RESLN() , and the values passed to fx_rcvfax() and fx_sendfax() have more options. (The defect number associated with the documentation update is IPY00040796.)
Resolved	IPY00040832	--	174	DM3 Voice	TEC_STREAM event is not returned to the application when ec_stopch() is called after dx_unlisten() is performed on that voice channel.
Resolved	IPY00040685	--	174	DM3 Voice	ATDX_TRCOUNT() returns the wrong value when playing a GSM 6.10 WAVE file on Dialogic® DM3 Boards.
Resolved	IPY00040798	--	174	Springware Fax	When enabling RTF logging (after modifying the <i>RTFConfigWin.xml</i> file), the Fax demo fails to start and exits with an exception. When the RTF trace is enabled with default settings, the Fax demo doesn't crash. However, when the <i>RTFConfigWin.xml</i> file is modified to trace application activities, the Fax demo crashes.
Resolved	IPY00039490	--	174	Springware PBX	The d42_setparm() for the parameter 0x1A does not work on the Dialogic® D/42JCT-U Board.
Resolved	IPY00040096	--	174	Springware Voice	Failure to increase media play speed by more than 25% when using dx_adjsv() to set the play speed; the documentation specifies a maximum change of 50%.
Resolved	IPY00039476	--	171	DM3 Fax	Stuck fax channels during inbound calls.
Resolved	IPY00040179	--	171	Modular Station Interface (MSI)	SRL_TIMEOUT_ERROR occurs after upgrading from SU 154 to SU 166. (Results in ms_listen() / ms_unlisten() failures.)
Resolved	IPY00040052	--	171	Springware Voice	Perfect Call call progress analysis on Dialogic® Springware Boards sometimes falsely detects dial tone and proceeds with dialing while there is no signal matching for the dial tone criteria.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00039014	--	167	PBX Call Control	Adept display parser cannot handle large displays correctly. Displays larger than 24 characters (per line) do not parse correctly (regardless of rules created). Nortel PBXs can be configured to use displays larger than 24 characters per line (e.g., 32 characters). When the customer does so, the functions d42_gtcallid() and d42_gtcallidex() return invalid displays.
Resolved	IPY00039538	--	166	Board Detection	Error messages are seen in the Windows® Event Viewer indicating that the RTF server is not running. This is occurring because none of the Dialogic® services have a dependency configured on the RTF service.
Resolved	IPY00038190	--	166	DM/IP Boards	When running high volume load tests with Dialogic® DM/IP Boards to test SIP call control and media activity, the DM3 firmware reports data access exceptions from "Task:0x1993418 StatesTask" in DebugAngel logs. During this time, all active calls get suspended and performing media activity is not transmitted across the network to other end point.
Resolved	IPY00039068	--	166	DM3 Conferencing	The dc_b_addtoconf() function returns failure, and ATDV_ERRMSGP shows the error message as "Timed out waiting for reply from firmware."
Resolved	IPY00039586	--	166	DM3 Voice	ERROR_BROKEN_PIPE error internal message is reported in RTF logs during a streaming to board play.
Resolved	IPY00039412	--	166	DM3 Voice	TDX_PLAY is not generated to the application during streaming to board play; dx_GetStreamInfo() is not returning correct information.
Resolved	IPY00038981	--	166	DM3 Voice	TDX_PLAY is not generated to the application during streaming to board play; dx_GetStreamInfo() is not returning correct information.
Resolved	IPY00039427	--	166	Springware Call Control	If an outbound call is made (gc_MakeCall()) and then a gc_DropCall() is issued, a drop call event should be received. But instead, a disconnect event is returned.
Resolved	IPY00039492	--	165	Runtime Trace Facility (RTF)	RTF logging has a memory leak and drops some log messages.
Resolved	IPY00038545	--	165	Runtime Trace Facility (RTF)	In RTFManager, the <i>RtfMatrix.xml</i> file was used to map the modules in the RTFConfig file to a family and technology group. But if any changes were made to the RTFConfig file outside of RTFManager, the configuration section would fail. Note: The mapping file was removed, and attribute tags were added to the RTFConfig file to define the mappings, making the configuration section of RTFManager more robust.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00038572	--	165	SIP Call Control	When running a Dialogic® Global Call IP-based application that enables notification of certain SIP messages through GCEV_EXTENSION events, the application is not able to determine the IPPARM_MGSTYPE value for incoming SIP messages. The message type value returns more bytes than expected, making the application unable to decipher which message was received.
Resolved	IPY00039331	--	165	Springware Call Control	When using DPNSS, the response to the setup message from the switch is incorrect; an incomplete Number Acknowledge Msg is returned.
Resolved	IPY00039341	--	165	Springware Fax	The Dialogic® VFX/41JCT-LS Board sometimes fails to receive fax with ATFX_ESTAT() = 195 when using 14.4kbps/no ECM mode and multi-page signal (MPS).
Resolved	IPY00037918	--	165	SS7	The RSI link goes down intermittently.
Resolved	IPY00039155	--	165	Standard Runtime Library (SRL)	An application crash occurs with SRL at the top of the stack; the SRL was not initializing all variables of a structure for a given thread, which can cause an access violation.
Resolved	IPY00038946	--	162	Board Download	Dialogic® JCT Media Boards download failed.
Resolved	IPY00038792	--	162	Board Download	Slow download times for Dialogic® JCT Media Boards on high-end machines.
Resolved	IPY00038551	--	162	Modular Station Interface (MSI)	ms_stopfn() causes two TSC_MsgReleaseCall messages to be sent to the Dialogic® DM3 Analog TSP.
Resolved	IPY00039179	--	162	PSTN Call Control	During a glare scenario, a GCEV_RELEASECALL event is incorrectly returned to the synchronous function gc_ReleaseCall() . Events should only be returned from asynchronous functions.
Resolved	IPY00039249	--	162	Springware Call Control	When gc_WaitCall() is issued after an incoming call is pending, the gc_AcceptCall() fails even though the application receives the GCEV_OFFERED event.
Resolved	IPY00039032	--	162	Voice	Dialogic® DM3 Voice resources don't go to idle state after dx_stopch() function.
Resolved	IPY00038499	--	160	CSP	When using ec_stream() , a completion event is never triggered back when using .wav recording (based on Win32 programming model).
Resolved	IPY00037643	--	160	Diagnostics	Using Visual Studio (V6 or 2005) to attach to a running process causes an access violation in LIBRTFMT.DLL.
Resolved	IPY00038407	--	160	DM3 Fax	ATFX_RESLN() sometimes returns 0, which is an invalid value. (According to the documentation, the only valid values are 98 and 196.)
Resolved	IPY00038998	--	160	DM3 Host Runtime Library	Bipolar violation alarms are reported in LineAdmin, but are not reported programmatically via GCAMS.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00038533	--	160	DM3 Runtime Libraries	An internal parameter is not decremented correctly when a process exits, causing failures in opening devices.
Resolved	IPY00038611	--	160	DM3 Voice	When using the dx_playtone() function with TONEON or TONEOFF as the terminating condition, when the TONEON or TONEOFF event occurs, the program gets a TDX_ERROR event instead of TDX_PLAYTONE event.
Resolved	IPY00038435	--	160	DM3 Voice	Channels hang and are not able to recover once in a CS_STOPD state.
Resolved	IPY00038849	--	160	Host Library	When opening channels asynchronously with gc_open() , sequentially one after another channels fail to open.
Resolved	IPY00037319	--	160	JCT Call Control	If a board running ISDN 4ESS receives a CALL PROGRESS message in which the LOCATION information element in the Progress Indicator is 1010 - Location (network beyond interworking point), it sends back a STATUS message to the switch with Cause Value 100 (Invalid Information Element Contents).
Resolved	IPY00038433	--	160	Modular Station Interface (MSI)	The ms_stopfn() function fails to stop the ringing on a Dialogic® DISI32R2 Board.
Resolved	IPY00037923	--	160	PDK	Using PDK protocols on a system with Dialogic® Springware and DM3 Boards, T1/E1 GC Alarm Condition: evt=0x832 occurs, causing a GCEV_BLOCKED event. The channel remains in a BLOCKED state.
Resolved	IPY00038979	--	160	PSTN Call Control	The pd_k_sw_e1_fxs_io protocol does not forward the correct reason when a call is disconnected due to detection of a SIT. The reason should indicate that SIT was detected.
Resolved	IPY00038612	--	160	PSTN Call Control	When calling gc_BlindTransfer() synchronously, the function sometimes returns -1 and takes approximately 30 seconds to return with this error.
Resolved	IPY00038494	--	160	PSTN Call Control	CP failure on Dialogic® DM/N960-4T1 Board.
Resolved	IPY00038894	--	160	Runtime Trace Facility (RTF)	RTF logging corrupted device name in dx_close() .
Resolved	IPY00038524	--	160	Runtime Trace Facility (RTF)	Multiple threads can be created in the RTF server for a single client when the system is heavily loaded. This leads to a build-up of threads in the server, which can lead to thread creation failures.
Resolved	IPY00037789	--	160	Runtime Trace Facility (RTF)	RTF logs are not generated if application is executed as a service and launched as user "Network Services."

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00038539	--	160	Springware Call Control	Interface ID Present enabled in network setup message causes channel on Dialogic® D/480JCT Board using 4ESS protocol to reject call with invalid information element contents.
Resolved	IPY00038836	--	160	Springware Fax	Fax error codes are not reported properly with Dialogic® VFX41JCT-LS Board.
Resolved	IPY00038419	--	160	Springware Fax	The fx_sendfax() function never returns, and CPU utilization reaches 100%.
Resolved	IPY00038298	--	160	Springware Fax	When using Dialogic® VFX/41JCT-LS Board, multiple consecutive ECM fax receive calls failed and ATFX_ESTAT() reported 198. Non-ECM fax receives by the same channel were successful.
Resolved	IPY00036665	--	160	Springware Network	When using DPNSS firmware, disconnection is not completed properly. A dropcall complete event is not received after a remote disconnect event, and spurious interrupt firmware crashes occur.
Resolved	IPY00038708	--	160	Standard Runtime Library (SRL)	An access violation occurs when application calls sr_waitEvtEx() for the same device on multiple threads.
Resolved	IPY00038991	--	160	Voice	Previously existing user-defined tones are still being detected after deletion (i.e., call dx_deltones()) on the same channel in which a new set of different user-defined tones have been created.
Resolved	IPY00038317	--	155	DM3 Configuration	The Dialogic® DM/F240-T1-PCI Board is incapable of running T1 robbed bit protocols.
Resolved	IPY00037493	--	155	DM3 Voice	When running high volume load tests (500+ voice channels) for performing records, the RTF log shows "Buffer is corrupted" errors in the Dialogic® DM3 StreamSink component.
Resolved	IPY00037262	--	155	DM3 Voice	Under certain corner conditions, host CPU utilization increases a large percentage (15% witnessed) after issuing a record on multiple voice channels, and remains that way even after the record completes.
Resolved	IPY00038280	--	155	OA&M,	A non-OAMIPC based client was attempting connection to an internal software component, an OAMIPC-based server. This caused the internal OAMIPC-based server to crash when invoking the Dialogic® System Service startup or shutdown.
Resolved	IPY00038206	--	155	Springware PBX	Using d42_chnstatus() causes a memory leak.
Resolved	IPY00038074	--	154	Board Download	The OAMSYSLOG component reports multiple "DM3FDSP - GetOverlappedResult()[2] timeout for board 5, Error= 121" entries in RTF logs during load test.
Resolved	IPY00033228	--	154	Board Download	Cannot route voice device if it is not on the same board as the digital frontend device.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00038235	--	154	Configuration	The dcb_dsprescount() function returns an incorrect value. It returns double the resources.
Resolved	IPY00028248	33718	154	DCM	The board and protocol descriptions for <i>ml10_dsa_net5.pcd</i> are incorrect in the DCM Assign Firmware File dialog box.
Resolved	IPY00010514	35342	154	DI0408LSAR2	ms_genringex() fails to ring stations on Dialogic® DI0408LSAR2EU Board with UK ML3, and MSI device is left in a bad state.
Resolved	IPY00037507	--	154	DM3 Call Control	Event API fails to deliver an event when the T1 is configured for CAS and the cable is unplugged.
Resolved	IPY00037861	--	154	DM3 Conferencing	If one conferee goes on mute, other conference participants hear buzzing noise. Note: A documentation update to Section 6.7, [0x3b] Parameters (parameters 0x3b03 and 0x3b04) has been added in the Documentation Updates section for the Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide . Please refer to it for information relevant to this defect resolution.
Resolved	IPY00037817	--	154	DM3 Conferencing	When playing background music through the telephone set, music cuts are heard when party A speaks.
Resolved	IPY00037373	--	154	DM3 Conferencing	In a conference with two parties, if party A keeps speaking while party B starts speaking, party B hears breaks from party A while party B is speaking.
Resolved	IPY00037467	--	154	DM3 Fax	Dialogic® DM3 fax channel hangs. DebugAngel reports two errors: "QERROR_KILLTASK" and then "QERROR_WARNING".
Resolved	IPY00037166	--	154	DM3 Fax	After an inbound fax call, the fax resource cannot go back to idle after fx_stopch() .
Resolved	IPY00037161	--	154	DM3 Fax	With fax on Dialogic® DM/F240-1T1-PCI Boards, when the badscanline percentage exceeds the default value, the library and firmware both seem to send out RTN messages to request page re-send and retraining, but the RTN messages never get to the line. The result is that there is never a re-send, and the received image is distorted.
Resolved	IPY00032797	--	154	DM3 Fax	The fax sender cannot wait to receive retry of digital identification signal (DIS) message, and gets Phase E status (EFX_COMMERRTX) transmit communication error.
Resolved	IPY00028549	35901	154	DM3 Firmware	QERROR_WARNING messages appear in Dm3StdErr log, and then all channels lock up.
Resolved	IPY00031590	36755	154	DM3 Network	gc_BlindTransfer() is not working on the Dialogic® DMV160LS Board.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028555	36110	154	DM3 Network	With ms_SetMsgWaitInd() , if the user of the Dialogic® DI Board station picks up prior to the function returning, it renders the device useless for up to 30 seconds.
Resolved	IPY00028516	35001	154	DM3 Network	Hook flash is sometimes not detected on Dialogic® DI Boards when it is issued from its station interface during the ring cycle.
Resolved	IPY00037372	--	154	H.323 Call Control	An access violation/assert is seen in the Dialogic® Global Call IP Call Control Library if a RequestMode message for changing audio codecs is received.
Resolved	IPY00037351	--	154	H.323 Call Control	When the remote capabilities contain one audio codec and T.38 fax codec, the Dialogic® Global Call IP Call Control Library will incorrectly attempt to switch to fax.
Resolved	IPY00038244	--	154	PSTN Call Control	If gc_MakeCall() is called with GC_PARM_BLK set to NULL, ERR1 is shown in the RTF log.
Resolved	IPY00038130	--	154	PSTN Call Control	A GCEV_FATALERROR occurs on Dialogic® D/480JCT-2T1 Board.
Resolved	IPY00036855	--	154	SNMP	When using MIB2 from RFC1213, Dialogic® SNMP agent fails to return valid information when a "get" command is issued.
Resolved	IPY00038119	--	154	Standard Runtime Library (SRL)	When using a Dialogic® D/120JCT-LS Board, calling the ATDV_ERRMSG() function caused a LIB crash. The crash occurred when the application called ATDV_ERRMSG() at the end of fax reception when fx_rcvfax() returns with -1.
Resolved	IPY00037777	--	154	Voice	With sr_enbhdr() being used to enable handler for all events on dxdev, after running dx_stopch() to stop dx_playiottdata() , the callback function didn't run. Also, there is no TDX_PLAY event in the log.
Resolved	IPY00037818	--	154	Voice API	The dx_setevtmask() function fails to disable the TDX_CST events for DE_DIGITS when setting the DM_DIGOFF flag. Note: A documentation update has been added in the Documentation Updates section for the Dialogic® Voice API Library Reference . Please refer to it for important information relevant to this defect resolution.
Resolved	IPY00037356	--	148	Board Detection	DCM assigns the same physical slot ID to two boards (in different physical slots).
Resolved	IPY00037708	--	148	Diagnostics	The its_sysinfo tool, which is used to collect data including a PCI firmware dump, is not collecting a full memory dump.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00034857	--	148	DM3 Call Control	When performing call progress analysis via the Dialogic® Global Call media detection method, if the media detection occurs before the out-of-band CONNECT message is received, GCCT_UNKNOWN is returned as a result.
Resolved	IPY00037396	--	148	DM3 Conferencing	Static background noise trails voice in conferences with more than six parties.
Resolved	IPY00037183	--	148	DM3 Voice	When recording WAV 176 bps file (11 KHz, 16 bits per sample), dx_mreciottdata() stops prematurely with EOD before recording all bytes specified in io_length field of DX_IOTT structure, if this field is set to some large value (in this case, 26 Mb). Other formats, such as 64 kbs PCM MuLaw, ALaw, Linear, and ADPCM did not exhibit this problem.
Resolved	IPY00037607	--	148	PSTN Call Control	If another call comes in between a gc_DropCall() and gc_ReleaseCallEx() , the call is not detected. The problem occurs when the drop call and release call are issued within 1-2 seconds of each other.
Resolved	IPY00036919	--	148	Runtime Trace Facility (RTF)	Unable to configure RTF trace capabilities using RTFManager because the selection is grayed out.
Resolved	IPY00036469	--	148	Runtime Trace Facility (RTF)	RTF 3.0 introduced increased memory usage of 7 MB in the client. So for each process running on the system that is directly or indirectly linked with RTF, an additional 7 MB of memory is used.
Resolved	IPY00037633	--	148	Springware Call Control	gc_BlindTransfer() does not work when using the pdk_sw_e1_ss1s_io protocol with Dialogic® Springware Boards.
Resolved	IPY00037318	--	148	Springware Call Control	Dialogic® Springware ISDN 4ESS protocol does not support LOCATION type 1010 in Progress Indicator.
Resolved	IPY00037483	--	148	Springware Firmware	Firmware assert during load test causes boards to stop responding to driver.
Resolved	IPY00037746	--	148	Springware Voice	An exception occurs when calling ATDX_CPEERROR() with RTF logging enabled. When RTF logging is disabled, the exceptions stopped.
Resolved	IPY00037767	--	148	SS7	The GCSS7 library does not generate the GCEV_MOREINFO event if it receives a SAM message with only STOP digit (0xf) after the application has already issued gc_CallAck() .
Resolved	IPY00037632	--	148	SS7	If there is a delay in the SS7 server picking up messages from the IPC queue, an ERROR_IO_PENDING occurs and the SS7 library terminates the IPC. This causes all the circuits to get blocked, as there is no more connection with the SS7 service. This is causing the IVRs to get a sudden circuit block from the switch in all of its SS7 circuits.
Resolved	IPY00037432	--	148	Voice	The dx_clrdigbuf() function overwrites area of thread's stack space, causing the application to crash.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00036504	--	144	DM3 Call Control	Calling gc_MakeCall() causes a SETUP message to be sent. If the first response from the other side is CONNECTED, the board responds with CONNECT_ACK, but GCEV_CONNECTED is not sent to the application. The problem only occurs if the board is set to Network End; if the board is set to User End, GCEV_CONNECTED is sent.
Resolved	IPY00036861	--	144	DM3 Voice	When attempting to run transaction recordings under rapid succession, sometimes the internal CT Bus routing fails and the record returns with a TDX_ERROR event with the result "Switching Handler is not Present."
Resolved	IPY00036423	--	142	Conferencing	Sometimes a noise is generated when a party leaves a conference; the noise disappears when a party is added to the conference.
Resolved	IPY00028633	35748	142	Conferencing	Sometimes a noise is generated when a party leaves a conference; the noise disappears when a party is added to the conference.
Resolved	IPY00009499	33932	142	Conferencing	A loud scratch/click sound occurs when entering a conference when 1-2 parties are already in the conference.
Resolved	IPY00007470	32437	142	Conferencing	A sharp noise occurs when changing conference resource mode to MSPA_MODERECVONLY.
Resolved	IPY00006707	33803	142	Conferencing	Sometimes a noise is generated when a party leaves a conference; the noise disappears when a party is added to the conference.
Resolved	IPY00036280	--	142	Fax	When a Dialogic® VFX/41JCT-LS Board is receiving fax when the line quality is not good, sometimes the calls are terminated by error with ESTAT 193.
Resolved	IPY00037004	--	142	IP	IP trunks hang due to missing gc_AnswerCall() event.
Resolved	IPY00036886	--	142	PSTN Call Control	The call type information is incorrectly being encapsulated in the METAEVENT's extevtdatap pointer in the GCEV_OFFERED event when using ISDN call control on Dialogic® DM3 Boards.
Resolved	IPY00036833	--	142	PSTN Call Control	When using NI2 protocol on Dialogic® JCT Boards, disconnect glare causes next call to be rejected with cause code 44, channel not available.
Resolved	IPY00036830	--	142	PSTN Call Control	The DPNSS cause "Network Termination" (NT=0x02) is not supported.
Resolved	IPY00036448	--	142	PSTN Call Control	With 5ESS ISDN on Dialogic® Springware Boards, call setup fails when the CALLED NUMBER TYPE is set to NETWORK_SPECIFIC (0x03).
Resolved	IPY00036347	--	142	PSTN Call Control	QERROR_WARNING messages appear in <i>Dm3StdErr log</i> . Eventually, gc_SetChanState() fails on all channels, and all channels are blocked.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00036865	--	142	Voice	If a user attempts to do a play forever (specifying <code>io_length = -1</code>) with UIO plays on Dialogic® DM3 Boards, there is still a hard upper limit on the number of bytes that can be played, which is approximately equal to 2.147 GB (~2 to the 31 bytes).
Resolved	IPY00036345	--	142	Voice	<p>If a user calls <code>dx_play()</code> asynchronously and then calls <code>dx_stopch()</code> synchronously (possibly from another thread) on the same voice device to stop the play, the application sees different behaviors based on whether the voice device is a Dialogic® DM3 or Dialogic® Springware device. DM3 and Springware devices should behave the same way with regards to the eventing mechanism.</p> <p>Note: The fix for defect IPY00036345 changed the eventing mechanism behavior for Springware to match that of DM3. Behavior is now such that calling <code>dx_stopch()</code> synchronously no longer consumes TDX_PLAY events. Springware applications will now receive TDX_PLAY events when calling <code>dx_stopch()</code> synchronously.</p>
Resolved	IPY00031534	--	139	Fax	When sending a fax, the Dialogic® VFX/41JCT-LS Board cannot establish phase B with some particular fax machine.
Resolved	IPY00036418	--	139	Global Call	On Dialogic® DM3 Boards, the <code>gc_Open()</code> function does not cause sabmr messages to be sent for the DPNSS protocol.
Resolved	IPY00036337	--	139	PSTN Call Control	5ESS for Dialogic® DM3 Boards did not support CALLED NUMBER TYPE in the NETWORK_SPECIFIC (0x03), IE.
Resolved	IPY00036248	--	139	PSTN Call Control	When using Dialogic® Global Call SS7, the 0xb and 0xc address signals, which were previously reported to the application as "b" and "c", are now getting reported as "#" and "*", thus breaking backward compatibility.
Resolved	IPY00036247	--	139	PSTN Call Control	A Dialogic® JCT Board running with the NT1 protocol receives an Alerting message with incorrect GCEV_PROCEEDING event instead of the expected GCEV_ALERTING on a channel.
Resolved	IPY00036101	--	139	PSTN Call Control	User program cannot obtain a large UUI information along with other IEs using <code>cc_GetSigInfo()</code> on Dialogic® JCT Boards.
Resolved	IPY00036044	--	139	PSTN Call Control	Failures seen when invoking <code>gc_SetChanState()</code> on Dialogic® JCT Boards.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00036949	--	139	Springware ISDN Firmware	<p>With Service Update 108 and later, outbound ISDN calls are rejected by the switch due to missing IE (octet 3.1, Extension Bit/Interface Identifier). In Service Update 108, Dialogic® Springware firmware was changed to stop sending octet 3.1 if a board was not configured in an NFAS group. However, if a switch requires octet 3.1 to be present in the setup message for non-NFAS configurations, the call is now rejected. If the switch requires octet 3.1 to be present for non-NFAS configurations, perform the following:</p> <p>Step 1. Modify the <i>nfas.cfg</i> file so that each span is in its own NFAS group.</p> <pre>#NFAS_group 1 # Board ID Interface ID D-Channel board ID NFAS group ID 1 0 1 1 2 1 2 2 3 2 3 3</pre> <p>Step 2. Do not modify parameter 0016 in the PRM file for each span as you normally would within an NFAS environment. Instead, leave the D-channel as enabled:</p> <pre>;--- ;--- ENABLE/DISABLE the D channel (Parameter type 16H) ;--- Used only when the protocol type (Parameter number 13H) is PRI ISDN ;--- for NFAS configuration. ;--- Possible values for the data are as follows: ;--- 00H = Undefined. ;--- 01H = Enable the D channel. ;--- 02H = Disable the D channel. 0016 01</pre>
Resolved	IPY00034365	--	139	Voice	While the Dialogic® Springware voice module in the RTF config file is enabled, running the <i>gc_basic_call_model</i> application to make an outbound call causes a GCEV_FATALERROR.
Resolved	IPY00035350	--	134	Call Control	While sending NonStandard Control data in an H.323 message, if the input string contains a byte with value 0x00, all the data after this byte will not be sent.
Resolved	IPY00035875	--	134	Configuration	gc_Start() fails when an application was compiled.
Resolved	IPY00034841	--	134	Global Call	While closing the H.323 channels, some may be stuck in an intermediate state causing the subsequent events to be directed to incorrect devices.
Resolved	IPY00034413	--	134	IP Media Session Control (RTP)	Parameter checking behaves inconsistently when calling ipm_StartMedia() .
Resolved	IPY00035831	--	134	SIP Call Control	Segmentation fault occurs in <i>libipm_vsc.so</i> when calling gc_close() on Dialogic® Global Call (IP based) line device.
Resolved	IPY00035822	--	134	SIP Call Control	Dialogic® Global Call SIP application does not respond to 407 Proxy Authentication Required messages.
Resolved	IPY00035613	--	134	SIP Call Control	Fails to send a BYE message after dropping call on Avaya IP PBX.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00036073	--	133	Configuration	Dialogic® DM/V and DM/V-A Boards cannot be configured for R2 protocol or any PDK protocol through the PDK Config property sheet in DCM on Service Update 118.
Resolved	IPY00034495	--	131	Fax	Firmware crash occurs when certain TIFF file is sent from one channel in MH, 9600 MSLT=10ms condition.
Resolved	IPY00006790	35137	131	Global Call	For outbound Dialogic® Global Call SS7 calls with dialstring *1234, the leading * is stripped and replaced with a trailing 0 (i.e., 12340) causing call to fail.
Resolved	IPY00035506	--	131	ISDN	An ISDN call disconnects during the ACCEPT state. When this occurs the application does not get a CCEV_DISCONNECT event.
Resolved	IPY00035451	--	131	PSTN Call Control	WinXP gc_OpenEx() fails for device “:N_dkB1T1” for Dialogic® SS7 Board when configured for clear channel.
Resolved	IPY00035148	--	131	PSTN Call Control	The gc_Unlisten() function has no effect when issued on “dk” devices using Dialogic® Global Call SS7.
Resolved	IPY00034816	--	131	PSTN Call Control	SIT tone not detected on Nortel Meridian protocol.
Resolved	IPY00034738	--	131	PSTN Call Control	Call progress analysis does not properly report fax tone when parameter All INTEGER_t CDP_OUT_ConnectType has a value of “1”.
Resolved	IPY00034606	--	131	PSTN Call Control	While issuing a make call during a supervised transfer to a destination that is busy, gc_ResultMsg() returns with PROTOCOL ERROR.
Resolved	IPY00033492	--	131	Springware Boards	After repeating of network connection down and up while service/app is running, some channels cannot re-establish layer 2 connection, send or receive calls.
Resolved	IPY00034404	--	131	SS7	In GCSS7, initial alarm conditions are not propagated up to application.
Resolved	IPY00034079	--	125	Call Control	After gc_SwapHold() function successfully returns, both Global Call call states were reported as GCST_CONNECTED.
Resolved	IPY00034678	--	125	CSP	For Dialogic® D/41JCT-LS Board CSP application, dx_playiottdata() fails after ec_listen() to route any timeslot.
Resolved	IPY00034105	--	125	Fax	Dialogic® VFX/41JCT-LS Board channel is unable to send/receive fax after particular fax call scenario occurs.
Resolved	IPY00034618	--	125	PSTN Call Control	gc_DropCall() fails when responding to a GCEV_DISCONNECT event after a GCEV_BLOCKED event.
Resolved	IPY00033102	--	125	SIP Call Transfer	Supervised transfer fails on Party B getting GCEV_XFER_FAIL.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00034378	--	125	Voice	dx_playiottdata() function does not return TDX_PLAY event when directly followed by a dx_pause() and then dx_stopch() .
Resolved	IPY00028444	35763	124	DM3 Network	GCEV_PROGRESSING message not sent to application.
Resolved	IPY00033698	--	124	PSTN Call Control	The primary call cannot be re-transferred via gc_SetupTransfer() when the transferred call is disconnected after SwapHold.
Resolved	IPY00033163	--	124	PSTN Call Control	Access violation occurs when running ISDN based application.
Resolved	IPY00030001	36796	118	ISDN	ISDN traces not functional for NI2 and QSIG on Dialogic® DM3 Boards.
Resolved	IPY00034050	36636	116	PSTN Call Control	SIT tone operator intercept is incorrectly reported as Unknown SIT tone to the application on Dialogic® DMV160LP Board.
Resolved	IPY00032875	--	116	PSTN Call Control	Cannot send Facility Message on CRN1 when CRN1 is put on hold with Dialogic® DM3 Boards.
Resolved	IPY00034018	--	115	PSTN Call Control	SIT tone operator intercept is incorrectly reported as Unknown SIT tone to the application on Dialogic® DMV960A and DMV160LP Boards.
Resolved	IPY00033499	--	115	SS7	Opening of dti devices via GCSS7 library fails.
Resolved	IPY00007931	23718	115	UDD	Dialogic® D/240JCT and D/480JCT Boards fail Dialogic® Diagnostics Software (UDD) firmware download.
Resolved	IPY00032793	--	113	Board Deselection	For Dialogic® DM3 PSTN boards, DCBU switchover fails when the primary and standby D-channels are configured on different boards.
Resolved	IPY00031560	36801	113	DM/IP Boards	When calling a Dialogic® DM/IP Board using G729a codec, the volume coming from the board will decrease when DTMFs are sent with RFC2833.
Resolved	IPY00033584	--	113	DM3 Firmware	Double ringback tone in China causes false cadence break on Dialogic® DM/V-A and DM/V-B Boards.
Resolved	IPY00033244	--	113	PSTN Call Control	Dialogic® DM/V1200BTEP Board is sending a RELEASE COMPLETE (with cause 0x22) after receiving a CALL PROCEEDING.
Resolved	IPY00033009	--	113	PSTN Call Control	NCAS does not work on mixed T1/E1 or mixed ISDN/CAS configurations.
Resolved	IPY00031559	36828	113	PSTN Call Control	Station sets of Dialogic® DISI Board always initialize to ONHOOK.
Resolved	IPY00033410	--	111	D/120JCT-LS	When using five Dialogic® D/120JCT-LS Boards (CSP firmware), Dialogic® service will not start after a restart.
Resolved	IPY00031588	36770	111	Global Call	Problem with gc_HoldCall() , which sends the SUSPEND message to the network.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00031597	36527	110	Host Admin	Autodump leaves the board in an unknown state when it fails to download diagnostic firmware.
Resolved	IPY00029931	36809	110	NCM API	Throws an exception when attempting to run application from debugger.
Resolved	IPY00032715	--	110	SIP Call Control	SIP 3xx redirection and forward message: cannot set (or retrieve) more than one redirection address.
Resolved	IPY00033013	--	108	Board Detection	If the customer installs build 104 or later, and if they have Dialogic® CPI2400_1_T1 and CPI3000_1_E1 boards in their system, and they do a 'Restore Default' from the DCM GUI, the name will be changed to DF240_1_T1 and DF2000_1_E1, respectively. The change is only in the name displayed in DCM GUI, and there is no functionality difference. The same thing can happen if the customer uninstalls the existing build and installs the build 104 or later.
Resolved	IPY00032796	--	108	Configuration	A blue screen occurs with a mini dump whenever the Dialogic® D/600JCT Board is configured with CTR4 protocol.
Resolved	IPY00031529	36814	108	CSP	The mapping of CSP channels is not being handled correctly on the Dialogic® D/120JCT Board during Earth Recall processing, which can lead to an assert in dslac_dd.c.
Resolved	IPY00032244	36750	108	D/240JCT-T1	A Dialogic® D/240JCT-T1 Board that is running NTT protocol incorrectly accepts the next incoming call while the previous call is not released by host.
Resolved	IPY00031535	36852	108	D/240JCT-T1	ISDN channel hang occurs when Dialogic® D/240JCT-T1 Board receives a STATUS message in a particular ISDN call state.
Resolved	IPY00030882	36057	108	D/82JCT-U	Dialogic® D/82JCT-U Board is not reporting rings to the application consistently.
Resolved	IPY00031561	36775	108	DM3 Firmware	Intermittent blue screens occur when trying to shut down or reboot the OS with Dialogic® Boards downloaded.
Resolved	IPY00006562	35636	108	PBX Call Control	When Mitel SX-2000 switch swaps CPU, there is a Loss of Carrier, but does not gain carrier back when finished.
Resolved	IPY00033122	--	108	Springware Fax	Firmware crash occurs when receiving particular FSK data during send or receive fax.
Resolved	IPY00031536	36637	108	Springware Fax	The entire Dialogic® VFX/41JCT-LS Board gets hung after some particular image is received.
Resolved	IPY00028341	35790	108	Springware Fax	The fax tx modem signal level from a Dialogic® VFX Board changes (for both send and receive fax) after dx_playiottdata() is used.
Resolved	IPY00033185	--	108	Springware Firmware	On Dialogic® Springware ISDN 5ESS and 4ESS protocols, loopback calls from user to network fails.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00032803	--	108	Springware Firmware	Ported PTR 35154 fix from NI2 protocol to DMS protocol.
Resolved	IPY00032794	--	108	Springware Firmware	Board rejects incoming calls when a call is disconnected, but is not released yet in the first unblocked channel.
Resolved	IPY00033029	--	108	Voice	When playing (dx_playiotdata) from multiple offsets of the same file, only the first portion is played.
Resolved	IPY00032363	--	108	Voice	Random segmentation faults happen due to reading uninitialized memory.
Resolved	IPY00031550	36859	105	DM/IP Boards	RFC2833 digits sent continuously from Dialogic® DM/IP Board.
Resolved	IPY00032664	--	105	IP	RFC2833 DTMFs not detected by Dialogic® DM/IP241 Boards.
Resolved	IPY00032271	36699	104	OA&M	There is a limitation to the amount of processes you can use because of a limitation of signals you can create in the operating system.
Resolved	IPY00006348	36782	103	Configuration	ML5BC on Dialogic® DMV3600BP Board incorrectly shows up as ML5B in DCM.
Resolved	IPY00031562	36766	100	DM3 Voice	After a transaction record, routing another voice resource to another channel fails.
Resolved	IPY00028547	35670	100	Springware PSTN	PDK protocol delivers DETECTED/OFFERED event to the channel even if gc_ReleaseCall() was never called to clean up the previous call on this channel. Once a new call attempts to be transmitted/received on this channel, an error occurs.
Resolved	IPY00006846	36711	100	Springware PSTN	A crash occurred due to corruption in PDKRT library internal database caused by application.
Resolved	IPY00006712	36790	100	Springware PSTN	For Dialogic® Springware Boards, no GCEV_MEDIADETECTED event is received when the first sound heard after a connect is a SIT tone (frequency 914 Hz).
Resolved	IPY00006862	36830	98	CSP	ec_stream() returns -1 when running with a CAS protocol.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00006345	36788	98	DM3 Configuration	<p>All *cas*.config files for T1 CAS protocols that come by default or get generated (for Dialogic® DM/V-B Boards) have all spans set for D4/B8ZS. However, most T1 lines in the field are configured for D4/AMI or ESF/B8ZS. This adds an extra configuration step because the default doesn't match either of the likely cases.</p> <p>Resolution: Based on feedback concerning standard configuration of switches, the default layer1 line coding parameter (0x1603) for the CAS loads was modified to AMI (from B8ZS). This change does not affect any of the other protocols.</p> <p>Old: SetParm=0x1603,7 ! Coding (B8ZS=7, AMI=8) New: SetParm=0x1603,8 ! Coding (B8ZS=7, AMI=8)</p>
Resolved	IPY00031596	36840	98	DM3 Fax	A TIFF file will be faxed HI/LO resolution based on the TIFF header and not by the sndflag parameter for fx_sendfax() .
Resolved	IPY00006647	36598	98	DM3 Firmware	<p>There is memory corruption on the Dialogic® DMV1200BTEP Board when using ISDN firmware. The memory corruption is caused by any of the following conditions:</p> <ul style="list-style-type: none"> • Facility IE in the inbound SETUP > 128 bytes • Several call scenarios causing a memory leak: <ul style="list-style-type: none"> - Incoming SETUP message with an active call on the specified bearer channel - Incoming SETUP message while the channel is BLOCKED (i.e., application has not issued gc_WaitCall()) - SETUP glare condition - Disconnect glare
Resolved	IPY00032239	36769	98	DM3 IP	There is a problem when using IPPARM_SIP_HDR to set call ID.
Resolved	IPY00031791	36793	98	DM3 IP	gc_InvokeXfer() fails to send a SIP REFER message, and no event or failure indication is returned to the application.
Resolved	IPY00010900	36349	98	DM3 IP	The PARM_TX_ADJVOL_ and PARM_RX_ADJVOL_ parameters in the <i>ipmlib.h</i> header file are defined via #defines but have semicolons after them, which make it hard to compile applications built using it.
Resolved	IPY00010760	36647	98	DM3 IP	When a call is placed to an IP address that does not exist or to a valid IP address that does not have a SIP phone active, you cannot call gc_DropCall() to disconnect the call; you have to wait for the 64-second INVITE timer to expire before you receive a GCEV_DROPCALL.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00006856	36800	98	Global Call	When a board device is closed while time slots are still open on that trunk, the board device fails to open when the application tries to open the board again. The gc_OpenEx() to reopen the span fails with an Invalid linedevice error.
Resolved	IPY00011037	36677	98	IP Host	Inbound fax call fails. This happen when previous call on the same device is dropped and media devices are disconnected using gc_SetUserInfo() .
Resolved	IPY00032258	36810	95	Host Install	Silent install is flagging itself as completed even though it still requires a reboot.
Resolved	IPY00032265	36780	95	Host Library	The Dialogic® Standard Runtime Library (SRL) seems to get into a "hung" state, causing event and IO to stop.
Resolved	IPY00032262	36688	95	Host Library	sr_waitevtEx() hangs in multi-threaded environment. For example, if you have an application that creates two threads, each thread monitors its own events via sr_waitevtEx() . The first thread makes a call, synchronously. The second thread makes a call, synchronously. Before the second call is connected, the first call is disconnected. At this time you do not receive a CCEV_DISCONNECT for the first call. The sr_waitevtEx() call just hangs for the first thread.
Resolved	IPY00032247	36698	95	Host Library	D-channel remains down after setting the Logical Data Link State.
Resolved	IPY00028480	36640	95	Springware Fax	Dialogic® VFX/41JCT-LS Board randomly fails to receive multi-page inbound fax. The receiving side responds to the Multi-Page Signal (PPSMPS) message with a request to repeat last message (CRP). The sending fax machine repeats the PPSMPS message two more times, followed by a disconnect (DCN) message. The Dialogic® Fax Library returns error of EFX_DISCONNECT, and ATFX_ESTAT() returns 127 (which is EFX_WHYDCNRX see faxlib.h) /* Unexpected DCN while waiting for DCS/DIS */.
Resolved	IPY00032266	36735	95	Springware Firmware	The Dialogic® D/41JCT Board fails to detect dial tone on outbound calls.
Resolved	IPY00031587	36666	94	Host Library	gc_GetLinedevState() can return the wrong state for the D-channel because at times the GCEV_D_CHAN_STATUS event gets posted before the D-channel state is updated in the library.
Resolved	IPY00028536	36587	94	Springware Firmware	ISDN outbound calls fail when using the NI2 protocol and making back to back calls on a Dialogic® Springware Board.
Resolved	IPY00028448	36319	94	Springware Firmware	Disconnect glare causes the next call to be rejected with cause code 44, requested channel not available.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028588	35746	94	Springware Voice	An analog Dialogic® Springware Board kept returning NODIALTONE as result of call progress analysis (CPA) when performing outbound calls. This problem occurred after several outbound calls, which were made previously, experienced line busy. When NODIALTONE was returned, the voice recording transmitted on that line was captured, and it showed the dial tone received correctly.
Resolved	IPY00028408	35117	92	DM3 Network	Board crashes when using gc_SetInfoElem() to add "Display Name" IE prior to calling gc_AnswerCall() when connected to Nortel switch that has been configured for 5ESS.
Resolved	IPY00011063	36799	92	DM3 Voice	When using Dialogic® DISI32R2 Board, calling ms_estconf() causes the following error to be displayed: "Unhandled exception in application.exe (NTDLL.DLL): 0xC0000005: Access Violation."
Resolved	IPY00032263	36681	92	Global Call	The gc_SetupTransfer() function fails when calling far end, ring no answer.
Resolved	IPY00028542	36633	92	Host Library	Access violation occurred with sr_putevt()/gc_GetMetaEvent() .
Resolved	IPY00028642	36548	92	Modular Station Interface (MSI)	The ms_estconf() function is not working correctly in Service Update 74.
Resolved	IPY00006811	36584	92	Protocols	The pdk_us_ls_fxo protocol fails to notify the PDK library that the disconnected call has been already released, which prevents the application from dropping the call when a new incoming call is pending.
Resolved	IPY00028649	36416	90	DM3 Admin	Blue screen crashes occur in dlgcmpd when using Dialogic® DM/V480A-2T1-PCI Boards on Windows® 2003.
Resolved	IPY00028658	36606	90	DM3 Firmware	While processing calls on ISDN lines with Dialogic® DM/V-B Boards, memory pool corruptions occur that make the firmware reject all incoming calls on the span with Circuit Not Available cause code.
Resolved	IPY00028557	36302	90	DM3 Firmware	gc_BlindTransfer() fails after several days of normal operations. The system answers calls successfully, but blind transfer fails.
Resolved	IPY00028459	36329	90	Springware PBX	Display is parsed incorrectly while attempting to view ACD statistics when calling d42_display() or d42_displayex() when using Nortel_Meridian_1.fwl.
Resolved	IPY00010787	36134	90	Springware PBX	When a Dialogic® D/82JCT-U Board is connected to a Siemens Hicom, it consistently loses and re-gains carrier on multiple ports.
Resolved	IPY00028430	36333	88	DM3 Firmware	After running for several days, the driver side goes out of sync and the DM/V side reports AIS (blue alarm) error. The issue is seen only when brd_SendAlive() feature is enabled.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028530	36371	87	Global Call	When gc_Start() fails, gc_ErrorInfo() cannot be used to retrieve the error code. gc_ErrorInfo() fails with an error indicating that gc_Start() has not been issued. The correct behavior is for gc_ErrorInfo() to execute successfully and return the error code and description.
Resolved	IPY00028607	36356	84	DM3 Fax	When using ml5_qsa_5ess firmware, a kill task occurs if the remote side tries to send a page with 24x32 width. When fx_rcvfax() is called, it returns -1 with a TFX_FAXERROR, and the kill task occurs around 2 seconds later.
Resolved	IPY00028278	35423	84	DM3 Fax	Fax sender (Dialogic® DM/F240 Board) cannot wait to receive retry of DIS message and gets Phase E status (EFX_COMMERRTX).
Resolved	IPY00028196	36256	84	DM3 Fax	TIFF (with valid tags) fails on Dialogic® CPi/2400 and DM/F Boards.
Resolved	IPY00028299	35430	84	DM3 Firmware	ANI is not returned when Screening Indicator is set under DMS protocol.
Resolved	IPY00028244	34159	84	DM3 Firmware	The 0x3925 parameter does not appear in the <i>ml9b_pcires.config</i> file.
Resolved	IPY00007819	33173	84	DM3 Firmware	Host ISDN state machine gets out of sync with switch after 4ESS RESTART messages.
Resolved	IPY00010914	36429	84	DM3 IP	If application uses both H.323 and SIP, gc_ResetLineDev() called before gc_WaitCall() locks up channel on Dialogic® DM/IP241-1T1 Board,
Resolved	IPY00007686	31991	84	DM3 Network	When configuring inter-board NFAS where the Primary and Secondary D channel are on separate boards, NFAS trunks on the board with the Secondary D channel cannot make or accept calls. However, NFAS trunks on the Primary D channel board (intra-board NFAS) are not affected and calls can successfully be placed. If the Data Link on the Primary D channel is taken down, the Standby D channel does not successfully take over and now NFAS trunks on the both boards cannot make or accept calls.
Resolved	IPY00028576	36197	84	DM3 Voice	ATDX_BDNAMEP() does not work properly with Dialogic® DM3 Boards. When you request ATDX_BDNAMEP() on the handler of dxxxB1C1 (of a DM3 Board), you receive an empty string instead of dxxxB1. When you request ATDX_BDNAMEP() on the handler of dxxxB1 (of a DM3 Board), you receive the string dxxxB1.
Resolved	IPY00028527	36129	84	DM3 Voice	gc_BlindTransfer() failed to return with GCEV_BLINDTRANSFER after calling dx_getdig() (if digits are received).
Resolved	IPY00028560	36335	84	Global Call	gc_SetupTransfer() fails with invalid line device.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028207	36310	84	Global Call	gc_CompleteTransfer() does not complete successfully. Error returns: "Function not supported in current state."
Resolved	IPY00006654	36085	84	Global Call	Using Dialogic® Global Call SS7 protocol, when ISUP sent SUSPEND and RESUME message, the Global Call library did not generate a GCEV_RETRIEVECALL event.
Resolved	IPY00028511	36316	84	Host Admin	Dialogic® DISI32R2 Board failed to start with DISI32_R2_UK and DISI_R2_AU FCD/PCD files.
Resolved	IPY00028597	36108	84	Host Library	When the completion event for gc_MakeCall() results in GCEV_TASKFAIL, the application then uses the CRN returned from the gc_MakeCall() to issue a gc_DropCall() , gc_ReleaseCall() . Both of these functions fail with "invalid CRN".
Resolved	IPY00028592	36295	84	Host Library	RESTART messages change the maintenance state of a channel if the channel was IN SERVICE when the message arrived.
Resolved	IPY00031767	36021	84	Protocols	pd_k_r2_io.psi sets a wrong channel state after a timer expires.
Resolved	IPY00028584	35809	84	Protocols	A6 should be a terminating tone for pd_k_in_r2_io.cdp protocol.
Resolved	IPY00028497	36042	84	Protocols	With South Africa with pd_k_sw_e1_ac4400_io.cdp, a disconnect tone does not get detected.
Resolved	IPY00028454	36090	84	Protocols	When using Lucent Lineside E1 PDK protocol, the gc_RetrieveCall() function failed to transfer the call state from GCST_ONHOLD to GCST_CONNECTED.
Resolved	IPY00028411	34284	84	Protocols	When using 5ESS protocol with Dialogic® Springware Boards, outbound calls fail with Cause Value 1100100, invalid information element, in response to the Proceeding and Progressing message received.
Resolved	IPY00028363	36020	84	Protocols	Dialogic® Springware T1 Boards send incorrect "Interface ID present" to remote side when using T1 ISDN (DMS, 4ESS, 5ESS).
Resolved	IPY00030906	36237	84	Springware Fax	fx_open() causes memory leak on some analog boards.
Resolved	IPY00030880	35634	84	Springware Fax	Fax reception fails when DF_ACCEPT_VRQ is set in the receive flag and the sending fax machine is PRI-MPS capable.
Resolved	IPY00028611	36204	84	Springware Fax	When a Dialogic® VFX Board is receiving fax from a particular fax machine, after it sends DIS, it sometimes cannot recognize DCS from the remote end and the call is disconnected with phase E status: "Excessive HDLC carrier" without retry.
Resolved	IPY00028578	36159	84	Springware Fax	During ECM receiving, the board sends an invalid PPR that is not requesting any frames for resend.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00011005	36213	84	Springware Fax	When using SoftFax, legal size documents sent from a Toshiba fax machine are intermittently split into two pages.
Resolved	IPY00028518	35832	84	Springware Firmware	GCEV_DROPCALL event is not returned after calling gc_DropCall() if GCEV_DISCONNECT is sent by the firmware due to time-out.
Resolved	IPY00030570	35921	84	Springware PBX	Outbound calls made from the PBX are dialing extra digits at random times.
Resolved	IPY00009297	34095	84	Springware PBX	d42_displayex() doesn't return the correct softkey displays for Mitel SX-200 PBX.
Resolved	IPY00028455	36248	84	Springware Voice	If six tones of the same frequency are defined, only the first through fifth are detected. This problem occurred only with a specific tone.
Resolved	IPY00028288	36063	84	Springware Voice	When using global tone detection (GTD), only four tones are detected. If you define more than this, only four will work.
Resolved	IPY00010248	33750	84	Springware Voice	When performing call progress analysis, the results come out differently per channel for the same set of audio data.
Resolved	IPY00010545	35967	74	DM3 Firmware	Qsig firmware does not send IE information to the application when the IE length is longer than normal.
Resolved	IPY00010472	34532	74	DM3 Firmware	When all 95 channels are enabled in NFAS back-to-back systems using gc_basic_call_model , the system hangs.
Resolved	IPY00009588	34915	74	DM3 Firmware	With pdk_us_mf_io protocol, using immediate start with wait for dial tone option, 25% of outbound calls fail with protocol error.
Resolved	IPY00010627	35339	74	DM3 Network	Using Dialogic® DMV1200B Boards with NFAS group of 5 spans, you cannot make calls from the 5th span when the NFAS group is on two boards.
Resolved	IPY00010593	35619	74	DM3 Network	Using the default pdk_us_ls_fxs_io.cdp file, the application is not able to detect the DISCONNECT tone that is defined in the .cdp file.
Resolved	IPY00009660	35169	74	DM3 Network	On Dialogic® DM/V-A and DM/V-B Boards with pdk_us_ls_fxs protocol and CDP_WaitDialToneEnabled=1 , when blind transfer is initiated but no dial tone is available on the line, the gc_BlindTransfer() function does not return and the channel hangs.
Resolved	IPY00028407	35620	74	Host Admin	The ATDV_SUBDEVS() function fails on the Dialogic® DI0408LSAR2 Board due to a device mapping issue. The application gets a "Timed out waiting for firmware" error message.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00010226	36092	74	Host Admin	In the DCM Trunk Configuration tab for Dialogic® DM/V-B Boards, the Media Load and Trunk protocol values listed in the pull-down menu at the bottom do not show the currently selected value at the top when each is highlighted.
Resolved	IPY00028506	36209	74	Host Install	Service Update 65 cannot be installed as an update install. When you Start Services, DCM gives the errors "Failed to Detect Boards", "Error Configuring the TDM Bus".
Resolved	IPY00028305	32144	74	Media Voice Library	When the system is under heavy load, it's been observed that anywhere between 2-100 hours, a Voice channel fails to return a completion event TDX_RECORD while doing a Record operation. The application even on calling dx_stopch() does NOT recover the channel and the channel is stuck. This problem happens on a heavily loaded system and only affects record operation on a Voice channel. Play operations work fine. If the application then calls ATDX_STATE() to examine the state of the channel and for all subsequent calls, the value returned is 7 ("CS_STOPD").
Resolved	IPY00028417	35650	71	DM3 Firmware	ml2_qsa media loads (for example, ml2_qsa_5ess.pcd) do not support exit notification properly.
Resolved	IPY00028258	33717	71	DM3 Voice	When selecting ml10_dsa_net5.pcd for a Dialogic® DM/V600A-2E1-PCI Board, DCM displays ML2_60. It should display ML10_60 instead.
Resolved	IPY00030913	34816	71	Host Admin	NCM_GetVersionInfo() reports incorrect values for the DSS version information.
Resolved	IPY00030885	35102	71	Host Admin	The computer screen goes "blank" when the Dialogic® service is starting. The machine cannot be operated from the local terminal. The blank screen cannot be recovered until the video mode is altered (using remote control software).
Resolved	IPY00030909	35327	70	CSP Demo	Running the VoiceDemo after running the CSPAuto demo gives the error message "Unexpected event received 0x89, error 96" after selecting play Vox.
Resolved	IPY00028361	36091	70	DM3 Fax	There is a problem when sending a multi-page fax to a Dialogic® DM/V-B Board with UL3. It seems like the fax was received successfully from the sending side, but when opening the received tif file you only see the first page of the fax. However the size of the file is almost the same as the tif file sent.
Resolved	IPY00028349	35898	70	DM3 Fax	Dialogic® DMV1200BTEP Board fails to receive faxes sent from a Sharp UX-510A fax machine. The faxtrace utility reports an invalid image detected error, and a TFX_FAXERROR is reported to the user application and logged in RTF trace.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028336	35991	70	DM3 Fax	There is a problem when sending a multi-page fax to a Dialogic® DMV600BTEP Board with UL1. It seems like the fax was received successfully from the sending side, but when opening the received tif file you only see the first page of the fax. However the size of the file is almost the same as the tif file sent.
Resolved	IPY00028326	34858	70	DM3 Fax	Intermittently, fax channels get stuck during fax reception. The DebugAngel log file reports this condition with the following error: "Stream Id 0 Data Size 0 Flags 4 Discarded."
Resolved	IPY00028273	32842	70	DM3 Firmware	SETUP message without channel ID is not accepted by the firmware on Dialogic® DM/IP Board when the board is configured as Network side.
Resolved	IPY00028421	35417	70	DM3 Voice	When using Dialogic® DM/V600BTEP Board, glitch can be heard in recordings done by ec_stream() when another recording is being done on a neighboring time slot.
Resolved	IPY00028579	34569	70	Global Call	gc_RetrieveCall() returns error "function not supported in this state" when using pdk_sw_e1_ntmd_io.cdp .
Resolved	IPY00028416	35839	70	Global Call	Synchronous calls to gc_WaitCall() cause access violation error upon exit of the function.
Resolved	IPY00028521	36081	70	Host Install	The QSB-U2 media load is not available in the pull down menu in the Trunk Configuration tab of DCM under the media load selections for the Dialogic® DMV1200BTEP Board.
Resolved	IPY00028472	36043	70	Host Install	After upgrading from Service Update 62 to Service Update 64, the Registry keys and the DCM About dialog box still indicate SU 62.
Resolved	IPY00028595	35538	70	Protocols	Basic call control using Korea GDS LS protocol does not work on Dialogic® Springware Boards.
Resolved	IPY00006823	35851	70	Protocols	When using the pdk_us_mf_io protocol, the firmware crashes when CAS_Seize is similar to a wink signal.
Resolved	IPY00030908	34886	70	Springware Fax	When an ASCII text file is faxed from a Dialogic® VFX/41JCT-LS Board and the resolution is set to fine, the font size of the received document is reduced by about half of the sent document's font size.
Resolved	IPY00030890	32415	70	Springware Fax	When an ASCII text file is faxed from a Dialogic® VFX/41JCT-LS Board and the resolution is set to fine, the font size of the received document is reduced by about half of the sent document's font size.
Resolved	IPY00030883	32772	70	Springware Fax	Tiff header font size when sending fax is reduced on the received document when faxed from a Dialogic® VFX/41JCT-LS Board.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028479	35937	70	Springware Fax	Dialogic® VFX/41JCT-LS Board channel does not recover from fx_rcvfax() operation when the remote fax is disconnected and there's busy tone.
Resolved	IPY00009411	32855	70	Springware Fax	If a call is placed to a board, and a fax machine is not presented on the line, the fax log reports a CSID that appears to be from the last valid fax call on the line. This results in a Phase E status error 120 = "No fax machine present on the line".
Resolved	IPY00030911	33413	70	Springware Firmware	Call progress analysis incorrectly reports faxtone as PAMD on some occasions.
Resolved	IPY00028478	35825	65	Global Call	GCST_ONHOLD state is not returned as documented after a successful gc_HoldCall() ; instead the incorrect GCST_CONNECTED state is returned.
Resolved	IPY00028446	35330	65	Global Call	Dialogic® Global Call Software does not have result values for certain SIT tone terminations when performing call progress analysis using PDK protocols.
Resolved	IPY00028384	35875	65	Global Call	gc_MakeCall(SYNC) returns -1 with an undocumented error code when an operator intercept is received. The problem occurs when dialing a number whose results terminate with SIT.
Resolved	IPY00030892	35704	65	Host Install	The cleanup utility does not remove the IPMedia service.
Resolved	IPY00028599	35799	65	Springware Fax	fx_rcvfax() does not terminate when fax call is disconnected during RNR/RR and there's busy tone.
Resolved	IPY00028351	35775	65	Springware Fax	Part of sent image is sometimes missing from received TIFF file using ECM mode fax receive.
Resolved	IPY00028524	35566	65	Springware Firmware	When running ISDN, if glare scenarios occur where the application initiates a cc_AnswerCall() slightly after or around the same time that a CCEV_DISCONNECTED event comes in, an assert can result on the Dialogic® Springware Board.
Resolved	IPY00028415	35011	65	Springware Firmware	When using DPNSS firmware, disconnection is not completed properly. A dropcall complete event is not received after a remote disconnect event, and the application is left hung in a "disconnecting" state.
Resolved	IPY00028313	34814	65	Springware Firmware	When using an R2 protocol and the user attempts to make a call with greater than 10 DNIS digits, the R2MF response buffer contains garbled data.
Resolved	IPY00028271	35671	65	Springware Voice	Analog device will not respond to dx_sethook() after dialing an earth recall "&". This error occurred under normal working conditions where the earth lines are grounded and an incoming call is received.
Resolved	IPY00028229	35270	65	Springware Voice	Call progress analysis comes back with false cadence connects.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028345	35148	64	DM3 Firmware	D-channel fails to come up on a back to back setup. Two spans of NI2 are connected back to back and the D-channel comes up. When the cable is pulled out, the network side doesn't report the D-channel going down. When the cable is reconnected, the D-channel doesn't come up.
Resolved	IPY00028500	35390	63	Call Logging	The cl_open() function is not working; it doesn't give a value to the parameter errno and always returns zero.
Resolved	IPY00010776	35105	63	CSP	The ec_stopch() function does not always return a TEC_STREAM event.
Resolved	IPY00028375	35507	63	DM3 Fax	When you implement a send fax and receive fax in one call by using turnaround polling, the polling bit is not updated when the receiving fax contains more than one page. This causes the fx_rcvfax() function to complete with TM_POLLED instead of TM_FXTERM.
Resolved	IPY00010418	35572	63	DM3 Firmware	The dx_stopch() function does not return TDX_PLAY(0x81).
Resolved	IPY00009433	34878	63	DM3 Voice	dx_playiotdata() ignores the data length and plays until EoF, which sometimes causes noise if there is additional data after "data chunk."
Resolved	IPY00028442	35573	63	Host Admin	The brd_SendAlive() API feature to allow for watchdog alarms on spans throws an exception when enabled.
Resolved	IPY00028390	35768	63	Host Drivers	A blue screen occurred after running an application for 2-3 hours with a Dialogic® DMV600BTEP Board.
Resolved	IPY00028452	35597	63	Host Library	Problems with libdtimt.dll cause the cc_GetDLinkState() function to fail when the program is compiled for Service Updates after SU 58.
Resolved	IPY00009758	32759	63	Host Library	Calls to unsupported or unimplemented functions on Dialogic® DI/0408-LS-A Boards are resulting in an incorrect error code being generated.
Resolved	IPY00028373	35431	62	DM3 Firmware	DCM doesn't start when using media load 10b and E1CC (clear channel) mode (ml10b_qsb_4_e1cc.pcd) on Dialogic® DMV1200BTEP Board.
Resolved	IPY00028293	35281	62	DM3 Network	The gc_BlindTransfer() function is not working properly when using pdk_us_ls_fxs protocol with CSP_WaitDialToneEnabled = 1 and CSP_DialToneWaitTime = 5000 (Default). If the blind transfer fails because dial tone is not available on the line, then gc_BlindTransfer() should return a GCEV_TASKFAIL event after 5 seconds. However, this is not happening; the channel hangs without TASKFAIL.
Resolved	IPY00028492	35458	62	Global Call	gc_SendMoreInfo() is failing when using PDK Argentina on Dialogic® DM3 Boards.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00030886	31675	62	Host Admin	When PCI bus number of a board is 0, DCM shows the value as 0x00, but when the bus number is non-zero, DCM shows the value in decimal format. This is inconsistent. (The zero value is now shown as a decimal value as well to make them all consistent.)
Resolved	IPY00010860	35438	62	Host Admin	After upgrading a PCI RAID controller, Dialogic® System Service does not start automatically. The user must re-detect and reconfigure hardware in order to start services.
Resolved	IPY00008308	32313	62	Host Admin	NCM_GetVersionInfo() reports incorrect version information. This occurs when getting "About" information in DCM as well as when retrieving the information through the API.
Resolved	IPY00028477	35170	62	Host Drivers	Blue screens occur after >2 hours of load test when more than one Dialogic® DMV1200B Board is installed.
Resolved			62	Host Install	When performing an update install (not a full install), if an INF file change comes in, the board's configuration in the registry is not updated. The binaries that use the new INF file are installed, but the new INF information is not updated to the registry. Error messages may pop up when trying to configure a board, and as a result the board configuration will fail.
Resolved	IPY00028514	35412	62	Host Library	Setting MEDIA_TYPE_DETECT flag in PDK_MAKECALL_BLK on Dialogic® Springware Boards causes the GCEV_CONNECTED event to indicate GCCT_INPROGRESS as expected, but a GCEV_MEDIADETECTED event is never received. This prevents enabling/disabling call progress analysis on a call-by-call basis on Springware Boards.
Resolved	IPY00028334	35134	62	Host Library	Transaction record occasionally doesn't return any data, even though the application is performing the same sequence of events as in a successful transaction record.
Resolved	IPY00009943	34160	62	Protocols	If pdk logs are enabled for TxRx bit information (by adding "ALL_INTEGER_t PSL_TXRX_LOG_ENABLE=1" in the respective .cdp file), gc_MakeCall() fails with GCEV_TASKFAIL.
Resolved	IPY00028360	33514	62	Springware Fax	An access violation occurs when sending a tiff file starting from a page number it does not contain. For example, if you try to send a tiff file beginning at page 3 that only contains 2 pages, the fx_sendfax() function called will crash.
Resolved	IPY00028575	35232	62	Springware Firmware	With Dialogic® D/240JCT-LS Board and NTT ISDN protocol, channel can be stuck with valid Q.931 call flow.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00028544	35104	62	Springware Firmware	After load testing, cc_Restart(ASYNC) does not return CCEV_RESTART, and subsequent calls to cc_Restart() return CCEV_RESTARTFAIL.
Resolved	IPY00007425	32712	62	Springware PBX	If a second call comes in after a first caller disconnects and before the ring off event is generated, the call will not be answered.
Resolved	IPY00028383	35321	62	Springware Voice	Busy tones are detected as “no ringback” in call progress analysis when using dx_dial() method in a Dialogic® Global Call application.
Resolved	IPY00028458	35154	58	Springware Firmware	Dialogic® Springware NI2 firmware sets and sends the interface ID bit and Octet 3.1 in its setup message when configured for NFAS circuits.
Resolved	IPY00028262	33199	56	Demos	gc_GetCallInfo() fails to return the caller ID on a Dialogic® D/4PCIU Board when using the gc_basic_call_model demo.
Resolved	IPY00009130	32103	56	DI Boards	The ms_setvol() function fails intermittently on the Dialogic® DI/SI32 Board.
Resolved	IPY00008909	32265	56	DI Boards	When placing an outbound call on a Dialogic® DI0408LSAR2 Board trunk to an invalid number (operator intercept), a GCEV_CONNECTED event with positive answering machine detection (PAMD) is received, rather than a disconnect with SIT.
Resolved	IPY00008826	32458	56	DI Boards	In the following config/FCD files for the Dialogic® DI0408LSAR2 Board, the impedance setting required for the German stations is improperly set: disi*_r2_de.config, disi*_r2_de.fcd
Resolved	IPY00007277	31912	56	DI Boards	When a Dialogic® DI0408LSAR2 Board is in a call and is the station party to hang up first, the POTS party hears a loud squeal for 2-3 seconds before the call is disconnected.
Resolved	IPY00010565	35077	56	DM/IP Boards	The Dialogic® DM/IP601-2E1-100 Board cannot start; it fails with error.
Resolved	IPY00028295	34503	56	DM3 Firmware	Application starts getting TDX_ERROR events after dx_playiottdata() .
Resolved	IPY00009611	33998	56	DM3 Firmware	Sometimes dx_stopch() fails to terminate the voice activity (play or record), leading to a player or recorder stuck in a stopping state.
Resolved	IPY00008779	34575	56	DM3 Firmware	Dialogic® DM/V160LP firmware crashed running a load test.
Resolved	IPY00011347	34397	56	DM3 Hardware	The general network interface alarm LED on the Dialogic® DMV1200BTEP and DMV600BTEP Boards is always on after DCM is started. Even after unplugging the E1 cable, there is no change; the LED is still on.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00030905	34640	56	DM3 Host Runtime Library	When Service Update 30 is installed on the System Release 6.0 PCI Windows base release, if ms_open() is called, it causes Microsoft Visual C++ Runtime Library errors. This does not happen when Service Update 30 is installed on a clean system.
Resolved	IPY00006779	34516	56	DM3 Host Runtime Library	When sr_putev() is used to add an event to the run-time library, if the parameter evtlen is set bigger than 512, the application receives an exception error.
Resolved	IPY00028406	35210	56	DM3 Network	PDKManager is encountering problems in registering the protocol for Dialogic® DM3 Boards, but the problems are not reported to the user and there are failures after the application starts.
Resolved	IPY00009790	34269	56	DM3 Network	The gc_AlarmSourceObjectNameToID() function doesn't return pass or fail when used with Dialogic® DM3 Boards; it throws an exception that the application either catches, or, if not programmed to catch, an application error is generated.
Resolved	IPY00009300	34862	56	DM3 Network	With NET5 protocol, firmware does not send GCEV_PROGRESSING event to application upon reception of a PROGRESS message with unknown but syntactically correct event. Unless the message is incorrectly formatted, the event should always be generated.
Resolved	IPY00028372	34427	56	DM3 Voice	Channel gets stuck in a stopping state during record operation, and dx_stopch() doesn't stop the channel.
Resolved	IPY00009683	33685	56	DM3 Voice	dx_stopch() cannot stop voice channel if run in thread.
Resolved	IPY00009231	32953	56	DM3 Voice	Accuracy of call progress analysis (PVD, PAMD) when using the default CPA qualification values for Dialogic® DM3 Boards needs to be improved.
Resolved	IPY00010364	35130	56	Global Call	The GCEV_DIALING event is being reported too early when using PDK CAS/R2 protocol on Dialogic® DM3 Boards.
Resolved	IPY00010129	34274	56	Global Call	Dialogic® Global Call Software does not provide a way to disable DISCONNECT TONE SUPERVISION with pd_k_na_an_io.cdp .
Resolved	IPY00010035	35159	56	Global Call	Under certain conditions when a gc_MakeCall() attempt times out, it incorrectly displays the result message as NORMAL CLEARING instead of timeout.
Resolved	IPY00009094	33816	56	Global Call	When disconnecting and reconnecting spans running the pd_k_mx_r2_io protocol, GCEV_FATAL_ERROR events occur.
Resolved	IPY00008293	35190	56	Global Call	When gc_MakeCall() is issued under PDK CAS, with CPA parameters specified (GC_PARM_BLK), an access violation occurs.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00009426	32539	56	Host Admin	When performing a "Restore Device Defaults," the service startup mode gets reset to automatic, which can cause problems with customers expecting the state to remain at Semi-Automatic or Manual.
Resolved	IPY00009305	34805	56	Host Admin	If you reboot the system without stopping the Dialogic® System Service, an error occurs when trying to start the system again.
Resolved	IPY00009263	33385	56	Host Admin	When a Dialogic® DM/V-A or DM/V-B Board is shut down in DCM, an error event is generated in the Windows® Event Viewer. The error message is "dwCheckPoint=6". The error event can be ignored, since boards can be restarted without error and applications can be run without a problem.
Resolved	IPY00008243	35013	56	Host Admin	Using dt_xmitwink() toggles abcd bits from 0000->1111 instead of 0000->1010 as in previous releases.
Resolved	IPY00028354	34032	56	Host Drivers	When the Dialogic® D/480JCT Board is assigned an interrupt of 45, it causes genload to fail.
Resolved	IPY00009527	34921	56	Host Drivers	A blue screen occurred after stopping the system running on a Q10000 chassis.
Resolved	IPY00010136	33019	56	Host Install	When Dialogic® System Release 6.0 PCI for Windows® is installed on a partition that is not drive C, the first thing the install script does is to delete any existing system release folders in drive C. It does not delete the existing system release in the specified install drive.
Resolved	IPY00008078	33939	56	Host Install	If the user chooses to back up data during the uninstall, an error is generated and the data is not backed up. This issue only affects the Config file migration; DCM and GC migration are OK. The uninstall continues after being prompted for an action, and the uninstall completes.
Resolved	IPY00030907	34175	56	Host Library	Calling sr_getboardcnt() with DEV_CLASS_DCB returns 0 boards with conferencing load.
Resolved	IPY00010556	35157	56	Host Library	Calling ATDV_SUBDEVS() on Dialogic® DM3 MSI stations while alarms are being processed on DM3 trunks on span cards can cause a deadlock condition in the application, which can hang the system for 8 seconds.
Resolved	IPY00028378	34586	56	Protocols	For inbound call, channel is blocked after the remote caller hangs up before sending DNIS, when using pd_k_hk_dtmf_io.cdp .

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00010746	35042	56	Protocols	When using the pdk_us_mf_io protocol, if CDP_OUT_Send_Alerting_After_Dialing = 1 and CPA is disabled, the user expects to get the GCEV_ALERTING event right after dialing. However, if the remote side answers the call too quickly, the GCEV_CONNECTED event is returned and the GCEV_ALERTING event never comes in.
Resolved	IPY00010621	34537	56	Protocols	When using the pdk_us_mf_io protocol in the Feature Group D configuration, ANI is missing the last digit when ANI is not terminated with the expected ST digit.
Resolved	IPY00010372	35035	56	Protocols	After sending CAS_HOOKFLASH, there should be some delay before sending DTMF in pdk_sw_e1_necls_io protocol, if CDP_WaitDialToneEnabled = 0 (i.e., do not wait for dialtone).
Resolved	IPY00010223	34985	56	Protocols	pdk_sw_e1_ermx_io.cdp can only accept one ringing signal (the internal ringing or the external ringing but not both). Defining CAS_RING_APPLIED (0001 -> 0xxx) solves the detection of the two ringing signals but causes problems with outgoing calls.
Resolved	IPY00010004	34685	56	Protocols	When using the pdk_us_mf_io protocol in the Feature Group D configuration, the protocol does not send a Disconnect signal when it times out waiting for DNIS and ANI. This occurs when the remote side is configured as Feature Group B and makes a call.
Resolved	IPY00009837	35049	56	Protocols	There seems to be a hard-coded 30-second timeout on a Make Call when the call is made in Alerting mode, which will terminate the call if no one picks up the phone. The expected behavior is that the call will not be dropped automatically, so the phone will ring forever if no one picks up. This occurs on T1 CAS lines.
Resolved	IPY00009409	34663	56	Protocols	When using FXS protocol and calling a busy station using supervised transfer, you get a disconnect event for both the consultation CRN and transferred CRN.
Resolved	IPY00008220	34972	56	Protocols	When using the pdk_us_mf_io protocol, digits from the previous call are returned in ANI.
Resolved	IPY00007327	30233	56	Protocols	With the pdk_mx_r2_io protocol, if the E1 cable is disconnected and reconnected, the application does not receive all the GCEV_UNBLOCKED events.
Resolved	IPY00006809	34543	56	Protocols	When CDP_IN_DNIS_ST_Needed = 0, the pdk_e1_cas_io protocol should not issue timed-out error while waiting for DNIS.
Resolved	IPY00006771	34329	56	Protocols	Using Belgium R2 protocol, when configured in DTMF/MF mode, in the Offered state the gc_ResetLineDev() function does not behave properly.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00006762	34664	56	Protocols	When using E1 line side protocol and calling a busy station using supervised transfer, you get a disconnect event for both the consultation CRN and transferred CRN.
Resolved	IPY00006748	34587	56	Protocols	The PDK E1 CAS protocol cannot be downloaded on Dialogic® DM3 Boards, and Dialogic® Springware Board channels cannot be opened when using this protocol.
Resolved	IPY00006735	34344	56	Protocols	On Dialogic® DM3 Boards, when dialtone is enabled on Belgium R2 protocol, if the first DTMF/MF digit of DNIS sent is 1 then the DNIS digits received at the inbound side are not the same as sent by the outbound side.
Resolved	IPY00010060	34495	56	SNMP	SNMP service crashes periodically. The event log entry reads: "Faulting application snmp.exe, version 5.2.3790.0, faulting module CosNaming405.dll, version 0.0.0.0, fault address 0x00004e2e".
Resolved	IPY00009266	34050	56	SNMP	<i>dlgagent.log</i> under "c:" is created by SNMP and increases automatically when DCM starts.
Resolved	IPY00010734	34753	56	Springware Fax	In ECM fax send operation, the Dialogic® VFX/41JCT-LS Board sets wrong frame count in PPS message when responding to PPR from remote fax machine.
Resolved	IPY00010365	35132	56	Springware Fax	The operating system hangs when trying to download Dialogic® D/4PCIUF Boards.
Resolved	IPY00010668	34476	56	Springware Firmware	DE_RINGS event is not received properly for double interrupted ring in ROLM 9005 with Dialogic® D42JCT-U Board.
Resolved	IPY00010663	34719	56	Springware Firmware	When DCM is used to set the country code to South Africa (ZA), no audio (or sometimes half-duplex audio) is present.
Resolved	IPY00010611	34999	56	Springware Firmware	Dialogic® Springware NI2 firmware sends out the "Interface Identifier" octet (3.1) all the time for the PROCEEDING message, causing the switch to reject the call.
Resolved	IPY00009068	34788	56	Springware Firmware	Dialogic® D82 Board ports cannot be made VMS port from PBXDRVR.
Resolved	IPY00028211	33249	56	Springware Protocols	BRI/PCI firmware stops normal operation and error -1, ATDV_LASTERR() 3 is returned from dt_listen() .
Resolved	IPY00028318	35012	56	Springware Voice	The first ec_reciottdata() done on each channel after the service starts generates a TEC_STREAM event with a termination type of LCOFF.
Resolved	IPY00009001	34393	39	CSP	Echo canceled data transmitted over the SCbus to another channel using the CSP ExtraTimeslot feature still contains echo.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00009462	34121	39	Global Call	GCEV_FATAL_ERROR events occur frequently when using R2 PDK protocols, and channels can be lost until the boards are redownloaded.
Resolved	IPY00006769	34478	39	Protocols	The default CDP_GrpA_TermToneMask3 for <code>pdk_cn_r2_io.cdp</code> should be 10 instead of 8.
Resolved	IPY00010475	34241	39	Springware Firmware	Using DPNSS firmware, when a call is made to a PBX extension that is on Divert, the application does not receive a Diversion IE and therefore cannot make a call to the "diverted to" extension.
Resolved	IPY00009981	34345	39	Springware Firmware	Events seem to block on certain channels when using CSP firmware.
Resolved	IPY00009374	33099	39	Springware Voice	If an outbound call (or transfer) is initiated with Perfect Call Progress, a return value of no-ringback is received if the remote answers the call between the first and second ring and does not say anything/or a silence.
Resolved	IPY00006804	34319	37	Protocols	If a board is configured using <code>pdk_us_ls_fxs_io.cdp</code> file and a call is abandoned after the first ring, the application is not receiving the GCEV_DISCONNECTED event that is expected.
Resolved	IPY00007640	30390	30	DM/IP Boards	When using Microsoft NetMeeting to call into the <code>iptmail_r4</code> demo, connections fail or DTMFs dialed from NetMeeting are not being detected when using different coders on the Tx (local) and Rx (receive) sides.
Resolved	IPY00009494	33772	30	DM3 Network	Outbound calls fail with "Out Of Order" error on Dialogic® DM3 Fax Board running GDK load.
Resolved	IPY00009525	32827	30	DM3 Voice	If an application calls <code>dx_addspddig()</code> to assign DTMF values to increase and decrease speed, then these DTMF values do not show up in the digit buffer again until the board is redownloaded, even if the conditions are cleared by <code>dx_clrsvcond()</code> .
Resolved	IPY00007997	31583	30	Host Admin	When starting and stopping services, DCMOBJ.EXE memory usage and handle count increase continually and never get deallocated. This also happens when using the NCM API and polling to see if services have started up.
Resolved	IPY00007995	32188	30	Host Library	Any ODI error in the <code>rtflog.txt</code> file that has an error code of 0x2801e can be ignored, since this is not a functional error. This error only indicates that the queried Dialogic® DM3 component does not exist. This is an expected error if the component being queried does not exist in the firmware due to the <code>pcd</code> file downloaded.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00008465	32590	30	NCM API	If an application calls NCM_StartSystem() and then aborts while polling to see if services have started up via NCM_GetSystemState() , then on reattempts at starting services downloads fail and can result in a crash of dlgs_srv.exe.
Resolved	IPY00007269	32571	27	DM3 Network	In a glare condition, a local DISCONNECT message with reason WRONG_MSG_FOR_STATE was received. The reason should be some other Q.931 cause code.
Resolved	IPY00010370	34054	27	GDK	GDK functionality is not operational. GDK channels cannot be detected.
Resolved	IPY00010664	34063	27	Protocols	When you configure a Dialogic® DM3 Board with ISDN 4ESS for USER and NETWORK side, the ANI cannot be extracted properly on an incoming call using gc_GetCallInfo() .
Resolved	IPY00010520	34048	27	Protocols	When you configure a Dialogic® DM3 Board with ISDN 5ESS for the NETWORK side, the ANI cannot be extracted properly on an incoming call using gc_GetCallInfo() .
Resolved	IPY00009272	33981	27	Protocols	When using Qsig protocol, a DISCONNECT message is received 4 seconds of making a call into a cellular network. The cause code is 102 "Recovery on timer expiry".
Resolved	IPY00009442	33994	27	Springware Voice	Dialogic® D/82JCT firmware assert in pbxdvr.c.
Resolved	IPY00010139	33782	25	DI/0408-LS-A	When opening a resource, on connect a file is played (.vox), but when pressing a DTMF the play is not terminated. The DTMF is ignored and the file continues to play.
Resolved	IPY00007715	32343	25	Host Admin	In systems with Dialogic® Springware Boards only, a dialog box with an error message is displayed when accessing any option under Settings->System/Device Autostart of DCM. The error message states "Failed to set Device Autostart setting", and "Requested data not found in NCM data storage."
Resolved	IPY00009887	34053	25	Protocols	When configuring a system to use ISDN NI2 protocol in conjunction with NT1, the D-channel does not come up.
Resolved	IPY00008138	32978	25	Protocols	DPNSS firmware doesn't answer to an EEM(C) *89B# message (Add-On Validation for conference support).
Resolved	IPY00008546	31747	25	Springware Voice	If dx_play() async is called simultaneously with ec_getparm(DXCH_EC_TAP_LENGTH) from another thread on the same voice resource, dx_play() returns TDX_ERROR: Command not supported.
Resolved	IPY00008676	33200	22	Demos	The Voice Demo fails with gc_GetMetaEvent() failure when going offhook with an analog board, such as a Dialogic® D/120JCT Board.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00008283	32979	22	DI Boards	gc_Stop() returns 0 (GC_SUCCESS) before TCP ports are effectively closed.
Resolved	IPY00021448	31633	22	DM/IP Boards	When using Dialogic® DM/IP Boards, the Type Of Service (TOS) byte cannot be set dynamically using either the Dialogic® Global Call API or the Dialogic® IP Media Library API.
Resolved	IPY00009042	31632	22	DM/IP Boards	When using Dialogic® DM/IP Boards, the Type Of Service (TOS) byte cannot be set dynamically using either the Dialogic® Global Call API or the Dialogic® IP Media Library API.
Resolved	IPY00007472	28620	22	DM/IP Boards	Applications should not set the TOS bits through Dialogic® Global Call Software (Parameter = IPPARM_CONFIG_TOS) or Dialogic® IPML Software (Parameter = PARMCH_TOS). This may cause a blue screen.
Resolved	IPY00006801	33501	22	DM/IP Boards	The gc_h3r error entry for failing to retrieve a presentationRestricted should be changed to a level of WARNING.
Resolved	IPY00006731	31661	22	DM/IP Boards	For Dialogic® DM/IP Boards, if an error is returned when attempting to set TOS via Dialogic® Global Call Software, the error message is unclear. Error states: "Received IPMEV_Error during ipm_setParm on device ...: No Error." Setting of TOS field works correctly. Only in cases where API fails (for any reason), the error message is not reported correctly.
Resolved	IPY00007844	27539	22	DM3 Network	If a call is received on Q.931 where there is no channel ID in the SETUP message, the call is rejected by the firmware.
Resolved	IPY00008337	33011	22	HDSI Boards	Modifications to the ring frequency in the HDSI CONFIG file do not take effect.
Resolved	IPY00007737	32060	22	PBX Expert (previously called PBXpert)	The Dialogic® D41JCT-LS Board fails to test the disconnect tone (affects all JCT boards). Problem appears to be in the Dialogic® Voice Library with using dx_open() a second time in PBX Expert.
Resolved	IPY00007308	31896	22	Springware Firmware	On a Dialogic® D/82JCTU Board using CSP firmware, multiple channels dialing at the same time cause the board to become non-responsive and report device busy errors. The system stops responding with an assert.
Resolved	IPY00008056	33690	22	Springware Voice	Turning Silence Compressed Record on via the <i>voice.prm</i> file causes distortion on Dialogic® D600JCT2E1 Boards, rendering recorded files unusable. This problem occurs when recording in 8kHz linear format.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00007937	32318	22	Springware Voice	An intermittent problem has been seen when dx_rec() is called synchronously and fails to return after calling dx_stopch() on that channel from another thread. Even after exceeding the MAXTIME timeout value for the dx_rec() , it still leaves the channel in a hung state.
Resolved	IPY00007803	31782	18	Call Logging	The cl_ReleaseTransaction() function has no effect on non-call-related transactions; memory keeps increasing.
Resolved	IPY00008046	32435	18	CSP	There is no CSP extra timeslot assigned even though ExtraTimeslot is set to ON in DCM with the CSP firmware selected. As a result, ec_getxmitslot() returns 0 and there is no way to share the echo canceled data with another channel through the SC/CT Bus.
Resolved	IPY00009423	32858	18	CSP Demo	CSPAUTO demo fails to return TEC_STREAM event if more than one process is run per board.
Resolved	IPY00009017	32209	18	D/240JCT-T1	When dualcall feature is enabled, firmware selects channel 1 for incoming call while the channel is being used for outbound call.
Resolved	IPY00008476	32065	18	D/240JCT-T1	With high call load, a firmware crash occurs on Dialogic® D/240JCT-T1 Boards running NTT protocol.
Resolved	IPY00008169	31242	18	D/82JCT-U	Dialogic® D/82 firmware is not reading proper integration data from the 2-line display when integrated with vectors instead of hunt groups on a G3 switch. It only reads the second line of the display.
Resolved	IPY00008405	32026	18	D30EP	The Dialogic® D30EP Board should respond with REL COM message after receiving a SETUP message including the IBCAP message block.
Resolved	IPY00009633	33596	18	Demos	Ansrmt demo code does not include copyright notice, and execution of the demo prints "Dialogic" on the output screen.
Resolved	IPY00008420	32765	18	Diagnostics	Under certain call scenarios and when the application first starts, GetCallid errors are logged to DebugAngel. If not regularly checked, this file will grow. If this message is benign, it should not be logged.
Resolved	IPY00008839	33389	18	DM/IP Boards	RTP data sent over IP immediately after a fax CED call progress tone may be delayed and cause choppy audio at a receiving device. In a back to back configuration, the fax CED call progress tone is not always detected when using 30 ms G.711 coders.
Resolved	IPY00008962	32275	18	DM/V Boards	MAXSIL with CSP on Dialogic® DM/V Board is not working using the CSP stream.
Resolved	IPY00007390	31844	18	DM/V Boards	ISDN protocols mixed with DPNSS protocol in a single system will not work if the NetCRV feature is enabled for DPNSS through the registry setting.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00009922	33056	18	DM3 Fax	When sending a multi-page fax to a Dialogic® DMV1200BTEP Board running UL1, it appears that the fax was received successfully from the sending side. However, when opening the received tiff file, you see that it only received the first page of the fax.
Resolved	IPY00009597	32651	18	DM3 Firmware	GCEV_ANSWER events are missing when using NI2 (ml2_qsa_ni2).
Resolved	IPY00009103	33425	18	DM3 Firmware	Static-sounding background noise trails voice in conferences with more than six parties.
Resolved	IPY00009080	33144	18	DM3 Firmware	GCEV_DROPCELL event is not always returned from gc_DropCall() after call glare has occurred.
Resolved	IPY00010478	33053	18	DM3 Host Runtime Library	During a hold glare scenario, the application never receives a GCEV_HOLDREJ event.
Resolved	IPY00009554	32913	18	DM3 Host Runtime Library	The application doesn't receive a GCEV_UNBLOCKED event after an alarm is cleared.
Resolved	IPY00008893	32725	18	DM3 Host Runtime Library	An ERR entry for circular buffer underruns occurs when the streaming to board feature is used on a Dialogic® DM/V960A-4T1 Board. This causes the rtflog file to roll over more quickly, thus losing valuable data.
Resolved	IPY00008422	33443	18	DM3 Host Runtime Library	The dx_stopch() function does not return when called synchronously.
Resolved	IPY00008651	32111	18	DM3 Media Span	When running high density Dialogic® DM3 Media Span systems, the Windows® Event Viewer may become populated with SRAM corruption errors. There will be no other system impact.
Resolved	IPY00008659	32773	18	DM3 Network	The gc_SetInfoElem() function does not allow you to set MLPP IE (0x41) nor does it allow CodeSet shift 5 (0x95) when using 5ESS or 4ESS on Dialogic® DM3 Boards.
Resolved	IPY00008391	31850	18	DM3 Network	The Connected Number Information Element is ignored in CALL CONNECT ISDN message.
Resolved	IPY00007916	32554	18	DM3 Network	When a span is set as NET5 network end and an incoming SETUP message comes in without a channel ID IE, the SETUP is ignored.
Resolved	IPY00007370	27563	18	DM3 Network	When using the DMS100 protocol, after a RESTART message is received, all B-channels are put Out Of Service and all inbound calls are rejected with Cause code 44, channel busy.
Resolved	IPY00007288	27764	18	DM3 Network	Outbound calls fail when the ALERTING message contains a Non-Locking Shift IE.
Resolved	IPY00010660	33502	18	DM3 Voice	Board resets when multiple parties are added and removed from conferences.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00009279	33694	18	DM3 Voice	dx_reciottdata(ASYNCR) returns 0 but fails to return any event, and after that, the channel does not respond to any commands.
Resolved	IPY00008559	32510	18	DM3 Voice	The fcdgen utility reports an error when changing the default PVD/PAMD qualification parameters.
Resolved	IPY00007872	33351	18	DM3 Voice	The dx_playtoneEx() function stopped after 40 repetitions; it did not play as long as defined.
Resolved	IPY00009673	33519	18	Global Call	After many successful outbound calls, a gc_MakeCall() fails with GCEV_DISCONNECTED (gc_msg=Event caused by protocol error, cc_msg=Pcakup). After that, all subsequent calls on that network device fail with the same reason. The problem gets cleared only after the device is closed and reopened.
Resolved	IPY00009517	33543	18	Global Call	GCAMS incorrectly reports the DCHAN_CFA alarm as a DTE1_LOS alarm when the D-channel is down.
Resolved	IPY00009457	32846	18	Global Call	The gc_DropCall() function fails to send a completion event when an alarm occurs right after the function is issued.
Resolved	IPY00009131	32810	18	Global Call	Running a Dialogic® Global Call program with both analog and digital line devices enabled will cause an error if the program also opens a digital board device. The following error message is generated: Insufficient number of funtbls.
Resolved	IPY00009024	32014	18	Global Call	When performing call progress using the gc_MakeCall() function on Dialogic® DM3 Boards, the TSP does not distinguish between the CaNoRingback and CaNoAnswer responses.
Resolved	IPY00008150	33069	18	Global Call	gc_MakeCall() changes the CRN value after the permanent signal timer expires.
Resolved	IPY00009466	32615	18	Host Admin	Only administrators should have write access to the RTF config file.
Resolved	IPY00008881	33156	18	Host Admin	In certain systems, the transmit timeslot information is not correctly assigned for a few devices on a board. For example, dx_getxmitslot() will return -1 on certain devices, or the output from devmapdump will not show the correct transmit timeslot information for certain devices, while other devices on the same board will have correct transmit timeslot information. There is a high probability that this problem occurs on the first few devices on a board.
Resolved	IPY00007352	31530	18	Host Admin	Uninstall cleanup utility does not report whether it passed or failed.
Resolved	IPY00030671	32696	18	Host Drivers	After the Driver Verifier finds an obsolete call used in the device driver, a blue screen occurs.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00030669	32557	18	Host Drivers	A blue screen occurs during the boot verification tests performed by the Windows® kernel using Verifier.exe.
Resolved	IPY00009015	32108	18	Host Drivers	The dx_stopch() function does not return with a completion event on several channels.
Resolved	IPY00010161	33665	18	Host Install	Installation of the Dialogic® System Release Software fails when the Windows® PATH environment variable is not defined. After making all install selections, and "Next" is clicked to begin the copy of files, a pop-up box marked "Severe" appears reporting the following error: "Failed to set the environment variable (path)". The install then aborts.
Resolved	IPY00008769	32441	18	Host Install	Files are left on the system after doing an uninstall.
Resolved	IPY00007781	32411	18	Host Install	Boards can't be started when UNC names are used during the install for directory paths.
Resolved	IPY00007620	31945	18	Host Install	During the install using Terminal Server, an error pops up for GDKInf.exe.
Resolved	IPY00009004	32303	18	Host Library	An application may see a deadlock while using Streaming to Board. For Streaming to Board, an application calls dx_PutStreamData() to put data in the Circular Stream Buffer. As a result of issuing this API, if the total size of the data in the Circular Stream Buffer happens to cross the high water mark set by the application, a process deadlock may occur between the application thread calling the dx_PutStreamData() and an internal thread in the library.
Resolved	IPY00008151	33070	18	Host Library	Problems occur with rtf logging; enabling modules in 'RtfConfigWin.xml' does not log any information to the <i>rtflog.log</i> file.
Resolved	IPY00008535	31333	18	ISDN Protocols	The 5ESS protocol firmware on Dialogic® JCT Boards does not handle incoming STATUS messages with a cause value "Response to Status Enquiry" properly.
Resolved	IPY00009183	32625	18	ISDN Q.SIG Protocol	When the service provider sends a STATUS message carrying cause value 100 (invalid information element contents), the board responds with an immediate disconnect.
Resolved	IPY00030912	33334	18	Protocols	pdk_us_ls_fxs_io reports that the firmware detected a disconnect tone while there was no disconnect tone on the line. Calls are being falsely disconnected because of this.
Resolved	IPY00030679	33146	18	Protocols	When using the pdk_us_mf_io protocol, the GCEV_UNBLOCKED event is not generated when Layer 1 alarms are cleared after the channel is put OOS.
Resolved	IPY00028277	32444	18	Protocols	A GCEV_MEDIADETECTED event is not generated on the Dialogic® DM/V160-LP Board even though the call is answered at around 30 seconds.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00009407	32547	18	Protocols	The gc_SetChanState() function fails to return a completion event or error indication when using the pdk_us_mf_io protocol on a Dialogic® DM/V960A-4T1 Board.
Resolved	IPY00008963	32443	18	Protocols	A GCEV_MEDIADETECTED event is not generated when running FXS on a Dialogic® DM/V960A-4T1 Board and the call is not answered until after the CA_ANSWER time-out.
Resolved	IPY00008634	31778	18	Protocols	cc_CallAck() sends incorrect IEs when used for sending a host controlled PROCEEDING message.
Resolved	IPY00008374	32601	18	Protocols	The gc_SetChanState() function fails to return a completion event or error indication when using the pdk_us_mf_io protocol on a Dialogic® DM/V960A-4T1 Board.
Resolved	IPY00007955	17567	18	Protocols	With the Dialogic® D/240SC-T1 Board, the 4ESS protocol does not support multiple restart.
Resolved	IPY00007716	27336	18	Protocols	When using the ETSI option to drop a call by directly sending a RELEASE instead of a CALL DISCONNECT message, the response is "REL" but should be "REL COMPL".
Resolved	IPY00007573	29445	18	Protocols	The gc_MakeCall() function "timeout" parameter with pdk_us_mf_io times out after a maximum of 45 seconds when using wink start protocol.
Resolved	IPY00009171	29859	18	Springware Boards	A board configured for Layer 2 access should be able to bring down/up layer 2 on demand. When cycling a few times through the UP and DOWN states with the NE1 firmware on trunk 1 and CTR4 firmware on trunk 2, it eventually becomes impossible to activate layer 2.
Resolved	IPY00009099	33444	18	Springware Fax	When sending fax to a Xerox Able 1221 fax machine, Dialogic® VFX/JCT fax firmware does not respond to the NSF/CSI/DIS. This is because the NSF was 67 bytes long but the hdlc buffer was only 64 bytes long.
Resolved	IPY00007528	32416	18	Springware Fax	Multiple page fax receiving terminates with EFX_DCNFAXRX = 129 (Unexpected DCN while waiting for EOM/EOP/MPS) when receiving from a Canon G3 High Speed Laser 3170MS machine.
Resolved	IPY00009008	32192	18	Springware Firmware	Disconnect glare causes the next call to be refused with cause code 44 - requested channel not available. Disconnect glare is caused when the user side hangs up; but before the switch recognizes this disconnect, it sends its own disconnect. The next incoming call should be accepted, but in some cases it is being rejected, with the ISDN firmware responding that the channel is not available.
Resolved	IPY00008640	32704	18	Springware Firmware	There are caller ID issues (with single and multiple hop forwarded calls) when using the Nortel Norstar PBX.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00008592	32678	18	Springware Firmware	Two bytes of corrupt data are observed in the D-channel trace whenever cc_SetInfoElem() is called to set the value for the CALLING_LINE_ID number in a SETUP message.
Resolved	IPY00008537	32161	18	Springware Firmware	CTR4 firmware responds with STATUS message when Calling Party Subaddress contains 0xF9 (or similar value). On some networks, the status message may cause the network to tear down the call.
Resolved	IPY00007984	32104	18	Springware Firmware	When running into PDK R2 glare conditions, false R2MF time-outs occur in the spanplus firmware, resulting in calls not connecting properly.
Resolved	IPY00007421	25633	18	Springware Firmware	Incorrect response to Release message when using Dialogic® D/600JCT-2E1 Board.
Resolved	IPY00007241	31840	18	Springware Firmware	When there is a call collision between an outbound and inbound call, gc_GetSigInfo(...U_IES...) sometimes fails with error 0x303=Information not available. The functions gc_GetANI() and gc_GetDNIS() return the correct information.
Resolved	IPY00007235	29328	18	Springware Firmware	When using gc_SetInfoElem() to set the calling party number in a SETUP message, the first two digits are missing.
Resolved	IPY00009562	32733	18	Springware Voice	Using ISDN NT1 with a Dialogic® D/480SC-2T1 Board, when the inbound application is to receive a call, the calling (Telco) side receives an error message 'protocol error' and the call is dropped.
Resolved	IPY00009242	31777	18	Springware Voice	Caller ID is not available on Dialogic® D/120JCT Boards if noise is present on the line.
Resolved	IPY00008215	28550	18	Springware Voice	With the Dialogic® DTI/240SC Board, when the inbound application is to receive a call, the calling (Telco) side receives an error message 'protocol error' and the call is dropped.
Resolved	IPY00021218	30986	--	Conferencing (CNF)	When using the Asynchronous programming model in a CNF application, API timeouts may be observed under certain heavy load conditions, particularly if the user is adding or removing parties or creating/tearing down conferences at a high rate.
Resolved	IPY00022229	25660	--	Conferencing (DCB)	When calling dcb_setcde() to set the attribute of a conferee, the value MSPA_MODEFULLDUPLEX cannot be ORed with any other MSPA_ value and has to have its own dcb_setcde() called for it. This was resolved by updating the <i>Dialogic® Audio Conferencing API Library Reference</i> .
Resolved	IPY00011782	29318	--	CSP	TEC_VAD event does not occur when DM_VADEVTS is set by ec_setparm() .
Resolved	IPY00030605	25864	--	CSP Demo	For CSPdemoDM3 demo, the "wait for ring/wink" option (-w) does not work for Dialogic® DM/V-A Boards.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00020943	24719	--	CSP Demo	Typos in printf statements of cspdemo code may mislead troubleshooting.
Resolved	IPY00012124	28389	--	D/300JCT-E1	Dialogic® D/300JCT-E1 Board crashes with an unstable E1 line.
Resolved	IPY00012757	27544	--	D/480JCT-2T1	When trying to configure the Dialogic® D/480JCT-2T1 Board for SoftFax capability, the <i>spfax.fw</i> firmware file option is listed as available for "FirmwareFile" (span 1) category but not for "FirmwareFile2" (span 2) in their respective pull-down menus.
Resolved	IPY00011986	28826	--	D/480JCT-2T1	dx_stopch() does not terminate call progress analysis when using DX_CAP parameter: <i>ca_intflg</i> = DX_PVDOPTNOCON, or DX_PVDENABLE, or DX_PVDOPTEN.
Resolved	IPY00030589	25101	--	D/600JCT-2E1	Windows® Device Manager fails to install Dialogic® D/600JCT-2E1 Board.
Resolved	IPY00030597	29237	--	DCM	Dialogic® DM/V480-2T1 and DM/V960-4T1-PCI Boards are not detected by DCM on a Windows® 2003 system (.NET).
Resolved	IPY00019208	23343	--	DCM	ML2_120 is displayed in DCM instead of ML6_120 when configuring an E1 QS A with Media Load 6.
Resolved	IPY00019147	29041	--	DCM	Default setting of DISI32_R2_UK.config is mu-law even though UK uses A-law.
Resolved	IPY00014213	28818	--	DCM	When the RTF is activated and the DCM is stopped, the size of rtflg.txt generated becomes 0 KB.
Resolved	IPY00014103	28004	--	DCM	The DCM cannot load certain .tsf files properly to detect certain tones, especially when a tone is noisy and the volume is low.
Resolved	IPY00012759	27658	--	DCM	Under the Interface tab in DCM, users are allowed to put a blank in the place of ISDNProtocol and ISDNProtocol2 instead of "None" and this leads customers to wrongly believe that this is the method to download non-ISDN firmware.
Resolved	IPY00008135	29106	--	DCM	More than five boards cannot be downloaded and started through the DCM in some dual-processor chassis.
Resolved	IPY00019091	29917	--	Demos	The demos under demos\voice directory have problems compiling.
Resolved	IPY00015573	28376	--	DI Boards	The number of tone templates defined in the config/fcd files should be less than 88 to guarantee no runtime problems. If more than 88 are defined at download, care should be taken to not exceed 128 total during runtime.
Resolved	IPY00014097	27655	--	DI/0408-LS-A	R4 High Performance libraries fail to return NAME or DATE for CallerID info on Dialogic® DI/0408-LS-A Boards.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00012765	28171	--	Dialogic System Service	Memory leaks with every Dialogic® System Start/Stop iteration. Repeatedly stopping and restarting eventually consumes all memory.
Resolved	IPY00022013	29211	--	DM/IP Boards	For ipvs_evr_isdn_net5_307, using the IPML test series, DTMF/tone tests have about 80% failure rate in detecting the digits/tones accurately.
Resolved	IPY00020968	28273	--	DM/IP Boards	An ARRAY FULL failure can occur on the PQ-II processor (SP13) on Dialogic® DM/IP Boards in a bulk SIP-call environment when more than 80% of the channels are being used on each board.
Resolved	IPY00020965	27459	--	DM/IP Boards	Application returns "synchronization object time out" error when calling IPML functions.
Resolved	IPY00020954	26090	--	DM/IP Boards	An IP call to a non-existent IP address returns "normal clearing".
Resolved	IPY00020951	25615	--	DM/IP Boards	In the iptmail_r4.dsp parser in the apppars.c module cannot handle 0D0D0A (CRCRLF) in the last line of the iptmail_r4.cfg, which causes iptmail_r4 to crash in In_mailInitialization() function.
Resolved	IPY00020557	28561	--	DM/IP Boards	gc_GetCTInfo() wrongly reports bus encoding as mu-law when called on a Dialogic® DM/IP Board configured for A-law operation.
Resolved	IPY00020556	28282	--	DM/IP Boards	When attempting a stop procedure using gc_Stop() , the handlers are trying to be disabled without checking whether they were enabled in the first place.
Resolved	IPY00020545	29167	--	DM/IP Boards	Error messages in GC_H3R logs while running fax over IP (Non T.38).
Resolved	IPY00014105	28272	--	DM/IP Boards	When DMA is enabled on Dialogic® DM/IP Boards and a host to board or board to host DMA transfer is taking place, there is a chance that the transfer might not complete and the board would hang waiting for the completion to occur.
Resolved	IPY00012521	29111	--	DM/IP Boards	Downloading IPVSC firmware creates iptBxTy in the registry.
Resolved	IPY00009062	19233	--	DM/IP Boards	Trying to change media type on the TDM Bus from mu-law to A-law or vice versa with a T1 or E1 Dialogic® DM/IP Board in the system, produces error message "error calling CTBB_UserApply()".
Resolved	IPY00032019	25211	--	DM/V Boards	Out-of-Service messages are not sent out on a Dialogic® DM/V960-4T1-PCI Board in NFAS configuration.
Resolved	IPY00016138	27431	--	DM/V Boards	Dialogic® DM/V Board fails to download if call progress is set to "y".
Resolved	IPY00016062	28905	--	DM/V Boards	Doing a gc_close() on the 120th channel using R2MF, it may occasionally take approximately 8 seconds to go out of and back into service.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00015557	27160	--	DM/V Boards	Using Dialogic® DM/V960 (qs_ protocol) Board, dx_rec() does not return immediately after the actual recording finishes.
Resolved	IPY00014898	26665	--	DM/V480A-2T1	Operator intercept outcomes are falsely detected as positive answering machine when doing call progress analysis with Dialogic® DM/V480A-2T1 Boards.
Resolved	IPY00019232	25922	--	DM/V-A Boards	The board type for the media load ml1_pcd, ml10_pcd, ml9b_pcd are identified as DM/V1200A-PCI although these are pcd files for Dialogic® DM/V2400A-PCI Boards.
Resolved	IPY00016183	28779	--	DM/V-A Boards	Channels are not set in service upon setting channel state when parm 1312 is set to 0 (default) in ml2_qsa_4ess.config.
Resolved	IPY00016180	28553	--	DM/V-A Boards	D channel will not recover if line taken out-of-service and put back in-service when the channel is connected.
Resolved	IPY00015512	29922	--	DM/V-A Boards	Download failures of <i>ml2_qsa_net5.pcd</i> and <i>ml2_qsa_qsige1.pcd</i> files on Dialogic® DM/V1200A-4E1-PCI Boards.
Resolved	IPY00015507	29486	--	DM/V-A Boards	dx_playiottdata() does not return any events. This happens with Dialogic® DM/V960A and DM/V480A Boards.
Resolved	IPY00016159	27903	--	DM3 Fax	When using the Dialogic® DM3 Fax E1 board to receive fax, the signal gain is too high. The DM/F300 Board fails to receive fax from some old models of fax machines. This does not happen with new models of fax machines.
Resolved	IPY00014110	28684	--	DM3 Fax	When sending a fax from a Dialogic® DM/F240 Board through a Dialogic® JCT front-end board, some fax pages show reversed data.
Resolved	IPY00021322	29294	--	DM3 Firmware	Central Processor Failure is returned in the event log after making a few calls.
Resolved	IPY00012770	28838	--	DM3 Install	Windows® device manager (WDM) unable to load dlgcdm3_nt4.inf for Dialogic® DI/0408-LS-A and DI/SI32 Rev 2 Boards.
Resolved	IPY00016070	29869	--	DM3 Network	After re-download of remote side, the local Layer2 still thinks that Layer1 is down and does not issue SABME request.
Resolved	IPY00015578	28841	--	DM3 Voice	"Device busy" message on voice resource after calling quickly dx_stopch() on dx_TxRxIottData() .
Resolved	IPY00015574	28393	--	DM3 Voice	dx_TxRxIottData() ignores TPT maxtime termination when receiving FSK data.
Resolved	IPY00015360	25285	--	DM3 Voice	dx_dial() with "T" parameter does not set digits to DTMF.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00014104	28121	--	DM3 Voice	Need a method to improve call progress analysis on Dialogic® DM3 Boards similar to that for Dialogic® Springware Boards.
Resolved	IPY00008770	29169	--	DM3 Voice	Time out waiting on reply from firmware when <code>ms_setstparm(MSSP_STPWR, MS_PWROFF</code> or <code>MS_PWON)</code> command was issued.
Resolved	IPY00019150	29550	--	DMV160LP	<code>dx_playiottdata()</code> never returns any event.
Resolved	IPY00016174	28266	--	DMV160LP	Debug messages that shouldn't be there show up in the DebugAngel viewer.
Resolved	IPY00016064	28972	--	DMV160LP	Caller ID is not received reliably 100% of the time. Upon caller ID failure, the application receives an empty caller ID string.
Resolved	IPY00008722	29103	--	DMV160LP	PBXs that provide excessive leakage current within 300 msec after a disconnect may trigger a false ring indication.
Resolved	IPY00008233	28782	--	DMV160LP	<code>dx_getfeaturelist()</code> indicates that CSP is supported on the 5th virtual board (which contains the fax resources), but CSP functions cannot be called on these resources.
Resolved	IPY00015228	31100	--	DMV160LPHIZ	The functions <code>cl_StartTrace()</code> , <code>cl_StopTrace()</code> and <code>cl_DeCodeTrace()</code> are not supported on Dialogic® Analog HiZ boards. If the buttons to "Start Trace", "Stop Trace" or "Decode Trace" are selected from the Sniffer menu bar of the SnifferMFC demo while running with the Dialogic® DMV160LPHIZ Board, error code "0x3006 function not supported" will be returned. This information will be added to the <i>Dialogic® Call Logging API Software Reference</i> .
Resolved	IPY00015226	31072	--	DMV160LPHIZ	In the SnifferMFC.EXE, the ability to select TSC as an argument for <code>cl_Open()</code> was omitted. The problem can be resolved by recompiling SnifferMFC from source.
Resolved	IPY00015217	30280	--	DMV160LPHIZ	Fax tones can't be reliably detected if PVD and PAMD detection are disabled while call analysis is enabled. To ensure that fax tones can be detected for call analysis, make sure that PVD and PAMD are enabled.
Resolved	IPY00011464	30206	--	DMV160LPHIZ	Collection of dialed digits is not supported for outbound calls.
Resolved	IPY00008173	30959	--	DMV160LPHIZ	The <code>cl_GetMessageDetails()</code> function returns an "<unknown>" message text for the <code>pszName</code> instead of displaying the proper message text in the cases of "CallInfo_CallerName" and "CallInfo_DateTime". This issue pertains to Dialogic® Analog HiZ Boards only.
Resolved	IPY00032022	55549	--	Global Call	Incorrect cause returned for event GCEV_BLOCKED.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00021487	24364	--	Global Call	Using dx_delltones() in connected state causes gc_DropCall() to hang. This was updated in the <i>Dialogic® Global Call Analog Technology Guide</i> .
Resolved	IPY00019243	25537	--	Global Call	dx_close() fails if called after gc_close() in a Dialogic® R4 Library application that uses gc_attach() .
Resolved	IPY00019149	29335	--	Global Call	Running a modified gc_basic_call_model application (play/record features added), for the first time there are no problem. However, after ending the application and running it a second time, errors are seen in the DebugAngel log.
Resolved	IPY00016068	29758	--	Global Call	If an application exits ungracefully two times in a row, upon a third application execution, gc_MakeCall() always returns with GCEV_DISCONNECTED.
Resolved	IPY00016066	29040	--	Global Call	GCEV_OFFERED event received on a board device (DTIB1) causes application to crash when using overlap receive.
Resolved	IPY00015514	30170	--	Global Call	A NON RECOVERABLE FATAL ERROR occurs if a call is dropped at the remote-end in the ACCEPTED state. After that, the port is dead and there is no way to feasibly recover.
Resolved	IPY00007743	30029	--	Global Call	Sometimes the first gc_MakeCall() under T1 ISDN with R4 will not complete successfully.
Resolved	IPY00007242	28807	--	Global Call on IP	Applications using Dialogic® Global Call over IP cannot switch from voice to T.38 fax after receiving CNG/CED tone. The remote side can initiate a switch from voice to T.38 by either sending a RequestMode for H.323 or a Reinvite for SIP. Currently, Global Call does not support the sending of RequestMode or Reinvite.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00014904	28798	--	Global Tone Detection	<p>If you have trouble detecting tones and see "Can't allocate space in suspect list for GTD(x)" in the DebugAngel output, consider the following:</p> <ul style="list-style-type: none"> • Seeing this message is not necessarily a problem. If you are properly detecting tones of interest, this message can be safely ignored. It is generated when too many tone frequency ranges overlap the signal actually being received. Because the commonly used, predefined tones (e.g. DTMF tones and Call Progress), are given precedence on the list, detection of standard tones is not compromised. • You may wish to review any user-defined tones to ensure that they do not duplicate predefined tones. While detection will not be impacted, the tracking of multiple definitions of the same tone is inefficient. <p>If you cannot detect a user defined tone and are seeing the above message, it usually means the newly defined tone overlaps a frequency range that is already used by several existing tones. This can often be remedied by taking one or more of the following steps:</p> <ul style="list-style-type: none"> • Check for duplication of tones. Are you adding tones that differ by only small values? Are you duplicating existing default tones? If so, try to consolidate. Use or redefine existing tones instead of creating new ones that differ only slightly. • Check for unnecessarily wide frequency tolerances. Try to use ranges only large enough to meet requirements. Very large ranges do not improve detection, and can negatively impact efficiency. • When you have discretion as to what frequency areas to use for your user defined tones, try to choose a range that is little used by standard tone definitions. <p>The above suggestions will improve detection efficiency even when no errors are observed.</p>
Resolved	IPY00030591	25747	--	HDSI Boards	Rebooting a Dialogic® HDSI system with DCM set to autostart will occasionally fail to come up with fatal error in MSILineActivate.exe.
Resolved	IPY00019274	27450	--	HDSI Boards	Dialogic® System Release 5.1.1 does not include proper CONFIG/PCD/FCD files for configuration of MSI/1200 (HDSI) to be used with SIB units less than 120 ports.
Resolved	IPY00030595	27307	--	Host Admin	The perfcttl program fails to start and prevents the enabling of Dialogic counters.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00020547	29189	--	Host Admin	Error message "rAddExt (VT Tree) Array Full (124725)" printed on the screen when running with Slow Start.
Resolved	IPY00020546	29188	--	Host Admin	Error messages in GC_H3R logs when trying to run with Slow Start.
Resolved	IPY00012764	28169	--	Host Admin	CTBB services assign two ports UDP and TCP that just listen. These port numbers are randomly assigned and that makes it hard to leave these port numbers open.
Resolved	IPY00019757	31086	--	Host Install	When installing the Dialogic® System Release Software, pressing F1 for online help on any of the install screens results in an error. To access online help, go to the root directory on the CD and double-click on install.hlp. This error message does not negatively affect the rest of the software installation; all files are properly installed.
Resolved	IPY00012763	28122	--	Host Install	Uninstalling Dialogic® System Release 5.1.1 will cause an existing CT-Connect install to fail.
Resolved	IPY00007575	29790	--	Host Install	The installation screen has incomplete instructions and the help is incorrect.
Resolved	IPY00016067	29539	--	Host Library	No event generated when CO sets B channel(s) out of service. Application keeps calling on blocked channels.
Resolved	IPY00016178	28372	--	ISDN	Dialogic® DM3 ISDN firmware formats all outbound messages with the Interface ID bit set to 1. This has resulted in both incoming and outgoing calls being rejected.
Resolved	IPY00016168	28084	--	ISDN	When performing ISDN tracing on all spans in a bulk call environment, dual span boards can encounter firmware crashes with just one board running.
Resolved	IPY00007887	29513	--	ISDN	Under heavy load, firmware assert happens in vb_util.c when working with ISDN protocols.
Resolved	IPY00019148	29058	--	Modular Station Interface (MSI)	ms_genring() will cause an application to crash (in libdm3msi.dll) if you open the same MSI device twice and if you execute the ms_genring() on the second device handler. Workaround: Don't open the MSI devices twice.
Resolved	IPY00019145	28944	--	Modular Station Interface (MSI)	Using MS_RNG_DEFAULT in the ms_genringex() function generates "Invalid Ring Cadence" error.
Resolved	IPY00012520	29075	--	NCM API	Attempting to add a new device using NCM_AddThirdPartyDevice() fails with a name that is subset of an existing device name.
Resolved	IPY00022302	27992	--	NCM Documentation	NCM_DetectBoardsEx() does not give list of PCD files for Dialogic® DM3 Boards. This was resolved by updating the NCM API documentation.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00013978	25586	--	PBX Expert (previously called PBXpert)	PBX Expert defined disconnect tone does not trigger LCOFF event in the application.
Resolved	IPY00016065	28992	--	PBX Integration	The Called side drops a connection when trying to connect from channel 1 to channel 2 through a PBX.
Resolved	IPY00014328	26154	--	PBX Integration	The Hardware Wizard continues to appear each time the machine boots and asks for the correct device driver when using either the Dialogic® D/82JCT-U or D/42NE-PCI Board.
Resolved	IPY00009506	28636	--	PBX Integration	A phantom ring event is generated on the Nortel Meridian.
Resolved	IPY00009268	29354	--	PBX Integration	Call id on the Dialogic® D/82 Board is inaccurate when using networked Meridian switches.
Resolved	IPY00009010	27123	--	PBX Integration	Dialogic® D/42JCT-U Board Mitel integration: When there is a T in the display, it is detected as a trunk call.
Resolved	IPY00008814	29442	--	PBX Integration	Setting or clearing MWIs too quickly causes a loss of ability to dial feature codes.
Resolved	IPY00008813	29388	--	PBX Integration	Forwarded calls that originate on a networked Mitel SX2000 switch are not being tagged with the correct callid strings.
Resolved	IPY00008445	29094	--	PBX Integration	Host application does not receive TD42_ASYNCCHSTATUS in Mitel 2000.
Resolved	IPY00016176	28334	--	PDK	The num_rings parameter for gc_AnswerCall() does not work on Dialogic® DM3 PDK, and always defaults to 2.
Resolved	IPY00016173	28222	--	PDK	PDK Manager takes a long time to load (several minutes per board).
Resolved	IPY00016167	28077	--	PDK	Single board start/stop fails on Dialogic® DM3 Boards with PDK protocols.
Resolved	IPY00016157	27800	--	PDK	pd_k_us_mf_io fails to detect busy when used on Dialogic® DM3 Boards.
Resolved	IPY00015569	28209	--	PDK	The ml1_ds2_cas.pcd file will print the message "timerIdx = 61166" while running test application.
Resolved	IPY00014188	30005	--	R4 Libraries	Running Dialogic® R4 application under the VC++ 6.0 debugger results in 100% CPU utilization and missing events after closing and reopening Global Call devices
Resolved	IPY00021428	30443	--	Springware Boards	The listboards utility will not display the model number, configuration ID, or the driver state for Dialogic® Springware Boards.
Resolved	IPY00007547	29780	--	Springware JCT	Dialogic® D/41JCT and VFX/41JCT Boards do not set correct RING status bit after first boot up.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Resolved	IPY00008416	29635	--	Springware Protocols	Application calling dx_dial() to perform call progress analysis (CPA). Incorrect CPA result of CR_ERROR = 2 (CR_TMOUTON) can be seen under these conditions: <ul style="list-style-type: none"> Valid SIT tone can be heard on the other end of the call, but CPA results return CR_ERROR = 2 (CR_TMOUTON). Similarly, if a single tone beep is heard on the line which is within range of any of the 3 SIT frequencies set in DX_CAP structure, dx_dial() again returns CR_ERROR = 2 (CR_TMOUTON).
Resolved	IPY00030588	27302	--	Springware Voice	The firmware asserts when the application calls dx_stopch() to stop dx_rec() . The firmware assert is an unexpected interrupt.
Resolved	IPY00014187	29372	--	Standard Runtime Library (SRL)	Synchronous function can become blocked when sr_waitevt() is called from another thread.
Resolved	IPY00012758	27572	--	UDD	Dialogic® Diagnostics Software (UDD) does not work correctly on Dialogic® D/600JCT-2E1 Boards.
Resolved	IPY00007492	29714	--	VFX/41JCT	Dialogic® VFX/41JCT Board failed with ATFX_ESTAT() error code 102 - Got DCN while waiting for DIS.
Resolved	IPY00022258	27159	--	Voice Documentation	Voice documentation does not specify time units for the Voice Board Parameters (Table 4). This was fixed in the <i>Dialogic® Voice API Library Reference</i> .
Known (permanent)	IPY00006127	33837		Board Download	The UK country parameter file for the Dialogic® D/41JCT-LS Board is missing from the release. If a D/41JCT-LS Board is configured for use in the United Kingdom (DCM Country parameter is set to United Kingdom), the system will start, but the system event log will report the following error: Error downloading file. The uk_41j.prm file cannot be found. Workaround: To correct this problem, locate the file <i>eu_41j.prm</i> in the <i>Program Files\Dialogic\data</i> directory and rename this file to <i>uk_41j.prm</i> .
Known (permanent)	IPY00028668	36716		Conferencing (CNF)	When trying to add an ipm device (e.g., ipmB1C2) to a conference, the cnf_AddParty() function times out after 30 seconds. Around the same time as the time-out, an UNLISTEN event, followed by a LISTEN event, is received for the ipm device being added. The conference connection does appear to connect; audio does get passed through. But a time-out error is always returned.
Known (permanent)	IPY00026331	28279		CPI Fax	GFXHEADER does not work with .fls file expansion.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00022296	19492		D/120JCT-LS	Older Dialogic® D/120JCT-LS Boards may experience a problem when trying to increase the amplitude by more than 5 dB. This is not a problem with the newer versions of the board.
Known (permanent)	IPY00010221	35118		D/600JCT-2E1	The second trunk of a Dialogic® D/600JCT-2E1 Board cannot be used as a clock source in SCbus mode. Setting the DCM parameter DerivePrimaryClockFrom to Front_End 2 causes download errors. Workaround: Use Front_End 1 as the clock source.
Known (permanent)	IPY00008602	30950		D/600JCT-2E1	The Dialogic® D/600JCT-2E1 Board may fail to clear alarms when the cable is manually removed and reconnected quickly many times, because the PMC chip on these boards may incorrectly report that the alarm is still present. Workaround: To clear the condition after the lockup, remove the cable and reconnect one more time.
Known (permanent)	IPY00022342	15033		D/82JCT-U	“Parm not set correctly” error for board and channel parameters. The problem occurs when the d42_setparm() or d42_getparm() function is called simultaneously on multiple threads for the same channels on the Dialogic® D82JCT-U Board. Very infrequently, the function call will fail. Workaround: There are several workarounds for the problem. <ul style="list-style-type: none"> • Re-issue the d42_setparm() or d42_getparm() function when the function returns this failure. • Limit calls to d42_setparm() or d42_getparm() to a single thread in the application. • Implement a semaphore in the application to serialize calls to these functions in a multithreaded application.
Known (permanent)	IPY00022390	19978		DCM	The Terminal Server program cannot auto detect boards on a Windows® 2000 machine. Explanation: The Remote DCM is not designed to work via Terminal Server for security reasons.
Known (permanent)	IPY00022293	19308		DCM	The <i>spandti.prm</i> file is not downloaded by default. Workaround: Specify this parameter in the “ParameterFile” in DCM in order for it to take effect.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00029958	36722		DM3 Driver	<p>DCM may not detect all boards in systems with D865GBF series motherboard. This problem occurs only with some revisions of the BIOS.</p> <p>Workaround: This problem can be corrected by updating the BIOS to version P25. First, determine if your system has the D865GBF series motherboard and check the BIOS version as follows:</p> <ul style="list-style-type: none"> From the Windows® Start menu, select Run, type MSinfo32, and click OK. In the System Information window that is displayed, check the System Model and BIOS Version/Date values. For systems with a D865GBF series motherboard, the System Model is D865GBF. The BIOS Version/Date will be something similar to this: BF86510A.86A.0075.P24. (This shows BIOS version P24.) <p>If your system has the D865GBF series motherboard and an earlier BIOS than version P25, update the BIOS to version P25 as follows:</p> <ul style="list-style-type: none"> Go to the following website for the Intel Desktop Board D865GBF: http://downloadfinder.intel.com/scripts-df-external/Product_Filter.aspx?ProductID=948&lang=eng Follow the instructions provided at that website. Be sure to read the Release Notes and special instructions to be followed prior to installation.
Known (permanent)	IPY00031563	36612		DM3 Firmware and Host Runtime Library	<p>A quick execution of gc_Listen(), dx_listen() to the same time slot, followed by dx_unlisten() and gc_UnListen(), results in an error in the RTF logging.</p> <p>Workaround: When calling unlisten(), the application should implement a guard time (i.e., sleep) of 100 msec if listen() has been called for the same time slot. (Calling unlisten() for a different time slot does not require the guard time.) The application must still unroute time slots in reverse order (i.e., voice then network).</p>
Known (permanent)	IPY00022290	19115		Global Call	<p>In US_MF_O protocol, if gc_DropCall() is called soon after gc_MakeCall(), the line gets stuck in blocked state.</p> <p>Workaround: Redesign the application's state machine so that it does not call gc_DropCall() within a few seconds of gc_MakeCall().</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00022262	27343		Global Call	<p>When using the us_mf_io ICAPI protocol (and possibly other ICAPI protocols) with Dialogic® Springware Boards and using the dx_ method of call analysis, fax tones may be misinterpreted if the ca_pamd_spdval field is set to PAMD_FULL in the DX_CAP structure.</p> <p>Workaround: Setting the ca_pamd_spdval field to PAMD_ACCU always gives the correct fax tone detection.</p>
Known (permanent)	IPY00021424	30376		Global Call	<p>This release does not support the ANAPI library or protocols. Customers should migrate to the equivalent Analog PDK protocol.</p>
Known (permanent)	IPY00022261	27289		Global Call on ISDN	<p>When using Dialogic® Global Call APIs and ISDN call control APIs in the same application, the user application must include <i>gclib.h</i> before <i>cclib.h</i>:</p> <pre>#include <gclib.h> #include <cclib.h></pre>
Known (permanent)	IPY00028395	35879		Host Admin	<p>During system startup, if the system is configured to use DHCP, network connectivity problems may cause the DHCP service to respond slowly or not at all. When this occurs, DCM may fail to start the Dialogic® Boards. This may happen even if Remote DCM is not used.</p> <p>Workaround: The problem may be resolved either by correcting the network connectivity problem or, if you are not using Remote DCM, by adding the following line: ooc.liop.host=127.0.0.1 in the section titled "Settings For All Servers" in the <i>dlgadmin.config</i> file located in the dialogic/cfg directory. This will cause Remote DCM to not operate, but DCM will now be able to successfully start the boards locally.</p>
Known (permanent)	IPY00008157	32588		Host Admin	<p>CTBusBroker posts a warning message in the event log saying that FRU doesn't support common media type.</p> <p>Workaround: Ignore the message, as it doesn't affect system operation.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00006578	34616		Host Admin	<p>Due to security enhancements implemented in Windows® XP SP2 and Windows Server® 2003 SP1, Remote DCM will no longer work with these operating systems.</p> <p>Workaround: In order to allow Remote DCM to work again, you have to revert the security settings to the pre-service pack states for the machine being accessed remotely by modifying the following two Windows® settings:</p> <p>First Setting:</p> <ul style="list-style-type: none"> Go to Control Panel -> Administrative Tools -> Component Services. Go into the Properties page of Console Root -> Computers -> My Computer. Under the COM Security tab, click on Edit Limits... button for both Access Permissions as well as Launch and Activation Permissions. For Access Permissions, make sure "ANONYMOUS LOGON" has local as well as remote access. For Launch and Activation Permissions, make sure "Everyone" has all local as well as remote permissions. <p>Second Setting:</p> <ul style="list-style-type: none"> Create/modify the registry value "HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows NT\RPC\RestrictRemoteClients". It is a DWORD value that has to be set to 0 in order for Remote DCM to work. <p>After these settings are applied, reboot the machine and the machine should be ready to be remotely managed through DCM again.</p> <p>Refer to the Microsoft support website for additional information on the security enhancements in new service packs.</p>
Known (permanent)	IPY00032264	36119		Host Drivers	<p>Under high load of cc_PlayTone(), the device doesn't return an event to indicate the end of the cc_PlayTone().</p>
Known (permanent)	IPY00037706	--		Host Install	<p>'MERCCONFIG - DLGCMPCD driver failed to start' error is shown in the Windows® Event Viewer when only Dialogic® Springware Boards (no Dialogic® DM3 Boards) are installed.</p> <p>Workaround: The appearance of this error message on a Springware-only system does not indicate an error; it does not affect system use and can be ignored.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00028427	36079		Host Install	<p>DCM fails to download the board when the cdp file name is wrong in pdk.cfg. An error message appears in the Event Log, but it doesn't adequately describe the error condition.</p> <p>Workaround: Check the pdk.cfg file for accuracy and check pdk.log in ..\Dialogic\log for errors.</p>
Known (permanent)	IPY00028358	33991		Host Install	<p>After installation, the operating system does not have all the drivers loaded for all the boards.</p> <p>Workaround: Take the following actions.</p> <p>Use Case 1: When users see the New Hardware Wizard pop-up:</p> <ol style="list-style-type: none"> 1. Click "Next". 2. Go to the "Advanced option". 3. Point to the location where Dialogic software is installed, "...dialogic\driver\" directory. 4. Click "Next". 5. Click "Finish". 6. Repeat this process for all the boards for which you see the pop-up. <p>Use Case 2: Installation is complete and system rebooted; not all boards are detected by DCM:</p> <ol style="list-style-type: none"> 1. Go to the "Device Manager". 2. Expand the "DM/HDSI" and see if any board has a Yellow "!". If yes, continue with the following steps. 3. Double click on this device. 4. Click update driver / reinstall driver. 5. Follow the same steps as above (Use Case 1). <p>Use Case 3: Installation is complete and system rebooted; not all boards are detected by DCM:</p> <ol style="list-style-type: none"> 1. Go to the "Device Manager". 2. Expand the "PCI Devices" and see if any board has "Unknown PCI Device". If yes, continue with the following steps: 3. Double click on this device. 4. Click update driver / reinstall driver. 5. Follow the same steps as above (Use Case 1).

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00099002	--		Installation	<p>The Dialogic service does not start after system reboot. As described in Microsoft KB812486, when a file named "Program" exists in the C:\ folder, Window's Service Control Manager cannot load the correct files stored under "C:\Program Files" or its subfolders.</p> <p>Workaround: To prevent this, KB812486 recommends to enclose the ImagePath string with quotation marks.</p> <ol style="list-style-type: none"> 1. Open regedit.exe. 2. Go to [HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\[Dialogic service name]. 3. Double-click ImagePath. 4. Add double quotation around the service path. For example. "C:\ProgramFiles\Dialogic\bin\dlgc_srv.exe" <p>Apply this change to the following services, where the "Dialogic service name" is Boardserver, CTBusBroker, DebugAngel (if it exists), DetectorsProj, Dialogic, DlgPnPObserverService, Dm3Config, IMRService and IPMedia.</p>
Known (permanent)	IPY00016036	27709		ISDN Q.SIG Protocol	<p>The Q.SIG E1 network-side firmware allows the host to send a SETUP_ACK message even when the incoming SETUP message contains a SENDING COMPLETE information element. This causes a glare condition between two DISCONNECT messages, followed by a glare condition between two RELEASE messages. The RELEASE_COMPLETE message is not sent.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00007501	30091		JCT Boards	<p>A single 400 Hz tone can be erroneously detected as a dual tone defined as 459±40 Hz, 330±40 Hz because the DSP cannot detect dual tones that are less than 60 Hz apart. It is recommended that the dual tone be defined as 459±20 Hz, 330±20 Hz. This restriction is only for certain call progress tones including disconnect, extra dial tone, local dial tone, international dial tone, ringback, busy, and fax.</p> <p>Rationale: The DSP cannot reliably detect dual tones that are 60 Hz apart. In order to compensate, the firmware sets up a "twin" tone. A twin is a single frequency tone that will be reported to user applications as the dual tone. The frequency range of the twin tone is based on the frequency of the dual tone. For example, if the disconnect tone is set up as 330±40 Hz and 459±40 Hz, the maximum low frequency is 330 + 40 or 370 Hz and the minimum high frequency is 459 - 40 or 419 Hz. As these two frequencies are only 49 Hz apart, a twin frequency will be set up. In this case, the twin will have a lower bound of 359 Hz and an upper bound of 430 Hz. If the channel is presented with a single tone in this frequency range, it will be reported to the user application as a disconnect tone.</p>
Known (permanent)	IPY00041217	--		PBX Call Control	<p>Port 4 on Dialogic® D/42JCT-U Board or ports 4 and 8 on Dialogic® D/82JCT-U Board will not successfully gain carrier on an NEC PBX unless at least one other port from the same set of 4 ports is also connected to a PBX line.</p> <p>Workaround: Ensure that port 4 on a D/42JCT-U Board and ports 4 and 8 on a D/82JCT-U Board are never connected to the PBX without other ports in their respective 4-port range.</p>
Known (permanent)	IPY00022130	22957		PBX Integration	<p>The Dialogic® PBX Integration Board (D/82JCT or D/42JCT) MUST be the Primary Master in the system deriving reference from its Frontend. Any other configuration will result in frame slips which will cause the board and PBX to run out of synch and data to be lost. This is dictated by the PBX hardware design.</p>
Known (permanent)	IPY00022119	22259		PBX Integration	<p>The Dialogic® PBX Integration Board (D/82JCT or D/42JCT) MUST be the Primary Master in the system deriving reference from its Frontend. Any other configuration will result in frame slips which will cause the board and PBX to run out of synch and data to be lost. This is dictated by the PBX hardware design.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00021449	31707		Protocols	When running R2MF PDK protocols on Dialogic® DM3 Boards under a flexible routing configuration, as you increase the density across multiple boards, connect failures may increase when an off-board voice/media resource is used for call control. These failures can be reduced by using a voice/media resource from the local board that is doing the call control and not from any other board in the system.
Known (permanent)	IPY00032742	--		Runtime Trace Facility (RTF)	<p>ERR1 in RTF log can be ignored when using Dialogic® DISI Switching Boards.</p> <p>When you use DISI Boards in your system, the following prints will appear with an ERR1 label in the RTF log files:</p> <pre>04/13/2006 17:54:50.386 3348 3352 Cheetah ERR1 Dm3Player dxxxB28C1 ----- DOES NOT EXIST</pre> <p>This is not considered an error for DISI Boards. DISI Boards have no player or recorder components and that is why these messages are getting printed. System performance is not affected significantly. However, although these are not errors on DISI Boards, the same print could be an error for other types of boards. These prints are useful in determining if a board doesn't have any normal components and when debugging firmware load issues and OAM device enumeration issues.</p>
Known (permanent)	IPY00032735	--		Runtime Trace Facility (RTF)	<p>ERR1 in RTF log can be ignored when fax resources are involved. The following prints might appear as ERR1 in the RTF log when the Dialogic® Fax API is used:</p> <pre>04/14/2006 17:11:57.201 2508 1484 Cheetah ERR1 Dm3Stream dxxxB143C4 ----- Data received after first EOF on stream 17</pre> <p>These errors can be ignored when fax resources are involved. Performance is not altered significantly. These prints have been kept in the RTF logs because they help in debugging stuck channels when voice resources are involved (dx_rec, ec_stream).</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00032730	--		Runtime Trace Facility (RTF)	<p>ERR1 in RTF log that appears at teardown of a process when Dialogic® DM3 Conferencing/MSI Libraries are involved can be ignored.</p> <p>The following prints may appear with an ERR1 label in the RTF log during the teardown of a process when DM3 Conferencing/MSI Libraries are involved:</p> <pre>04/17/2006 11:42:17.844 3948 2376 Cheetah ERR1 Dm3MsgDispatcher ERROR: No client attached to QComp (0:2:1:21:33)</pre> <p>In such a case, this is not an error. But this would be considered an error when any of the DM3 Voice Media Libraries are involved. These prints do not alter performance significantly. They are helpful in the debugging process and they only appear during the process teardown time.</p>
Known (permanent)	IPY00043811	--		Springware Board IDs	<p>When multiple Springware boards are installed and they all have their board ID switch set to the "0" position (the factory default), unique instance numbers based on the bus and slot numbers should be assigned by the system software. However, this assignment sometimes fails to occur, leaving all boards with ID 0, and this could result in application errors such as events being sent to the wrong board.</p> <p>Workaround: When multiple Springware boards are installed in the system, set the board ID switches to unique, sequential values beginning with 1. For example, with four boards in the system, set the board ID switches to 1, 2, 3, 4. Do not set any switch to 0 when there are multiple boards in the system. (If there is only one Springware board in the system, the default setting of 0 can be used.)</p>
Known (permanent)	IPY00030548	24937		Springware Voice	<p>If you call the dx_reciottdata() function and you specify a DX_MAXSIL termination condition, dx_reciottdata() ignores this condition and will eventually trigger on another one (DX_MAXTIME) even if there is silence on the line.</p> <p>Workaround: Set the EC_RESOURCE feature in DCM to ON.</p>
Known (permanent)	IPY00022341	14325		Springware Voice	<p>lineDial does not generate DTMF tones A, B, C, and D if specified dialstring is in uppercase during inband dialing.</p> <p>Workaround: You must use lowercase letters a, b, c, d in a dialstring that contains an escape string. The firmware only accepts lowercase letters a, b, c, d. The TSP provides the conversion for out-of-band dialing (default), but does nothing when an escape string is present in the dialstring (in-band dialing). Therefore, any uppercase letters A, B, C, D used in a dialstring that contains an escape string will be ignored by the firmware.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known (permanent)	IPY00022151	23673		Springware Voice	DE_RINGS is received after the TDX_RECORD if the onhook recording begins while the ring is generated on the line. Explanation: When using analog Dialogic® Springware Boards, if a ring is generated on the line when you begin onhook recording, the DE_RINGS event will be received by the application after the TDX_RECORD event, i.e. after the recording is finished. The firmware was designed to process the rings in this manner and suspends the ring debouncer on issuance of commands like play and record. The debouncer is resumed only on completion of the play or record. Since the ring debouncer is suspended, the firmware cannot send a DE_RINGS event to the application. On resumption, the debouncer goes back to its last state and will send the ring event to the host.
Known (permanent)	IPY00022100	21760		Springware Voice	Calling dx_setevtmask() while a dx_play() is running will cause the play to return with a TDX_ERROR, EDX_SH_BADCMD. Explanation: Calls to dx_setevtmask() on a channel that is currently playing a file causes an error to be returned and the channel to get stuck in an unstable state that requires the application to be shutdown and restarted to recover. Workaround: Call dx_setevtmask() initially with DM_DIGITS to enable DTMF digit events. DM_DIGITS should not be specified when making subsequent calls to dx_getevtmask() , for instance, when turning on/off silence events. This requires the application to be modified so that the DM_DIGITS flag is only passed to the function at initialization time.
Known (permanent)	IPY00037015	--		UDD	Dialogic® Diagnostics Software (UDD) reports download errors when multiple boards are installed in the same system. Workaround: When using UDD to test multiple Dialogic® Springware Boards in the same system, use DCM to disable all boards except the one being tested.
Known (permanent)	IPY00091130	--		Voice	Small audio gaps of 4-60 ms in length may be heard sporadically during playback or recording under certain conditions on a Dialogic® JCT board. If tones are streamed instead of using a function like dx_dial() , a gap may be seen in the tone being played. Workaround: This is a known restriction. Audio glitches may be heard on certain voice channels during playback or record when simultaneously making or receiving several DTI or ISDN calls. Channels recover and continue to operate after the glitch. If tones are being played from a pre-recorded file, then one may dial (dx_dial) the DTMF instead of playing the tones from a pre-recorded file.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022362	19779		Clocking	When setting up mixed board configurations involving both SCbus and CT Bus, errors may arise as the result of the placement of the clock master.
Known				Clocking	<p>In the DCM, use the TDM Bus device to configure clocking in either SCbus or CT Bus mode. You will no longer find the SCbusClockMaster and SCbusClockMasterSource parameters. Instead, use the following parameters when the bus is configured in SCbus mode:</p> <ul style="list-style-type: none"> Specify the SCbus clock master via the "Primary Master FRU (User Defined)" parameter. Specify the SCbus clock master source via the "Derive Primary Clock From (User Defined)" parameter. A drop-down list will be provided so that you can select between an internal oscillator (equivalent to INDEPENDENT in older implementations of SCbusClockMasterSource) and a specific trunk to derive clock from (equivalent to LOOP in older implementations of SCbusClockMasterSource).
Known	IPY00022145	23509		Conferencing (DCB)	<p>On Dialogic® DM3 Boards, the conference notification tone (a tone that is generated when a party enters or exits a conference) is enabled by default; whereas on Dialogic® Springware boards, the default was to disable conference notification tone. The two problems with enabling this tone by default are:</p> <ul style="list-style-type: none"> This is the opposite of what Springware provides. There is no API method available to indicate that tone notification should be disabled when establishing a conference. While the MSCA_NN bit mask exists to disable notification to receive-only parties or monitors, this parameter doesn't apply to all party types. <p>Additionally, it is suspected that the notification tone may be contributing to PT 23506 against noises generated when parties enter or exit a conference (in addition to any notification tone). As a result, if the suggestion is that tone notification should be disabled for better conferencing quality, by default the feature should be disabled.</p> <p>Workaround: Update the FCD/CONFIG files with a parameter to disable conference tone notification by default.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00008091	31432		Conferencing (DCB)	<p>The maximum value for the dcb_estconf() function numpty parameter is 24. If you attempt to establish a conference with more than 58 parties initially by using the dcb_estconf() function with numpty parameter set to greater than 58, rather than giving an API error, the driver will fail.</p> <p>Workaround: To create a conference with greater than 24 parties, use the dcb_estconf() function to create a 24-party conference, and then use the dcb_addtoconf() function to add parties one at a time. You can have as many parties in a conference as is supported by your particular board and its media load.</p>
Known	IPY00008269	29634		CPI Fax	<p>When a tiff header analyzing utility (tiffhdr.exe) is used to analyze a tiff file that's received on a Dialogic® CPI Fax Board running in MH mode (TIFF Group 3 1-D), it generates an error saying "error 2905 on line 138".</p> <p>Workaround: Use another encoding than MH.</p>
Known	IPY00006204	34764		CSP	<p>If the ECCH_CONVERGE parameter is set on a Dialogic® DM3 Board that does not support this feature, the board fails with error "device busy" and "SP 2 NOT RESPONDING." (The only board that supports the ECCH_CONVERGE parameter is the Dialogic® DMV160LP Board.)</p>
Known				D/120JCT-EURO	<p>The Dialogic® D/120JCT-EURO Board is unable to detect a standard continuous DISCONNECT tone (350 Hz, 440 Hz).</p> <p>Workaround: The DISCONNECT tone can be detected if FREQUENCY RES is set to "LOW" (125 Hz value). Therefore, select Euro-21 as country for D/120JCT boards; this has FREQ-LOW as the default frequency resolution.</p>
Known	IPY00022110	22030		D/120JCT-LS	<p>Routing LSI resources from the Dialogic® D/120JCT Boards results in heavy noise (echo problem).</p>
Known	IPY00007346	29275		D/120JCT-LS	<p>When configuring PCM encoding on a system containing both Dialogic® Springware Boards and Dialogic® DM3 Boards, the Dialogic® D/120JCT-LS Boards default to mu-law. When attempting to reconfigure from configured devices (top level) to A-law, the D/120JCT-LS Board does not change; it remains mu-law.</p> <p>Workaround: Configure PCM encoding for each board manually.</p>
Known				D/120JCT-LS	<p>The Dialogic® D/120 Rev2 Board supports Japan Caller ID, but the EC_RESOURCE must be set to ON. This reduces the density of the board to 8 channels. The D/120 Rev1 Board does not support Japan Caller ID.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00008850	31245		D/480JCT-2T1 D/600JCT-2E1	When Global Level PCMEncoding is not set to "Automatic", which is the default, it must be set to match the Board Level PCMEncoding for the Dialogic® D/480JCT-2T1 and D/600JCT-2E1 Boards.
Known	IPY00021906	21049		D/82JCT-U	Call Progress test fails 100% on Dialogic® D/82JCT-U Boards. Explanation: The D/82JCT-U voice resources cannot be used to provide CPA capability for other boards.
Known	IPY00021905	21029		D/82JCT-U	If a voice resource of a Dialogic® D/82JCT-U Board is listening to a front end other than the default (its own), it may return a disconnected result. Explanation: The D/82JCT-U Board supports the call progress analysis feature of dx_dial() , only when the D/82JCT-U is using the default TDM routing.
Known	IPY00021909	21082		DCM	When using Dialogic® Global Call SS7, Dialogic® SS7 Signaling Boards (PCCS6) can be added manually via DCM, but DCM doesn't allow the SS7 board to be used as the SCbus clock master.
Known	IPY00022112	22090		Device Naming	dx_open() causes an application crash with access violation when the size of name is equal to or more than 31 characters. Explanation: There is a limitation on the length of a device name. It can be no longer than 30 characters.
Known	IPY00026634	22919		DI Boards	dx_playtone() can only play up to 35 unique tones.
Known	IPY00020991	20150		DI Boards	ms_setvol() does not affect the volume level on the Dialogic® DI/SI32 or DI/0408-LS-A Board.
Known	IPY00042226	--		Diagnostics	PDK Trace maximum log file size is only 100 megabytes when it should be unlimited. Workaround: To avoid losing data, use the new log file array option ("-a") with size > 1. Log files are binary format and rarely grow beyond this limit; however in the event this happens and upon reaching the limit, the log file is saved with the timestamp naming convention, and a new log file is created. See Section 1.32, "File Management Enhancements for PDK Trace Tool" , on page 100 for more information.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022220	25318		Dialogic System Service	<p>When starting the Dialogic® System Service (DSS) via the Windows® Service Control Manager, a Progress dialog box may display the following error message: “Error 1053: The service did not respond to the start or control request in a timely fashion”</p> <p>This Progress message appears when any Windows service started via Service Control Manager takes more than 3 minutes. The message is misleading because the DSS may still be in a start pending state and start completion should occur within 7 additional minutes. The 3 minute limit is hard-coded by Microsoft in Windows 2000.</p> <p>Workaround: Start the DSS using the DCM tool.</p> <p>Note: Refer to the Microsoft Knowledge Base, Product Support Services documentation for further details about Error 1053.</p>
Known	IPY00030640	23783		DM/IP Boards	<p>There is no interoperability between a Dialogic® DM/IP Board and a Siemens IP phone in Fast Start mode. When working in Fast Start mode with the DM/IP Board as the originator, the DM/IP Board sends facility with reason startH245 which the Siemens IP phone does not support.</p> <p>Workaround: Work in Slow Start mode.</p>
Known	IPY00028247	32107		DM/IP Boards	<p>IP calls cannot return to voice session after T.38 fax transmission.</p> <p>Workaround: Must drop the call and reconnect to return to voice session.</p>
Known	IPY00027310	29279		DM/IP Boards	<p>Customer application may see intermittent failures on fax over IP.</p>
Known	IPY00026608	28884		DM/IP Boards	<p>The ipm_SetParm() IPM_RFC2833MUTE_AUDIO parameter is not supported on Dialogic® DM/IP Boards.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022155	23727		DM/IP Boards	<p>When Dialogic® DM/IP Boards with 100Base-T NICs are used and the boards are properly configured, the boards will echo back a response if they are pinged from within the subnet. However, if they are pinged from outside the subnet, they do not echo any response. Explanation: This is a configuration issue. DM/IP boards can be configured for a board-specific Network Configuration using the DCM Network tab. In the Network tab, HostIPAddress and GatewayIPAddress are used to add a network route to the subnet of HostIPAddress by gateway GatewayIPAddress in the DM/IP board. There are two types of possible configurations:</p> <ul style="list-style-type: none"> • Configuration 1. For example, if board IPAddress=192.50.50.20, HostIPAddress=192.50.49.12, SubnetMask=0xFFFFFFFF00, and GatewayIPAddress= 192.50.50.250. A route will be added in the board where 192.50.50.250 will act as the gateway to subnet 192.50.49.0 and there is no default gateway configured. In this case, if a Host resides in a subnet other than 192.50.49.0 will not be able to communicate with the board. • Configuration 2. For example, if board IPAddress=192.50.50.20, HostIPAddress=0.0.0.0, and GatewayIPAddress=192.50.50.250. A route will be added where 192.50.50.250 will act as default gateway to internet. In this case, a host residing anywhere in the network can communicate with board as long as board and host has network connectivity. <p>You can choose to configure the routing table to either set up default gateway or only talk to specific subnet (which may serve security purposes).</p>
Known	IPY00019225	25596		DM/IP Boards	<p>All test files *.c and *.h in the iptmail_r4.dsp and gateway_r4.dsp have an extra carriage return CR added: 0D0D0A (CRCRLF) instead of 0D0A (CRLF) which prevents the Microsoft Development Studio's editor from proper alignment of the source code with debug info.</p> <p>Workaround: Use VisualStudio ver 6.0 instead of ver 5.x to compile the demo files. Doing that, you will get a dialog box stating that there is a problem with the format of the files and asked to approve conversion of the files to the Windows® environment. By choosing OK, the conversion will be run smoothly and the compilation will be successful.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00008999	31419		DM/IP Boards	Tone clamping is insufficient for GSM 20ms 3FPP. Bleed through tones are apparent in 1.125%. Workaround: Applications should not mix the out-of-band and in-band DTMF transfer techniques. Must use one or the other, not both.
Known	IPY00008656	31404		DM/IP Boards	While in RFC2833 mode, two of the same DTMFs sent consecutively are detected as only one DTMF. A string like: "112233445566778899" will be received as: "112334455667899" Workaround: The RFC2833 transmission itself is fine. Improved performance may be realized if the end point ensures the inter digit off time of 75ms or larger.
Known	IPY00008451	31342		DM/IP Boards	Marker bit in RFC2833 packet is not set properly on G.723 and G.729 codecs at multiple frames per packet rate and with G.711 codec at frame sizes greater than 10 ms.
Known	IPY00008332	29455		DM/IP Boards	gc_Extension() API does not support IPPARM_DTMF_RFC_2833 parameter for generating DTMF digits using RFC 2833. An application should use a dxxx device to generate dual tones which will be encoded as RFC 2833 digits by the associated ipm device when the DTMF transfer mode is set the RFC2833. Workaround: Use the Voice Device to dial/receive digits in a call that uses RFC2833 as DTMF transfer mode.
Known	IPY00007957	31871		DM/IP Boards	IP calls cannot return to voice session after T.38 fax transmission. Workaround: Must drop the call and reconnect to return to voice session.
Known	IPY00007879	31659		DM/IP Boards	The default nfrm value for user-defined tones on Dialogic® DM/IP Boards is 10. In situations where the DM/IP Board firmware is being used in a PSTN environment, this value may need to be lowered if you are seeing cadence detection failures. PSTN products (QVS) use a value of 3, but preliminary testing shows that a value of 5 is sufficient to reduce errors to 0 for DM/IP Boards.
Known	IPY00007701	31594		DM/IP Boards	RFC2833 failures occur when using low bit rate coders at 3-4% failure rate when tone duration is longer than 2 seconds.
Known	IPY00007555	29164		DM/IP Boards	The error message (RTP Recv: in media_RTPUnpack() SSRC failed) may occasionally be seen in DebugAngel when running Dialogic® DM/IP Board configurations. Workaround: Ignore the message; it does not affect the application.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00007322	29280		DM/IP Boards	Call progress over IP will fail intermittently in applications. If the application performs call analysis to find out how it was connected (e.g., PAMD, fax) it won't be able to do it consistently.
Known	IPY00006725	31651		DM/IP Boards	The multicast transmit address can be set as addresses other than the reserved multicast addresses. No error checking is available to prevent or warn against this. Workaround: Ensure that only valid IP addresses (244.0.0.0 to 239.255.255.255) are used.
Known	IPY00006467	29048		DM/IP Boards	When the host application crashes or is abnormally terminated (e.g. killed in Task Manager), Exit Notification does not cancel all events in the Dialogic® DM/IP Board firmware. The boards must be re-downloaded or else the application will fail to initialize. Workaround: Re-download boards after a host application crash.
Known	IPY00006466	29008		DM/IP Boards	ipm_GetSessionInfo() returns all zeros instead of valid information. Explanation: No information will be returned if an RTP session has not been created, or if called before an RTCP report has been received during a session.
Known				DM/IP Boards	Echo when using Dialogic® DM/IP Boards with Microsoft NetMeeting. Workaround: Disable the residual speech flag by setting prmECResSpFlagEnableDisable (parameter number 0x1b65) to 0 in the config file, then restarting the Dialogic® System Service.
Known				DM/IP Boards	To select a coder when using Dialogic® DM/IP Boards with Microsoft NetMeeting, invoke the coder list (Tools>Options>Audio>Advanced) to bring your preferred coder to the top of the priority list. For best results, Microsoft NetMeeting and the DM/IP component should be configured to use the same coder.
Known				DM/IP Boards	Microsoft NetMeeting does not support VAD when using Dialogic® DM/IP Boards. Workaround: Do not set the VAD parameter in the relevant demo configuration file (for example, gateway_r4.cfg).
Known				DM/IP Boards	A connection to Microsoft NetMeeting will fail if the T.38 fax coder is included in the capability list. Workaround: Do not include the T.38 fax coder in the capability list when establishing a connection with NetMeeting.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00023901	29646		DM/V Boards	TSC_MsgSetChanStateCmplt error occurs on ml1b ISDN load. Received following error message when running QsigE1 on Dialogic® DM/V-B Board during download. Error was seen in DebugAngel. QHostFailed message 13:47:47.113 002:CPI:[0xffff0000]TSC.000 Error - tscSetChanStateCmplt() - line 1 replyCount 0. The appearance of this message does not affect normal operation.
Known	IPY00021432	30972		DM/V Boards	QERROR_WARNING warning may show up in DebugAngel window for basic call control or voice tests for Dialogic® DM/V(A) and DM/V(B) Boards. Such warnings are generated due to extreme load/stress conditions for CP pools while running certain test applications and are taken care of by Kernel CP Pools resize safety net.
Known	IPY00021419	30224		DM/V Boards	QERROR_WARNING warning may show up in DebugAngel window for basic call control or voice tests for Dialogic® DM/V(A) and DM/V(B) Boards. Such warnings are generated due to extreme load/stress conditions for CP pools while running certain test applications and are taken care of by Kernel CP Pools resize safety net.
Known	IPY00020482	30167		DM/V Boards	QERROR_WARNING warning may show up in DebugAngel window for basic call control or voice tests for Dialogic® DM/V(A) and DM/V(B) Boards. Such warnings are generated due to extreme load/stress conditions for CP pools while running certain test applications and are taken care of by Kernel CP Pools resize safety net.
Known	IPY00007354	31617		DM/V Boards	When setting CODESET_7_IE or CODESET_6_IE together with USER_USER_IE in the setup message, neither IE is delivered to the remote side. However, when setting USER_USER_IE only, it is delivered to the remote side. Currently, Dialogic® DM3 Boards only support sending non-codeset 0 messages within supplementary services, such as FACILITY and NOTIFY.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known				DM/V Boards	<p>R4 Compatibility Flag issue: All systems running R4 applications on high density Dialogic® DM3 Voice and Network Interface Boards must make sure that the R4 Compatibility Flag parameter in the [CHP] section of the CONFIG files is set to 1 (this is the default value). You should enable the R4 Compatibility Flag in order to:</p> <ul style="list-style-type: none"> • Delay reporting Offered call state until DNIS and ANI call information is available. (Only the timing is affected.) • Report ISDN Q.931 Cause values instead of Call State reasons in Call State events. • Support Q.931 Cause values as reasons in DropCall and ReleaseCall messages (ISDN protocols only). <p>Set the R4 Compatibility flag in the [CHP] section as follows:</p> <pre>SetParm=0x1310,1 ! R4 Compatibility Flag ! 0-default, 1-enable, ! 2-disable</pre> <p>If this parameter is not set to 1, update the CONFIG file. After you make this modification, start the Dialogic® System Service for the change to take effect.</p>
Known	IPY00024003	32882		DM/V160-LP	<p>When setting up a supervised call transfer, after the gc_SetupTransfer() function is issued to obtain a CRN for the consultation call, a permanent signal timer (8 seconds) starts. If the consultation call is not made within the 8 second period, the timer expires and the application receives a GCEV_DISCONNECTED event. The reason associated with the GCEV_DISCONNECTED event is "Event Caused by Protocol Error". The reason should indicate that the disconnect is a result of the timer expiring.</p>
Known	IPY00006684	31690		DM/V160-LP	<p>Debug messages are being printed in DebugAngel when opening devices.</p> <p>Workaround: Ignore the messages. Despite the warning messages all functionality should work.</p>
Known	IPY00007996	32189		DM/V-B Boards	<p>During high density, over 700 channels per chassis, an illegal termination of the system may result in a conditional lockup or hang state.</p> <p>Workaround: Either re-download or reboot the Dialogic Boards if the application terminates abnormally.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022125	22545		DM3 Fax	Multi-page ASCII fax function always fails. This is a known limitation of the product. Workaround: Multiple pages can be sent by generating 1 iott per page (use the same handle, but define io_offset/io_length). However, most fax devices allow receipt of a "long page".
Known	IPY00005994	33137		DM3 Fax	While running fax load tests on Dialogic® DM3 E1 fax boards, faxes stop transmitting after several hours.
Known	IPY00035574	--		DM3 Firmware	There is an interoperability issue when using Dialogic® DM/IP Boards with Dialogic® DM/V-B Boards (in PCI or PCI Express form factor) in a Dell PowerEdge 6850 chassis. It has been observed with certain high-load regression test applications run, a QERROR_KILLTASK error is generated and reported in the DebugAngel, and the DM/IP firmware crashes. This issue occurs when running voice functionality on the DM/IP and DM/V-B Boards simultaneously; the failure is on the first voice operation on the DM/IP board. Workaround: Disable direct memory access (DMA) transfers on the DM/IP Board by setting the doDMA parameter to 0 (off) in DCM.
Known	IPY00006407	36806		DM3 Firmware	Error Message "Warning: PDK SetProtocolOutOfService timed out" is generated intermittently on Dialogic® DMV1200BTEP Boards (with UL3 or ML10-LC R2MF firmware) when the application is stopped and started without re-downloading boards.
Known	IPY00006393	36758		DM3 Firmware	Random digit(s) missed in DNIS string on random Inbound calls when running with CAS media loads.
Known	IPY00006353	36792		DM3 Firmware	Error message "Warning: PDK SIG_AlarmOff timed out" is generated on Dialogic® DM/V1200A-4E1-PCI Boards (with ml1b_qsa_r2mf firmware) when downloading Dialogic® DMV1200BTEP Boards connected to them.
Known	IPY00023900	28301		DM3 Network	Errors occur when trying to use the phone application's dial pad: Error: Error 0x500 Description {No Description Available} Data {ErrorMsg 0xa0002 ErrorCode 0x500 Data {0x0 0x0 0x0 0x0}} Workaround: Ignore the errors.
Known	IPY00008411	32133		DM3 Network	Under heavy load with 100% CPU utilization, if the host application were to exit abnormally (i.e. application error, memory exception), specific real-time tasks running on the board may assert. The only way to recover would be to restart the Dialogic® Services. Workaround: To prevent this, avoid running at or near 100% CPU utilization.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00007385	29991		DM3 Network	Missing completion event from gc_DropCall() if called right after gc_Attach() in SYNC mode on Dialogic® DM3 Boards. Workaround: Call gc_Attach() in ASYNC mode and wait for completion event.
Known	IPY00007234	23614		DM3 Network	When a trunk receives AIS, the LineAdmin utility only displays the GREEN and RED LEDs, and <i>not</i> the YELLOW one.
Known	IPY00008208	30489		DM3 Voice	On Dialogic® DM3 Boards, call progress using dx_dial() does not return a result of CR_FAXTONE when a CNG tone is played. Note that CED tones are correctly interpreted as CR_FAXTONE.
Known	IPY00022317	28582		DMV160LP	GSM voice coder issue. Workaround: To use the GSM voice coder for recording on the Dialogic® DMV160LP Board, you must disable the DMA option in the Dialogic® Configuration Manager (DCM) using the following steps: <ol style="list-style-type: none"> 1. Make sure the board is in the stop state. 2. Go to the Driver tab. 3. Modify the setting for the “Do DMA” parameter to 0 and click Apply. (This parameter is set to 1 by default.) 4. Re-download the board. In certain environments, such as in a system with five or more boards with all channels active, you may experience an increase in CPU utilization of 4% to 6% when using GSM.
Known	IPY00022006	29073		DMV160LP	Disconnect tone supervision. You may need to adjust the definition for the disconnect tone depending on the PBX system you are using. To do so, modify its definition in the dmv160lp.config file. Use one of the following values: Fast Busy (reorder): 19938 Dialtone: 41571 Busy: 19937
Known	IPY00021978	28889		DMV160LP	DTMF termination condition issue. On the Dialogic® DMV160LP Board, when the record operations are set to be terminated on a DTMF, the recorded file may contain between 30 to 50 msec of the terminating DTMF.
Known	IPY00023977	31550		Global Call	For an object intending to use gc_MakeCall() , all call temporal parameters need to be settable via the make call block. Workaround: Continue to use gc_SetUserInfo() before gc_MakeCall() to set parameters.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022395	20083		Global Call	<p>On Dialogic® DM3 Boards, MakeCall is not successful after placing lines in service. Explanation: When running ISDN through R4 on DM3, it is important to ensure the line has been put in service and the D channel has come up prior to making calls on any channels.</p> <p>Workaround: There are three possible ways to ensure this happens:</p> <ul style="list-style-type: none"> • Open up the board device (e.g., dtiB1) and wait for the event GCEV_D_CHAN_STATUS (with reason E_LINKUP ERR_ISDN_LIB) prior to placing any calls. • Prior to running the application, run the QSCRIPT tool "lineadmin -board x" where "x" is the number of the board and put all of the lines in service. • Add a 3 second delay into the application between the time the channels are opened and the first attempt to issue a MakeCall.
Known	IPY00022135	23048		Global Call	<p>Exception while receiving GCEV_OFFERED event. Explanation: Customers should not use sr_putevt() to send any Dialogic-specific event codes. The Dialogic® library that is usually sending this event may need to change its internal state and may go out of sync with other libraries that will also receive this event using high priority handles.</p>
Known	IPY00021408	29419		Global Call on IP	<p>Applications running Dialogic® Global Call Software on host-based SIP or H.323 stacks and issuing gc_WaitCall() before every call produce errors at higher call rates.</p> <p>Workaround: Applications should issue gc_WaitCall() only once for a given channel at the beginning of application or after gc_ResetLineDev() has been completed (GCEV_RESETLINEDEV has been received).</p>
Known				Global Call on IP	<p>When developing applications that use IP technology, Dialogic® Global Call Software does not support synchronous programming models. Unless explicitly stated in the <i>Dialogic® Global Call IP Technology User's Guide</i>, Global Call functions should be called in asynchronous mode.</p>
Known	IPY00030585	25536		Global Call on ISDN	<p>When using Dialogic® Global Call Software with ISDN, if the inbound call is disconnected while the application was trying the answer the call, depending on the timing, the application might get a GCEV_TASKFAIL with error code 0x10f (BADSTATE).</p> <p>Workaround: The application should restart the time slot using gc_ResetLineDev() to handle this glare.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known				Global DPD	Speed control for the Dialogic® D/160SC-LS-IDPD, D/240SC-T1-IDPD, D/300SC-E1-75-IDPD, D/300SC-E1-120-IDPD, and D/320SC-IDPD Boards cannot be used while the Global DPD feature is enabled. If any speed control adjustments are attempted while Global DPD is enabled, the function will return with a -1, indicating failure. Workaround: You can adjust the speed before or after placing or receiving a call that uses the Global DPD feature.
Known				Global DPD	The Global DPD feature must be implemented on a call-by-call basis. For the Global DPD feature to work correctly, each time an incoming or outgoing call is initiated, Global DPD must be initialized by using the dx_setdigtyp() function with the D_DPDZ flag. Refer to the <i>Dialogic® Voice API Library Reference</i> .
Known	IPY00028199	29038		HDSI Boards	If you start the HDSI demo on a Dialogic® DI/SI32 Rev2 Board with a phone in the off-hook state, the off-hook state will not be detected. The application will report only on-hook on the MSI channel and an application crash will occur quickly afterwards.
Known	IPY00008842	33625		HDSI Boards	Cannot download Dialogic® HDSI-960-PCI Board using us_ and at_hdsi_96_play_rec.pcd and.fcd files.
Known	IPY00006017	33633		HDSI Boards	Multiple play/record tests fail; an extra digit (usually a 0) is at the end of the string.
Known				HDSI Boards	A Station Interface Box (SIB) firmware upgrade may be required to support the 25 Hz and 50 Hz ring frequencies provided in the country-specific configuration files. You can use the kernelver utility to retrieve the Dialogic® HDSI Board and SIB firmware versions. To retrieve the firmware versions, start the HDSI Board in DCM and then run kernelver twice (once for the HDSI Board firmware version and once for the SIB firmware version) using the following syntax examples. To retrieve the firmware version of the SIB, run: <pre>kernelver -bxx -p1 -s</pre> where xx is the LogicalID of the HDSI Board attached to the SIB. The LogicalID for a given Dialogic® DM3 Board can be determined through DCM. For details, refer to the DCM Online Help. To retrieve the firmware version of the HDSI Board, run: <pre>kernelver -bxx -p1</pre>
Known	IPY00013365	19303		Host Admin	DCM fails to detect any Dialogic® DM3 Boards when one unrecognized board is present.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00013282	17053		Host Admin	DCM fails to detect any Dialogic® DM3 Boards when one unrecognized board is present.
Known	IPY00013252	17052		Host Admin	DCM fails to detect any Dialogic® DM3 Boards when one unrecognized board is present.
Known	IPY00009150	28379		Host Admin	The Error code in <i>NCMApi.h</i> says "NCME_RELEASE_TIMESLOT" instead of "NCME_RELEASE_TIMESLOT".
Known	IPY00008501	31050		Host Admin	Listboards will report an error on the screen if it is run after a "single stop" operation has been performed on some of the boards. The problem is not seen as long as all of the boards are running (i.e., no boards have been stopped). Workaround: Run listboards with the "-l2" option, which runs the updated version of listboards.
Known	IPY00008491	31206		Host Admin	When DSS is started or stopped programmatically via the NCM API and while the DCM GUI is already running, the service status is not updated. Hitting the refresh button will refresh the GUI and show the correct service status. Alternatively, if the GUI is opened after the service is stopped or started, it reflects the correct status.
Known	IPY00007797	31695		Host Admin	Data backup and migration will not work with Terminal Services.
Known	IPY00007510	32342		Host Admin	CTBB event logs are being made without descriptions appearing in the Application log panel. CTBB event logs should not even appear in the Application log panel. CTBB event logs should only appear in the System log panel with descriptions.
Known	IPY00006547	33730		Host Admin	After the initial install, DCM detects boards in a different order after Restore Device Defaults is run.
Known	IPY00006036	31669		Host Admin	Using Terminal Server to control a GDK machine is not supported. If needed, remote access to a GDK machine can be easily done through other means (e.g. remote desktop connection using XP, Netop, etc). Workaround: Don't use remote access to the GDK machine. It is not a requirement to run a demo on a GDK machine remotely (through Terminal Server).
Known	IPY00006011	31701		Host Admin	When using the Event service consumer object to subscribe for events, sometimes the application hangs while exiting on Windows® XP systems. Workaround: A sleep of 1 second at the end of the application causes this hang to go away.
Known	IPY00005982	31435		Host Admin	dlgsnapshot utility is not functional on Dialogic® DM/V-B Boards.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00024819	31099		Host Install	<p>When uninstalling the Dialogic® Software, a warning message stating “Error encountered after attempting to launch” may appear if an error was encountered after the setup program attempted to launch a utility.</p> <p>Workaround: Follow these steps if you encounter this error:</p> <ol style="list-style-type: none"> 1. Click OK to continue with the uninstall. 2. Follow the documented procedure to run the clean-up utility. The procedure can be found at: http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/2000/tn020.htm 3. Reboot.
Known				Host Install	<p>The PDKManager tool, which downloads Dialogic® Global Call protocol modules and country dependent parameters to Dialogic® DM3 Boards, can be set up to run automatically when DCM is started. However, after performing an update install, PDKManager no longer runs automatically.</p> <p>Workaround: PDKManager must be rerun manually after an update install. For further information about PDKManager, see the <i>Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide</i>.</p>
Known	IPY00023978	31618		Host Library	<p>Applications utilizing a Dialogic® HiZ board may take 15-20 minutes to shut down.</p> <p>Workaround: Tearing down channels in parallel will greatly reduce the shutdown time (less than 30 seconds).</p>
Known	IPY00023708	27287		Host Library	<p>When using ms_genRingCallerId() on a Dialogic® HDSI or DI/SI32 Board, with cadence MS_RNGA_SHORTLONG, the phone rings with the specified cadence, but does not show the caller id.</p>
Known	IPY00009177	31642		Host Library	<p>SRLGetSubDevicesOnVirtualBoard returns 0 sub devices for Dialogic® D600JCT-2E1 Boards.</p>
Known	IPY00008960	31060		Host Library	<p>Applications using cached prompts will crash or be abnormally terminated if they do not issue a dx_close() before exiting the application. If this is not adhered to, the cached prompt API will fail on the next execution and the board will have to be re-downloaded.</p> <p>Workaround: Once cached prompt is downloaded, close the physical board with dx_close() API before exiting from application.</p>

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00007762	31734		Host-Based H.323 Protocol Stack	Dialogic® Global Call Software applications that use the host-based H.323 protocol stack may generate the following error message in the <i>gc_h3r.log</i> file if the application enables the stack to send the PROCEEDING message automatically. ! 22:22:19.393 ! M_SIGNAL ! L_ERROR ! 1 ! << SIGNAL::sendProcceding: RV cmCallSendCallProceeding Failed : [-996] Workaround: Ignore this error message. The PROCEEDING message is actually sent.
Known	IPY00092038	--		Installation	The Setup Utility unconditionally installs the Dialogic® SNMP Extension Agent.
Known	IPY00017747	29044		IP CCLIB	For host-based configurations (using Dialogic® Global Call or IPML API), if QoS lost packets alarms (QOSTYPE_LOSTPACKETS) have been enabled and out of band signaling is being used (either H.245 Ull or RFC2833), then QOSTYPE_LOSTPACKETS alarms will be generated whenever information is sent out of band. Workaround: Ignore the alarm (which is for information purposes anyway) or disable the alarm event.
Known	IPY00022147	23574		ISDN	cc_SetParmEx() fails when changing parameters that require numerical values (e.g. BC_XFER_RATE). This is not applicable to the parameters that require character string values (e.g. DIRECTORY_NUMBER). Workaround: When using cc_SetParmEx() to set a parameter that requires a numerical value, set the length field in the PARM_INFO structure to 1 and ensure that only the first byte in the parmdata field contains the value.
Known	IPY00022142	23256		ISDN	cc_SetChanState() is only supported on North American T1 PRI protocols. It is not supported on NTT (Japanese) or European E1 protocols since the specs of these protocols do not support SERVICE/SERVICE_ACK messages.
Known				Modular Station Interface (MSI)	Multi-threaded applications must enclose all MSI calls in a critical section or applications run the risk of getting intermittent errors. Reports "No error", firmware does not assert but reports "cnt q overflow".
Known				Modular Station Interface (MSI)	If the coach speaks before any conversation has taken place between the client and the pupil, the client will hear some background noise for a fraction of a second. Under most circumstances, this will not be a problem since the coach usually will not need to speak before some conversation has taken place between the client and the pupil.
Known				Modular Station Interface (MSI)	ms_setcde() fails to return a valid error message when an invalid chan_attr is assigned.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known				Modular Station Interface (MSI)	Setting the board parameter MSCB_ND through use of the setbrdparm() function fails to configure the volume, tone, and duration of the notify-on-add tone.
Known	IPY00022053	20344		NCM API	All Dialogic® Boards in system must be detected using either NCM_DetectBoards() or NCM_DetectBoardsEx() before using NCM_StartDlgSrv() .
Known	IPY00021901	20949		NCM API	All Dialogic® Boards in system must be detected using either NCM_DetectBoards() or NCM_DetectBoardsEx() before using NCM_StartDlgSrv() .
Known	IPY00006533	31731		PBX Expert (previously called PBXpert)	When using PBX Expert with the Dialogic® DMV160LP Board, for disconnect tone supervision to work, it must be enabled in two places. The DisconnectTone parameter in DCM must be enabled by selecting Yes, and the Tone_SigId4 parameter in the board's CONFIG file must also be enabled. For information about enabling the Tone_SigId4 parameter, see the [CHP] Analog Voice Variant Definitions section of the CONFIG File Parameter Reference chapter of the <i>Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide</i> .
Known				Programming Using External References	Please refer to the following technotes on the support website for information regarding how to program using external references: http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/dlsoft/tn254.htm http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/dlsoft/tn253.htm Note that it is not applicable to Dialogic® DMV2400A-PCI, DMV1200BTEP, DMV600BTEP, and DMV3600BTEP Boards. For the DMV2400A-PCI Board, if using Transaction Record, the maximum number of concurrent transaction records per physical board is 120, even though the board supports up to 240 channels of standard record.
Known	IPY00007185	29270		SNMP	SNMP fails when run on loopstart boards.
Known	IPY00014335	26956		Springware Firmware	CPU usage remains high after program stops. The CPU usage only returns to normal after drivers are stopped.
Known	IPY00007598	25289		Springware ISDN	When using network-side ISDN firmware, gc_MakeCall() does not fail and does not produce any error message when the data link is down. The function returns successfully, but no subsequent call control events are received on the channel.

Issues Sorted By SU No., Dialogic® System Release 6.0 PCI for Windows® (Continued)

Issue Type	Defect No.	PTR No.	SU No.	Dialogic® Product(s) or Component(s)	Description
Known	IPY00022133	23032		Springware Voice	<p>Playing and recording a 21-second file using 176 kHz Linear Coder and SCR. When viewing the file in CoolEdit, the coder is recording the 21-second file into a file over a 1000 minutes long. Explanation: If a file is opened in "write only" mode, the library is unable to update the header because the code that does this uses a generic manner that also works when the file already existed and only the data is replaced.</p> <p>Workaround: When you do a WAVE recording, your application should open the files in the mode specified below:</p> <p>Change: dx_fileopen(fname, O_WRONLY O_CREATIO_BINARY, _S_IWRITE)</p> <p>To: dx_fileopen(fname, O_RDWRIO_CREATIO_BINARY, _S_IWRITE _S_IREAD)</p>
Known	IPY00022082	21385		Springware Voice	<p>Cannot create more than 10 user-defined tone templates on one voice channel. Explanation: This is a limitation of the firmware. The firmware can recognize a total of 20 terminating conditions for an IO event, however only 10 of them can be tones. So when the user sets up 11 tones as terminating conditions, the firmware issues an error that is captured at the driver level and the play is stopped immediately.</p> <p>Workaround: Enable tone events while setting up the tones. When that particular event is received, the play can be stopped.</p>
Known	IPY00006637	32339		Springware Voice	<p>Async polled mode demo does not pick up the call after "Close Channel" button is used. The application does a dx_unlisten() during cleanup, but it fails to do a dx_listen() during init. This means that the front end and voice timeslots are now permanently disconnected. Explanation: This demo was designed originally for older Dialogic® Springware Boards that are now obsolete. These Springware boards required that the analog and voice timeslots be routed by the application. However, the newer Dialogic® JCT boards do not require this.</p> <p>Workaround: Stop and start the board in DCM for the demo to work again.</p>

Documentation Updates

This chapter contains information on updates and corrections to the documents included in Dialogic® System Release 6.0 PCI for Windows®. Documentation updates are divided into the following categories:

- [System Release Documentation](#) 372
- [Installation and Configuration Documentation](#) 376
- [OA&M Documentation](#) 390
- [Programming Library Documentation](#) 401
- [Demonstration Software Documentation](#) 418

3.1 System Release Documentation

This section contains updates to the following documents:

- [Dialogic® System Release 6.0 PCI for Windows® Release Guide](#)

3.1.1 Dialogic® System Release 6.0 PCI for Windows® Release Guide

Update to the System Requirements chapter

Add Windows® XP SP3 to the bulleted list in the Basic Software Requirements section. (IPY00080663) See [Section 1.23, “New Operating System Support”](#), on page 69 of this Release Update.

Updates to the **System Requirements** chapter

Since the original release of Dialogic® System Release 6.0 PCI for Windows®, additional operating systems are now supported with the Service Update. See [Section 1.95, “New Operating System Support”](#), on page 259 of this Release Update.

The **System Requirements** chapter should include the following notes (PTR# 32933):

Note: Dialogic® drivers do not support Physical Address Extensions (PAE). Users using Windows® 2003 with Service Pack 1 will have to disable PAE (which is enabled by default in Service Pack 1).

Note: Dialogic® drivers do not support more than 4 GB of RAM.

The following paragraph should be added to the **Basic Hardware Requirements** section:

This system release supports Intel Hyper-Threading Technology (HT Technology). Multi-Threaded Applications running on HT Technology enabled platforms will interoperate safely with this system release.

The following note should be added to the **Basic Software Requirements** section (PTR# 36031):

Note: Terminal Services Application Server Mode and Active Directory Application Server Mode are not supported on any operating systems.

In the **Basic Software Requirements** section, in the note about using U.S. English versions of the operating system, the information about manual file copy operations if you are using a language other than U.S. English should be deleted (PTR# 36671). The note should simply say:

Note: This system release is designed only for U.S. English versions of the Windows® Operating System.

Updates to the **Features by Product** chapter, **Dialogic DI/0408-LS-A-R2 Features** section

The following item belongs under the “Other Supported Features” heading:

- fixed routing support

The **Dialogic DI/0408-LS-A-R2 Features** section erroneously mentions support for the DI/0408-LS-A Board. This board is not supported in Dialogic® System Release 6.0 PCI for Windows®. Refer to the **Supported Hardware** chapter in the Release Guide for a complete list of supported hardware in this release. (PTR# 33615)

Updates to the **Features by Product** chapter, **Dialogic DI/S1xx-R2 Series Features** section

The following item belongs under the “Other Supported Features” heading:

- fixed routing support

Updates to the **Features by Product** chapter, **Dialogic DMV160LP Analog Loop Start Board Features** section

The following item belongs under the “Other Supported Features” heading:

- flexible routing (exportable voice resources) support

The following feature under the “Other Supported Features” heading is not supported and should be deleted (PTR# 36105):

- Hook-flash through the Global Call API

Updates to the **Features by Product** chapter, **DM/IP Series Features** section

Continuous Speech Processing (CSP) support is listed as a feature. However, CSP is not supported on all Dialogic® DM/IP boards. CSP is supported only on the Dialogic® DM/IP241-1T1-PCI-100BT and DM/IP301-1E1-PCI-100BT boards with the following firmware:

- Dialogic® DM/IP241-1T1-PCI-100BT Board:
 - ipvs_cas_311.pcd
 - ipvs_evr_cas_311.pcd
 - ipvs_evr_isdn_4ess_311.pcd
 - ipvs_evr_isdn_5ess_311.pcd
 - ipvs_evr_isdn_dms_311.pcd
 - ipvs_evr_isdn_ni2_311.pcd
 - ipvs_evr_isdn_ntt_311.pcd
 - ipvs_evr_isdn_qsigt1_311.pcd

- Dialogic® DM/IP301-1E1-PCI-100BT Board:
ipvs_evr_isdn_net5_311.pcd
ipvs_evr_isdn_qsige1_311.pcd
ipvs_evr_r2mf_311.pcd

Updates to the **Features by Product** chapter, SS7 Product Support section (IPY00081381)

Under the Other Supported Features subheading, added the following note:

Note: Global Call SS7 binaries are linked with the shared library of the Dialogic® SS7 DSI Development Package. Global Call SS7 customers must use the Dialogic® SS7 DSI Development Package version 5.0 or later. If an older version is used, the Global Call SS7 server will not start during download.

Updates to the **OA&M Software** chapter

The SCbus is supported by Dialogic® Springware and Dialogic® DM3 Boards in Dialogic® System Release 6.0 PCI for Windows®. If a DM3 board, however, is configured as the Clock Master and the SCbus is selected as the TDM Bus Type, the DM3 board cannot use any of the FrontEnd values in the **Derive Primary Clock From** parameter.

In the **Administrative Software** section, the following restriction and limitation on the Board Management API is documented:

Note: A restriction and limitation of Board Management is that it is supported only on JCT single span and dual span boards under the following protocols: T1 4ESS, T1 5ESS, T1 DMS100, and T1 NI2. (E1 protocols are not supported.)

This information is correct except that it also applies to Dialogic® DM3 boards. And with the Service Update, additional protocols are supported for DM3 boards. Replace the restriction and limitation with the following correct one:

Note: The Board Management API is supported on JCT single span and dual span boards using the following protocols: T1 North American ISDN (4ESS, 5ESS, DMS100, DMS250, and NI2). (E1 protocols are not supported.)

The Board Management API is supported on digital DM3 boards (the board must have a network interface for the API to be supported) using the following protocols: T1 North American ISDN (4ESS, 5ESS, DMS100, DMS250, and NI2). With the Service Update, additional protocols are supported: E1/T1 CAS (PDK protocols), additional T1 ISDN (NTT and QSIG-T1), E1 ISDN (NET5 and QSIG-E1), DPNSS, and DASS2.

Updates to the **Development Software** chapter, **New Conferencing Library API** section and **Audio Conferencing API Library** section

The following note, which appears in both the **New Conferencing Library API** section and **Audio Conferencing API Library** section, should be **deleted** because it is no longer correct:

Note: Although the Audio Conferencing (DCB) API continues to be supported, it is recommended that all new conferencing applications be developed using the new Conferencing (CNF) API.

Updates to the **Development Software** chapter, **Standard Runtime Library API** section
The New Features list is incomplete. The correct list of new features is as follows:

- Support for an alternative variant of the extended asynchronous programming model
A set of functions called the device grouping API has been added to support a more efficient alternative to the **sr_waitevtEx()** variant of the extended asynchronous model.

- Device mapper functions
A set of new device mapper functions are available to return information about the structure of the system.
- Support for user context in asynchronous programming model
The **sr_GetUserContext()** function has been added to the SRL. This function provides support for user context in asynchronous mode. User context is a mechanism that allows you to match a termination event with a function call by returning the user-supplied pointer originally passed to the function. In this release, user context is only supported in the new Conferencing (CNF) API library.

Updates to the **Development Software** chapter, **Voice API Library** section

The New Features list is incomplete. The correct list of new features is as follows:

- Cached prompt management
Prompts can be stored in on-board memory rather than in the host computer to reduce latency. The **dx_getcachesize()** and **dx_cacheprompt()** functions and the TDX_CACHEPROMPT event have been added to the Voice library to support cached prompt management.
- IMA ADPCM (32.443 Kbps) coder
The IMA ADPCM coder (VOX and WAVE file formats) is supported. IMA is an acronym for the Interactive Multimedia Association, which defined and published the ADPCM algorithm.
- Enhancement to Multi Frequency (MF) signaling
MF tone detection is now supported. Previously, only MF tone generation was supported.
- Increased granularity for DX_MAXSIL and DX_MAXNOSIL termination conditions (DV_TPT structure)
The range of valid values for DX_MAXSIL and DX_MAXNOSIL is now 10 ms to 250 seconds (1 to 25000 in 10 ms units). There are no further restrictions within this range. Previous range of time was 1 second to 30 seconds, with step values.
- Streaming to board
This feature enables streaming to a network interface in real time which is essential in applications such as text-to-speech and IP gateways. Several new functions have been added to the Voice library.
- Enhancements to call progress analysis
Enhancements include the ability to modify call progress analysis tone definitions on Dialogic® DM3 boards. The **dx_createtone()**, **dx_deletetone()**, and **dx_querytone()** functions have been added to the Voice library.
- Automatic gain control (AGC) configurable on a per-channel basis through new **dx_setparm()** parameters
The new parameters for AGC have the prefix DXCH_AGC_. Previously AGC was configurable on a board basis.
- Record notification beep tone generation (used in call logging applications)
The **dx_SetRecordNotifyBeepTone()** function has been added to the Voice library.
- Playback pause and resume
This feature allows a playback to be paused and then resumed at the exact point it was stopped without loss of data. The **dx_pause()** and **dx_resume()** functions have been added to the Voice library.

Updates to the **Supported Hardware** chapter

The following items belong under the "Fax Boards" heading in the **Media Processing - Single Media Boards** section (PTR# 33046):

- CPi/200B
- CPi/400B

In addition, for information about new boards supported with the Service Update, see [Section 1.105, “New Boards Supported”](#), on page 272 of this Release Update.

Update to the **Separately Orderable Products** chapter

This chapter, which refers to the Global Call Protocols Package, is no longer applicable. With the Service Update, the Global Call Protocols Package can now be installed as part of Dialogic® System Release 6.0 PCI for Windows®.

3.2 Installation and Configuration Documentation

This section contains updates to the following documents (click the title to jump to the corresponding section):

- [Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide](#)
- [Dialogic® Springware Architecture Products on Windows® Configuration Guide](#)
- [Dialogic® GDK 5.0 Installation and Configuration Guide for Windows®](#)
- [Dialogic® Global Call Country Dependent Parameters \(CDP\) for PDK Protocols Configuration Guide](#)
- [Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide](#)

3.2.1 Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide

New information for Mixed ISDN and Clear Channel on Additional Dialogic® DM3 Boards
The Configuration Guide does not currently include information about these new configuration files. See [Section 1.68, “Support for Mixed ISDN and Clear Channel on Additional Dialogic® DM3 Boards”](#), on page 164 in this Release Update.

Update for modifying PVD and PAMD qualification template definitions (IPY00006588 = PTR# 36210)

The Configuration Guide does not include information about the PVD and PAMD qualification templates that are defined in the CONFIG file. The relevant parameters are in the [SigDet] section of the CONFIG file.

In addition, the default PVD and PAMD qualification template definitions are no longer suitable for accurate PVD and PAMD on Dialogic® DM3 Boards and should be modified in accordance with the instructions in Technical Note 030 available on the

Customer Support web site at

<http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/2000/tn030.htm>.

Note: Technical Note 030 was written specifically for Dialogic® System Release 5.1.1 for Windows® Feature Pack 1, but the principle applies to subsequent system releases also.

The recommended default PVD (ID=128193) and PAMD (ID=106561) qualification template definitions are as follows:

!User defined Pvd template.

PvdDesc signalId 128193

PvdDesc signalLabel 0000

PvdDesc minSnr 5

PvdDesc maxSnr 600

PvdDesc maxPk 2

PvdDesc maxRing 5

PvdDesc ringThresh 10000

PvdDesc PvdWin 8

PvdDesc PvdVthresh 10000

PvdDesc PvdRbLow 380

PvdDesc PvdRbHigh 510

CreatePvd

!User defined PAMD template.

PamdDesc signalId 106561

PamdDesc signalLabel 0000

PamdDesc minRing 190

PamdDesc mask 1

PamdDesc maxAnsiz1 159

PamdDesc maxAnsiz2 159

PamdDesc maxAnsiz3 159

PamdDesc loHiss 22

PamdDesc hiHiss 16

PamdDesc bhParm 5

PamdDesc cvThresh1 80

PamdDesc cvThresh2 165

PamdDesc maxCvThresh 390

PamdDesc nMaxBroad 2

PamdDesc nMaxErg 65

PamdDesc maxSilence 30

PamdDesc voiceThresh 25

PamdDesc silenceThresh 10000

PamdDesc rjFbandLow 0

PamdDesc rjFbandHigh 0

CreatePamd

The default PVD qualification template ID is 128193 (0x1f4c1), but other valid PVD qualification template IDs that can be defined in the CONFIG file are:

- 128194 (0x1f4c2)
- 128195 (0x1f4c3)
- 128196 (0x1f4c4)

- 128197 (0x1f4c5)

The default PAMD qualification template ID is 106561 (0x1a041), but other valid PAMD qualification template IDs that can be defined in the CONFIG file are:

- 106564 (0x1a044)
- 106565 (0x1a045)
- 106566 (0x1a046)
- 106567 (0x1a047)

Update for analog line adaptation utility (LineAdapt)

Because of a new feature in the Service Update, a configuration utility is now available for tuning the impedance level on analog front-ends to reduce transmitter side line echo due to degraded analog telephone lines that deviate from their designed impedance range. Information about the LineAdapt utility should be added to this document. For information about this utility, see [Section 1.73, “Analog Line Adaptation Utility \(LineAdapt\)”](#), on page 168 of this Release Update.

Update for IP support on Dialogic® DI0408LSAR2 Boards

Because of a new feature in the Service Update, Voice over IP (VoIP) capability is now supported on Dialogic® DI0408LSAR2 Switching Boards. Some additional parameters are now applicable to these boards. For information about this feature, including configuration information, see [Section 1.75, “IP Support on Dialogic® DI0408LSAR2 Boards”](#), on page 183 and [Section 1.76, “Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs”](#), on page 190 of this Release Update.

Update for adjusting DTMF characteristics

Because of a new feature in the Service Update, you can now adjust DTMF parameter values, such as amplitudes and on/off durations, in the Tone Templates [tonegen] section of a particular media load CONFIG file. For information about this feature, see [Section 1.79, “Adjusting DTMF Characteristics through the CONFIG File”](#), on page 192 of this Release Update.

Update to Media Load 11 on page 22 (PTR# 33555/34771)

Media Load 11 description on page 22 should read:

Media Load 11 - Enhanced Voice Plus Conferencing (Dialogic® DM/IP241-1T1-PCI-100BT and DM/IP301-1E1-PCI-100BT Boards only)

- All Enhanced Voice features (see Media Load 2)
- Conferencing resource

Update to Table 1 on page 23 (PTR# 33555/34771)

Table 1 on page 23 should be modified as follows:

- The last two board entries, Dialogic® DM/IP481-2T1-PCI-100BT and DM/IP601-2E1-PCI-100BT, should be ignored.
- The note at the bottom of the table associated with the ‡ symbol should read: Media load 11 only applies to Dialogic® DM/IP single-span boards.

Parameters not applicable to this release

The following parameters, which are documented in the guide, are not applicable in Dialogic® System Release 6.0 PCI for Windows®:

- Derive NETREF Two From

- NETREF Two Clock Rate
- NETREF Two FRU
- Using NETREF Two

Update to **Section 2.4, Media Loads** for new media loads

Because of features introduced in the Service Update, several new media loads are available:

- for Dialogic® DMV3600BP Boards: ML9B-LC
- for Dialogic® DMV1200BTEP Boards: QSB-U3, QSB-ML10, QSB-ML10-LC, QSB-U2, and 10b.
- for Dialogic® DMV600BTEP Boards: DSB-U2

These media loads should be documented in **Section 2.4, Media Loads**. For information about these media loads, see [Section 1.98, “New Media Load for Dialogic® DMV3600BP Boards”](#), on page 260, [Section 1.99, “New Media Loads for Dialogic® DMV1200BTEP Boards”](#), on page 261, and [Section 1.100, “New Media Load for Dialogic® DMV600BTEP Boards”](#), on page 265 of this Release Update.

Update to **Section 2.4, Media Loads** for new Dialogic® DI Board feature

Because of a new feature in the Service Update, **Section 2.4.1.1** about features supported on Dialogic® DI Boards should be updated to indicate that conference bridging is supported so a higher number of maximum parties per conference is possible. For further information about this feature, see [Section 1.84, “Conference Bridging on Dialogic® DI Boards”](#), on page 242 of this Release Update.

Update to **Section 2.4.1.2, Dialogic® DM/IP, DM/V, DM/V-A, and DM/V-B Boards**

In **Table 2, Channel Densities by Board and Media Load (Universal)**, the table footnote about echo cancellation should be changed as follows:

- Default configuration is EEC (enhanced EC, 32 ms) for CSP supported ML, unless otherwise indicated or set in the component named [0x2c] in the respective CONFIG file. You can only change it to a lower EC tail length, by changing the CSP parameter 0x2c03 accordingly in the respective CONFIG file. Conferencing EC, however, will always be 16 ms, regardless of the EC parameter setting.

Update to **Section 2.5, CT Bus Clock Fallback** (PTR# 35769)

Reference master fallback is **not** supported and should be deleted from the Section 2.5 introduction and from Figure 5, Clock Fallback. The entire **Section 2.5.2, Reference Master Fallback**, should be deleted.

Update to **Section 3.4, [NFAS] Section**

The third note about NFAS D channel backup (DCBU) supported only on ISDN NI-2 protocol is incorrect. DCBU is supported on 4ESS, 5ESS, and NI-2.

Update to **Chapter 4, Configuration Procedures**

Because of an enhancement in the Service Update, it is no longer necessary to use the fcdgen utility to generate an updated FCD file. All references to fcdgen throughout the Configuration Guide can be ignored. For information on the enhanced way to generate an updated FCD file, see [Section 1.65.2, “Automatic FCD File Generation”](#), on page 163 of this Release Update.

Update to **Section 4.3, Starting the Configuration Manager (DCM)**

In the instructions regarding the Computer Name dialog box for remote DCM, the following notes should be added:

Note: In order to use remote DCM, the local computer (management node) and remote computer (managed node) must both be running the same Dialogic® software release (for example, Dialogic® System Release 6.0 PCI for Windows®) and same build number. If you try to connect to a remote computer with a different software release or build number, the following message is displayed:

An incompatible version of the Dialogic(R) System Release Software is installed on the remote system and the software release and build numbers for the two systems are shown.

Note: Remote DCM is not supported when using Windows Vista® and Windows Server® 2008.

Update to **Section 4.3, Starting the Configuration Manager (DCM)**

After the Note just before step 2, the following note should be added:

Note: To use remote DCM across firewalls, enable the port used by the DCOM Server, *DCMObj.exe*, in the firewall configuration. *DCMObj.exe* is located in the */Program Files/Dialogic/bin* directory. To find out the port used by *DCMObj.exe*, first use the Windows® Task Manager to find out the PID of *DCMObj.exe*. Once you know the PID, you can use a port usage utility to find out the port used by *DCMObj.exe*. Windows® XP users can run *netstat -o* to find the port.

Update to **Section 4.4, Selecting a Configuration File Set**

Because of a feature in the Service Update, it is now possible to mix ISDN and CAS protocols on the same Dialogic® DMV600BTEP or DMV1200BTEP Media Board using the Trunk Configuration property sheet of DCM. Table 5, Protocol Groups, should be replaced by the following table:

Group 1	Group 2
4ESS (T1)	DPNSS
5ESS (T1)	DASS2
NTT (T1)	
NI2 (T1)	
DMS (T1)	
QSIGT1 (T1)	
QSIGE1 (E1)	
NET5 (E1)	
T1CC (T1)	
CAS (T1)	
E1CC (E1)	
R2MF (E1)	

For further information about this feature, see [Section 1.87, "Mixing ISDN and CAS on Dialogic® DM/V-B Boards"](#), on page 246 of this Release Update.

Update for new **PDK Configuration Property Sheet**

Because of a new feature in the Service Update, a new PDK Configuration property sheet in DCM is now used to assign country dependent parameter (CDP) file variants to trunks that use CAS or R2MF protocols. Information about this property sheet should be added to **Chapter 4, Configuration Procedures**, following **Section 4.4, Selecting a Configuration File Set**. The new property sheet should also be documented in **Chapter 5, DCM Parameter Reference**. For further information about the new property sheet, see [Section 1.65.1, "PDK Configuration Property Sheet"](#), on page 161 of this Release Update.

Update to **Section 4.5, Setting the TDM Bus Clock Source** (PTR# 30175)

The following note is added to **Section 4.5, Setting the TDM Bus Clock Source**:

Note: When configuring a board that has front-end capability as resource only, the system will not detect this and might select this board as a clock master. In this event, the user must manually configure another board in the system as the clock master.

Updates to **Section 5.5, Physical Property Sheet**

The following description of the DCM parameter **PhysicalSlotNumber** should be added:

The description of the DCM parameter **PciID** should be replaced by the following:

PciID

Description: The **PciID** parameter is a positive integer or hexadecimal value in which the lower 5 bits specify a board's rotary-switch setting (PCI boards) or the physical slot number location of the board (CompactPCI boards). The rotary-switch setting for PCI boards can be the same for all boards in the system if the value is set to 0.

Values: A positive integer or hexadecimal value

Guidelines: The **PciID** parameter is set by the system software and should not be changed by the user.

Update to **Section 5.6, TDM Bus Configuration Property Sheet**

The description of the DCM parameter **Derive Primary Clock From (User Defined)** that is contained in **Section 5.6, TDM Bus Configuration Property Sheet**, is replaced by the following:

Derive Primary Clock From (User Defined)

Description: The **Derive Primary Clock From (User Defined)** parameter specifies the clock source that the **Primary Master FRU** uses to drive the Primary Line.

Values:

- Default [default]: The value of this parameter is to be determined by the system software. Its current value is indicated by the Resolved Equivalent.
- FrontEnd_1: Not applicable to Dialogic® DM3 Boards.
- FrontEnd_2: Not applicable to DM3 Boards.
- FrontEnd_3: Not applicable to DM3 Boards.
- FrontEnd_4: Not applicable to DM3 Boards.
- InternalOscillator: The Primary Master derives clocking from its own internal circuitry.
- NETREF_1: The Primary Master derives clocking from NETREF_1 (CT Bus only)
- NETREF_2: This selection is not supported for this release.

Update to **Chapter 6, CONFIG File Parameter Reference**

Because of a feature in the Service Update, there are new transmit and receive parameters that let you change the volume level of the FSK modem signals sent and received by the board. For information about this feature and the new parameters, see [Section 1.56, “New FSK Transmit and Receive Signal Level Parameters”](#), on page 154 of this Release Update.

Update to **Section 6.3, [0x2c] Parameters**

Because of a feature in the Service Update, a new parameter, **0x2c22**, can be manually added to the CONFIG file to disable or lower white noise. This parameter should be documented in **Section 6.3, [0x2c] Parameters**. For more information about this feature and the new parameter, see [Section 1.54, “Ability to Lower or Disable White Noise”](#), on page 152 of this Release Update.

Update to **Section 6.4, [encoder] Parameters**

Because of enhancements to the **dx_reciottdata()** function introduced in the Service Update, a new parameter, **0x416**, can be manually added to the CONFIG file to change the default value for the amount of allowable silence when using RM_ISCR mode. This parameter should be documented in **Section 6.4, [encoder] Parameters**. For information about this feature and the new parameter, see [Section 1.102, “dx_reciottdata\(\) Enhancements”](#), on page 266 of this Release Update.

Update to **Section 6.7, [0x3b] Parameters**

Information about parameters **0x3b03** and **0x3b04** should be added to this section as follows:

Note: This information is intended for experienced users of the Dialogic® DM3 conferencing feature. Changing the default parameter settings is **not** recommended, as this could introduce negative effects on the audio quality and conferencing experience of the participants.

CSUMS_ActTalkerPartiesMinNum

Number: 0x3b03

Description: Specifies the number of talkers in a conference before Active Talker mode is enabled.

Note: Conference Active Talker mode, though related, should not be confused with the Active Talker detection feature.

Values: 0 [default] to 0xff (255).

Guidelines: Refer to the guidelines for the **CSUMS_SmartScalingPartiesMinNum** parameter below.

CSUMS_SmartScalingPartiesMinNum

Number: 0x3b04

Description: Specifies the number of talkers in a conference before scaling mode is enabled.

Values: 0 [default] to 0xff (255).

Guidelines: Audio conferencing provides a mechanism for audio summation of two or more parties in a conference. There are three possible summing modes, which are controlled by CSUMS parameters **0x3b03** and **0x3b04** in the configuration file.

By default, both active talker and scaling are enabled. When parameters **0x3b03** and **0x3b04** are both set to their default values of 0, the default summing mode is Active Talker Summation mode, which sums the three loudest parties. This is advantageous in **large conferences**. Since only the three loudest parties are summed, background noise is reduced. However, there may be times with **small conferences** when a different summation mode is preferable, for example, with soft speakers or when the energy is too low (as with analog lines). The other summation modes are:

- Smart scaling mode - the summation of all parties, but scaling is only done on the ones who are talking.
- No scaling - pure summation, can be used if you want full voice energy in the conference.

The settings for parameters **0x3b03** and **0x3b04** determine the summing mode as shown in the following table.

Parameter 0x3b03, CSUMS_ActTalkerPartiesMinNum	Parameter 0x3b04, CSUMS_SmartScalingPartiesMinNum	Summing Mode
0 (default)	0 (default)	Active Talker Detection (default)
> Conf_MaxTotalParties	0 (default)	Smart Scaling
> Conf_MaxTotalParties	> Conf_MaxTotalParties	No Scaling
Conf_MaxTotalParties is the setting for parameter 0x3926 in the configuration file, e.g., SetParm=0x3926,120 !Conf_MaxTotalParties		

To disable the Active Talker algorithm, set the parameter **0x3b03** to a value larger than the maximum number of conferences per DSP; setting it to **Conf_MaxTotalParties**, or per board total number of parties, will suffice, to a maximum of 255.

Even without Active Talker, scaling is also enabled by default. If not required, set the parameter **0x3b04** to a number larger than the maximum number of parties per DSP, and again using **Conf_MaxTotalParties** will suffice, to a maximum of 255.

Update to **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**

Because of a feature in the Service Update, a new parameter, **LineEncoding**, 0x1627, can be manually added to the CONFIG file for line lawencoding. For information about this feature and the new parameter, see [Section 1.22, “Configuring the Line Law Encoding Mode”](#), on page 67 of this Release Update.

Update to **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**

In the guidelines for the **SignalingType** parameter, the note about NFAS D channel backup (DCBU) supported only on ISDN NI-2 protocol is incorrect. DCBU is supported on 4ESS, 5ESS, and NI-2.

Update to **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**

Because of a feature in the Service Update, a new parameter, **0x1626**, can be manually added to the CONFIG file for trunk preconditioning. This parameter should be documented in **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**. For information about this feature and the new parameter, see [Section 1.103, “Trunk Preconditioning”](#), on page 269 of this Release Update.

Update to **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**

The following new parameter is added in **Section 6.9, [lineAdmin.x] Parameters (Digital Voice)**:

InitialBitPattern (Initial CAS Signaling Bit Pattern)

Number: 0x1625

Description: The **InitialBitPattern** parameter defines the values of the CAS ABCD signaling bits that are transmitted for all channels on the specified line at the time the firmware is downloaded and initialized.

Values: 0x0 to 0xf, where the hexadecimal value represents the binary ABCD bit values. For example, 0xd defines the ABCD bit pattern as 1101.

Guidelines: For a T1 line, the default is 0x0. For an E1 line, the default is 0xd.

Update for **CRC Checking Parameter (PTR# 31812/32282)**

The following information about the **CRC Checking Parameter** should be included in the Configuration Guide:

A T1 front end can run two different framing algorithms when configured as extended superframe (ESF): a default algorithm and an alternate CRC-6 checking algorithm. The CRC-6 checking algorithm allows the circuit to confirm the CRC-6 bits in the

received multiframe, as a guard against mimic framing patterns, before forcing a new frame alignment.

The CRC Checking parameter allows you to enable the CRC-6 checking algorithm. This parameter only applies to T1 trunks whose Line Type parameter (0x1601) is set to 1 (dsx1_ESF). For all other Line Types, this parameter is invalid.

To include this parameter and enable CRC checking, you must edit the applicable CONFIG file by adding the following line at the end of each [lineAdmin] section of the CONFIG file:

```
SetParm=0x1624,1! CRC checking OFF=0 (default), CRC checking ON=1
```

After editing the CONFIG file, you will need to generate a new FCD file. Refer to **Section 4.9, Modifying the FCD File Parameters**.

Update to **Section 6.12, [NFAS.x] Parameters**

In the description of the **NFAS_Standby_IntlID** parameter, the note about NFAS D channel backup (DCBU) supported only on ISDN NI-2 protocol is incorrect. DCBU is supported on 4ESS, 5ESS, and NI-2.

Update to **Section 6.18, [CCS] Parameters**

Because of a feature in the Service Update, a new parameter, **0x26**, can be manually added to the CONFIG file to enable bearer channel time slots to use a sequentially-ordered logical channel numbering scheme, from 1 to 30, for the QSIG protocol. This parameter should be documented in **Section 6.18, [CCS] Parameters**. For information about this feature and the new parameter, see [Section 1.74, "New QSIG Channel Mapping Parameter for E1 Boards"](#), on page 181 of this Release Update.

Update to **Section 6.21, [CHP] ISDN Protocol Variant Definitions** (IPY00045267)

The values shown for the **ProtocolType** parameter are incorrect. The correct values for the **ProtocolType** parameter are:

- 1: 4ESS
- 2: 5ESS
- 3: DMS100 and DMS250
- 4: NTT
- 7: NET5
- 8: DASS2
- 9: DPNSS
- 10: QSIGE1
- 11: QSIGT1
- 12: NI2

Update to **Section 6.24, [TSC] defineBSet Parameters** (IPY00033335)

The information about the **DChanDesc** parameter should be replaced with the following:

DChanDesc (D Channel Identifier)

Description: The **DChanDesc** parameter is an ISDN parameter that identifies which trunk the D-channel resides for this B-set. This parameter is ignored for T1 CAS, clear channel, and Global Call protocols.

Values: 1 to 16

Guidelines: For example, on a board with four T1 ISDN lines, **DChanDesc** is set as follows:

```
defineBSet=10,1,1,24, 0,1,1,1,20,1, 1,1,3,24,0  
defineBSet=20,2,1,24, 0,1,1,2,20,1, 1,1,3,24,0  
defineBSet=30,3,1,24, 0,1,1,3,20,1, 1,1,3,24,0  
defineBSet=40,4,1,24, 0,1,1,4,20,1, 1,1,3,24,0
```

3.2.2 Dialogic® Springware Architecture Products on Windows® Configuration Guide

Parameters not applicable to this release

The following parameters, which are documented in the guide, are not applicable in Dialogic® System Release 6.0 PCI for Windows®:

- Derive NETREF Two From
- NETREF Two Clock Rate
- NETREF Two FRU
- Using NETREF Two

Update for analog line adaptation utility (LineAdapt)

Because of a new feature in the Service Update, a configuration utility is now available for tuning the impedance level on analog front-ends to reduce transmitter side line echo due to degraded analog telephone lines that deviate from their designed impedance range. Information about the LineAdapt utility should be added to this document. For information about this utility, see [Section 1.73, "Analog Line Adaptation Utility \(LineAdapt\)"](#), on page 168 of this Release Update.

New stand-alone configuration supported

Because of a new feature in the Service Update, a stand-alone configuration that will eliminate a single point of failure with respect to clocking is now supported on selected Dialogic® JCT Boards. For information about this feature, including new parameters in DCM, see [Section 1.80.2, "Stand-Alone Configuration"](#), on page 199 of this Release Update.

New parameter in *ntt.prm* file

Because of a new feature in the Service Update, a new channel block timer parameter has been added to the *ntt.prm* file for the ISDN NTT protocols. For information about this feature, see [Section 1.86, "New Channel Block Timer for NTT Protocol"](#), on page 244 of this Release Update.

Update to **Section 2.3.2, Signal Delay** (PTR# 31601)

In **Section 2.3.2, Signal Delay**, the following note is added after the first paragraph in the section:

Note: Due to Host CPU/PCI Bus loading limitations, the minimum firmware buffer size for systems with more than 20 channels is 256 bytes.

Update to **Section 3.3, Starting the Configuration Manager (DCM)**

In the instructions regarding the Computer Name dialog box for remote DCM, the following notes should be added:

Note: In order to use remote DCM, the local computer (management node) and remote computer (managed node) must both be running the same Dialogic® software release (for example, Dialogic® System Release 6.0 PCI for Windows®) and same build number. If you try to connect to a remote computer with a different software release or build number, the following message is displayed:

An incompatible version of the Dialogic(R) System Release Software is installed on the remote system and the software release and build numbers for the two systems are shown.

Note: Remote DCM is not supported when using Windows Vista® and Windows Server® 2008.

Update to **Section 3.3, Starting the Configuration Manager (DCM)**

In **Section 3.3, Starting the Configuration Manager (DCM)**, after the Note just before step 2, the following note should be added:

Note: To use remote DCM across firewalls, enable the port used by the DCOM Server, *DCMObj.exe*, in the firewall configuration. *DCMObj.exe* is located in the */Program Files/Dialogic/bin* directory. To find out the port used by *DCMObj.exe*, first use the Windows® Task Manager to find out the PID of *DCMObj.exe*. Once you know the PID, you can use a port usage utility to find out the port used by *DCMObj.exe*. Windows® XP users can run `netstat -o` to find the port.

Update to **Section 3.5, Setting the TDM Bus Clock Source** (PTR# 30175)

The following note is added to **Section 3.5, Setting the TDM Bus Clock Source**:

Note: When configuring a board that has front-end capability for use as a resource-only board, the system will not detect this and might select this board as a clock master. In this event, the user must manually configure another board in the system as the clock master.

In Service Update 267, additional update to **Section 4.4, Misc Property Sheet**, for **EC_Resource** Parameter (IPY00092052)

IPY00041018 documentation update is only applicable to Service Update 182 and prior versions. Customers who use Service Update 183 and later versions should use `EC_Resource=OFF / CSP_ExtraTimeSlot=ON` when using continuous speech processing (CSP) firmware with Dialogic® Springware boards.

Update to **Section 4.4, Misc Property Sheet**, for **EC_Resource** Parameter (IPY00041018)

The following guideline for using the **EC_Resource** parameter is **incorrect**:

- For boards that support continuous speech processing (CSP), set this parameter to OFF (disabled) and, instead, use the **CSPEXtraTimeSlot** parameter to enable echo cancellation.

The guideline should be **changed** to:

- For Dialogic® Springware Boards that support continuous speech processing (CSP), set this parameter to ON (enabled) and also set the **CSPEXtraTimeSlot** parameter to ON.

In Service Update 267, additional update to **Section 4.4, Misc Property Sheet**, for **CSPEExtraTimeSlot** Parameter (IPY00092052)

IPY00041018 documentation update is only applicable to Service Update 182 and prior versions. Customers who use Service Update 183 and later versions should use EC_Resource=OFF / CSP_ExtraTimeSlot=ON when using continuous speech processing (CSP) firmware with Dialogic® Springware boards.

Update to **Section 4.4, Misc Property Sheet**, for **CSPEExtraTimeSlot** Parameter (IPY00041018)

The following guideline for using the **CSPEExtraTimeSlot** parameter is **incorrect**:

- If you enable CSP for a board, do not enable the board's **EC_Resource** parameter.

The guideline should be **changed** to:

- If you enable CSP for a Dialogic® Springware Board, you must also enable the board's **EC_Resource** parameter.

Update to **Section 4.5, TDM Bus Configuration Property Sheet**

The information about the DCM parameter **Derive Primary Clock From (User Defined)** that is contained in **Section 4.5, TDM Bus Configuration Property Sheet**, is replaced by the following:

Derive Primary Clock From (User Defined)

Description: The **Derive Primary Clock From (User Defined)** parameter specifies the clock source that the Primary Master FRU uses to drive the Primary Line.

Values:

- Default [default]: The value of this parameter is to be determined by the system software. Its current value is indicated by the Resolved Equivalent.
- FrontEnd_1: The Primary Master derives clocking from its own front end network interface. This value only applies when the TDM Bus Type (Resolved) is set to SCbus and the Primary Master FRU (Resolved) is a Dialogic® Springware Board.
- FrontEnd_2: The Primary Master derives clocking from its own second network interface. This value only applies when the TDM Bus Type (Resolved) is set to SCbus and the Primary Master FRU (Resolved) is a Springware Board.
- FrontEnd_3: Not applicable to Springware Boards.
- FrontEnd_4: Not applicable to Springware Boards.
- InternalOscillator: The Primary Master derives clocking from its own internal circuitry.
- NETREF_1: The Primary Master derives clocking from NETREF_1 (CT Bus only).
- NETREF_2: This selection is not supported for this release.

Update to **Section 4.6, Country Property Sheet**

The information about the DCM parameter **Digital Signaling** that is included in **Section 4.6, Country Property Sheet**, is replaced by the following:

Digital Signaling

Description: Allows you to designate E1 time slot 16 for signaling or to choose clear-channel signaling.

Values:

- TS16_SIG [default]: Designates time slot 16 to be used for signaling.
- TS16_CLEAR: Selects clear-channel signaling.

Guidelines: To use this parameter, you must also set a value for the **Country** parameter. Consult the Country Parameter Selection Table in the DCM online help to verify that the value you choose for this parameter can be used for the country selected.

3.2.3 Dialogic® GDK 5.0 Installation and Configuration Guide for Windows®

In addition to the updates described in this section, refer to the separate document *Updates for GDK Version 6.0 and Dialogic® System Release 6.0 PCI for Windows®* for other updates applicable to the *Dialogic® GDK 5.0 Installation and Configuration Guide for Windows®*. Also, for additional information about configuring Dialogic® CPI/2400PCIU-T1 Boards, refer to the tech note at this link (PTR# 33698, 33699):

<http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/2000/tn091.htm>

Do not use the procedure in **Section 3.3.4** of the *Dialogic® GDK Version 5.0 Installation and Configuration Guide for Windows®* for configuring the **NETREF One FRU** parameter. Instead, follow the procedure titled “**Setting the TDM Bus Clock Source**” in **Section 4.5** of the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide* (PTR# 24782).

3.2.4 Dialogic® Global Call Country Dependent Parameters (CDP) for PDK Protocols Configuration Guide

Update to **Chapter 10, Brazil R2 Bidirectional Protocol Parameter Configuration**

The **CDP_SKIP_A3_AND_A4_PULSE** parameter should be added to this chapter as follows:

CDP_SKIP_A3_AND_A4_PULSE (Inbound)

Description: Specifies when to send ANI after DNIS when overlap sending is enabled and the Append F flag is disabled. This parameter is valid only if **CDP_OVERLAP_SENDING_ENABLED=1** and **CDP_FLAG_APPEND_F=0**.

Values:

- 0 [default]: Protocol waits for A3 or A4 pulse and then requests Category before requesting ANI. This is the default behavior when **CDP_OVERLAP_SENDING_ENABLED=1** and **CDP_FLAG_APPEND_F=0**.
- 1: Protocol requests ANI immediately after DNIS, without waiting for A3 or A4.

Update to **Chapter 10, Brazil R2 Bidirectional Protocol Parameter Configuration**

The “Values” section for the **CDP_FLAG_APPEND_F** parameter should be updated to refer to the **CDP_SKIP_A3_AND_A4_PULSE** parameter as follows:

Values:

- 0 [default]: No tone will be sent to the remote end. In this case, A3 or A4 pulse is expected to be received from the remote end. In a case of overlapped sending (see description of **CDP_OVERLAP_SENDING_ENABLED** parameter), the remote end may also send A1 to request more information.
To skip the A3 or A4 pulse and send ANI immediately after DNIS, set **CDP_SKIP_A3_AND_A4_PULSE=1**.
- 1: ‘f’ (I-15) will be sent to the remote end, indicating the end of information.

3.2.5 Dialogic® System Release 6.0 PCI for Windows® Software Installation Guide

In Service Update 256, Update to Section 2.1.1. “Installing and Configuring Windows® SNMP Service” (IPY00092038)

Added the following note after the first paragraph:

Note: The System Release installation updates the SNMP Extension Agents regardless of whether the SNMP option is selected. This is not an issue *unless* a custom SNMP agent is required instead of the Dialogic® SNMP agents. In the latter instance, the following values may be deleted from under the
HKLM\SYSTEM\CurrentControlSet\services\SNMP\Parameters\ExtensionAgents key to prevent the loading of Dialogic® SNMP extension DLLs:

- DialogicPerformanceAgent
- DialogicSnmpAgent

Update to Section 2.4, Performing an Update Install (IPY00081149)

Add the following note after the first paragraph:

Note: Due to changes in the Dialogic® Software install process, an update install should not be used when updating to a more recent build from a Dialogic® System Release 6.0 PCI for Windows build prior to Service Update 207. Update install does work when upgrading from Service Update 207 to any more recent build.

3.3 OA&M Documentation

This section contains updates to the following documents (click the title to jump to the corresponding section):

- [Dialogic® Board Management API Library Reference](#)
- [Dialogic® Configuration Manager \(DCM\) Online Help](#)
- [Dialogic® System Software Diagnostics Guide](#)
- [Dialogic® System Software for PCI Products on Windows® Administration Guide](#)

- [Dialogic® Native Configuration Manager API Library Reference](#)
- [Dialogic® Native Configuration Manager API Programming Guide](#)
- [Dialogic® SNMP Agent Software for Windows® Administration Guide](#)

3.3.1 Dialogic® Board Management API Library Reference

Update to **brd_Open()** function

Because of a new feature in the Service Update for firmware assert notification on Dialogic® JCT Boards, the **brd_Open()** function has a new **mode** parameter, **BRD_FW_ASSERT_ENABLE**. There is also a new event, DMEV_FW_ASSERT. For information about this feature, see [Section 1.80.3, “Firmware Assert Notification”](#), on page 200 of this Release Update.

Update to **brd_SendAliveEnable()** function

The description of the **brd_SendAliveEnable()** function currently says:

The network interface is taken out of service by providing the network with a protocol-specific out-of-service condition.

Because of a new feature in the Service Update, the network interface is taken out-of-service by sending an Alarm Indication Signal (AIS) toward the network rather than a protocol-specific out-of-service condition. For information about this feature, see [Section 1.104, “Extended Board Management API Support for Dialogic® DM3 Boards”](#), on page 271 of this Release Update.

3.3.2 Dialogic® Configuration Manager (DCM) Online Help

Parameters that are not applicable

The following parameters, which are documented in the DCM online help, are not applicable in Dialogic® System Release 6.0 PCI for Windows®:

- Derive NETREF Two From
- NETREF Two Clock Rate
- NETREF Two FRU
- Provide NETREF Two
- Provide NETREF Two From
- Using NETREF Two
- Frequency Resolution

New parameters for Dialogic® DI0408LSAR2 Boards

Because of a new feature in the Service Update for IP support on Dialogic® DI0408LSAR2 Boards, two parameters have been added to DCM: **DI_TOS** and **HostIpMediaNetworkAddress**. For information about these parameters, see [Section 1.75, “IP Support on Dialogic® DI0408LSAR2 Boards”](#), on page 183 and [Section 1.76, “Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs”](#), on page 190 of this Release Update.

New parameters for stand-alone configuration

Because of a new feature in the Service Update for stand-alone configuration (applicable to selected Dialogic® JCT Boards), two parameters have been added to

DCM: **NFASPrimary** and **Using Cable Mode**. For information about these parameters, see [Section 1.80.2, “Stand-Alone Configuration”](#), on page 199 of this Release Update.

In Service Update 267, additional update to **CSPEXtraTimeSlot** help topic (IPY00092052) IPY00041018 documentation update is only applicable to Service Update 182 and prior versions. Customers who use Service Update 183 and later versions should use EC_Resource=OFF / CSP_ExtraTimeSlot=ON when using continuous speech processing (CSP) firmware with Dialogic® Springware boards.

Update to **CSPEXtraTimeSlot** help topic (IPY00041018)

The following note for using the **CSPEXtraTimeSlot** parameter is **incorrect**:

- If you enable CSP for a board, do not enable that board’s **EC_Resource** parameter.

The note should be **changed** to:

- If you enable CSP for a Dialogic® Springware Board, you must also enable that board’s **EC_Resource** parameter.

Update to **Derive Primary Clock From (User Defined)** help topic

The help topic for **Derive Primary Clock From (User Defined)** should read as follows:

Description: This parameter specifies the clock source that the Primary Master FRU uses to drive the Primary Line.

Settings	Value	Explanation
	Default	The value of this parameter is to be determined by the system software. Its current value is indicated by the Resolved Equivalent.
	FrontEnd_1	The Primary Master derives clocking from its own front end network interface. This value only applies when the TDM Bus Type (Resolved) is set to SCbus and the Primary Master FRU (Resolved) is a Dialogic® Springware Board.
	FrontEnd_2	The Primary Master derives clocking from its own second network interface. This value only applies when the TDM Bus Type (Resolved) is set to SCbus and the Primary Master FRU (Resolved) is a Springware Board.
	FrontEnd_3	Not supported
	FrontEnd_4	Not supported
	InternalOscillator	The Primary Master derives clocking from its own circuitry.
	NETREF_1	The Primary Master derives clocking from NETREF_1 (CT Bus only).
	NETREF_2	Not supported

Update to **Digital Signaling** parameter help topic

The information in the help topic for the **Digital Signaling** parameter should read as follows:

Description: Allows you to designate E1 time slot 16 for signaling or to choose clear-channel signaling.

Values:

- TS16_SIG [default] Designates E1 time slot 16 to be used for signaling.
- TS16_CLEAR Selects clear-channel signaling.

Note: To use this parameter, you must also set a value for the Country parameter. Consult the Country Parameter Selection Table in the DCM online help to verify that the value you choose for this parameter can be used for the country selected.

Update to **DisconnectTone** parameter help topic

In the help topic for the **DisconnectTone** parameter, the **Applicability** field in the Rules section should read:

All Dialogic® Springware Voice Boards and Dialogic® DMV160LP Boards.

In the help topic for the **DisconnectTone** parameter, the **Description** field should read:

Enables or disables support of Disconnect Tone Supervision. Disconnect Tone Supervision allows voice processing boards to sense a disconnect has occurred at the PBX by listening for the PBX disconnect tone.

In the help topic for the **DisconnectTone** parameter, the following note is added to the **Settings** field:

Note: For Dialogic® DMV160LP Boards, this parameter must also be enabled in the CONFIG file associated with the board. For information about enabling Disconnect Tone Supervision using the **Tone_SigID4** parameter in the CONFIG file, see the [CHP] Analog Voice Variant Definitions section of the CONFIG File Parameter Reference chapter in the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

In Service Update 267, additional update to **EC_Resource** help topic (IPY00092052) IPY00041018 documentation update is only applicable to Service Update 182 and prior versions. Customers who use Service Update 183 and later versions should use **EC_Resource=OFF / CSP_ExtraTimeSlot=ON** when using continuous speech processing (CSP) firmware with Dialogic® Springware boards.

Update to **EC_Resource** help topic (IPY00041018)

The following note for using the **EC_Resource** parameter is **incorrect**:

- For boards that support Continuous Speech Processing (CSP), set this parameter to OFF (disabled) and, instead, use the **CSPEXtraTimeSlot** parameter to enable echo cancellation.

The note should be **changed to**:

- For Dialogic® Springware Boards that support Continuous Speech Processing (CSP), set this parameter to ON (enabled) and also set the **CSPEXtraTimeSlot** parameter to ON.

Update to **Group One Clock Rate, ..., Group Four Clock Rate** parameter help topics

The help topics for the four parameters **Group One Clock Rate, ..., Group Four Clock Rate** should each include the following note:

Note: This parameter does not apply when the Bus Type parameter is set to SBus.

Update to **FCDFilename** and **PCDFilename** parameter help topics

The following note is added to the help topics for the **FCDFilename** and **PCDFilename** parameters:

Note: Dialogic® HDSI Boards use country-specific PCD and FCD files. Depending on the PCD/FCD files selected for an HDSI Board, the PCM encoding method will be set to either A-law or mu-law, based on the default value for that country. If this value is not the same as the TDM Bus Media Type parameter setting, the HDSI Board will fail to download.

To change the PCM encoding method for the HDSI Board from the default value, you will need to edit the Encoding parameter in the associated Config file, re-generate the FCD file, and then restart

the system. For additional information about modifying FCD file parameters, see the *Dialogic® DM3 Architecture PCI Products on Windows® Configuration Guide*.

Update to **PciID** parameter help topic (Physical property sheet)

The information in the help topic for the **PciID** parameter should read as follows:

Description: A positive integer or hexadecimal value in which the lower 5 bits specify a board's rotary-switch setting (PCI boards) or the physical slot number location of the board (CompactPCI boards). The rotary-switch setting for PCI boards can be the same for all PCI boards in the system if it is set to 0.

Note: The PciID parameter is set by the Dialogic® System Software and should not be changed by the user.

Update to **PhysicalSlotNumber** parameter help topic (Physical property sheet)

The information in the help topic for the **PhysicalSlotNumber** parameter should read as follows:

Description: For a PCI board, specifies the board's rotary-switch setting. The rotary-switch setting for Dialogic® DM3 PCI boards can be the same for all boards in the system if the value is set to 0. For a CompactPCI board, specifies the number of the physical slot in which the board is installed. A value of 1 indicates the first slot in the chassis. (The chassis slot numbers are usually marked on the front of the chassis.)

Settings: For a PCI board, 0 to 15.

For a CompactPCI board, a positive integer or hexadecimal value.

Note: This parameter is read-only and cannot be modified through the DCM.

Update to **SCbus Clock Rate (User Defined)** parameter help topic

The help topic for the **SCbus Clock Rate (User Defined)** parameter should read as follows:

Description: If the bus is running in SCbus mode (the TDM Bus Type parameter is set to SCbus), this parameter determines the clock rate for the SCbus.

Settings	Value	Explanation
	Default	The value of this parameter is to be determined by the system software. Its current value is indicated by the Resolved.
	2MHz	Not currently supported.
	4MHz	The SCbus operates at 4 MHz.
	8MHz	Not currently supported.

Update for UK country parameter file (PTR# 25019)

The UK country parameter file for the Dialogic® D/120JCT-LS Board (*uk_120j.prm*) is missing from the release. If the board is configured for use in the United Kingdom (DCM Country parameter is set to United Kingdom), the system will start, but the system event log will report the following error:

Error downloading file. The *uk_120j.prm* file cannot be found.

To correct this problem, locate the file *eu_120j.prm* in the *Program Files\Dialogic\data* directory and rename this file to *uk_120J.prm*.

3.3.3 Dialogic® System Software Diagnostics Guide

Update for Remote Diagnostics Package

A remote diagnostics package is now available that allows you to run Dialogic® diagnostics utilities remotely from a central site. For further information, see [Section 1.41, “Remote Diagnostics Package”](#), on page 131 of this Release Update.

Updates to **Chapter 12, DebugAngel Reference**

Because of a new feature in the Service Update, the DebugAngel tool has been enhanced to provide more capabilities for managing multiple log files. For more information about this feature, see [Section 1.31, “File Management Enhancements for DebugAngel Tool”](#), on page 95 of this Release Update.

Updates to **Chapter 20, ISDN Trace Reference**

Because of a new feature in the Service Update, the ISDNtrace tool has been enhanced to include support for DPNSS tracing. For more information about this feature, see [Section 1.59, “Enhanced ISDN Trace Functionality for DPNSS Tracing”](#), on page 157 of this Release Update.

Because of a new feature in the Service Update, the ISDNtrace tool has been enhanced to include new command line options to set the output log file size and to create multiple backup log files to be archived. For more information about this feature, see [Section 1.46, “File Management Enhancements for ISDNtrace Tool”](#), on page 137.

Updates to **Chapter 21, Telecom Subsystem Summary Tool Reference**

Because of new features in the Service Update:

- The `its_sysinfo` tool has an option to disable collection of board memory dumps for Dialogic® Springware Boards.
- The `its_sysinfo.htm` file includes a Windows® Package Info section at the beginning of the file.

For further information about these features, see [Section 1.91, “Telecom Subsystem Summary Tool \(its_sysinfo\)”](#), on page 254 of this Release Update.

Updates to **Chapter 24, PDK Trace Reference**

Because of a new feature in the Service Update, PDK Trace has new command line options to set the output log file size and to create multiple log files. For more information about this feature, see [Section 1.32, “File Management Enhancements for PDK Trace Tool”](#), on page 100 of this Release Update.

Because of a new feature in the Service Update, PDK Trace supports CAS/R2MF/Tone tracing and readable log files. A new option for enhanced tracing for CAS, R2MF, tone-on and tone-off has been added. For more information about this feature, see [Section 1.53, “PDK Trace Supports CAS/R2MF/Tone Tracing”](#), on page 149 of this Release Update.

Update to **Chapter 26, PSTN Diagnostics Tool Reference**

An enhanced version of the PSTN Diagnostics Tool (`pstndiag`) is provided in the Service Update. The previous version of the tool is still supported. For information about the new version, see [Section 1.51.1, “PSTN Diagnostics \(pstndiag\)”](#), on page 144 of this Release Update.

Update to **Chapter 28, Runtime Trace Facility (RTF) Reference** (IPY00037518)

The following information about using binary log files should be added to **Section 28.3.2, Logfile Tag**:

For installations with high channel densities, or which have enabled all or most RTF trace levels, the volume of logging may result in an increased CPU utilization by the RtfServer executable as a result of the increased volume of log messages.

As shipped, the RTF log files are generated in ASCII text mode. There is a configuration parameter in the RTF configuration file (*RtfConfigWin.xml* for Windows®, *RtfConfigLinux.xml* for Linux) that allows log files to be generated in either “text” or “binary” format. Testing on high channel density systems with most or all of the RTF trace levels enabled has shown that the generation of binary format RTF log files has less of an impact on CPU usage than does the generation of text format RTF log files.

If the volume of logging results in high CPU usage, then using binary format will reduce the usage.

Enabling Binary Format RTF Log Files

The XML file contains the following line, which allows changes to log file parameters to be made:

```
<Logfile path="$(INTEL_DIALOGIC_DIR)\log" size="300" maxbackups="10"
preserve_size="300" preserve_maxbackups="10"
duplicate_to_debug_console="0" log_format="text" />
```

The “log_format” value controls the type of log files that are written. Valid values for this parameter are “text” and “binary”. Once a change has been made to the XML file, it must be reloaded using the rtftool reload command.

Converting Binary Format RTF Log Files to Text Format

In order for binary log files to be examined, they must be converted into text format. This can be done by using the rtftool export command.

```
rtftool export [-d source_dir | -s source_file]
[-f [dest_file] | -m dest_dir]
```

By default, the name of the text format files generated by this command will be *EXPORT-<RTF binary log file name>*. For example, if the binary format file is named *rtflog-LOCAL-20070306-15h09m26.506s.txt*, then the default name of the generated text format file will be *EXPORT-rtflog-LOCAL-20070306-15h09m26.506s.txt*. This behavior can be overridden using the -f command line option.

The rtftool utility is a stand-alone program, and it is not necessary to have the Dialogic® System Release installed on the system in order to convert RTF log files from binary to text format.

Note: When generating large binary files with RTF, do not split the single large binary file and then use the individual split files with the rtftool utility. RtfTool will not work with chopped binary files.

Update to **Chapter 29, RTFManager Reference** (IPY00037518)

Section 29.5, General Tab, says that binary log format is not supported by the current release. This is not correct; binary log format is supported. For information about binary log files, see the update to **Chapter 28, Runtime Trace Facility (RTF) Reference** above.

Update to **Chapter 30, Status Monitor Reference**

An enhanced version of the Status Monitor tool (statusmon) is provided in the Service Update. The previous version of the tool is still supported. For information about the new version, see [Section 1.51.2, “Status Monitor \(statusmon\)”](#), on page 145 of this Release Update.

3.3.4 **Dialogic® System Software for PCI Products on Windows® Administration Guide**

Single board start/stop for selected Dialogic® JCT Boards

Because of a new feature in the Service Update, the ability to stop and start a single Dialogic® JCT Board (after the system has initially started) is now supported. Guidelines for performing a single board stop/start should be added to the Administration Guide. For information about this feature, see [Section 1.80, “Single Board Start/Stop for Selected Dialogic® JCT Boards”](#), on page 198 of this Release Update.

Update to **Section 2.1.1.2, Start Server Only Mode**

Change **Section 2.1.1.2, Start Server Only Mode**, to read:

Selecting the Start Server Only mode from the System/Device autostart submenu causes the Dialogic® Service to start automatically when the system reboots. The boards will be automatically detected, but not started. In this mode, you will need to start the boards manually through the DCM GUI or the NCM API.

This mode allows Windows® NT Service applications to start and stop the boards without any dependency on the Dialogic® Service.

Updates to **Section 3.3, Replacing a Board in the System**

The paragraph preceding Step 1 of the procedure is replaced by the following:

The following procedure describes the basic steps for removing a PCI board and replacing it with a board identical in model and type in the same slot in the system.

Step 7 of the procedure is replaced by the following:

7. Depending on the DCM System/Device autostart option selected, the replacement board will be detected when the system is rebooted and either be started, or remain in the stopped state, allowing you to manually configure and start the board. See Figure 4 for a display of the Device menu.

Note: For the current configuration of the replaced board to be downloaded to the new board, the replacement board must be installed in the same slot as the board that was removed. Otherwise, the new board will be configured with the default values of the replaced board.

- If the **Detect Only** option has been selected from the **System/Device autostart** submenu, the Dialogic® System and the boards will have to be manually started using the DCM GUI (or NCM API). The replacement board will be detected by the system and displayed in the DCM main window, but will not be started automatically. You will have to manually start the new board using the DCM GUI (or NCM API).
- If the **Start Server Only** option has been selected, the Dialogic® System will start automatically when the system is restarted and the replacement board will be detected automatically. You will, however, need to start the replacement board manually using the DCM GUI (or NCM API).

- If the **Start System** option has been selected, the Dialogic® System will be automatically started and the replacement board will be detected by the system, displayed in the DCM main window, and automatically started using the existing system configuration for that board.

3.3.5 Dialogic® Native Configuration Manager API Library Reference

New functions for PDK protocol configuration

Because of a new feature in the Service Update, the new functions and related data structures for PDK protocol configuration should be added to the *Dialogic® Native Configuration Manager API Library Reference*. The functions are **NCM_PDKGetVariantList()**, **NCM_PDKApplyVariantList()**, **NCM_PDKQuerySettings()**, and **NCM_FreePDKVariants()**. The data structures are NCMPDKTrunk and NCMPDKTrunkVariantType. For further information, see [Section 1.30, “New Dialogic® NCM API Functions for PDK Protocol Configuration”](#), on page 80 of this Release Update.

Updates to **NCM_ApplyTrunkConfiguration()**

On the **NCM_ApplyTrunkConfiguration()** function reference page, the first two inputs for **NCM_ApplyTrunkConfiguration()** are not pointers. Therefore the words “pointer to a” should be deleted from the descriptions of the inputs **NCMFamily*** **pncmFamily** and **NCMDevice*** **pncmDeviceUnique**. (PTR# 36260)

On the **NCM_ApplyTrunkConfiguration()** function reference page, the following two parameters should be added:

pMediaLoad	pre-defined sets of supported features. A media load consists of a configuration file set and associated firmware. Universal media loads support voice, fax, and conferencing resources simultaneously. See the “Media Loads Supported” table below.
pErrorMsg	API provides as needed. This is a pointer to BYTE that the API fills with an error message on return. BYTE is defined as an unsigned character.

Boards	Media Loads	Media Loads Supported Protocols
DMV1200BTEP	UL1	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL2	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL3	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2

Boards	Media Loads	Protocols
DMV600BTEP	ML10B	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	ML10	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL1	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL2	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	Tone	Group 1: 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, ISDN1CC, ISDNE1CC Group 2: CAS, T1CC Group 3: R2MF, E1CC
	Network Only	Group 1: 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, ISDN1CC, ISDNE1CC
	ML10	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL2	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	ML10B	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2
	UL1	Group 1: CAS, 4ESS, 5ESS, DMS, NI2, NTT, QSIGT1, QSIGE1, NET5, R2MF, T1CC, E1CC Group 2: DPNSS, DASS2

On the **NCM_ApplyTrunkConfiguration()** function reference page, the sample code should be updated to show the two new parameters:

```
#include <stdio.h>
#include "ncmapi.h"
void main()
{
    NCMRetCode ncmRetCode;
    char buffer[300] = {0};
```

```

NCMFamily family;
family.name = "DM3";
family.next = NULL;

NCMDevice UniqueName;
UniqueName.name = "DMV1200BTEP #1 in slot 2/10";
UniqueName.next = NULL;

NCMTrunkConfig ncmTrunkConfig[4] = {0};

NCMFeatureType ncmFeatureType = {0};

ncmTrunkConfig[0].TrunkName = "Trunk1";
ncmTrunkConfig[0].TrunkValue = "4ESS(T1, Group 1)";
ncmTrunkConfig[0].next = &(ncmTrunkConfig[1]);

ncmTrunkConfig[1].TrunkName = "Trunk2";
ncmTrunkConfig[1].TrunkValue = "4ESS(T1, Group 1)";
ncmTrunkConfig[1].next = &(ncmTrunkConfig[2]);

ncmTrunkConfig[2].TrunkName = "Trunk3";
ncmTrunkConfig[2].TrunkValue = "5ESS(T1, Group 1)";
ncmTrunkConfig[2].next = &(ncmTrunkConfig[3]);

ncmTrunkConfig[3].TrunkName = "Trunk4";
ncmTrunkConfig[3].TrunkValue = "4ESS(T1, Group 1)";
ncmTrunkConfig[3].next = NULL;

strncpy(ncmFeatureType.MediaLoad, "ML10", MEDIA_LOAD_LENGTH);

ncmRetCode = NCM_ApplyTrunkConfiguration(family, UniqueName,
ncmTrunkConfig, &ncmFeatureType, reinterpret_cast<unsigned
char*>(buffer));
if (ncmRetCode != NCM_SUCCESS)
{
    printf("Error calling NCM_ApplyTrunkConfiguration(). It
returned: %d \n", ncmRetCode;
    printf( " Error Msg:  %s \n", buffer);
}
else
{
    printf("Succesful calling
NCM_ApplyTrunkConfiguration\n");
}
printf("press any key to exit\n");
getchar();
}
...

```

3.3.6 Dialogic® Native Configuration Manager API Programming Guide

There are currently no updates to this document.

3.3.7 Dialogic® SNMP Agent Software for Windows® Administration Guide

Update to **Chapter 2, Stopping and Starting the System**

The following new section is added at the end of **Chapter 2, Stopping and Starting the System**:

Starting the Boardserver

When you use SNMP, you must start the Boardserver in one of the following ways:

- From the Windows® Control Panel, go to **Administrative Tools > Services**, select the Boardserver, and click **Start**.
- Use the Windows® NT Service Control Manager to set the startup mode from Manual to Automatic.
- Use the following command at a command line prompt:
`net start Boardserver`

3.4 Programming Library Documentation

This section contains updates to the following documents (click the title to jump to the corresponding section):

- [Dialogic® Audio Conferencing API Library Reference](#)
- [Dialogic® Audio Conferencing API Programming Guide](#)
- [Dialogic® Continuous Speech Processing API Library Reference](#)
- [Dialogic® Continuous Speech Processing API Programming Guide](#)
- [Dialogic® D/42 Series Software API Library Reference](#)
- [Dialogic® D/42 Series Boards User's Guide](#)
- [Dialogic® Digital Network Interface Software Reference](#)
- [Dialogic® Fax Software Reference](#)
- [Dialogic® GDK Programming Reference Manual](#)
- [Dialogic® Global Call API Library Reference](#)
- [Dialogic® Global Call API Programming Guide](#)
- [Dialogic® Global Call Analog Technology Guide](#)
- [Dialogic® Global Call E1/T1 CAS/R2 Technology Guide](#)
- [Dialogic® Global Call IP Technology Guide](#)
- [Dialogic® Global Call ISDN Technology Guide](#)
- [Dialogic® Global Call SS7 Technology Guide](#)
- [Dialogic® IP Media Library API Programming Guide](#)
- [Dialogic® IP Media Library API Library Reference](#)

- [Dialogic® ISDN Software Reference](#)
- [Dialogic® Modular Station Interface API Library Reference](#)
- [Dialogic® Modular Station Interface API Programming Guide](#)
- [Dialogic® PBX Integration Board User's Guide](#)
- [Dialogic® PBX Integration Software Reference](#)
- [Dialogic® Standard Runtime Library API Library Reference](#)
- [Dialogic® Standard Runtime Library API Programming Guide](#)
- [Dialogic® Voice API Library Reference](#)
- [Dialogic® Voice API Programming Guide](#)

3.4.1 **Dialogic® Audio Conferencing API Library Reference**

There are currently no updates to this document.

3.4.2 **Dialogic® Audio Conferencing API Programming Guide**

There are currently no updates to this document.

3.4.3 **Dialogic® Continuous Speech Processing API Library Reference**

Update for single echo canceller convergence

Because of a new feature in the Service Update, information about single echo canceller convergence should be added to the **ec_stream()** function description, and information about the ECCH_CONVERGE parameter should be added to the **ec_setparm()** function description. For information about this feature, see [Section 1.93, “Single Echo Canceller Convergence”](#), on page 255 of this Release Update.

Update to **ec_reciottdata()** and **ec_stream()**

The **ec_reciottdata()** and **ec_stream()** function reference pages contain a caution about channels getting stuck when failing to listen to a TDM bus time slot prior to invoking a record operation. The caution should be revised: this condition now returns an error rather than resulting in a stuck channel. The revised caution is:

- On Dialogic® DM3 Boards using a flexible routing configuration, CSP channels must be listening to a TDM bus time slot in order for the **ec_reciottdata()** and **ec_stream()** functions to work. The actual recording operation will start only after the channel is listening to the proper external time slot. In other words, you must issue a **dx_listen()** function call on the device handle before calling **ec_reciottdata()** or **ec_stream()** for that device handle, and the **dx_listen()** has to be called from the same process as the **ec_reciottdata()** or **ec_stream()**. If not, the **ec_reciottdata()** or **ec_stream()** function will return TEC_STREAM with EDX_SH_MISSING as the termination reason.

3.4.4 Dialogic® Continuous Speech Processing API Programming Guide

In Service Update 267, additional update to **Section 4.1.2, Reserving Extra Time Slots for Streaming to TDM Bus** (IPY00092052)

IPY00041018 documentation update is only applicable to Service Update 182 and prior versions. Customers who use Service Update 183 and later versions should use `EC_Resource=OFF / CSP_ExtraTimeSlot=ON` when using continuous speech processing (CSP) firmware with Dialogic® Springwareboards.

Update to **Section 4.1.2, Reserving Extra Time Slots for Streaming to TDM Bus** (IPY00041018)

The paragraph about using the **CSPEXtraTimeSlot** parameter to configure the extra time slot should also include the **EC_Resource** parameter, as follows:

On Dialogic® Springware Boards in Linux, you configure this time slot at initialization time in *dialogic.cfg*. On Dialogic® Springware Boards in Windows®, you configure this time slot at initialization time in the Dialogic® Configuration Manager (DCM). Both the **CSPEXtraTimeSlot** and **EC_Resource** parameters must be enabled. See the appropriate Configuration Guide for more information about these parameters.

Update to **Chapter 7, Echo Cancellation Convergence Notification**

Because of a new feature in the Service Update, information about single echo canceller convergence should be added to **Chapter 7, Echo Cancellation Convergence Notification**. For information about this feature, see [Section 1.93, “Single Echo Cancellation Convergence”](#), on page 255 of this Release Update.

3.4.5 Dialogic® D/42 Series Software API Library Reference

This document has been added to the online bookshelf to support the Dialogic® D/42-NE2 PCI PBX Integration Board, which is now supported in the Dialogic® System Release 6.0 PCI for Windows® Service Update. Other boards referred to in this document are **not** supported in the System Release 6.0 PCI Windows Service Update.

3.4.6 Dialogic® D/42 Series Boards User's Guide

This document has been added to the online bookshelf to support the Dialogic® D/42-NE2 PCI PBX Integration Board, which is now supported in the Dialogic® System Release 6.0 PCI for Windows® Service Update. Other boards referred to in this document are **not** supported in the System Release 6.0 PCI Windows Service Update.

3.4.7 Dialogic® Digital Network Interface Software Reference

There are currently no updates to this document.

3.4.8 Dialogic® Fax Software Reference

There are currently no updates to this document.

3.4.9 Dialogic® GDK Programming Reference Manual

Update to **Chapter 4, Queue Record Programming** (IPY00040964)

In the **Queue Record Fields** section, the following information should be added to the description of the **fn_received** field:

When an inbound fax transmission terminates prematurely, resulting in an invalid tiff file, GDK deletes the tiff file and the **fn_received** field in the queue record will be blank.

3.4.10 Dialogic® Global Call API Library Reference

Update to **Section 1.15, Global Call Function Support by Technology** section

Because of a new feature in the Service Update, this section should be updated to indicate that the GCAMS functions (with the exception of **gc_TransmitAlarms()** and **gc_StopTransmitAlarms()**) are supported for SS7 technology. Also, the individual GCAMS function reference pages should be updated to indicate support for SS7 technology.

Update to **gc_GetCallInfo()** (IPY00044729)

There are two more values for the **info_id** parameter, CALLED_SUBS and CALLING_SUBS. The following information should be added to **Table 6, gc_GetCallInfo() info_id Parameter ID Definitions**:

info_id Parameter	Definition	Technology	valuep Format
CALLED_SUBS	Called party subaddress	ISDN	CALLED_PARTY_SUBADDR_ELEM data structure
CALLING_SUBS	Calling party subaddress	ISDN	CALLING_PARTY_SUBADDR_ELEM data structure

The format of the CALLED_PARTY_SUBADDR_ELEM data structure is:

```
typedef struct {  
    unsigned char subaddr_type;  
    unsigned char subaddr_plan;  
    char          subaddr_info[IS_SUBADDR_BUF_SZ];  
} CALLED_PARTY_SUBADDR_ELEM;
```

The format of the CALLING_PARTY_SUBADDR_ELEM data structure is:

```
typedef struct {  
    unsigned char subaddr_type;  
    unsigned char subaddr_plan;  
    char          subaddr_info[IS_SUBADDR_BUF_SZ];  
} CALLING_PARTY_SUBADDR_ELEM;
```

In addition, the following caution for **gc_GetCallInfo()** should be added:

- When using the CALLED_SUBS or CALLING_SUBS **info_id** parameter and no called or calling subaddress, respectively, is available, an error is returned for Dialogic® Springware Boards but not for Dialogic® DM3 Boards, which return success but an empty string in the subaddr_info **valuep** structure member.

Update to **gc_GetCallInfo()**

Because of a new feature in the Service Update, a new billing type has been added to CALLINFOTYPE called "CHARGE WITH CLEARING FROM INBOUND." The

gc_GetCallInfo() function reference page (in particular, **Table 6, gc_GetCallInfo() info_id Parameter ID Definitions**) should be updated to indicate this. In addition, **gc_GetCallInfo(CALLINFOTYPE)** is now supported on Dialogic® DM3 Boards. For information about this feature and the new billing type, see [Section 1.57, “Support for Reporting Billing Type”](#), on page 155 of this Release Update.

Update to **gc_GetFrame()**

In the code example, under */* Retrieve events from SRL */* change this:

```
GC_L2_BLK recvfrmptr; /* Buffer to store received frame */
.
.
.
case GCEV_L2FRAME:
/* retrieve signaling information from queue */
if ( gc_GetFrame(ldev, &recvfrmptr) != GC_SUCCESS)
```

to this:

```
L2_BLK          l2ie;
GC_L2_BLK       recvfrmptr; /* Buffer to store received frame */
.
.
.
recvfrmptr.cclib = (void *)&l2ie;
case GCEV_L2FRAME:
/* retrieve signaling information from queue */
if ( gc_GetFrame(ldev, &recvfrmptr) != GC_SUCCESS)
```

Update to **gc_util_insert_parm_val()** (IPY00043078)

In the description for **gc_util_insert_parm_val()**, a note should be added stating that **gc_Start()** must be called before **gc_util_insert_parm_val()**. Also, the code example should be replaced with the following:

```
#include <stdio.h>
#include <srllib.h>
#include <gcLib.h>
#include <gcerr.h>

void main( )
{
    GC_PARM_BLK my_blkp = NULL;
    GC_PARM_DATAP my_parmp;
    GC_INFO gc_error_info; /* GlobalCall error information data */
    int type = 1;

    /* Issue a gc_Start() call to initialize the library */
    if ( gc_Start(NULL) != GC_SUCCESS )
    {
        /* process error return as shown */
        gc_ErrorInfo( &gc_error_info );
        printf ("Error: gc_Start(), GC ErrorValue: 0x%x - %s, CCLibID: %i - %s,
                CC ErrorValue: 0x%x - %s\n", gc_error_info.gcValue, gc_error_info.gcMsg,
                gc_error_info.ccLibId, gc_error_info.ccLibName,
                gc_error_info.ccValue, gc_error_info.ccMsg);
        return (gc_error_info.gcValue);
    }
}
```

```

/* insert parm by reference */
if ( gc_util_insert_parm_ref( &my_blkp, GC_SET_SERVREQ, PARM_REQTYPE,
                             sizeof( int ), &type ) != GC_SUCCESS )

{
    /* Process error */
}

/* insert parm by value */
if ( gc_util_insert_parm_val( &my_blkp, GC_SET_SERVREQ, PARM_ACK,
                             sizeof( short ), GC_ACK ) != GC_SUCCESS )

{
    /* Process error */
}

/* Now we should have a GC_PARM_BLK with 2 parameters */

/* Following use of gc_util_next_parm retrieves the first parameter in a
 * GC_PARM_BLK, which in this case is PARM_REQTYPE */
my_parmp = gc_util_next_parm( my_blkp, NULL );

/* Retrieve the next parameter after getting the first one */
my_parmp = gc_util_next_parm( my_blkp, my_parmp );

/* This function finds and returns specified parameter, NULL if not found */
my_parmp = gc_util_find_parm( my_blkp, GC_SET_SERVREQ, PARM_ACK );

/* After GC_PARM_BLK is no longer needed, delete the block */
gc_util_delete_parm_blk( my_blkp );

/* Set my_blkp to NULL now that the block has been deleted */
my_blkp = NULL;

/* Issue gc_Stop() Next */
if (gc_Stop() != GC_SUCCESS )
{
    /* process error return as shown */
    gc_ErrorInfo( &gc_error_info );
    printf ( "Error: gc_Stop(), GC ErrorValue: 0x%xh - %s, CCLibID: %i - %s,
             CC ErrorValue: 0x%xh - %s\n",
             gc_error_info.gcValue, gc_error_info.gcMsg,
             gc_error_info.ccLibId, gc_error_info.ccLibName,
             gc_error_info.ccValue, gc_error_info.ccMsg);
}
}

```

Updates for analog call transfer support on Dialogic® Springware Boards

Because of a new feature in the Service Update, the **gc_BlindTransfer()**, **gc_SetupTransfer()**, **gc_CompleteTransfer()**, and **gc_SwapHold()** functions are now supported for Dialogic® Springware Analog technology. **Table 1, Global Call Function Support by Technology**, and the individual function reference pages should be updated to indicate this.

New alarms for Dialogic® DM3 Boards

Because of a new feature in the Service Update, several new T1/E1 alarms are supported. For information about these alarms, see [Section 1.90, “Enhanced GCAMS on Dialogic® DM3 Boards”](#), on page 252 of this Release Update.

3.4.11 Dialogic® Global Call API Programming Guide

There are currently no updates to this document.

3.4.12 Dialogic® Global Call Analog Technology Guide

There are currently no updates to this document.

3.4.13 Dialogic® Global Call E1/T1 CAS/R2 Technology Guide

There are currently no updates to this document.

3.4.14 Dialogic® Global Call IP Technology Guide

Update for IP support on Dialogic® DI0408LSAR2 Boards

Because of a new feature in the Service Update, Voice over IP (VoIP) capability is now supported on Dialogic® DI0408LSAR2 Switching Boards. The *Dialogic® Global Call IP Technology Guide* does not currently include any information about DI0408LSAR2 Boards. For information about this feature, including configuration information, see [Section 1.75, “IP Support on Dialogic® DI0408LSAR2 Boards”](#), on page 183 and [Section 1.76, “Dialogic® DI0408LSAR2 Board Support for Host Systems with Multiple NICs”](#), on page 190 of this Release Update.

Update for early media

Because of a new feature in the Service Update, information about early media should be added to **Chapter 3, IP Call Scenarios**. For information about this feature, see [Section 1.82, “Early Media”](#), on page 234 of this Release Update.

Update for SIP call transfer

Because of a new feature in the Service Update, information about SIP call transfer should be added to **Chapter 4, IP-Specific Operations**. For information about this feature, see [Section 1.81, “SIP Call Transfer”](#), on page 202 of this Release Update.

Update for SIP message header fields (PTR# 35268)

The ability to set and retrieve SIP message header fields is not supported in Dialogic® System Release 6.0 PCI for Windows®. The information in **Section 4.5, Setting and Retrieving SIP Message Information Fields**, and all of its subsections (pages 59-62) should be ignored.

The version of the IP_VIRTBOARD data structure that is implemented in Dialogic® System Release 6.0 PCI for Windows® (structure version 0x100) does not include the sip_msginfo_mask field. The line of the typedef on page 184 that defines this field and the description of the field on page 185 should both be ignored, and applications should not attempt to set the value of this undefined field.

Update for adjusting the Windows® TimedWait state

The following information on adjusting the Windows® TimedWait state should be added to the guide:

Running ONLY call control on 10 or more timeslots may cause the error:

`IPEC_Q931Cause34NoCircuitChannelAvailable`

Each IP call uses a Windows® socket that binds the call to a unique TCP address/port. The Dialogic® Global Call stack uses these ports starting at port address 20000. When an IP call is completed, the socket associated with that call closes and then enters into a TimedWait state,

during which the socket.s associated address/port is not available for use until the time expires. The default time for this TimedWait state is 240 seconds.

If an application is stopped and then immediately restarted before the TimedWait state expires, as may be the case during application development and debugging, calls may fail. Reducing the duration of the TimedWait state can alleviate this problem.

Another problem that may result from the TimedWait state duration is when a server experiences a high call rate. Even though the maximum number of TCP connections that can be opened simultaneously is large, in a high call rate scenario the potential exists for hundreds of TCP sockets to be in the TimedWait state causing the system to reach the maximum number of TCP connections. Again, reducing the duration of the TimedWait state can alleviate this problem.

Changing the TimedWait state to a value less than the 240 second default requires a change to the Windows[®] registry:

System Key:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Tcpip\Parameters
(PTR# 32165)

Parameter Name:

TcpTimedWaitDelay

Value Type:

REG_DWORD (DWORD Value)

Valid Range:

30 to 300 seconds

Also, see the following Microsoft information at these links:

- Windows[®] 2000 <http://support.microsoft.com/default.aspx?scid=kb;en-us;120642>
- Windows[®] XP <http://support.microsoft.com/default.aspx?scid=kb;en-us;314053>

Update to **Section 7.2.12, gc_MakeCall() Variances for IP** (IPY00029956 = PTR# 36646)

The following paragraph is added to **Section 7.2.12, gc_MakeCall() Variances for IP**, just before Section 7.2.12.1 (page 123):

When using SIP, if the remote side does not send a final response to an outgoing INVITE (sent by the call control library) within 64 seconds, the **gc_MakeCall()** function times out and the library generates a GCEV_DISCONNECTED event to the application. If the application attempts to drop the call before the 64 second timeout is reached, the library's behavior depends on whether a provisional response was received. When no provisional response was received before the application cancels the call, the library cleans up the call immediately. But if a provisional response was received before the application attempts to cancel the call, the library sends a CANCEL to the remote endpoint and generates a GCEV_DROPCALL to the application after it receives the 200OK response to the CANCEL and a 487RequestTerminated response for the original INVITE, or when an additional 32-second timeout expires.

Update to the **gc_OpenEx() Variances for IP** section (PTR# 32087)

The following paragraph should be added to **Section 7.2.13, gc_OpenEx() Variances for IP** (pages 136-137). This paragraph should also be considered to be a

variance for **gc_Close()**, which does not have a “Variances for IP” section in this edition of the document.

- Applications should avoid closing and re-opening devices multiple times. Board devices and channel devices should be opened during initialization and should remain open for the duration of the application.

Update for **INIT_IPCCLIB_START_DATA()** and **INIT_IP_VIRTBOARD()**

The initialization functions **INIT_IPCCLIB_START_DATA()** and **INIT_IP_VIRTBOARD()**, which are documented in the *Dialogic® Global Call IP Technology Guide*, are not supported in Dialogic® System Release 6.0 PCI for Windows®. Ignore the discussions of the **INIT_IPCCLIB_START_DATA()** and **INIT_IP_VIRTBOARD()** functions in the following sections:

- Section 4.1, Call Control Configuration
- Section 4.5.1, Enabling Access to SIP Message Information Fields
- Section 7.2.20, **gc_Start()** Variances for IP
- Section 7.5.1, **INIT_IPCCLIB_START_DATA()**
- Section 7.5.2, **INIT_IP_VIRTBOARD()**
- IP_VIRTBOARD data structure reference page
- IPCCLIB_START_DATA data structure reference page

In the absence of the **INIT_IPCCLIB_START_DATA()** and **INIT_IP_VIRTBOARD()** functions, the user must manually initialize the IP_VIRTBOARD and IPCCLIB_START_DATA data structures before calling **gc_Start()**. Refer to the reference pages for these structures for more details.

Update to **Section 8.5, IPSET_CONFIG Parameter Set**

New parameter IDs have been added to IPSET_CONFIG so that you can disable/enable the sending of the automatic SIP re-INVITE message upon media switch (e.g., when switching from fax to audio). For further information, see [Section 1.29, “Disabling Automatic re-INVITE Message when Switching between Fax and Audio”](#), on page 77 of this Release Update.

Update to **Chapter 9, IP-Specific Data Structures**

Because of a feature introduced in the Service Update, a new data structure, SIP_STACK_CFG, has been added for configuring SIP stack parameters. Related to this, the IP_VIRTBOARD data structure has been updated to point to the new structure. For further information, see [Section 1.28, “Configuring SIP Stack Parameters with Global Call”](#), on page 73 of this Release Update.

Update for **IP_H221NONSTANDARD** data structure

On the reference page for the IP_H221NONSTANDARD data structure (page 182), the descriptions of the three data fields are updated as follows:

country_code

The country code. Range: 0 to 255; any value x>255 is treated as x%256.

extension

The extension number. Range: 0 to 255; any value x>255 is treated as x%256.

manufacturer_code

The manufacturer code. Range: 0 to 65535; any value x>65535 is treated as x%65536.

3.4.15 Dialogic® Global Call ISDN Technology Guide

There are currently no updates to this document.

3.4.16 Dialogic® Global Call SS7 Technology Guide

There are currently no updates to this document.

3.4.17 Dialogic® IP Media Library API Programming Guide

Update to **Section 6.1, Introduction to DTMF Handling** (PTR# 33826)

The fourth paragraph in **Section 6.1, Introduction to DTMF Handling** (page 21) and the note that follows the fourth paragraph should be ignored. The IPM_RFC2833MUTE_AUDIO parameter that the paragraph refers to is not supported; DTMF audio is always muted when in RFC2833 mode. Similarly, Step 5 in the procedure in **Section 6.2.3, Setting RFC 2833 Mode** (page 24) should also be ignored.

Update to **Section 7.4, Using QoS Alarms**

The example code in **Section 7.4, Using QoS Alarms**, is missing the declaration and initialization for the **l_pVoid** variable within the **CheckEvent()** subroutine on page 35.

The code should include the line:

```
void* l_pVoid = sr_getevtdatap();
```

3.4.18 Dialogic® IP Media Library API Library Reference

In the reference information for the **ipm_GetLocalMediaInfo()** function, the first Caution refers to incorrect defines for eMediaType. The first Caution is replaced with the following paragraph:

- To retrieve RTP or T.38 information, set the eMediaType field to MEDIATYPE_LOCAL_RTP_INFO or MEDIATYPE_LOCAL_UDPTL_T38_INFO and set unCount to 1. See the example for details.

In the reference information for the **ipm_GetLocalMediaInfo()** function, the following corrections are made in the code example:

The line:

```
// MediaInfo.MediaData[0].eMediaType = MEDIATYPE_LOCAL_T38_INFO;
```

is replaced with:

```
// MediaInfo.MediaData[0].eMediaType = MEDIATYPE_LOCAL_UDPTL_T38_INFO;
```

The line:

```
printf("MediaType = MEDIATYPE_RTP_INFO!!\n");
```

is replaced with:

```
printf("MediaType = MEDIATYPE_LOCAL_RTP_INFO!!\n");
```

3.4.19 Dialogic® ISDN Software Reference

Update to **cc_GetDLinkState()**

The description paragraph is replaced by the following:

The **cc_GetDLinkState()** function retrieves the logical data link state (operable or inoperable) of the specified board device for PRI or station device for BRI.

Update to **cc_GetDLinkState()** (PTR# 25745)

In the description of the **state_buf** parameter, only two possible data link states are defined: DATA_LINK_UP and DATA_LINK_DOWN. DATA_LINK_DISABLED is not a valid value.

Update to **cc_GetEvtMsk()**

Table 20, Bitmask Values, incorrectly indicates the default values for CCMSK_SERVICE_ACK and CCMSK_SETUP_ACK as “Not enabled”. The correct default values are “Enabled.”

Update to **cc_GetEvtMsk()** (PTR# 29203)

Table 20, Bitmask Values, incorrectly lists CCMSK_TERMINATE as a supported bitmask type. The CCMSK_TERMINATE bitmask type is **not** supported.

Update to **cc_GetEvtMsk()** and **cc_SetEvtMsk()** (PTR# 29036)

The descriptions of the CCMSK_TMREXPEVENT bitmask in the **cc_GetEvtMsk()** and **cc_SetEvtMsk()** functions mention that the CCEV_TIMER event is generated when a Layer 3 timer expires, but there is no description of how to retrieve the Timer ID and Call ID values associated with the CCEV_TIMER event. The following text describes how to retrieve these values with the assumption that the CCEV_TIMER event has been enabled:

In the application, define a TIMER_DATA structure as follows:

```
typedef struct _TIMER_DATA {  
    unsigned char tbd_1;        // 0  
    unsigned long CallId;       // 1 2 3 4  
    unsigned short TimerId;     // 5 6  
    unsigned short tbd_2;      // 7 8  
}TIMER_DATA, *PTIMER_DATA;
```

Then, retrieve the values as follows:

```
(evtdatap = sr_getevtdatap(...)  
case CCEV_TIMER:  
    { PTIMER_DATA pData = (PTIMER_DATA)evtdatap;  
      m_TimerCallId = pData->CallId;  
      m_TimerId     = pData->TimerId;  
      Log(MSG_EVENT, "Timer: Call_id = %d, Timer expired ID = (%d)  
0x%x", m_TimerCallId, m_TimerId);  
    }  
    break;  
.  
.  
.
```

Update to **cc_MakeCall()** (PTR# 22842)

The description of the **numberstr** parameter is replaced by the following:

The destination (called party's) telephone number string. The maximum number of digits is dictated by the protocol switch specification. Users need to find out the specification limits for

the protocol they wish to use, otherwise the protocol stack will reject the request to make a call.

Update to **cc_MakeCall()** and **cc_SetCallingNumber()** (PTR# 28720)

The following caution should be included in the **cc_MakeCall()** and **cc_SetCallingNumber()** function reference pages:

- When using **cc_MakeCall()** to make an outbound call, if the `origination_phone_number` field in the `MAKECALL_BLK` structure is set to `NULL` or `'\0'` (null string), the `destination_number_plan` and the `destination_number_type` fields in the `MAKECALL_BLK` structure are ignored. This precludes the option of using the **cc_SetCallingNumber()** function to set the origination phone number and specifying a value of `NULL` or `'\0'` for the `origination_phone_number` field in the `MAKECALL_BLK` structure, when the destination number plan and the destination number type values (as specified in the `destination_number_plan` and `destination_number_type` fields in the `MAKECALL_BLK` structure) must be included in the outgoing message.

Update to **cc_SetEvtMsk()**

Table 24, Bitmask Values, incorrectly indicates the default values for `CCMSK_SERVICE_ACK` and `CCMSK_SETUP_ACK` as “Not enabled”. The correct default values are “Enabled.”

Update to **cc_StartTrace()** and **cc_StopTrace()** (IPY00045193)

The following caution should be included in the **cc_StartTrace()** and **cc_StopTrace()** function reference pages:

- The **cc_StartTrace()** and **cc_StopTrace()** functions interact with data on the board's shared RAM (SRAM). The **cc_StopTrace()** function is asynchronous, thus returns immediate control to the calling thread; however, due to intrinsic SRAM messaging latencies, the last piece of data will be processed even after a successful **cc_StopTrace()** return.

Applications must allow time for **cc_StopTrace()** to complete its internal data processing before invoking another trace start with **cc_StartTrace()**, even with different files. Otherwise, calling **cc_StartTrace()** immediately after **cc_StopTrace()** can result in error value `ERR_ISDN_LIB | E_ISTNACT` “Trace information is already activated” until the last piece of data is processed and the trace file is closed.

3.4.20 Dialogic® Modular Station Interface API Library Reference

There are currently no updates to this document.

3.4.21 Dialogic® Modular Station Interface API Programming Guide

There are currently no updates to this document.

3.4.22 Dialogic® PBX Integration Board User's Guide

There are currently no updates to this document.

3.4.23 Dialogic® PBX Integration Software Reference

There are currently no updates to this document.

3.4.24 Dialogic® Standard Runtime Library API Library Reference

There are currently no updates to this document.

3.4.25 Dialogic® Standard Runtime Library API Programming Guide

There are currently no updates to this document.

3.4.26 Dialogic® Voice API Library Reference

New function

The **dx_resetch()** function is now supported in Dialogic® System Release 6.0 PCI for Windows®. The **dx_resetch()** function recovers a channel that is “stuck” (busy or hung) and in a recoverable state, and brings it to an idle and usable state. For further information, see [Section 1.36, “Dialogic® DM3 Media Channel Reset Capability \(Stuck Channel Recovery\)”](#), on page 109 of this Release Update.

Functions not supported

The **r2_creatfsig()** and **r2_playbsig()** functions, which were previously provided for backward compatibility only, are no longer supported. All references to these functions should be deleted. R2MF signaling is typically accomplished through the Dialogic® Global Call API.

Update to **ATDX_CRTNID()** function

Because of enhancements introduced in the Service Update, the **ATDX_CRTNID()** function is now supported on Dialogic® DM3 Boards with new tone IDs. For information about this feature, see [Section 1.39, “Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs”](#), on page 118 and [Section 1.89, “Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards”](#), on page 248 of this Release Update.

Update to **dx_createtone()** function

Because of a new feature in the Service Update, the **dx_createtone()** function can be used with the new custom special information tones (SITs) described in [Section 1.39, “Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs”](#), on page 118 of this Release Update.

Update to **dx_deletetone()** function

Because of a new feature in the Service Update, the **dx_deletetone()** function can be used with the new custom special information tones (SITs) described in [Section 1.39, “Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs”](#), on page 118 of this Release Update.

Update to **dx_deltone()** function (IPY00079097)

The following caution should be added for **dx_deltone()**:

- With Dialogic® Springware Boards, calling **dx_deltone()** suspends all tone detection on the specified channel, including DTMF tone detection; it resumes upon **dx_deltone()** return. The user may experience missed or duplicated DTMF digits if **dx_deltone()** is called while a DTMF digit is being detected. It is recommended that you call **dx_clrbuf()** after **dx_deltone()** to clear any inappropriately detected DTMF digits from internal digit buffer.

Update to **dx_dial()** function (PTR# 36660)

The following information should be added to the **dx_dial()** function, **dialstrp** parameter description:

The maximum dial string size (number of digits) is 275 for Dialogic® DM3 Boards and 200 for Dialogic® Springware Boards.

Update to **dx_getdig()** function (IPY00038453)

For Dialogic® DM3 Boards, the return value of **dx_getdig()** in synchronous mode has been changed to return 0 instead of 1 when there are no digits in the buffer. The NULL character in the digit string 'dg_value' is no longer counted as a digit. Similarly, when **dx_getdig()** returns the number of digits, the terminating NULL is no longer added to the number of digits. (The NULL was previously counted in the numdig return value calculation, but since it is not a digit, the NULL is no longer included.)

For Dialogic® Springware Boards, the terminating NULL is included in the number of digits. So for Springware Boards, **dx_getdig()** still returns 1 when there are no digits in the buffer.

Update to **dx_OpenStreamBuffer()** (IPY00044981)

The following caution should be added for **dx_OpenStreamBuffer()**:

- When using Dialogic® DM3 Boards, the **dx_open()** function must be called on a board, channel, or physical board before **dx_OpenStreamBuffer()** is called. Failure to do so would prevent the DM3 library from loading, and **dx_OpenStreamBuffer()** would fail.

Update to **dx_querytone()** function

Because of a new feature in the Service Update, the **dx_querytone()** function can be used with the new custom special information tones (SITs) described in [Section 1.39, "Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs"](#), on page 118 of this Release Update.

Update to **dx_rec()**, **dx_reciottdata()**, **dx_recvox()**, and **dx_recwav()**

The **dx_rec()**, **dx_reciottdata()**, **dx_recvox()**, and **dx_recwav()** function reference pages contain a caution about channels getting stuck when failing to listen to a TDM bus time slot prior to invoking a record operation. The caution should be revised: this condition now returns an error rather than resulting in a stuck channel. The revised caution is:

- On Dialogic® DM3 Boards using a flexible routing configuration, voice channels must be listening to a TDM bus time slot in order for voice recording functions, such as **dx_reciottdata()** and others, to work. The actual recording operation will start only after the voice channel is listening to the proper external time slot. In other words, you must issue a **dx_listen()** function call on the device handle before calling a voice recording function for that device handle, and the **dx_listen()** has to be called from the same process as the voice recording function. If not, the voice recording function will return TDX_ERROR with EDX_SH_MISSING as the termination reason.

Update to **dx_setevtmask()** (IPY00038053)

The following information should be added to the description of the **mask** parameter:

User defined tones that are associated an optional digit (**dx_addtone()**) have digit reporting enabled by default in Dialogic® System Release 6.0 PCI for Windows®. The user defined tones digit reporting can be turned off by using **dx_setevtmask()** with DM_DIGOFF mask. To reactivate digit reporting, use **dx_setevtmask()** with DM_DIGITS mask.

Update to **dx_setsvcond()** function (IPY00079103)

The description for the **dx_setsvcond()** function should include the following note:

Note: The pause and resume play feature is not supported on Dialogic® Springware Boards.

Update to DX_SVCB data structure (IPY00079103)

The description for the DX_SVCB data structure should include the following note:

Note: The pause and resume play feature is not supported on Dialogic® Springware Boards.

In addition, in the field description for the type field, the descriptions of the SV_PAUSE and SV_RESUME options should be changed as follows:

- SV_PAUSE - For Dialogic® DM3 Boards only; use with SV_SPEEDTBL to pause the play on detection of the specified DTMF digit.
- SV_RESUME - For Dialogic® DM3 Boards only; use with SV_SPEEDTBL to resume the play on detection of the specified DTMF digit.

Updates to **Events** chapter

In the Call Status Transition Events section, the DE_DIGOFF event (Dialogic® DM3 Boards and Dialogic® Springware Boards) is not supported and should be removed from the documentation (IPY00033772).

With the Service Update, a time stamp has been added to the DE_TONEON and DE_TONEOFF events for Dialogic® DM3 Boards (supported on Dialogic® DM/V2400A Board). For further information, see [Section 1.62, "Time Stamp for Tone-On/Off Events"](#), on page 159 of this Release Update.

New TN_TIMESTAMP data structure

Because of a new feature in the Service Update, a new data structure, TN_TIMESTAMP, has been added to provide a time stamp for tone-on/off events. For further information, see [Section 1.62, "Time Stamp for Tone-On/Off Events"](#), on page 159 of this Release Update.

3.4.27 Dialogic® Voice API Programming Guide

Functions not supported

The **r2_creatfsig()** and **r2_playbsig()** functions, which were previously provided for backward compatibility only, are no longer supported. All references to these functions should be deleted. R2MF signaling is typically accomplished through the Dialogic® Global Call API.

Update to **Chapter 6, Application Development Guidelines**

The following note should be added to **Section 6.4.2, Multithreading and Multiprocessing**:

Note: The continuous speech processing architecture allows a voice channel to be shared between processes (or applications) on Dialogic® JCT Boards, on Dialogic® DM3 Boards, or on Dialogic® Host Media Processing (HMP) (starting with Dialogic® Host Media Processing Software Release 1.3 for Windows®), providing one process does the play activity and the other process does the record/stream activity. Other CSP scenarios are **not** supported, such as playing or recording/streaming from both processes. For details, refer to the application note, Telephony Application Architectures for Dialogic® Boards with DM3 Architecture, located at http://www.dialogic.com/products/tdm_boards/media_processing/docs/9380an.pdf.

Update to **Chapter 7, Call Progress Analysis**

Because of enhancements introduced in the Service Update, **Section 7.5.6, SIT Frequency Detection**, is superseded by the information in this Release Update. For information about this feature, see [Section 1.39, “Enhanced Special Information Tones on Dialogic® DM3 Boards Using Voice and Global Call APIs”](#), on page 118 and [Section 1.89, “Enhanced Special Information Tone Frequency Detection on Dialogic® DM3 Boards”](#), on page 248 of this Release Update.

Updates to **Section 8.5, Voice Encoding Methods**

The following row is added to **Table 9, Voice Encoding Methods (DM3 Boards)** (PTR# 31773):

Digitizing Method	Sampling Rate (kHz)	Resolution (bits)	Bit Rate (kbps)	File Format
IMA ADPCM coder	8	4	32	VOX, WAVE

In **Table 10, Voice Encoding Methods (Springware Boards)**, the 16-bit linear PCM and GSM 6.10 full rate (TIPHON format) coders are not supported on Dialogic® Springware Boards and should be removed from the table. (IPY00006594 = PTR# 36685 and IPY00091693)

Update to **Section 8.7, Transaction Record** (IPY00006537 = PTR# 35666)

The following paragraph should be added to this section:

For information on running transaction record on a single board, see the technical note posted on the Dialogic® web site at:

<http://www.dialogic.com/support/helpweb/dxall/tnotes/legacy/dlsoft/tn253.htm>

Update to **Section 10.6, Fixed-Line Short Message Service (SMS)**

This section erroneously states that SMS is not supported on Dialogic® Springware Boards. SMS **is** supported on Springware Boards.

Fixed-line SMS solutions can be created using the standard Telcordia Technologies (formerly Bellcore) ADSI specification or using the ETSI-FSK specification ETSI ES 201 912. On Springware Boards, to set the voice channel to ETSI compatibility, specify the two-way FSK transmit framing parameters in the *voice.prm* file. For more information on these parameters, see the *Dialogic® Springware Architecture Products on Windows® Configuration Guide*.

Update to **Section 10.7.2, Library Support on Springware Boards**

Fixed-line short message service (SMS) is supported on Dialogic® Springware Boards. The information in this section should be updated as follows:

Dialogic® Springware Boards support ADSI one-way, two-way FSK, and fixed-line short message service (SMS).

The following voice library functions and data structures support this functionality on Springware Boards:

dx_RxIottdata() function

Receives ADSI data on a specified channel.

dx_TxIottdata() function

Transmits ADSI data on a specified channel.

dx_TxRxIottdata() function

Starts a transmit-initiated reception of data (two-way ADSI) on a specified channel.

ADSI_XFERSTRUC data structure

Stores information for the transmission and reception of ADSI data. It is used by the **dx_RxIottdata()**, **dx_TxIottdata()**, and **dx_TxRxIottdata()** functions.

DV_TPT data structure

Specifies a termination condition for an I/O function; in this case, **dx_RxIottdata()**, **dx_TxIottdata()**, or **dx_TxRxIottdata()**. DX_MAXDATA termination condition is not supported on Springware Boards.

ATDX_TERMMSK() function

Returns the reason for the last I/O function termination. TM_MAXDATA is not supported on Springware Boards.

To determine whether your board supports FSK, use **dx_getfeaturelist()** to return information about the features supported in the FEATURE_TABLE structure; the ft_play field, FT_ADSI bit, is used to indicate FSK support on Springware Boards.

Update to **Section 13.1.5, Retrieving Tone Events** (PTR# 32681)

The following should be added as the last paragraph of this section:

Cadence tone on events are reported differently on Dialogic® DM3 Boards versus Dialogic® Springware Boards. On DM3 Boards, if a cadence tone occurs continuously, a DE_TONEON event is reported each time a match is detected. On Springware Boards, only the first DE_TONEON event is reported. On both types of boards a DE_TONEOFF event is reported when the tone is no longer present.

Update to **Section 13.1.9, Guidelines for Creating User-Defined Tones** (IPY00006580 = PTR# 34546)

The following guideline should be added to this section:

- On Dialogic® DM3 Boards, building and adding tones of zero frequency values to a tone template can cause firmware failures.

Update to **Section 13.1.10.2, Detecting Leading Edge Debounce Time** (IPY00006581 = PTR# 35616)

The values currently listed in this section apply to Dialogic® DM3 Boards. The following text should be added for Dialogic® Springware Boards:

On Dialogic® Springware Boards, to detect leading edge debounce time, specify the following values for the **dx_bldstcad()** or **dx_blddtcad()** function parameters listed below:

- For **ontime**, specify the desired debounce time.
- For **ontdev**, specify 3.
- For **offtime**, specify 0.
- For **offtdev**, specify 0.
- For **repent**, specify 1.

Update to **Section 14.3, Enabling Global DPD**

Because of a new feature in the Service Update, it is no longer necessary to order a separate GDPD enablement package to enable Global Dial Pulse Detection on a board. Information about the GDPD enablement package should be removed from this section. See [Section 1.38, “Global DPD Enabled on Dialogic® Springware Boards”](#), on page 117 of this Release Update for further information.

Update to **Chapter 17, Building Applications** (PTR# 32966)

Run-time linking using the source code in the CLIB subdirectory is no longer supported. Run-time linking can be accomplished using Windows® functions. In the *Dialogic® Voice API Programming Guide*, **Section 17.2.3, Run-time Linking**, should be revised as follows:

Run-time linking resolves the entry points to the Dialogic® DLLs when the application is loaded and executed. This allows the application to contain function calls that are not contained in the DLL that resides on the target system.

To use run-time linking, the application can call the Windows® **LoadLibrary()** function to load a specific technology DLL and a series of **GetProcAddress()** function calls to set up the address pointers for the functions.

3.5 Demonstration Software Documentation

This section contains updates to the following documents (click the title to jump to the corresponding section):

- [Dialogic® IP Multicast Client \(IPML\) Demo Guide](#)
- [Dialogic® IP Multicast Server \(IPML\) Demo Guide](#)

3.5.1 Dialogic® IP Multicast Client (IPML) Demo Guide

The following note is added to **Section 2.1, Hardware Requirements** (PTR# 31488):

Note: When using a single span Dialogic® DM/IP Board, the demo supports only one board in the system.

3.5.2 Dialogic® IP Multicast Server (IPML) Demo Guide

The following note is added to **Section 2.1, Hardware Requirements** (PTR# 31488):

Note: When using a single span Dialogic® DM/IP Board, the demo supports only one board in the system.