Binary for Windows - TUP

Release Notes for Version 3.00

1. Overview

In this release, a new scheme to allow licensing of the binary is introduced, as well as some new features allowing for easier diagnosis of problems. A number of corrections to functionality are also included. The change in functionality described in section 3.12 should be noted; otherwise, the release is backwards compatible with the previous release (V2.04).

For details of the new functionality that has been added, please refer to issue 7 of the TUP Programmer's Manual.

2. New Functionality

2.1 Support for end user licensing

Prior to this release the use of Host Protocol Software required a signed licence agreement between the supplier and the end user. This release offers the ability to license the software for a specific target machine using a licence file obtained electronically without the need to enter into a customer specific licence agreement.

To determine whether a licence file is required, run the binary using the –v command line option. If a licence file is required please refer to the *Host Protocol Licensing User Guide*. Note that a separate licence file is required for each target machine.

2.2 Selective tracing

A new selective tracing mechanism has been added. For certain maintenance and software events (e.g. when a badly formatted message is received) a trace of the message causing the event may now optionally be made. This allows for easier diagnosis of problems.

To activate the selective tracing, the user must format and send to TUP the Set Selective Trace Mask request, setting the appropriate bits in the mask for the types of events that should produce a message trace. If the selected event occurs, a Selective Trace Event Indication, message will be sent to the module configured to receive these traces.

2.3 Additional maintenance indications

Additional reporting of the "primitive discarded" maintenance event has been added for messages received from the user in the wrong state.

2.4 Confirmation messages now traced

Confirmation messages are now traced when the appropriate bit in the Set Trace Masks Request message is set. For example, if the TUP_EVT_MSG_R_STATUS bit in the mng_evt_mask field of the Set Trace Masks Request is set, the Read Circuit Group Status Request message and any confirmation to this message are now traced. Previously, only the Circuit Group Status Request message would be traced.

2.5 Setting circuit state when restarting TUP module

A new capability has been added to allow the user to force the state of a TUP circuit into the active state. This allows the user to restart the TUP module or move a circuit group to an alternate TUP module without interrupting calls in the active state.

The circuit state is set to either incoming or outgoing active by sending a Circuit Group Supervision Request message to TUP. On completion of the state change, a Circuit Group Supervision Confirmation message will be received. The request will only be accepted if the circuit is currently in the idle state.

2.6 Setting of Charge Indicator

Coding of the charge indicator field in the backward call indicators (on the interface between the user and TUP) has changed to align with the ISUP meanings (as used in other Dialogic telephony modules). To use the new coding scheme, the new TUPGOP_CCC_CHG option should be set.

2.7 CCL handling enhanced

When a CCL message is received, a call release is initiated by sending a Release Indication to the application. Two enhancements have been provided:

1. When a CCL is received, cause value 0x7c is now used to allow the user to distinguish a CCL message from any other type of release. (The previous cause value was 0x1f). This allows the CCL to be ignored or passed on without releasing the call, as required by the particular application.

2. Now a release response can be used to complete the release of the call (i.e. the Release Response causes CBK to be sent and continues the release as normal). Previously, the call remained in the answered state and could only be released by sending Release Request.

2.8 Reset after COT failure

If an outgoing continuity test is made and the test fails, it is now possible to abandon continuity testing on the circuit by sending a reset

request (i.e. a Circuit Group Supervision Control Request with ptype=reset) to return the circuit to idle. Similarly, if a reset circuit is received from the network while waiting for the next outgoing continuity test to be performed, the circuit will be returned to idle.

2.9 ROC in SSUTR2

ROC (automatic recall if busy) is now supported in SSUTR2. A new “ROC call indicator” has been added to the Calling party’s category parameter in the Setup request and Setup indication primitives.

3. Faults cleared

3.1 Timer start errors

Occasionally, a Software Event Indication occurred indicating that a timer could not be started (TUPSWE_TM_START_ERROR). No other adverse effect would have been seen. This problem has now been resolved.

3.2 Handling badly formatted messages

When a badly formatted message is received for an idle circuit or for a circuit that is engaged in a call but no backward message has yet been received, the circuit will now be reset. Previously the message would be ignored and an error reported.

3.3 Common call control message type values

The new module option TUPF_STD_MTYPE (bit 10) is defined to allow the application to use the same common call control set of message type values that are used by other telephony modules.

3.4 Dual Seizure handling corrected.

On receipt of IAM (having already sent IAM) when the incoming call has priority, TUP sends a Setup Indication to the user in accordance with the Dialogic common call control interface. Previously a Release Indication and Release Confirmation were also sent.

3.5 Incoming continuity test not released

When a continuity test call is received on a locally maintenance blocked circuit, the call is now correctly released. Previously, the call was never fully released which meant that the circuit could not subsequently be re-used.

3.6 Autoblocking after IAM with COT requested

When IAM is received with the continuity check request indicator set to "continuity check requested on this circuit" and this continuity test fails,

a BLO is now issued if a CCR message is received before the user application ends the circuit release.

Previously if an IAM was received with COT request followed by a CCF, the circuit was released to the user. If the user was slow to issue Release Response, and the CCR was received first, the TUP module ignored the CCR rather than starting autoblocking.

3.7 RLG ignored in response to RSC

Occasionally the situation could occur when a reset circuit (RSC) had been sent by the TUP module and a group reset (GRS) received from the far end without first receiving release guard (RLG) in response to the RSC. This would cause the circuit to continually send RSC on the circuit every 1 minute whilst still allowing calls to be set up. Whenever the RSC was sent any call present would be released. Receiving GRS in response to RSC is now handled correctly.

3.8 T112 started incorrectly

The presence of the ST digit in the IAM or IAI is checked before starting the timer T112 (waiting for SAM). Additionally, if the TUP module sends an ST digit to the application (for instance because the TUPGOP_ICC_ST option is set), T112 is stopped. If a SAM is subsequently received from the network by the TUP module when the ST digit has already been issued to the application, it is ignored. In that case, a new maintenance event indication (TUPMI_SAM_AFTER_ST) is reported.

Previously, if the TUP module received an IAM containing an ST digit when the TUPGOP_SAM_TIM group option was set, it started timer T112. That caused the call to release because it expected to receive a SAM during the waiting for address complete period.

3.9 Primitive discarded maintenance event

When both parties clear the call simultaneously, a race condition may occur. If a Suspend Request is sent to TUP after Release Indication has been received, the Suspend Request is now silently discarded, since this race condition is harmless. Previously the Suspend Request was discarded and a Maintenance Event Indication "primitive was discarded" was issued to the user.

3.10 Answer timer expiry

If an outgoing call is made but no answer is received from the other end, the timer T100 expires. Now, when T100 expires, the circuit is correctly released. Previously when T100 expired, both Release Indication and Release Confirmation were sent to the application. If the application responded with Release Response (RLC), the primitive was discarded and no CLF was sent to the network.

3.11 GRA and CGBA status bits incorrect

Occasionally, when a GRS was received, the status bits in the GRA that was returned were set, even though the circuits were not locally maintenance blocked. A similar problem occurred when a CGB was received relating to only some of the circuits in the range. Occasionally the status bits relating to other circuits were set in the CGBA message returned. The status bits in the GRA and MGBA are now set correctly.

3.12 Unblocking confirmation on reset request

If a request was received to reset a circuit that was maintenance blocked, an unblocking confirmation was sent to the user for each circuit which was reset. Sending the unblocking confirmation has been removed and replaced with a (new) Maintenance Event Indication meaning "local circuit maintenance blocking removed by circuit reset" (0x4a).

3.13 Incorrect handling of CGBA

When a blocking request is received from the application, a CGB message is sent. Occasionally, when the CGBA message was received in response, it was ignored and the CGB message resent. The problem would only occur when two blocking requests for the same group of circuits were received in quick succession. This problem has now been corrected.

3.14 Receipt of GRA

The following changes have been made on receipt of a GRA message:

a) When a GRA message was received in response to a GRS message, a blocking indication for all the circuits in the range of the GRS was sent to the user. The blocking indication is now only sent for circuits whose status bits are set in the GRA message received.

b) A GRA received with more bytes of status bits than necessary now does not cause the GRA message to be discarded.

3.15 Reset confirmation

If a reset request is received from the application relating to a circuit which is already sending RSC (because T7 expired), a Circuit Group Supervision Confirmation is now sent once the RLC is received from the network.

3.16 Resetting a remotely blocked circuit

If the user resets a remotely blocked circuit, an RSC message is sent to the network and a BLO message will be received because the circuit is remotely blocked. TUP now responds to the BLO with a BLA and

indicates to the user that the circuit is remotely blocked by sending a CGSC indication.

3.17 SSUTR2 - Setting values in ACF message

When an Alerting request is received from the user, the Charge indicator and the Called party's status indicator in the Backward Call indicators are now correctly mapped to the equivalent indicators in the SSUTR2 MIF when the Called party's category indicator is set to "no indication". Previously, all three indicators would have been set to “no indication” in this situation.

3.18 SSUTR2 - Call release after Suspend request

When a Suspend request indicating “network suspend” is received from the user for an incoming call and no Resume request is subsequently received, RAU is sent to release the call. If no FIU is received in response to the RAU, the call is now correctly released. Previously this could have resulted in the circuit becoming unusable.

3.19 SSUTR2 - T117 started when COT fails

T117 (10 s) is not required when waiting for CCR (but rather when waiting for FIU or CCF) and therefore is no longer started in this case.

3.20 SSUTR2 - EAR not sent after ACF

The EAR message may now be sent and received after ACF and before RIU. Previously, the EAR message could only be sent and received before ACF.

3.21 SSUTR2 - MUU received in answered state

In the answered state for an incoming call, an MUU received by TUP from the network is now passed to the user. Previously, the message was ignored.

3.22 SSUTR2 - Access information in FIU

Access information received in the Release request is now transferred to the FIU (in the “domaine d’acces” field). Previously the access information was not mapped into the FIU.

3.23 SSUTR2 - Sending ECH after answer

When a Release request is received after answer for an incoming call, it maps to ECH unless normal call clearing was received, in which case it maps to RAU. Previously, RAU was sent unless the cause value was set to 0x15 in which case ECH was sent.

3.24 Call suspend

When an outgoing call is suspended, the Suspend indication is now sent to the correct user instance.

3.25 Individual blocking messages not sent

Occasionally when blocking requests were sent to the TUP module, TUP did not send out a blocking message (BLO). This would only happen when the TUPGOP_NO_CGB option was set and also only occurred when many blocking requests were sent in quick succession. This problem has now been resolved.

Dialogic
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Binary for Windows - TUP

Release Notes for Version 3.01

1. Overview

In this release, the number of circuits supported is increased from 4096 to 16384. This release is backwards compatible with the previous release.

2. New Functionality

2.1 Increased number of circuits

TUP now supports up to 16384 circuits and 684 circuit groups.

Dialogic
05-Nov-03

Binary for Windows - TUP

Release Notes for Version 3.04

1. Overview

This is the first full release since V3.01. It introduces the ability to run the binary for up to 10 hours at a time without a licence whilst developing an application. It provides support for an increased number of circuits (up to 64K) and clears minor problems as described below.

The software is backwards compatible with the previous release.

2. New functionality

2.1 Trial mode

An additional command line parameter '-t' has been added. If this flag is set then the binary will run in trial mode and the presence of a valid license certificate will not be enforced. The binary will, however, terminate after ten hours.

The licensing command line parameters (-Lp, and -Lt) should not be used when the trial mode is configured.

2.2 Increase to 64K circuits

TUP now supports up to 65535 circuits and 2732 circuit groups. Supporting 64K circuits may require some changes to the application: see 2.3 and 2.4.

2.3 Change in use of id field

The most significant bit of the id field in the TUP-Transmit Request (CAL_MSG_TX_REQ) is no longer ignored when more than 32768 circuits are configured in TUP_MSG_CONFIG.

Early versions of the TUP module (supporting less than 32K circuits) required the most significant bit to be set for outgoing calls so that an id value of 0x8001, for example, would be used to indicate an outgoing call on circuit id 1. In more recent versions, this bit has been ignored by the TUP module, so that either 0x8001 or 0x0001 could be used to indicate an outgoing call on circuit id 1. In this release, when more than 32768 circuits are configured, the most significant bit is considered to be part of the circuit id so that an id value of 0x8001 indicates a call (in either direction) on circuit id 32769. When 32768 circuits or less are configured, the MSB of the call_ref is ignored by the TUP module.

2.4 New module option TUPF_16CID in TUP_MSG_CONFIG

A new per module option, TUPF_16CID (bit 12), has been added to the <options> field in the Configure Request message (0x7700).

If the TUPF_16CID option is not set and up to a maximum of 32768 circuits are configured (in TUP_MSG_CONFIG), the most significant bit of the 16-bit id field in the TUP-Receive Indication (CAL_MSG_TX_REQ) will be set by the TUP module to indicate an outgoing call (compatible with release 3.01). If a maximum of 65535 circuits are configured, the most significant bit is part of an actual circuit id.

If the option is set, the most significant bit will be part of an actual circuit id whether the maximum number of circuits configured is 32768 or 65535.

3. Faults cleared

3.1 Mapping of nature of address subfield

When the nature of address subfield is set to “subscriber number” in the Called party number, Calling party number or Original called number, this is now correctly set to “subscriber number” in the outgoing message. Previously it was mapped to “national number” in the outgoing message.

3.2 SSUTR2: Wrong option used for T113

T113 (timer waiting for first backwards message) is now started when the TUPGOP_RESP_TIM is set, rather than the TUPGOP_SAM_TIM option is set.

3.3 Incorrect circuit status reported

The status of circuits in a circuit group may be queried by sending a Read Circuit Group Status request to the TUP module. The confirmation message that is returned now only contains status for circuits that belong to the circuit group specified in the ID field in the request message. Previously, status could also be returned for circuits belonging to other groups if the <cic_mask> field in the request message had extra bits set.

3.4 Hardware blocking status cancelled

If a call is in the process of being set up and the circuit is hardware blocked, all subsequent call processing messages are now ignored until the circuit is unblocked. Previously, receipt of an unexpected call set up message (for example an ACM for the call that was in progress)

would have resulted in the circuit being reset and the hardware blocked condition being cancelled.

Dialogic
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Binary for Windows – TUP

Release Notes for V4.00

1. Overview

This is the first release since V3.04 and is functionally equivalent to that release. This release is developed for use with the SS7 Development Package for Windows V5.00 or later. It cannot be used with earlier development packages.

Customers who wish to make use of the Long Message support offered in V5.00 of the development package should upgrade to this release of software (Long Message support is required for SCCP Segmentation). Other customers need not upgrade.

2. Changes

2.1 Use of Windows DLL

This release makes use of the DLL version of the GCT library included in V5.00 of the development package. The module has not been changed to support Long Messages itself but it does permit the module to be used in an environment where Large Messages are being used.

Dialogic
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Binary for Windows – TUP

Release Notes for V4.01

1. Overview

This release allows coded and decoded Access Transport data in the SSUTR2 ‘domaine d'information d'acces’ field to handle single byte parameters. Additionally when the TUPGOP_IEO_CTRL option is set the entire ‘domaine d'information d'acces’ field is recovered to the Access Transport parameter.

The use of trial mode is now limited to one hour but in all other respects this release is backwards compatible with the previous release.

2. New Functionality

2.2 SSUTR2 - Single octet information elements

TUP will now accept Q.931 single octet information elements when they are received in the ‘domaine d'information d'acces’ field of SSUTR2 messages. Previously these octets, if present, caused the message to be rejected.

Information elements for User Service Information and User to User Information in the ‘domaine d'information d'acces’ field are recovered to their own CALPPN_USINF (0x1d) and CALPPN_UUINF (0x20) parameters (see TUP Programmer’s Manual). All other information elements in the ‘domaine d'information d'acces’ field are recovered to the Access Transport parameter CALPPN_AT (0x03). The recovered Access Transport parameter can define multiple information elements, both tag/length/data encoded and single octet, stored in the order recovered from the message.

Similarly, the User can specify data for the ‘domaine d'information d'acces’ field of a message for transmission using the CALPPN_USINF, CALPPN_AT and CALPPN_UUINF parameters. The module will send the parameters in the field order as listed. The CALPPN_AT parameter accepts multiple information elements, both tag/length/data and single octet encoded.

2.3 SSUTR2 - TUPGOP_IEO_CTRL option with CALPPN_AT

The run-time per circuit group configuration option TUPGOP_IEO_CTRL allows the SSUTR2 ‘domaine d'information d'acces’ field to be mapped to the Access Transport CALPPN_AT parameter (see TUP Programmer’s Manual).

The functionality of this option has been changed so that User Service Information and User to User Information in the ‘domaine d'information d'acces’ field is now recovered to the Access Transport CALPPN_AT parameter. For previous releases this data was discarded.

As was previously the case, CALPPN_USINF or CALPPN_UUINF parameters set by the User are ignored when the TUPGOP_IEO_CTRL option is set. The user must specify any User Service Information and User to User Information in the CALPPN_AT parameter.

Use of the TUPGOP_IEO_CTRL option is recommended for use with ‘domaine d'information d'acces’ data and allows full, unambiguous access to the data. When the TUPGOP_IEO_CTRL option is used:

1. The entire ‘domaine d'information d'acces’ field is returned as received, allowing code shift flags set using a single octet information elements to be interpreted. Without the option set, a shift flag before User Service Information or User to User Information could be misinterpreted (since they are returned as separate parameters).

2. The order of sending the User Service Information, Access Transport and User to User Information elements is no longer fixed by the module and can be changed.

The following SSUTR2 messages support the ‘domaine d'information d'acces’ in the above parameters:

ACF, EAR, FIU, MCE, MIF, MUU, RAU, RIU

3. Other Changes

3.1 Trial Mode

When operating in trial mode (using the –t command line option), the period of operation is now restricted to one hour after which the binary will terminate