



Dialogic[®] SS7 Protocols

INAP Programmer's Manual

June 2008

U16SSS

www.dialogic.com

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Publication Date: June 2008

Document Number: U16SSS, Issue 12

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Revision History

Issue	Date	Description
12	June 2008	Rebranding and updates. CAMEL v4 and CAMEL v4 for IMS added.
11	August 2007	CAP v3 documentation revised. Minor corrections and updates.
10	Dec 2005	Added new parameters (qos, user_information, report_cause) Addition of a subset of AIN operations from GR-1299-CORE (AINGR). Minor corrections and updates.
9	Jul 2003	Addition of all CAP V3 operations and selected AIN operations.
8	Jul 2003	Branding changed: references to System7 removed.
7	Jul 2001	Addition of remaining operations for ETSI CS-2.
6	Mar 2001	Addition of operations for ETSI CS-2 SCF-SRF interface.
5	May 2000	Extension of protocol support to provide access to operations and application contexts in ITU CS-1 (Oct '95) and CAMEL (v1 and v2). Enhanced support for the sending and receiving of operation extensions. Addition of new parameter for close pre-arranged end handling.
4	May 1999	Completion of all ETSI CS-1 operations and application contexts included in ETS 300 374-1. Includes details of new operations and additional parameters required to support these new operations. Addition of the procedure IN_version procedure to provide API version information.
3	Feb 1999	Addition of seven more ETSI 300-374-1 operations.
2	Nov 1998	Minor Corrections. Notes on use of "pre-arranged end" of INAP dialogues
1	Oct 1998	First Issue. INAP interface.

Note: The latest release issue of this guide can be found at:
<http://www.dialogic.com/support/helpweb/signaling>

1 About this Publication

1.1 Introduction

The INAP module enables straightforward development of Intelligent Network applications in the SS7 environment. The User application is provided with simple access to the operations specified in the Intelligent Network Application Protocol (INAP).

The module is of use to applications implementing any of the functions of the following IN Functional Entities: Service Control Function (SCF), Service Switching Function (SSF), Specialized Resource Function (SRF) or Call Unrelated Service Function (CUSF).

The module is a portable software implementation of the Single Association Control Function (SACF) specified in the *Intelligent Network Application Protocol (INAP)* ([Ref 1] on page 9).

The module consists of an event driven task using standard structured message types, which provides a control interface at the service provider level. A suite of API functions is also supplied to provide a convenient interface for the user application as well as coding and decoding of IN operations.

The module uses the services provided by the underlying Transaction Capabilities (TCAP) service for the transfer of operations between peer INAP Functional Entities.

This Programmer's Manual is intended for users developing their own applications that interface to and make use of the functionality provided by the INAP module.

Both the INAP module and the suite of API functions are written using the 'C' programming language. They are fully portable and make no operating system or compiler specific references.

This manual provides an overview of the API IN functions and the interface to the INAP module. It includes details of all API function parameters and the structure of messages used to interface to the INAP module.

1.2 Abbreviations

The following table provides a list of abbreviations used in this manual.

Abbreviation	Description
AIN	Advanced Intelligent Network
ANSI	American National Standards Institute
APDU	Application Protocol Data Unit
ASE	Application Service Element
ASN.1	Abstract Syntax Notation One
CAMEL	Customized Application for Mobile Network Enhanced Logic
CAP	CAMEL Application Part
CCITT	The International Telegraph & Telephone Consultative Committee
CS-1	Capability Set One
CS-2	Capability Set Two
CUSF	Call Unrelated Service Function
FE	Functional Entity
FEAM	Functional Entity Access Manager
INAP	Intelligent Network Application Protocol
ITU-T	International Telecommunication Union (formerly CCITT)
MACF	Multiple Association Control Function
MTP	Message Transfer Part
SACF	Single Association Control Function
SCCP	Signaling Connection Control Part
SCF	Service Control Function
SCP	Service Control Point
SRF	Specialized Resource Function
SSF	Service Switching Function
TCAP	Transaction Capabilities Application Part

1.3 Related Documentation

- [Ref 1] *ETS 300 374-1 - ETSI Intelligent Network CS1 Specification*
- [Ref 2] *X.208 - Specification of Abstract Syntax Notation One (ASN.1)*
- [Ref 3] *X.209 - Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*
- [Ref 4] *Q.773 - SS7 Transaction Capabilities Formats and Encoding*
- [Ref 5] *U06SSS - TCAP Programmer's Manual*
- [Ref 6] *U10SSS - Software Environment Programmer's Manual*
- [Ref 7] *X.680 - Specification of Abstract Syntax Notation One (ASN.1)*
- [Ref 8] *X.690 - Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*
- [Ref 9] *Q.1218 - ITU-T Interface Recommendation for Intelligent Networks CS-1*
- [Ref 10] *TS 101 046 v5.6.0 – CAMEL Application Part specification v1*
- [Ref 11] *TS 101 046 v6.3.0 - CAMEL Application Part specification v2*
- [Ref 12] *TS 129 078 v4.6.0 – CAMEL Application Part specification v3*
- [Ref 13] *3GPP TS 29.078 v7.1.0 (2005-09) - CAMEL Application Part Specification v.4*
- [Ref 14] *3GPP TS 29.278 v7.0.0 (2005-12) - CAMEL Application Part 4 IP Multimedia Subsystems (IMS) v.4*
- [Ref 15] *EN 301 140-1 – ETSI Intelligent Network CS2 Specification*
- [Ref 16] *GR-1299-CORE – AIN Specification, issue 7*
- [Ref 17] *Q.1228 - ITU-T Interface Recommendation for Intelligent Networks CS-2*

1.4 Feature Overview

Key features of the INAP module include:

- Eases IN application development by providing simple access to communication between IN functional entities.
- Functional Entity independent solution.
- Supports communication functions required at the SCF, SSF, SRF and CUSF Functional Entities.
- Implements the Single Association Control Function (SACF) specified in the ITU Q.1218 and ETSI ETS 300 374-1 specifications.
- INAP module provides service independent access to the SS7 environment.
- Procedural API provides a convenient means of accessing the INAP module. Provides tailored suites of Application Service Elements (suites of INAP operations) to support the required IN functions.
- The supported ASEs may be readily extended to support any network or operator specific IN functions.

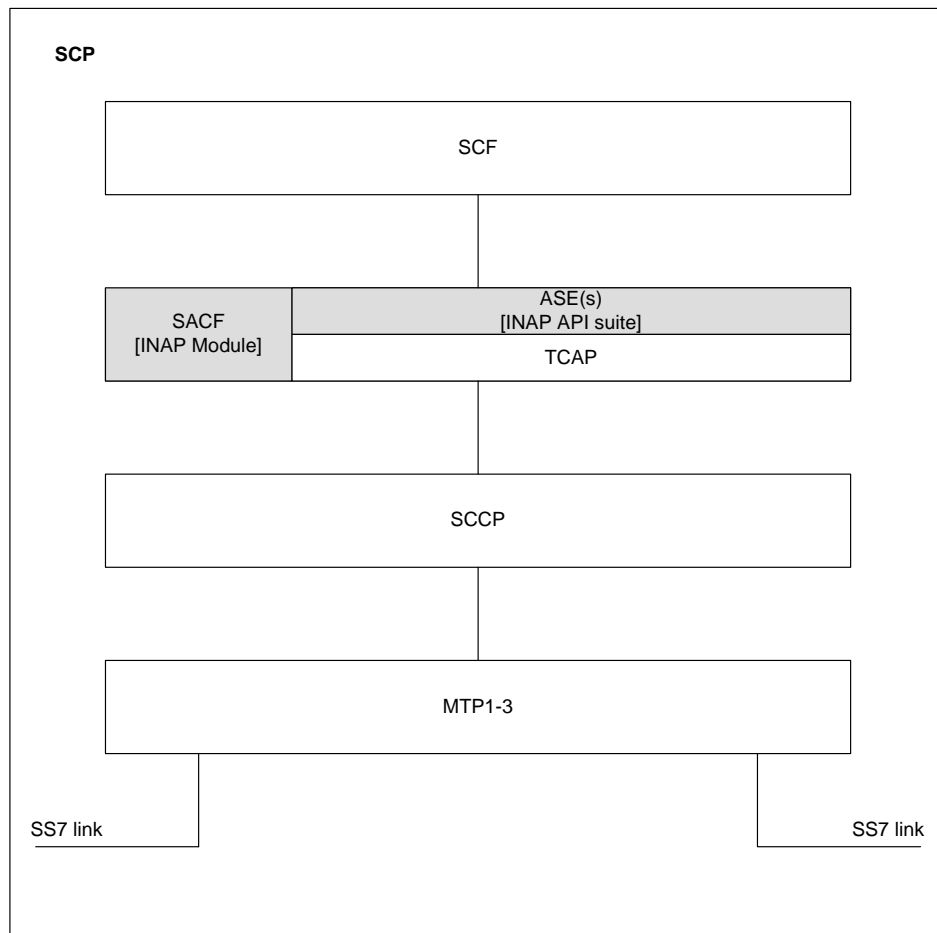
- Full user control of dialogues via message oriented or procedural (API) interface.
- Support for application context negotiation.
- Support for ITU, ETSI and CAMEL protocol stacks.
- Support for a subset of the AIN protocol stack GR-1299-CORE (AINGR).
- Error handling for Class 1, 2, 3, and 4 operations.

2 General Description

2.1 Module Overview

The module provides an implementation of the Single Association Control Function (SACF) block of an IN Functional Entity. The figure below shows the various components at a SCP functional entity but the module itself is FE independent. It may provide services to applications implementing the functions of the SCF, SSF and SRF Functional Entities. It may also support services to multiple FEs located at the same node. The ASEs can be implemented using the INAP API suite. Other modules in the Dialogic® SS7 Protocol stack can be used to implement the SCCP, TCAP and MTP layers.

Figure 1. INAP at an SCP



The module is event driven. It has a single input queue into which messages from other modules (TCAP, INAP-User, management etc.) are written. The module processes each message in turn until the input queue is empty, in which case it will do nothing until the next event is received. Output from the module is directed depending on the type of event to the TCAP module, the INAP User module, the Management module or the Maintenance module.

The Intelligent Network Application Protocol (INAP) is specified in terms of operations that are "invoked" at the serving FE by the requesting FE. See [\[Ref 9\] on page 9](#). These operations are invoked within the context of a "dialogue" between the two FEs.

The INAP module provides the user with a primitive interface for INAP dialogue control and for INAP service requests. The service request primitives contain INAP operations coded as TCAP components ([\[Ref 4\] on page 9](#)) for transmission via INAP dialogues.

The INAP module is supplied with an API function library containing a procedural interface for the INAP module. This consists of a suite of API functions for dialogue control and IN operation handling.

The API suite includes functions for the encoding and recovery of IN operations and associated parameters. The operations are coded as TCAP components using the *Basic Encoding Rules of the Abstract Syntax Notation 1*, see [\[Ref 3\] on page 9](#). This is the format required by the INAP module. Certain other parameters are also built into the INAP service request message by the coding function.

If the user already has access to the ASN.1 encoded version of the component the INAP module may be accessed directly via the primitive interface.

The API functions suite may be used with different variants of the INAP protocol. The required protocol handling is specified via internal coding tables. The user indicates the required protocol at run time. The INAP module is protocol independent. This approach allows new variants to be made available in minimum time.

2.2 INAP Functional Entity Addressing

When opening a dialogue with a remote FE the User Application must provide the SCCP address of the local and remote FEs in the SS7 network.

The User Application may provide the full SCCP address explicitly in each dialogue message or alternatively, the INAP module provides a number of Functional Entity records which once configured allow the User Application to address Functional Entities using a locally defined reference code. This feature also permits the INAP module to support more than one local Functional Entity. For example an SCF and an SRF may be supported on the same SS7 stack. The FE record for each local FE should be configured with the module id of the user application implementing the procedures of that FE.

2.3 INAP Application Context Handling

ITU-T and ETSI INAP specifications include the use of Application Context to identify the "context" of a particular dialogue between two IN Functional Entities. Application Context negotiation is required when a dialogue is established between two IN Functional Entities. If the FE receiving the dialogue request cannot support the requested context the dialogue is aborted.

The INAP module is able to perform application context negotiation once the supported contexts are configured. This can be done automatically using the API interface. The API user handles Application Contexts using defined interface codes.

Alternatively the INAP module may be configured to transparently pass raw Application Context data to the User permitting the User Application to perform context negotiation if required. This transparent Application Context handling option can also be used to support interworking with some proprietary INAP implementations that do not make use of Application Contexts.

2.4 Module Dimensions

Internally there are a number of data structures used by the module.

The maximum dimensions of these structures are determined by compile time constants. The constants of importance to the user are:

- The maximum number of IN Functional Entities supported by the module (32 for all assemblies).
- The maximum number of Application Contexts supported by the module (32 for all assemblies).
- The maximum number of simultaneous dialogues supported by the module.
- The maximum number of simultaneous invocations supported by the module.

	Host based (Linux, Windows®, Solaris)	SS7SIU520	SS7G21 SS7G22	SS7HDP SS7HDC
Maximum number of dialogues supported	65535	16384	65535	0, 8192 or 32768 (depending on run-time license)
Maximum number of invokes supported	65535	16384	65535	0, 8192 or 32768 (depending on run-time license)

2.5 Module Requirements

The module requires a periodic timer tick notification to be issued via the input queue. Typically this is required every tenth of a second. This can either be generated by a timer module or using the services of the selected operating system.

3 INAP Module User Interface

3.1 Introduction

The INAP module is event driven.

The INAP module - User interface is message based and uses the following message types:

Message Type	Value	Usage
INAP-SERVICE-REQ	0xc7f0	Used to invoke an operation at a remote Functional Entity. Also to respond to operation invocation requests from remote Functional Entities.
INAP-SERVICE-IND	0x87f1	Used to receive the results or errors arising from operations invoked at remote Functional Entities. Also to receive operation invocation requests from remote Functional Entities.
INAP-DIALOGUE-REQ	0xc7f2	Used to issue dialogue commands to the INAP module.
INAP-DIALOGUE-IND	0x87f3	Used to receive dialogue events from the INAP module.

User dialogue commands are passed by sending command primitives in the dialogue request messages outlined above.

User operations are sent to the network using the service request messages outlined above. The required operation and associated parameters are supplied coded as a TCAP component ([\[Ref 4\] on page 9](#)) following the basic ASN.1 encoding rules ([\[Ref 3\] on page 9](#)). It is recommended that the user make use of the suite of API functions for the coding and decoding of INAP operations, see [Chapter 4: Functional API User Interface on page 33](#).

The message must be contained in a single buffer allocated by the sending module. The suite of API functions includes functions for the allocation and transmission of these message buffers.

Each INAP primitive includes a number of parameters. These parameters are conveyed in the parameter area of the message buffer.

3.2 Dialog Primitive Types

Dialogue handling primitives provide the mechanism by which dialogues are established and maintained with remote Functional Entities.

Dialogue primitives are sent by the INAP User in an INAP-DIALOGUE-REQ message. These convey a dialogue request or response:

Primitive	Value	Usage
INAP-OPEN-REQ	0x1	Used to open a dialogue. The INAP module assigns resources for the dialogue and awaits any INAP operations the user wishes to open the dialogue with.
INAP-CLOSE-REQ	0x2	Basic End: Used to indicate that any operations supplied should now be transmitted to the remote FE. The dialogue is then terminated. Pre Arranged End: Used to indicate that the dialogue may be terminated locally when any active invocations have completed. Any pending components sent to the INAP module will be discarded. The INAP module will issue a Close Indication when the dialogue is terminated.
INAP-DELIMIT-REQ	0x3	Used to indicate that any components supplied should now be transmitted to the remote FE. The dialogue remains open.
INAP-U-ABORT-REQ	0x4	Used to indicate that the user wishes to abort this dialogue. Any outstanding components are discarded.
INAP-OPEN-RSP	0x81	Used to accept or reject a dialogue request from a remote FE.

Under some network configurations, it may be desirable to change the local and remote addresses that INAP uses for a particular dialogue after the Open has been received. The INAP module allows the user to specify a new set of origination and destination addresses within the Open-Response (or U_Abort if appropriate). These addresses will be used for the remainder of the dialogue. The value of INAPPN_dest_address will become the new remote address and the INAPPN_orig_address will become the new local address which will be used in messages sent to TCAP.

The current TCAP specifications only allow for the local address of the responding end of a dialogue to be changed; therefore, end-to-end support for changing additional addresses may depend on functionality offered at other nodes.

Where the INAP module started a dialogue, it accepts new local and remote addresses and uses them for the rest of the dialogue. This means that the INAP module supports the functionality to act at both ends of a dialogue where the addresses have changed.

Dialogue primitives sent by the INAP module in an INAP-DIALOGUE-IND message. These convey a dialogue indication or confirmation:

Primitive	Value	Usage
INAP-OPEN-IND	0x1	Used to indicate a dialogue request from a remote FE. The user may subsequently receive service indication messages bearing components.
INAP-CLOSE-IND	0x2	Used to indicate that all the components received have been issued to the user. The dialogue is terminated.
INAP-DELIMITER-IND	0x3	Used to indicate that all the components received have been sent to the user. The dialogue remains open.
INAP-OPEN-CNF	0x81	Used to indicate that the remote FE has accepted the user's dialogue request.
INAP-U-ABORT-IND	0x4	Used to indicate that the remote user has aborted the dialogue. Any outstanding components have been discarded.
INAP-P-ABORT-IND	0x5	Used to indicate that the dialogue has been aborted because of a network error. Any outstanding components have been discarded.
INAP-NOTICE-IND	0x6	Used to indicate that an abnormal component was detected.

3.3 Service Component Primitives

Service Component Request primitives convey coded INAP operations to the INAP module. The primitive type indicates the nature of the component.

Primitive	Value	Usage
INAP-INVOKE-REQ	0x1	Used by the user application to request an operation invocation.
INAP-RESULT-REQ	0x2	Used by the user application to provide the successful result of an operation invocation.
INAP-ERROR-REQ	0x3	Used by the user application to provide the unsuccessful result of an operation invocation.
INAP-REJECT-REQ	0x4	Used by an API decode function to indicate a "provider" problem. This occurs if the decode function is unable to decode the received component.

Service Component Indication primitives convey coded INAP operations to the user. The primitive type indicates the nature of the component.

Primitive	Value	Usage
INAP-INVOKE-IND	0x1	Used by the INAP module to convey an operation invocation to the user application.
INAP-RESULT-IND	0x2	Used by the INAP module to convey the successful result of an operation previously invoked by the user.
INAP-ERROR-IND	0x3	Used by the INAP module to convey the unsuccessful result of an operation previously invoked by the user.

3.4 INAP Dialogue Request Message

Synopsis

Message sent from the User to the INAP module containing a dialogue request primitive.

Message Format

Message Header		
FIELD NAME	MEANING	
type	INAP_MSG_DLG_REQ (0xc7f2)	
id	dialogue_ID	
src	Sending module_id	
dst	INAP_MODULE_ID	
rsp_req	0	
hclass	0	
status	0	
err_info	0	
len	Number of bytes of user data	
Parameter Area		
Offset	Size	Name
0	1	Dialogue primitive type octet.
1	len - 2	Parameters in Name-Length-Data format.
len - 1	1	Set to zero indicating end of message.

Description

This message is used by the User to send dialogue primitives to the INAP module. All dialogue primitives contain a dialogue ID which is encoded in the message header. It does not form part of the parameter area. It must be provided by the User with the INAP-OPEN-REQ primitive and used in the message header of all subsequent dialogue primitives associated with that dialogue. Operation invocations, results and errors are also associated with a particular dialogue using this dialogue ID.

See [Section 3.2 Dialog Primitive Types on page 16](#) for details of primitive usage.

Parameter Area Contents

The following table lists the parameters associated with each dialogue request primitive.

Parameter	INAP Primitive				
	OPEN-REQ	CLOSE-REQ	DELIMITER-REQ	U-ABORT-REQ	OPEN-RSP
Destination address	A				O
Originating address	B				O
Destination reference	A				
Originating reference	B				
Result					M
Refuse reason					O
Release method		M			
User reason				M	
Application context name	O	O	O	O	O
Application context index	C			O	
User Information		O	O	O	
NC	O				

Key

Symbol	Description	
M	Mandatory	The message will be discarded if the corresponding parameter is omitted
O	Optional	The parameter is not essential
A	Exclusive OR	One of the parameters marked A must be included.
B	Exclusive OR	One of the parameters marked B must be included.
C	Conditional	The parameter marked C must be included if Application Context negotiation is enabled i.e., if the INAP_MSG_CNF_AC message has been issued at least once.

3.5 INAP Dialogue Indication Message

Synopsis

Dialogue event indication message sent from the INAP module to the user.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_DLG_IND (0x87f3)	
id	Dialogue_ID	
src	INAP_MODULE_ID	
dst	User module_id	
rsp_req	0	
hclass	0	
status	0	
err_info	0	
len	Number of bytes of user data	
Parameter Area		
Offset	Size	Name
0	1	Dialogue primitive type octet.
1	len - 2	Parameters in Name-Length-Data format.
len - 1	1	Set to zero indicating end of message.

Description

This message is used by the INAP module to indicate dialogue events to the User application.

All protocol messages must contain the dialogue ID of the dialogue to which they refer. This is encoded in the message header. The INAP module assigns the dialogue id for an incoming dialogue request (OPEN IND primitive).

See [Section 3.2 Dialog Primitive Types on page 16](#) for details of dialogue primitive usage.

The following table lists the parameters associated with each dialogue indication primitive:

Parameter	INAP Primitive						
	OPEN-IND	CLOSE-IND	DELIMITER-IND	U-ABORT-IND	P-ABORT-IND	OPEN-CNF	NOTICE-IND
Destination address	A					O	
Originating address	B					O	
Destination reference	A						
Originating reference	B						
Result						M	
Refuse reason						O	
User reason				M			
Provider reason					M		
Application context name	O	O	O	O		O	
Application context index	C					O	
Source					M		
Problem diagnostic							M
Release confirm		O					
Report Cause							O
User Information	O	O	O	O			
NC	O						

Key

Symbol	Description	
M	Mandatory	The parameter will always be included in the message
O	Optional	The parameter may or may not be included in the message depending on the circumstances in which the message is sent.
A	Exclusive OR	One of the parameters marked A must be included.
B	Exclusive OR	One of the parameters marked B must be included.
C	Conditional	The parameter marked C must be included if Application Context negotiation is enabled i.e., if the INAP_MSG_CNF_AC message has been issued at least once.

3.6 INAP Dialogue Primitive Parameters

The following parameter names are defined for use in dialogue primitive messages:

Parameter	Mnemonic	Value (dec)	Value (hex)
Destination address	INAPPN_dest_address	1	0x01
Originating address	INAPPN_orig_address	3	0x03
Result	INAPPN_result	5	0x05
Refuse reason	INAPPN_refuse_rsn	6	0x06
Release method	INAPPN_release_method	7	0x07
User reason	INAPPN_user_rsn	8	0x08
Provider reason	INAPPN_prov_rsn	9	0x09
User Information	INAPPN_user_info	10	0x0a
Application context name	INAPPN_applic_context	11	0x0b
Source	INAPPN_source	12	0x0c
Problem diagnostic	INAPPN_prob_diag	13	0x0d
Destination FE code	INAPPN_dest_FE	14	0x0e
Originating FE code	INAPPN_orig_FE	15	0x0f
Application context index	INAPPN_ac_reference	27	0x1b
Release confirm	INAPPN_release_confirm	28	0x1c
Report Cause	INAPPN_report_cause	30	0x1e
Network Context	INAPPN_nc	31	0x1f

The coding for each parameter type is given in the following tables:

Parameter name	INAPPN_dest_address
Parameter length	Variable, in the range 2 to 18
Parameter data	<p>SCCP address of the FE with which the dialogue is required.</p> <p>Destination address parameter encoded in the format expected by the network layer (e.g. when using SCCP, in accordance with Q.713 definition of "Called party address", starting with the address indicator and containing, optionally, signaling point code, subsystem number and global title).</p>

Parameter name	INAPPN_dest_FE
Parameter length	Fixed, set to two octets.
Parameter data	<p>User defined reference code for the destination Functional Entity for this dialogue. The User must previously have issued a Functional Entity configuration request message for this FE. See Section 5.4 INAP Functional Entity Configuration Request on page 63.</p>

Parameter name	INAPPN_orig_address
Parameter length	Variable, in the range 2 to 18
Parameter data	SCCP address of the FE requesting the dialogue. Origination address parameter encoded in the format expected by the network layer (e.g. when using SCCP, in accordance with Q.713 definition of "Called party address", starting with the address indicator and containing, optionally, signaling point code and global title).
Parameter name	INAPPN_orig_FE
Parameter length	Fixed, set to two octets.
Parameter data	User defined code for the originating Functional Entity for this dialogue. The User must previously have issued a Functional Entity configuration request message for this FE. Section 5.4 INAP Functional Entity Configuration Request on page 63.
Parameter name	INAPPN_result
Parameter length	Fixed, set to one octet
Parameter data	Indicates whether the remote FE accepts the dialogue request from the user or not. <ul style="list-style-type: none">• 0 – dialogue accepted• 1 – dialogue refused
Parameter name	INAPPN_refuse_rsn
Parameter length	Fixed, set to one octet
Parameter data	When a remote FE refuses a dialogue request from the user a reason may be provided. Single octet coded as follows: <ul style="list-style-type: none">• 0 - no reason given• 3 – application context not supported• 4 – potential version incompatibility
Parameter name	INAPPN_release_confirm
Parameter length	Fixed, set to one octet
Parameter data	Allows the user to distinguish between a normal "basic" or "pre-arranged" termination of a dialogue. If this parameter is not present, then a normal release should be assumed. <ul style="list-style-type: none">• 0 – normal release indication. The dialogue has been closed by the remote system.• 1 – release confirm indication. The indication is generated to confirm that the dialogue has been closed using a pre-arranged end. All operations have been completed or have timed-out.

Parameter name	INAPPN_release_method
Parameter length	Fixed, set to one octet
Parameter data	Allows the user to select "basic" or "pre-arranged" termination of a dialogue. <ul style="list-style-type: none">• 0 – normal release. The INAP module issues a dialogue termination message to the remote system. May be used to transfer components to the remote system. User application dialogue resources may be released immediately.• 1 – prearranged end. Used where the IN specifications allow the dialogue to be terminated locally without sending a dialogue termination message to the remote system. If the INAP module is awaiting responses (errors or results) for any active Class 1, 2 or 3 operation invocations, the INAP module will maintain the dialogue until the internal operation timers have expired or the responses received. Once all the operations have completed the INAP module will issue a Close Indication primitive. User application dialogue resources may then be released.
Parameter name	INAPPN_user_info
Parameter length	Variable (subject to satisfying message length limits).
Parameter data	User information encoded as an X.208 EXTERNAL, commencing with the EXTERNAL tag. This formatting is not required when the User Information is carried in a User Abort primitive. Any format may be used in this case.
Parameter name	INAPPN_user_rsn
Parameter length	Fixed, set to one octet
Parameter data	Allows the user to provide an abort cause when aborting a dialogue. Single octet coded as follows: <ul style="list-style-type: none">• 0 - User specific reason• 6 - Application Context not supported
Parameter name	INAPPN_prov_rsn
Parameter length	Fixed, set to one octet
Parameter data	Provides the user with an abort cause when the network aborts a dialogue. <ul style="list-style-type: none">• 0 – provider malfunction• 1 – supporting dialogue/transaction released• 2 – resource limitation• 3 – maintenance activity• 4 – version incompatibility• 5 – abnormal INAP dialogue

Parameter name	INAPPN_source
Parameter length	Fixed, set to one octet
Parameter data	Used to indicate the source of the abort in a provider abort primitive. <ul style="list-style-type: none">• 0 – INAP problem• 1 - TC problem• 2 – network service problem
Parameter name	INAPPN_applic_context
Parameter length	Variable up to 32.
Parameter data	This parameter is only used when the module has been configured for "transparent AC operation" using the module configuration message. The Application context as received or transmitted with this dialogue. May be used to supply an alternative context when used with the U-ABORT primitive. Encoded as specified in Q.773 commencing with the Object Identifier Name tag.
Parameter name	INAPPN_ac_reference
Parameter length	Variable, in the range 1 to 2
Parameter data	The index specifying the Application context for use with this dialogue. The module must previously have been configured with supported contexts and associated references using the Configure AC message. See Section 5.5 INAP Application Context Configuration Request on page 65 . May be used to supply an alternative context when used with the U-ABORT primitive.
Parameter name	INAPPN_prob_diag
Parameter length	Fixed, set to one octet
Parameter data	Used to indicate unexpected events that are not related to an active operation invocation. <ul style="list-style-type: none">• 0 – abnormal event detected by peer• 1 – response rejected by peer• 2 – abnormal event received from peer• 3 – abnormal network report cause
Parameter name	INAPPN_report_cause
Parameter length	Fixed, set to 1
Parameter data	Values as defined in Q.713 Return cause
Parameter name	INAPPN_nc
Parameter length	Variable, typically 1. Length of zero indicates Network Context is unknown.
Parameter data	Network Context identifier. If the default NC is being used then this parameter is optional. If present, it should have a value of 0. For other Network Contexts it should match the value defined in the relevant INP_MSG_NC_CONFIG message.

3.7 INAP Service Request Message

Synopsis

Protocol message sent from the User to the INAP module containing a single INAP operation invocation, result or error.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_SRV_REQ (0xc7f0)	
id	Dialogue_ID	
src	Sending module_id	
dst	INAP_TASK_ID	
rsp_req	0	
hclass	0	
status	0	
err_info	0	
len	Number of bytes of user data	
Parameter Area		
Offset	Size	Name
0	1	Component Type octet.
1	len – 2	Parameters in Name-Length-Data format.
len – 1	1	Set to zero indicating end of message.

Description

This message allows the user to send INAP operation invoke, result and error components to a remote Functional Entity via an open dialogue. It is also used to issue problem codes relating to received components.

The User's components are formatted as a TCAP component following the basic ASN.1 encoding rules.

All service request messages must contain the dialogue ID of the dialogue to which they belong. This is encoded in the message header and does not form part of the parameter area.

The following parameters are defined for use in service request messages:

Parameter	Component Type			
	INVOKE-REQ	RESULT-REQ	ERROR-REQ	REJECT-REQ
Invoke ID	M	M	M	M
Linked ID	O			
Component	M	M	M	
Op code	M			
Parent Ind	O			
Class	M			
Timeout	M			
Problem code				M
Quality Of Service	O			

Key

Symbol	Description	
M	Mandatory	The message will be discarded if the corresponding parameter is omitted
O	Optional	The parameter is not essential

3.8 INAP Service Indication Message

Synopsis

Protocol message sent from the INAP module to the user containing a received operation invoke, result or error component.

Message Format

Message Header	
Field Name	Meaning
type	INAP_MSG_SRV_IND (0x87f1)
id	Dialogue_ID
src	INAP_TASK_ID
dst	User module_id
rsp_req	0
hclass	0
status	0
err_info	0
len	Number of bytes of user data

Parameter Area		
Offset	Size	Name
0	1	Component Type octet.
1	Len - 2	Parameters in Name-Length-Data format.
len - 1	1	Set to zero indicating end of message.

Description

The INAP module uses this message to send received INAP operation invoke, result and error components to the User.

The received components are formatted as a TCAP component following the basic ASN.1 encoding rules.

All service indication messages must contain the dialogue ID of the dialogue to which they belong. This is encoded in the message header and does not form part of the parameter area.

The following parameters are defined for use in service indication messages:

Parameter	Component Type		
	INVOKE-IND	RESULT-IND	ERROR-IND
Application context index	C		
Component	M	M	A
Invoke ID	M	M	M
Linked ID	O		
Linked Op code	O	M	M
Provider Error			A

Key

Symbol	Description	
M	Mandatory	The parameter will always be included in the message.
O	Optional	The parameter may or may not be included in the message depending on the circumstances in which the message is sent.
C	Conditional	The parameter will be included in the message if Application Context negotiation is enabled, i.e. at least one INAP_MSG_CNF_AC message has been issued.
A	Exclusive OR	One of the parameters marked A will always be included in the message.

3.9 INAP Service Primitive Parameters

The following parameter names are defined for use in service primitive messages:

Parameter	Mnemonic	Value (dec)	Value (hex)
Invoke ID	INAPPN_invoke_id	16	0x10
Linked ID	INAPPN_linked_id	17	0x11
Component	INAPPN_component	18	0x12
Class	INAPPN_class	19	0x13
Timeout	INAPPN_timeout	20	0x14
Op code	INAPPN_op_code	21	0x15
Linked Op code	INAPPN_linked_op_code	22	0x16
Problem code	INAPPN_problem_code	23	0x17
Parent Ind	INAPPN_parent_ind	24	0x18
Provider Error	INAPPN_provider_error	25	0x19
MTP message priority	INAPPN_priority	26	0x1a
Application context index	INAPPN_ac_reference	27	0x1b
Quality Of Service	INAPPN_qos	29	0x1d

Parameter name INAPPN_ac_reference

Parameter length Variable, in the range 1 to 2

Parameter data The index specifying the Application Context of the dialogue on which the component was received.
Supplied with invoke components to permit the decoded operation to be validated against the context.
The module must previously have been configured with supported contexts and associated references using the Application Context configuration message. See [Section 5.5 INAP Application Context Configuration Request](#) on page 65.

Parameter name INAPPN_invoke_id

Parameter length Fixed, set to 1

Parameter data An id associated with every operation invocation. Assigned by the invoking user.

Parameter name INAPPN_linked_id

Parameter length Fixed, set to 1

Parameter data The invoke id of the parent operation invocation.
This parameter is only included in linked (child) operation invocations.

Parameter name	INAPPN_component
Parameter length	Variable, 1 to 255
Parameter data	The invoke, result or error component coded in accordance with Q.773 using the ASN.1 Basic Encoding Rules. Starting with the Component type tag.
Parameter name	INAPPN_class
Parameter length	Fixed set to 1.
Parameter data	The class of the INAP operation. <ul style="list-style-type: none">• 1 - Operation has Results and Errors• 2 - Operation has Errors only• 3 - Operation has Results only• 4 - Operation has no Results or Errors Where the INAP Operation code and decode functions are used, this parameter is supplied automatically
Parameter name	INAPPN_timeout
Parameter length	Fixed set to 2.
Parameter data	The TCAP timeout of the INAP operation. Specified on a per operation basis in the INAP specifications. Time in seconds. Where the INAP Operation code and decode functions are used, this parameter is supplied by using the API functions.
Parameter name	INAPPN_op_code
Parameter length	Fixed set to 1.
Parameter data	The INAP specified Operation Code. Supplied by the User in Service Invoke Request messages. The INAP module does not examine the contents, storing it for use in Service Indication messages relating to this invocation. Where the INAP API code and decode functions are used, this parameter is supplied automatically.

Parameter name	INAPPN_linked_op_code
Parameter length	Variable, in the range 1 to 2.
Parameter data	<p>The INAP specified Operation Code.</p> <p>Supplied by the INAP module in Service Invoke Indications where the operation being invoked is a linked operation. In this case the operation code indicates the Parent operation of the linked operation.</p> <p>Supplied by the INAP module in Service Result & Error indications to indicate the operation to which the result or error refers.</p> <p>Where the INAP API code and decode functions are used, this parameter is handled automatically.</p>
Parameter name	INAPPN_problem_code
Parameter length	Fixed set to 1.
Parameter data	<p>Used by the User application to indicate a problem with a received component to the INAP module. The value of this parameter is a defined interface code. It does not correlate exactly with the TCAP reject component problem code.</p> <p>Where a INAP API decode function is used, this parameter is placed in the reject component automatically.</p> <ul style="list-style-type: none">• 1: Mistyped Parameter - The User application was unable to decode the received component.• 2: Unrecognized OP - The User application has decoded an operation that is not supported.• 3: Unrecognized Error - The User application has decoded an error that is not supported or not applicable to the operation invoked.
Parameter name	INAPPN_parent_ind
Parameter length	Fixed set to 1.
Parameter data	<p>Used by the User application to indicate to the INAP module that the operation being invoked has defined linked operations. This allows the INAP module to reject inappropriate received linked operation invocations.</p> <ul style="list-style-type: none">• 0: The operation being invoked does not have any specified linked operations.• 1: The operation being invoked has specified linked operations. <p>If this parameter is omitted it is assumed the operation being invoked does not have specified linked operations.</p> <p>Where the INAP API code functions are used, this parameter is supplied automatically if the operation is able to be a parent of a linked operation.</p>

Parameter name	INAPPN_provider_error
Parameter length	Fixed set to 1.
Parameter data	<p>Used by the INAP module to indicate a negative response to an operation invocation requested by the User application for network reasons.</p> <ul style="list-style-type: none">• 1: Duplicate Invoke ID - The user provided Invoke id for the invocation request collided with the invoke id of an existing invocation at the remote system.• 2: Unrecognized OP - The operation requested is not supported at the remote system.• 3: Mistyped Parameter - The remote system was unable to decode the operation invocation.• 4: Unrecognized Linked ID - The remote system did not have an active invocation matching the linked id.• 5: Linked Response Unexpected - The remote system was not expecting the linked response.• 6: Unexpected Linked Operation - The remote system was not expecting the linked operation invocation.• 7: Initiating Release - The remote system was unable to accept the operation invocation because the dialogue was being released.• 8: Resource Limitation - The remote system was unable to accept the operation invocation due to resource limitations.• 9: No response from peer - The operation invoked by the User application has timed out without a response being received.• 10: Invalid Response from peer - A response to an operation invoked by the User application was received. The response could not be decoded.• 11: Service Completion Failure - An expected response from the remote system was not received.
Parameter name	INAPPN_priority
Parameter length	Fixed set to 1.
Parameter data	<p>Used by the User application to indicate the MTP message priority for the SS7 message resulting from the operation invocation.</p> <p>Used only in ANSI mode. See Section 5.1 INAP Configuration Request on page 57</p> <p>Where the INAP API code and decode functions are used, this parameter is supplied automatically.</p>
Parameter name	INAPPN_qos
Parameter length	Fixed, set to 1
Parameter data	<p>The octet is an indicator octet. The coding is as follows:</p> <ul style="list-style-type: none">• bit 0 - Set to 1 if the Return Option is selected.• bit 1 - Set to 1 if Sequence Control is required. <p>All other bits are reserved for future use and must be set to zero.</p>

4 Functional API User Interface

4.1 Introduction

The INAP module provides the means for transmitting INAP operations between Functional Entities. The module requires the INAP operations coded as a TCAP component ([\[Ref 4\] on page 9](#)), following the basic ASN.1 encoding rules ([\[Ref 3\] on page 9](#)).

A suite of API functions is supplied to provide a convenient way to build and recover the INAP module messages. The API functions also provide the coding and de-coding of INAP operations and their parameters as TCAP components.

The API interface is entirely procedural. The user application need not be aware of the data structures used to handle the dialogue primitives and service requests.

The suite of API functions provides the following features:

- Message buffer allocation and de-allocation.
- Dialogue handling.
- IN service handling.
- Generic Parameter handling.
- Component code and decode.
- Ability to send and receive user extensions to operations.

The API suite of functions is generic to all INAP services. INAP operations and associated parameters are identified using API interface codes that are defined in the API header file "in_inc.h".

The user places INAP operations and associated parameters in a "component structure". The type definition of this component structure is available to the user, permitting the user to create instances of it as required. However, the API functions conceal the internal contents of the structure from the user application.

API functions are used to obtain an inter-process message structure.

An API coding function is then used to build an INAP Service Request message in this message structure using the contents of the component structure. The INAP operation and associated parameters placed in the component structure by the user application are coded using the *Basic Encoding Rules of ASN.1* see [\[Ref 3\] on page 9](#).

An API function can then be used to send the message structure to the INAP module.

Operation results and errors are handled in a similar way.

API function suites are available for the ETSI, ITU, CAMEL and AIN standards for INAP.

4.2 API Function Specifications

The functions of the API interface are listed below. Function parameters are identified as well as any return values.

Message Buffer Handling API Functions	Parameters	Return Value	Usage
IN_alloc_message()	alloc_options ¹	msg	Allocate message buffers The type of the message buffer pointer is "HDR **"
IN_free_message()	msg	status	De-allocates message buffers
IN_send_message()	user_id inap_id msg	status	Sends message buffer to INAP module.

Message Buffer Handling API Functions	Parameters	Return Value	Usage
IN_init_component()	prot_spec cpt init_options ¹	status	Initialize the component buffer. The user application is free to create instances of the component buffer as required. This function should be used to initialize the component structure for use with a protocol specified by the prot_spec variable. It must be called before using a cpt structure for coding or decoding

Build Dialogue Request API Functions	Parameters	Return Value	Usage
IN_set_dialogue_param()	param_name len data_ptr msg	status	Sets parameter "param_name" in the "msg" message structure. Copies "len" octets of parameter data from the "data_ptr" The available "param_names" are defined in the in_inc.h header file.
IN_dialogue_open()	dlg_id msg	status	Builds an OPEN dialogue primitive in the given message structure. Parameters already present in the message structure are verified for the OPEN action.
IN_dialogue_close()	dlg_id msg	status	Builds a CLOSE dialogue primitive in the given message structure. Parameters already present in the message structure are verified for the CLOSE action.
IN_dialogue_delimit()	dlg_id msg	status	Builds a DELIMIT dialogue primitive in the given message structure. No parameters are required for this action.

¹ This parameter is only defined when the code is compiled with a #define of IN_LMSGs and the library is implemented as a shared object.

Build Dialogue Request API Functions	Parameters	Return Value	Usage
IN_dialogue_u_abort()	dlg_id msg	status	Builds a U-ABORT dialogue primitive in the given message structure. Parameters already present in the message structure are verified for the U-ABORT action.
IN_dialogue_open_rsp ()	dlg_id msg	status	Builds an Open Response dialogue primitive in the given message structure. Parameters already present in the message structure are verified for the Open Response action.

Read Dialogue Request API Functions	Parameters	Return Value	Usage
IN_get_dialogue_type()	msg dlg_type_ptr	status	Used where the user application needs to determine type of dialogue in received message. The available "Dialogue type codes" are defined in the in_inc.h header file.
IN_get_dialogue_param()	param_name param_len data_ptr max_len msg	status	Retrieves parameter "param_name" from the "msg" message structure. Copies received parameter data to "data_ptr" and sets "param_len" to the number of bytes copied.

Build Operation in Component Buffer API Functions	Parameters	Return Value	Usage
IN_set_operation()	op_name timeout cpt	status	Used to place the required operation code into the component structure. See also Note A on page 36 .
IN_set_error()	error_op err_name cpt	status	Used to place the required error code into the component structure. See also Note A on page 36 .
IN_set_result()	result_op cpt	status	Used to set the operation code that triggered the result. See also Note A on page 36 .
IN_set_component_param()	param_name len data_ptr cpt	status	Used to place the required parameter into the component structure. See also Note A on page 36 .

Note A: An error status is returned if the parameter, operation or error is invalid or is too large for the component structure. However, it is not necessary to check the status after setting each parameter. The first error to occur is recorded in the component structure and may be obtained using the function `IN_get_component_first_error()`. The functions `IN_code_operation_invoke()`, `IN_code_result()` or `IN_code_error()` will return `IN_ERROR_IN_COMPONENT` if an error is stored in the component structure during an attempt to build an INAP message.

Read Operation from Component Buffer API Functions	Parameters	Return Value	Usage
<code>IN_get_component_first_error()</code>	<code>cpt</code> <code>error_rsn_ptr</code>	status	When using API functions to get or set operations, errors, results and associated parameters to and from component structures, the return status code of each function may be checked individually. As an alternative, the first function to fail places its return code in the component structures and this may be checked for once the component handling is complete. This function is used to obtain this error from the component structure.
<code>IN_get_operation()</code>	<code>cpt</code> <code>op_name_ptr</code>	status	Used to obtain the value of the received operation code.
<code>IN_get_error()</code>	<code>cpt</code> <code>err_name_ptr</code>	status	Used to obtain the value of the received error code.
<code>IN_get_component_param()</code>	<code>param_name</code> <code>param_len</code> <code>data_ptr</code> <code>max_len</code> <code>cpt</code>	status	Used to obtain the received parameter from the component structure. Note: Received parameters of ASN.1 NULL type return a length of 0 and a status of <code>IN_SUCCESS</code> . Copies the component parameter data to the user data area pointed to by "data_ptr". Places the number of octets copied in the location indicated by "param_len". "max_len" gives the maximum number of octets available in the user data area.

Code Service Request from Component Buffer API Functions	Parameters	Return Value	Usage
IN_code_operation_invoke()	dlg_id cpt msg	status	Codes the component in the given component structure as an invoke component into the given message structure.
IN_code_result()	dlg_id cpt msg	status	Codes the component in the given component structure as a result component into the given message structure.
IN_code_error()	dlg_id cpt msg	status	Codes the component in the given component structure as an error component or as a Reject component as appropriate for the nature of the user error parameter. The coded component is built into the given message structure.
IN_code_reject()	dlg_id cpt msg	status	Where an API decode function returns "IN_REJECT_REQUIRED" a provider problem has been detected. The decode API function places the detected problem component in the component structure. This function is used to build a reject INAP Service Request message.

De-code Service Indication from Component Buffer API Functions	Parameters	Return Value	Usage
IN_get_component_type()	msg cpt_type_ptr	status	Used to obtain the component type of a received message.
IN_decode_operation()	cpt msg	status	The operation and associated parameters are decoded from the component parameter of the received message into the given component structure. If a provider problem is detected during decoding that requires the transmission of a reject component to the remote system this function returns a status of "IN_REJECT_REQUIRED". The problem code is placed in the component structure. This component structure should be used with the IN_code_reject() function to build the required reject message, which should then be sent to the INAP module.

De-code Service Indication from Component Buffer API Functions	Parameters	Return Value	Usage
IN_decode_result()	cpt msg	status	The parameters of the result are decoded from the component parameter of the received message into the given component structure. Any provider problem detected during decoding is handled in the same way as during invoke component decoding.
IN_decode_error()	cpt msg	status	The error code and associated parameters are decoded from the component parameter of the received message into the given component structure. Any provider problem detected during decoding is handled in the same way as during invoke component decoding.

API support API Functions	Parameters	Return Value	Usage
IN_get_prot_spec	prot_def	prot_spec	Returns a pointer to a protocol specification. This function can be called to get a 'prot_spec' pointer to pass to other IN functions.
IN_init_applic_contexts	prot_spec user_id inap_id	status	Issues the Configure Application Context messages to the INAP module for the contexts supported by this API suite. This function should be called at system start up and whenever the INAP module is initialized.
IN_version	maj_rev min_rev text	status	Used to provide information on the version of the API library. The text variable will be updated to point to the name of the API.
IN_set_param_length_range	prot_spec param_name length_min length_max	status	Used to override the pre-set parameter length ranges with alternative values. This function should be used to redefine the default length range of protocol parameters. The protocol specification to change is indicated by the "prot_spec" parameter. This will affect all components using that protocol specification.

4.3 API Function Parameter Specifications

The function parameters of the API interface are listed below. Parameter types are identified in 'C'.

Parameter name	alloc_options
Parameter type	u32
Notes	Option flags for the IN_alloc_message function. The following flag bits are defined. <ul style="list-style-type: none"> • Bit 0 – IN_ALLOC_OPTION_LMSGGS – set to indicate if the allocated message is to be a large message. • All other bits – set to zero.
Parameter name	cpt
Parameter type	pointer to IN_CPT
Notes	Pointer to component structure. The type of the component buffer pointer is "IN_CPT *" defined in the in_inc.h header file. The User application should create instances of this as required. However the user application need not be aware of the internal structure of this type.
Parameter name	cpt_type_ptr
Parameter type	pointer to u8
Notes	Pointer to User Application variable into which the interface codes for the component type will be placed. Value defined in the API header file in_inc.h.
Parameter name	data_ptr
Parameter type	u8
Notes	Pointer to the first octet of user data.
Parameter name	dlg_id
Parameter type	u16
Notes	User defined id code for the dialogue. The range of dialogue ids available to the user is configured in the INAP module configuration message.
Parameter name	dlg_type_ptr
Parameter type	pointer to u8
Notes	Pointer to User Application variable into which the defined interface code for the dialogue type will be placed. Value defined in the API header file in_inc.h.

Parameter name	err_name
Parameter type	u16
Notes	INAP error code. The available error codes are defined in the API header file.
Parameter name	err_name_ptr
Parameter type	pointer to u16
Notes	Pointer to User Application variable into which the code for the required INAP error will be placed. The available error codes are defined in the API header file.
Parameter name	error_op
Parameter type	u16
Notes	Code for the operation whose invocation this error relates to. The available operation codes are defined in the API header file and have the prefix 'INOP_'.
Parameter name	error_rsn_ptr
Parameter type	pointer to s16
Notes	Pointer to a User Application variable into which the status code returned by the first component handling function to fail is placed. The available status codes are defined in the API header file.
Parameter name	inap_id
Parameter type	u8
Notes	Contains the module id of the INAP module.
Parameter name	init_options
Parameter type	u32
Notes	Option flags for the IN_init_component function. The following flag bits are defined. <ul style="list-style-type: none">• Bit 0 – IN_INIT_OPTION_CODE_SHIFT – set to indicate if Code Shift is supported (may be generated in INAP)• All other bits – set to zero.
Parameter name	len
Parameter type	u16 or u8
Notes	Contains length of parameter data in octets.
Parameter name	length_min
Parameter type	u16 or u8
Notes	Contains minimum length of parameter data in octets.

Parameter name	length_max
Parameter type	u16 or u8
Notes	Contains maximum length of parameter data in octets.
Parameter name	maj_rev
Parameter type	pointer to u16
Notes	Updated to show the major version number for the API library
Parameter name	min_rev
Parameter type	pointer to u16
Notes	Updated to show the minor version number for the API library
Parameter name	max_len
Parameter type	u16 or u8
Notes	Specifies the maximum length of parameter buffer data in octets in order to prevent overflow.
Parameter name	msg
Parameter type	pointer to HDR
Notes	Pointer to an inter process message structure.
Parameter name	op_name
Parameter type	u16
Notes	API interface code for the required operation. API interface operation codes defined in the API header file.
Parameter name	op_name_ptr
Parameter type	pointer to u16
Notes	Pointer to User Application variable into which the API interface code for the required operation will be placed. API interface operation codes defined in the API header file.
Parameter name	param_name
Parameter type	u16
Notes	Values defined in the API header file to identify the parameter. When used with the IN_set_dialogue_param() function the available parameters are detailed in Section 4.5 API Dialogue Parameters on page 53 . Dialogue parameters are common to all INAP implementations. When used with the IN_set_component_param() function the available parameters depend on the INAP operation set supported by the API supplied. These are detailed in Appendix B on page 77 .

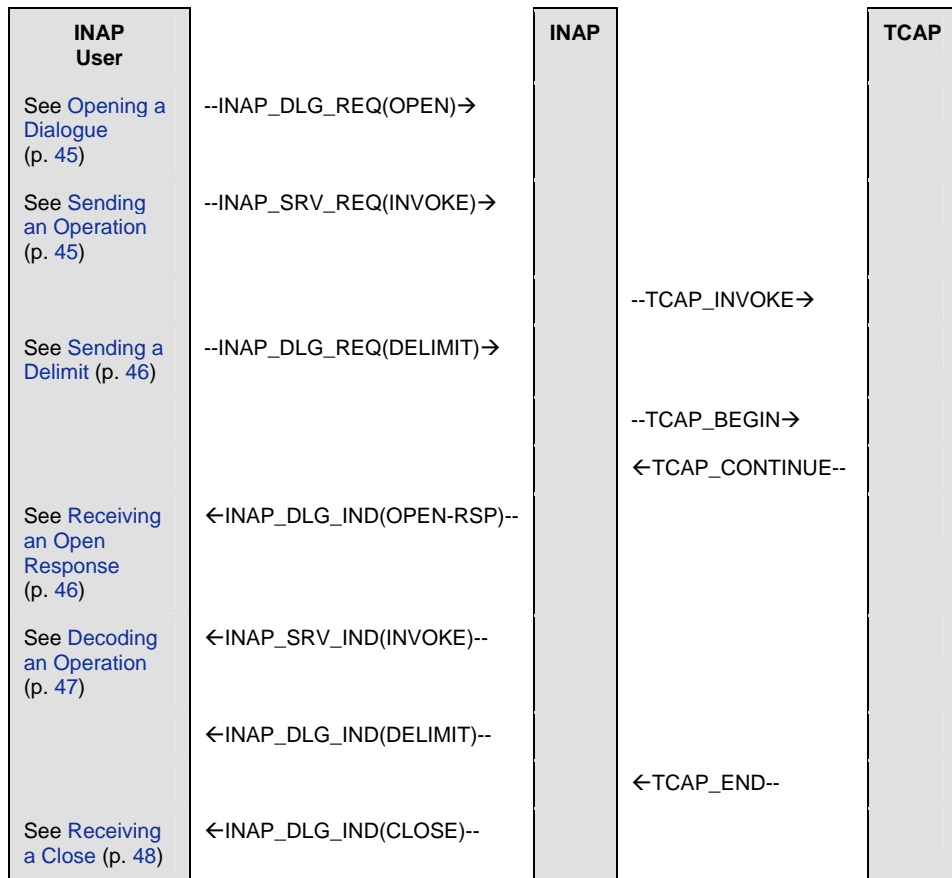
Parameter name	param_len
Parameter type	pointer to u16 (or pointer to u8)
Notes	Pointer to User Application variable into which the length of the recovered parameter is placed.
Parameter name	prot_def
Parameter type	u16
Notes	<p>Value to pass to the 'IN_get_prot_spec' function to gain a 'prot_spec' pointer to a given protocol.</p> <ul style="list-style-type: none">• Use "INETS_300_374_1_PROTOCOL" for coding under ETS 300 374 1.• Use "INEN_301_140_1_PROTOCOL" for coding under EN 301 140-1.• Use "INITU_Q1218_PROTOCOL" for coding under ITU Q.1218.• Use "INCAP_V1_PROTOCOL" for coding under CAMEL v1.• Use "INCAP_V2_PROTOCOL" for coding under CAMEL v2.• Use "INCAP_V3_PROTOCOL" for coding under CAMEL v3.• Use "INCAP_V4_PROTOCOL" for coding under CAMEL v4.• Use "INCAP_IMS_PROTOCOL" for coding under CAMEL v4 for IMS.• Use "AINGR_1299_PROTOCOL" for coding under AIN.
Parameter name	prot_spec
Parameter type	pointer to void
Notes	<p>Pointer to a pre-defined table specifying protocol definitions for parameter length ranges, ASN operation coding, Application Context handling and Error codes.</p> <p>The user need not be aware of the internal structure used.</p> <p>Note: The 'IN_get_prot_spec' function is used to define these pointers.</p>
Parameter name	result_op
Parameter type	u16
Notes	<p>Code for the operation whose invocation this result relates to.</p> <p>Value defined in the API header file.</p>

Parameter name	status
Parameter type	s16
Notes	Code returned by API functions indicating success or failure. <ul style="list-style-type: none"> • 0: IN_SUCCESS • -1: IN_GENERAL_FAILURE • -2: IN_INVALID_MESSAGE_HEADER • -3: IN_MESSAGE_BUFFER_OVERFLOW • -4: N_INVALID_PARAM_Name • -5: IN_INVALID_PARAM_LEN • -6: IN_INVALID_OPERATION • -7: IN_INVALID_ERROR • -8: IN_INVALID_TIMEOUT • -9: IN_INVALID_PROTOCOL_SPEC • -10: IN_INVALID_COMPONENT_POINTER • -11: IN_ERROR_IN_COMPONENT • -12: IN_INVALID_COMPONENT_TYPE • -13: IN_COMPONENT_BUFFER_OVERFLOW • -14: IN_COMPONENT_CODING_ERROR • -15: IN_PARAM_NOT_FOUND • -16: IN_PARAM_BUFFER_OVERFLOW • -17: IN_APPLIC_CONTEXT_NOT_FOUND • -18: IN_APPLIC_CONTEXT_ERROR • -19: IN_COMPONENT_NOT_FOUND • -20: IN_INVOKE_ID_NOT_FOUND • -21: IN_OP_CODE_NOT_FOUND • -22: IN_INVALID_LINKED_OPERATION • -23: IN_INVALID_OPERATION_CLASS • -24: IN_REJECT_REQUIRED Values defined in the API header file in_inc.h.
Parameter name	text
Parameter type	pointer to char *
Notes	Updated to point to a text name for the API.
Parameter name	timeout
Parameter type	u16
Notes	Timeout for the operation invocation. If the timeout parameter is set to zero, the longest timeout specified for the operation is used. If the timeout parameter is set to a duration outside the specified range for the operation, the coding function returns an error.
Parameter name	user_id
Parameter type	u8
Notes	Contains the module id of the User Application module.

4.4 INAP – API Message Sequence Charts

In the following sections, message sequence charts are used to show example sequences of API function calls with associated INAP and TCAP module messages. The first example shows a dialogue being opened at the local system and the second example shows the case where the dialogue is opened at the remote system. In all cases, only the messages at the local system are shown.

4.4.1 Outgoing Dialogue



Opening a Dialogue

In order to open a dialogue with a remote system the user application obtains a message structure and fills in the associated parameters. The message can then be set as a dialogue open before sending to the INAP module. One of the parameters in the open message should indicate the application context to be used for the length of the dialogue. This can either be the application context index or full application context. The application context index is used to reference a pre-configured application context.

```
h = IN_alloc_message();
IN_set_dialogue_param(INDP_dest_address, len, dptr, h);
IN_set_dialogue_param(INDP_orig_address, len, dptr, h);
IN_set_dialogue_param(INDP_applic_context_index, len, dptr, h);
IN_dialogue_open(dlg_id, h);
IN_send_message(user_id, inap_id, h);
```

Nothing will be sent to the remote system at this point. The INAP binary module is waiting for any INAP operation invocations with which the user may wish to open the dialogue. The dialogue id chosen for the open request should be an idle dialogue from the outgoing range defined by the values in the INAP configuration message (see [Section 5.1 INAP Configuration Request on page 57](#)).

Sending an Operation

To send an operation on an opened dialogue first a message structure is obtained in the same way as for dialogue messages. The user must then initialize an instance of a component structure, denoted here as 'cpt'. This initializes the fields in the component structure, including setting the protocol to be used to encode or decode messages. The cpt structure is used to store information ready for encoding into a message structure. The IN_set_operation is used to set the operation and timeout values. The IN_set_component_parameter procedure is used to store parameter data into the cpt structure. Once all of the required parameters are stored in the component, the IN_code_operation_invoke encodes the data from the cpt structure into the message structure ready for sending to the INAP module.

```
h = IN_alloc_message();
IN_init_component(prot_spec, cpt);
IN_set_operation(op_name, timeout, cpt);
IN_set_component_param(INPN_InvokeID, len, dptr, cpt);
IN_set_component_param(param1, len, dptr, cpt);
IN_set_component_param(param2, len, dptr, cpt);
IN_code_operation_invoke(dlg_id, cpt, h);
IN_send_message(user_id, inap_id, h);
```

Sending a Delimit

The delimit message is built and sent in a similar way to the open message. Once this is received by the INAP binary, any pending components will be sent to the remote system in a TCAP Begin message.

```
h = IN_alloc_message();
IN_dialogue_delimit(dlg_id,h);
IN_send_message(user_id,inap_id,h);
```

Receiving an Open Response

The procedure GCT_receive can be used to receive the incoming message. The message type will indicate it is a dialogue indication and the procedure IN_get_dialogue_type will show the message is an open response. The open response message will indicate in the result parameter whether the remote system wishes to accept or reject the dialogue.

```
h = GCT_receive();

switch (h->type)
{
    case INAP_MSG_SRV_IND :
        ...
        break;

    case INAP_MSG_DLG_IND :
        IN_get_dialogue_type(h,dlg_type_ptr);
        switch (dlg_type_ptr)
        {
            ...
            case INDT_OPEN_RSP:

                IN_get_dialogue_param(INDP_result,lenptr,dptr,max_len,h);

                IN_get_dialogue_param(INDP_refuse_rsn,lenptr,dptr,max_len,h);

                IN_get_dialogue_param(INDP_applic_context,lenptr,dptr,max_len,h);
                ...
                break;
            ...
        }
        break;
    ...
}
reln(h);
```

Decoding an Operation

The operation invoke message is received in the same way as the dialogue open response, but in this case the message type will indicate it is a service indication. The procedure `IN_get_component_type` can be used to see the procedure is an operation invoke. Just as when encoding an operation into a service request, a component structure must be initialized ready for use when decoding a component from a service indication message.

```
h = GCT_receive();

switch (h->type)
{
  case INAP_MSG_SRV_IND :
    IN_get_component_type(h,&cpt_type);
    switch (cpt_type)
    {
      case INCPT_INVOKE :
        IN_init_component(prot_spec,cpt);
        IN_decode_operation(cpt,h);
        IN_get_component_param(param1,lenptr,dptr,buffer_size,cpt);
        IN_get_component_param(param2,lenptr,dptr,buffer_size,cpt);
        ...
    }
    break;
    ...
    break;

  case INAP_MSG_DLG_IND :
    ...
}
break;
...
}
relm(h);
```

If the message received is corrupted or does not contain mandatory parameters, the return code from `IN_decode_operation` will indicate a reject is required. The `cpt` structure used for the decoding of the operation will have the information needed for the reject already encoded in it. The `IN_code_reject` procedure can be used to build the reject from the `cpt` structure before sending to the remote system.

Receiving a Close

The procedure `GCT_receive` can be used to receive the incoming message. The message type will indicate that it is a dialogue indication and the procedure `IN_get_dialogue_type` will show the message is a close.

```
h = GCT_receive();

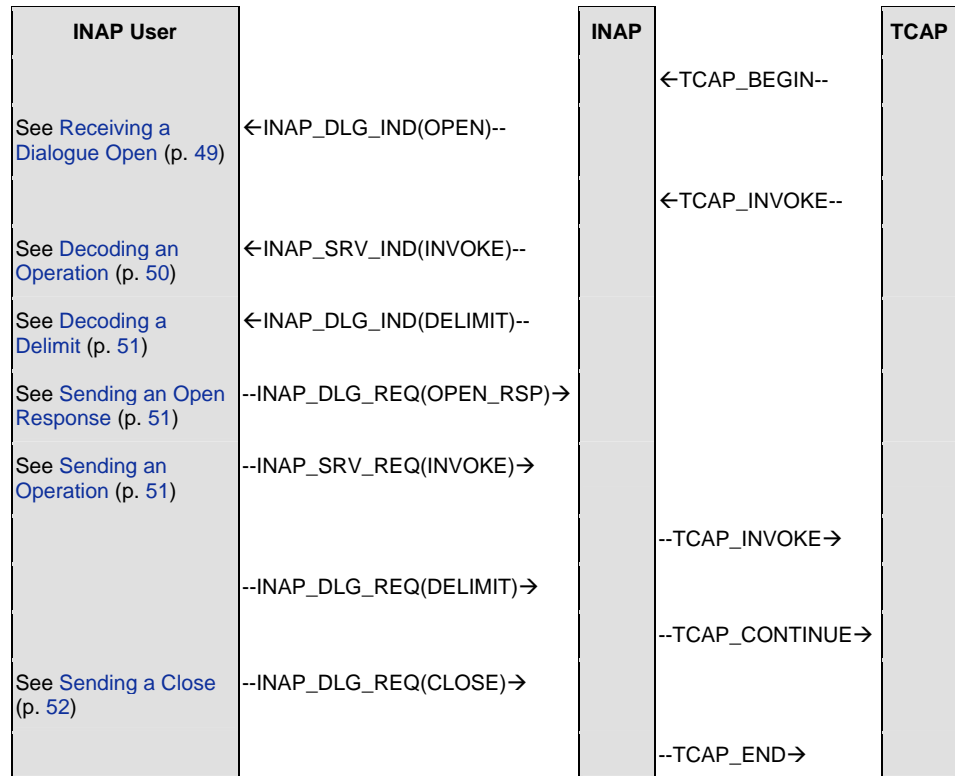
switch (h->type)
{
  case INAP_MSG_SRV_IND :
    ...
    break;

  case INAP_MSG_DLG_IND :

    IN_get_dialogue_type(h,dlg_type_ptr);
    switch (dlg_type_ptr)
    {
      ...
      case INDT_CLOSE:
IN_get_dialogue_param(INDP_release_method,lenptr,dptr,max_len,m);
      ...
      break;
    }
    ...
    break;
  ...
}
reln(h);
```

The close indicates that the dialogue should be ended and no further communication for that dialogue is possible. Resources for that dialogue should be closed and the dialogue id should be made available for re-use.

4.4.2 Incoming Dialogue



Receiving a Dialogue Open

A dialogue open indication can be decoded in the same way as other dialogue indications shown in the previous example. The value of the dialogue id is chosen from idle dialogues by the INAP binary module. The valid ids are defined by the values in the in INAP configuration message. (See [Section 5.1 INAP Configuration Request on page 57.](#))

If the INAP binary has been pre-configured with valid application contexts using the INAP_MSG_CNF_AC message then it will handle the application context negotiation. This means when it receives a request to open a dialogue for a particular application context it knows which are supported by the local system. If the incoming application context matches one of the supported application contexts then the open indication will contain the corresponding application context index. See [Section 5.5 INAP Application Context Configuration Request on page 65](#) for more information on configuring application contexts.

If application contexts have not be pre-configured, then the open indication will contain the full application context and this application context will have to be echoed back to the remote system in the open response and any other dialogue requests.

```
h = GCT_receive();

switch (h->type)
{
  case INAP_MSG_SRV_IND :
    ...
    break;

  case INAP_MSG_DLG_IND :

    IN_get_dialogue_type(h,dlg_type_ptr);
    switch (dlg_type_ptr)
    {
      ...
      case INDT_OPEN:
        IN_get_dialogue_param(INDP_dest_address, lenptr, dptr, max_len, m);
        IN_get_dialogue_param(INDP_orig_address, lenptr, dptr, max_len, m);
        IN_get_dialogue_param(INDP_dest_FE, lenptr, dptr, max_len, m);
        IN_get_dialogue_param(INDP_orig_FE, lenptr, dptr, max_len, m);
        IN_get_dialogue_param(INDP_applic_context_index, lenptr, dptr,
                               max_len, m);

        ...
        break;
      ...
    }
    break;
  ...
}
reIm(h);
```

Decoding an Operation

The operation decode can be performed as described in [Decoding an Operation on page 47](#).

Decoding a Delimit

The procedure GCT_receive can be used to receive the incoming message. The message type will indicate it is a dialogue indication and the procedure IN_get_dialogue_type will show the message is a delimit.

```

h = GCT_receive();

switch (h->type)
{
  case INAP_MSG_SRV_IND :
    ...
    break;

  case INAP_MSG_DLG_IND :

    IN_get_dialogue_type(h,dlg_type_ptr);
    switch (dlg_type_ptr)
    {
      ...
      case INDT_DELIMIT:
        ...
        break;
      ...
    }
    break;
  ...
}
relm(h);

```

The delimit indicates that all of the pending group of operations, results or errors received from the remote system in the same message over the signaling link have been sent from the INAP binary.

Sending an Open Response

The open response is built and sent in a similar way to the open message.

```

m = IN_alloc_message();
IN_set_dialogue_param(param1,len,dptr,m);
IN_set_dialogue_param(param2,len,dptr,m);
IN_set_dialogue_param(param3,len,dptr,m);
IN_dialogue_open_rsp(dlg_id,m);
IN_send_message(user_id,inap_id,m);

```

Sending an Operation

The operation encode and send can be performed as described in [Sending an Operation on page 45](#).

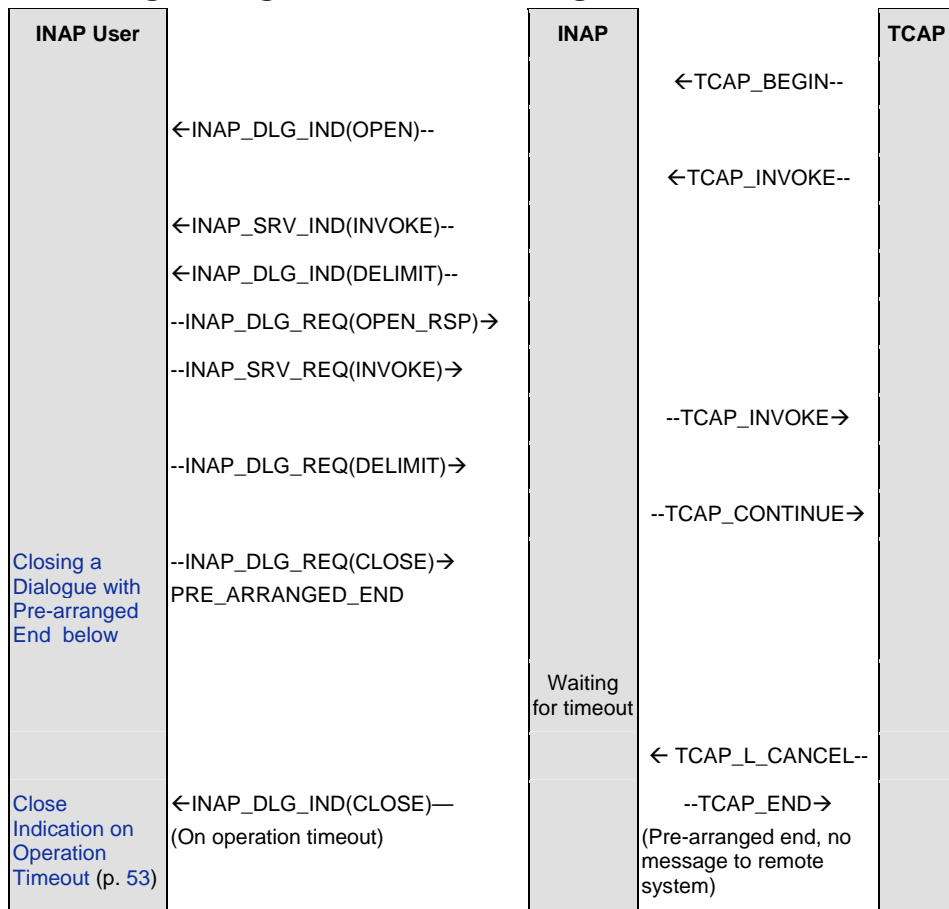
As before the sending of the operation will not trigger a message to be sent to INAP until a delimit (or close) is sent to INAP.

Sending a Close

The close request is sent to end the dialogue with the remote system and the release method parameter should be used to show whether this should be a normal or pre-arranged end.

```
m = IN_alloc_message();
IN_dialogue_close(dlg_id,m);
IN_set_dialogue_param(INDP_release_method,len,dptr,m);
IN_send_message(user_id,inap_id,m);
```

4.4.3 Incoming Dialogue with Pre-arranged End



Closing a Dialogue with Pre-arranged End

INAP and TCAP specifications allow a dialogue to be closed under some conditions without an explicit TC-END being sent over the SS7 link. If a close with release reason of pre-arranged end is sent to INAP then the module will wait until the operation timers of outgoing operations have expired before closing the dialogue. Any component waiting to be sent from INAP will be discarded. To send pending components, a delimit must precede the close pre-arranged end.

Close Indication on Operation Timeout

When the operation timer expires the INAP binary will send a close indication to the user module to allow the user to free their dialogue resources. After sending the indication INAP will free its own resources for the dialogue. Waiting for the timeout allows for any possible errors to the operation to be returned before the dialogue closes. The release confirm parameter can be used to differentiate between a normal close indication and a close confirm following a close pre-arranged end.

4.5 API Dialogue Parameters

The functional API permits the user to establish, maintain and terminate dialogues with remote Functional Entities.

The dialogue control functions are common to all INAP applications.

The API functions act to send and receive dialogue request and indication messages to the INAP module. The parameters that are required for these messages are those detailed in the message specifications given in [Chapter 3 INAP Module User Interface on page 15](#).

The mnemonics available to the user application for the parameter names are provided in the interface include file (in_inc.h) accompanying the API.

The parameters that should be placed in the message structure using the IN_set_dialogue_param() function for each of the message primitive types are summarized below.

Parameter	IN Dialogue Primitive Type				
	INDT_OPEN	INDT_CLOSE	INDT_DELIMIT	INDT_U_ABORT	INDT_OPEN_RSP
Destination address	A				
Originating address	B				
Destination reference	A				
Originating reference	B				
Result					M
Refuse reason					O
Release method		M			
User reason				M	
Application context name	O	O	O	O	O
Application context index	C			O	
User Information					

Key

Symbol	Description	
M	Mandatory	The message will be discarded if the corresponding parameter is omitted
O	Optional	The parameter is not essential
A	Exclusive OR	One of the parameters marked A must be included.
B	Exclusive OR	One of the parameters marked B must be included.
C	Conditional	The parameter marked C must be included if AC negotiation is enabled.

The parameters that may be recovered from the message structure using the IN_get_dialogue_param() function for each of the message primitive types are summarized below.

Parameter	IN Dialogue Primitive Type						
	INDT_OPEN	INDT_CLOSE	INDT_DELIMIT	INDT_U_ABORT	INDT_P_ABORT	INDT_OPEN_RSP	INDT_NOTICE
Destination address	A						
Originating address	B						
Destination reference	A						
Originating reference	B						
Result						M	
Refuse reason						O	
User reason				M			
Provider reason					M		
Application context name	O	O	O	O		O	
Application context index	C					O	
Source					M		
Problem diagnostic							M
Release confirm		O					

	IN Dialogue Primitive Type						
Parameter	INDT_OPEN	INDT_CLOSE	INDT_DELIMIT	INDT_U_ABORT	INDT_P_ABORT	INDT_OPEN_RSP	INDT_NOTICE
Report Cause							0
User Information	0	0	0	0			

The available parameter mnemonics are summarized below:

Parameter	Mnemonic	Value (dec)	Value (hex)
Destination address	INDP_dest_address	1	0x01
Originating address	INDP_orig_address	3	0x03
Result	INDP_result	5	0x05
Refuse reason	INDP_refuse_rsn	6	0x06
Release method	INDP_release_method	7	0x07
User reason	INDP_user_rsn	8	0x08
Provider reason	INDP_prov_rsn	9	0x09
User Information	INDP_user_info	10	0x0a
Application context name	INDP_applic_context	11	0x0b
Source	INDP_source	12	0x0c
Problem diagnostic	INDP_prob_diag	13	0x0d
Destination FE code	INDP_dest_FE	14	0x0e
Originating FE code	INDP_orig_FE	15	0x0f
Application Context Index	INDP_applic_context_index	27	0x1b
Release Confirm	INDP_release_confirm	28	0x1c
Report Cause	INDP_report_cause	30	0x1e

The parameters are used as required by the INAP module. See [Chapter 3 INAP Module User Interface](#) on page 15.

5 Non-Primitive Interface

In addition to the primitive interface for passing INAP protocol messages between the INAP module and the User application, the INAP module supports a non-primitive interface for implementation-specific functionality.

The non-primitive interface permits the configuration of the INAP module.

It also allows the INAP module to supply diagnostic information, protocol error events and software error events to the local system management and maintenance modules.

This section describes the formats of all the messages used in the non-primitive interface.

All of the messages handled by the INAP module may request a confirmation by setting the `rsp_req` field in the message header.

The confirmation message consists of the received message echoed back to the sending module. The status field of the confirmation message header may take one of the following values.

Mnemonic	Value	Description
INAPE_BAD_ID	1	Inappropriate or invalid id in request message
INAPE_BAD_STATE	2	Message received in wrong state.
INAPE_BAD_MSG	5	Unsupported message received.
INAPE_BAD_PARAM	6	Invalid parameters contained in message.
INAPE_NO_RESOURCES	7	Insufficient internal message resources.
INAPE_INVALID_NC	8	Invalid Network Context
INAPE_INVALID_VERSION	9	Message version is invalid

5.1 INAP Configuration Request

Synopsis

Message used to configure the INAP module for operation.

Message Format

Message Header	
Field Name	Meaning
type	INAP_MSG_CONFIG (0x77f4)
id	0
src	Sending module_id
dst	INAP_TASK_ID
rsp_req	used to request a confirmation
hclass	0
status	0
err_info	0
len	40

Parameter Area		
Offset	Size	Name
0	1	user_id
1	1	TCAP_id
2	1	mngt_id
3	1	maint_id
4	1	trace_id
5	1	reserved
6	2	base_usr_ogdlg_id
8	2	base_usr_icdlg_id
10	2	base_tc_ogdlg_id
12	2	base_tc_icdlg_id
14	2	nog_dialogues
16	2	nic_dialogues
18	2	num_invokes
20	4	options
24	16	reserved

Description

This message is used to configure the INAP module for operation. It should be the first message sent to the module. Any messages received before a valid configuration message will be discarded. It should only be issued once.

The message parameters relate to the environment in which the INAP module is operating.

Parameter Description

user_id

User Application module ID.

Note: The INAP module may be configured with Functional Entity references (see [Section 5.4 INAP Functional Entity Configuration Request on page 63](#)). These references permit a module ID to be associated with each local FE. The User ID configured here acts as the default User Application ID for received messages whose destination address is not among the configured local FEs.

TCAP_id

TCAP module ID.

mngt_id

Management module ID. The module to which software event indications are sent.

maint_id

Maintenance module ID. The module to which maintenance event indications are sent.

trace_id

Trace module ID. The module to which trace event indications are sent.

base_usr_ogdlg_id

The first dialogue ID for outgoing dialogues. The user assigns dialogue IDs for outgoing dialogues. The User should assign values in the range `base_ogdlg_id` to `(base_ogdlg_id + nog_dialogues - 1)`. The user must ensure that the dialogue ID is included in all protocol messages sent via the outgoing dialogue.

base_usr_icdlg_id

The first dialogue ID for incoming dialogues. The INAP module allocates the dialogue ID for incoming dialogues. It uses values in the range `base_icdlg_id` to `(base_icdlg_id + nic_dialogues - 1)` for this purpose. It is important that different ranges of values are used for incoming and outgoing dialogues on the user interface. This prevents the INAP module assigning a dialogue ID to an incoming dialogue at the same instant the user assigns it to an outgoing dialogue.

base_tc_ogdlg_id

The first dialogue ID for outgoing dialogues for use on the INAP module - TCAP interface. The INAP module allocates dialogue IDs for outgoing dialogues. It uses values in the range `base_tc_ogdlg_id` to `(base_tc_ogdlg_id + nog_dialogues - 1)` for this purpose.

base_tc_icdlg_id

The first dialogue ID for incoming dialogues for use on the INAP module - TCAP interface. The TCAP module allocates the dialogue ID for incoming dialogues. It uses values in the range `base_tc_icdlg_id` to `(base_tc_icdlg_id + nic_dialogues - 1)` for this purpose. It is important that different ranges of values are used for incoming and outgoing dialogues on the INAP module - TCAP interface. This prevents the INAP module assigning a dialogue id to an outgoing dialogue at the same instant TCAP assigns it to an incoming dialogue.

nog_dialogues

The maximum number of simultaneous outgoing dialogues that the module is required to support. This value is compared with a compile time constant to ensure that the module has sufficient internal resources to handle the requested maximum number of outgoing dialogues.

nic_dialogues

The maximum number of simultaneous incoming dialogues that the module is required to support. This value is compared with a compile time constant to ensure that the module has sufficient internal resources to handle the requested maximum number of incoming dialogues.

num_invokes

The maximum number of simultaneous invocations that the module is required to support. This value is compared with a compile time constant to ensure that the module has sufficient internal resources to handle the requested number of simultaneous invocations.

Options

Run time options are assigned according to the following table.

Bit	Mnemonic	Description
0	INAPF_ANSI	ANSI operation If set to one the module will handle ANSI format TCAP components specified according to ANSI T1.114. No application contexts should normally be configured for ANSI operation. If not set the INAP module will handle ITU format TCAP components specified according to ITU Q.773.
1	INAPF_TRNS_AC	Transparent Application Context If set to one, the module will convey the Application Context received in incoming dialogue messages to the user in the "Application Context Name" parameter. The user may also provide the Application Context for outgoing dialogue messages using the same "Application Context Name" parameter. This permits the user application to handle application context negotiation if so required. It can also be used to enable interworking with implementations that do not make use of application contexts by forcing the module to ignore the application context parameter. The "Application Context Name" parameter is not used if this option is not set.
2	INAPF_24PC	Use 24 bit point codes. If set to one, the module will expect 24 bit point codes when examining Functional Entity Addresses. If set to zero, the module will expect 14 bit point codes when examining Functional Entity Addresses.
3	INAPF_NULL_TC_CONT	Null TC-CONTINUE If set, the INAP module will generate an INAPDT_DELIMITER_IND on reception of TC-CONTINUE without any component in the established state. If not set, the Null TC-CONTINUE will be discarded (default operation)
4	INAPF_SEGMENTATION	Set to 1 to enable segmentation support when used with an appropriate SCCP and TCAP configuration.
5 - 15	none	Reserved. Reserved bits should be set to zero.

Reserved

Reserved for future use. Should be set to zero.

5.2 INAP Network Context Configuration Request

Synopsis

Message used to configure a Network Context.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_NC_CONFIG (0x77f8)	
id	Network Context id (value 1 to 3)	
src	Sending module_id	
dst	INAP_TASK_ID	
rsp_req	used to request a confirmation	
hclass	0	
status	0	
err_info	0	
len	40	
Parameter Area		
Offset	Size	Name
0	1	cnf_ver
1	1	user_id
2	1	TCAP_id
3	2	options
5	35	reserved

Description

This allows the configuration of additional Network Contexts. The INAP_MSG_CONFIG (0x77f4) message should be used to configure the default Network Context for the first network. For each subsequent Network Context, the message INAP_MSG_NC_CONFIG is required. The INAP_MSG_NC_CONFIG message contains parameters to define address format and INAP specific options and therefore allows different behavior for the module to be selected depending on the Network Context of the dialogue.

The meaning of the parameters in the INAP_MSG_NC_CONFIG message is the same as the equivalent parameters in the INAP_MSG_CONFIG message. When used to support multiple local point codes within the same network, the options settings should typically be the same in both messages.

Parameter Description

Network Context Id

The Network Context id will identify the Network Context being defined. The default Network Context (0) is configured using the existing INAP_MSG_CONFIG message therefore this message should only be used for Network Contexts 1 to 3. This assumes that four Network Contexts are permitted.

cnf_ver

Version of this NC configuration message. (Currently only version zero).

user_id

INAP-User module ID for this NC.

TCAP_id

TCAP module ID for this NC.

options

Run-time options assigned for this NC. Defined according to the options field table for the INAP_MSG_CONFIG message.

reserved

Reserved for future use. Should be set to zero.

5.3 INAP Timer Configuration Request

Synopsis

Message used to set up default protocol timers for use by the INAP module.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_CNF_TIM (0x77f5)	
id	0	
src	Sending module_id	
dst	INAP_TASK_ID	
rsp_req	used to request a confirmation	
hclass	0	
status	0	
err_info	0	
len	40	
Parameter Area		
Offset	Size	Name
0	2	tguard

Description

This message is used to configure the INAP protocol timers for operation. It should be sent to the module before any protocol messages are sent or received.

Timer values are in multiples of the timer tick period which should usually be 100ms.

Parameter Description**tguard**

Timer: Waiting for a response from the User application. A minimum value of 5 seconds is recommended (If the Configure Timers message is not sent, a default value of 50 seconds will be used.).

5.4 INAP Functional Entity Configuration Request

Synopsis

Message used to set up the internal Functional Entity records.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_CNF_FE (0x77f7)	
id	FE reference	
src	Sending module_id	
dst	INAP_TASK_ID	
rsp_req	used to request a confirmation	
hclass	0	
status	0	
err_info	0	
len	40	
Parameter Area		
Offset	Size	Name
0	2	FE options
2	1	local FE module ID
3	1	FE SCCP address length
4	18	FE SCCP address
22	18	reserved

Description

This message is used to configure the INAP functional entity records for operation. These allow the User application to refer to Functional Entities in the network via a local reference rather than providing the full SCCP address.

All Functional Entity configuration messages must contain the FE reference assigned by the User application to this FE. This is encoded in the message header and does not form part of the parameter area. The user may subsequently use this reference in the "Destination FE" or "Originating FE" parameters of the INAP_OPEN_DLG primitive or "IN_dialogue_open" API function. This reference is used instead of the destination or origination address parameter.

Parameter Description**FE options**

Run time options assigned according to the following table:

Bit	Mnemonic	Description
0	INAPFE_LOCAL	Local FE. If set to one the FE is local, i.e.: it is at the local point code. If not set the FE resides at a remote point code.
1 - 15	none	Reserved. Reserved bits should be set to zero.

Local FE module ID

Used when the FE is located at the local point code.

Single octet indicating the Module Id to which messages addressed to this FE should be sent. Used only for local FEs. This permits the INAP module to support INAP dialogues to several local FEs distinguished by their SCCP addresses.

Note: Any message received whose destination address has not been configured using the FE configuration message is sent to the User Application Module ID configured in the module configuration message.

Note: Within the local SCCP module, local FEs must be configured as Local Sub Systems. If the INAP and TCAP module are to be shared between FEs, all Local Sub Systems must be configured to use the same TCAP module ID.

FE SCCP address length

The length of the SCCP address of the Functional Entity.

FE SCCP address

The SCCP address of the Functional Entity.

Reserved

Reserved for future use. Should be set to zero.

5.5 INAP Application Context Configuration Request

Synopsis

Message used to set up the internal Application Context records.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_CNF_AC (0x77f6)	
id	Application Context Reference	
src	Sending module_id	
dst	INAP_TASK_ID	
rsp_req	used to request a confirmation	
hclass	0	
status	0	
err_info	0	
len	9 + ac_len	
Parameter Area		
Offset	Size	Name
0	8	Reserved
8	1	Application Context Length (ac_len)
9	ac_len	Application Context

Description

This message is used to configure the INAP Application Context records for use. These control the application context negotiation that the module conducts during dialogue establishment. All supported application contexts must be individually configured using this message.

The module will only accept incoming dialogues with configured Application Contexts. If a dialogue request with an unconfigured context is received, a dialogue abort message is returned to the requesting Functional Entity.

If no supported Application Contexts are configured, the application context negotiation is disabled. The module will accept all incoming dialogues.

The number of Application Context records available to the user is configured at module initialization using the Module Configuration message.

All Application Context configuration messages must contain the AC reference assigned by the User application to this AC. This is encoded in the message header and does not form part of the parameter area. The user may subsequently use this reference in the "ac_reference" parameter of the INAP_OPEN_DLG primitive or "IN_dialogue_open" API function to indicate the application context required for the dialogue.

Parameter Description

Reserved

Reserved for future use. Should be set to zero.

Application Context Length

The application context length indicates the number of octets representing the Application Context.

Application Context

The octet string specified in the relevant IN standard to represent the required application context. Encoded as specified in Q.773 commencing with the Object Identifier Name tag. This is the same format as expected for the parameter INAPPN_applic_context.

5.6 Read Revision Request

Synopsis

Message used to request the module type and software revision number.

Message Format

Message Header			
Field Name	Meaning		
type	GEN_MSG_MOD_IDENT (0x6111)		
id	0		
src	Originating module ID		
dst	INAP_TASK_ID		
rsp_req	Sending layer's bit must be set		
hclass	0		
status	0		
err_info	0		
len	28		
Parameter Area			
Offset	Size	Name	
0	2	type	Currently undefined
2	1	maj_rev	Major version number
3	1	min_rev	Minor version number
4	24	text	Null terminated string giving textual module identity

Description

This message is provided to request a reply indicating the software version for module under test.

On receipt of this request the module returns the message with status "SUCCESS" to the sender including the information requested.

5.7 INAP Software Event Indication

Synopsis

Message used by INAP to indicate an implementation specific software related event to the local management module.

Message Format

Message Header	
Field Name	Meaning
type	INAP_MSG_ERROR_IND (0x07f8)
id	See below
src	INAP_TASK_ID
dst	Management module id
rsp_req	0
class	0
status	Software event code (see below)
err_info	0
len	0

Description

This message is used by INAP to notify system management of various software events which under normal operating conditions should not occur. These events may be due to lack of system resource or error within the system.

Software Event Code

The Software event code contained in the status field of the message indicates the type of event. Possible values are listed in the following table, which also lists the meaning of the id field in each case.

Mnemonic	Code	Id	Description
INAPSWE_NO_MSSM	1	0	Maximum number of active invocations exceeded.
INAPSWE_NO_DLG	2	0	No internal resource to handle dialogue.
INAPSWE_NO_ISM	3	0	Internal pool of structured messages exhausted.
INAPSWE_ISM_LOW	4	0	Internal pool of structured messages running low.
INAPSWE_BAD_MSG	5	msg_type	Unrecognized inter process message received.
INAPSWE_TX_FMT_ERR	6	0	Internal error during message formatting.
INAPSWE_USER_BAD_FMT	7	msg_type	Badly formatted message received from User.
INAPSWE_TCAP_BAD_FMT	8	msg_type	Badly formatted message received from TCAP.
INAPSWE_UNREC_TYPE	9	msg_type	Unrecognized message received from TCAP.
INAPSWE_INVALID_DLG_ID	10	dlg_id	Message received with unrecognized dialogue id.
INAPSWE_INVALID_NC	11	nc	Message received with unrecognized Network Context.

5.8 INAP Maintenance Event Indication

Synopsis

Message used by INAP to indicate a protocol related event to the local maintenance module.

Message Format

Message Header	
Field Name	Meaning
type	INAP_MSG_MAINT_IND (0x07f9)
id	See below
src	INAP_TASK_ID
dst	Maintenance module id
rsp_req	0
class	0
status	Maintenance event code (see below)

Message Header	
Field Name	Meaning
err_info	0
len	0

Description

This message is used by INAP to indicate a protocol related to the maintenance module.

Maintenance Event Code

The Maintenance event code contained in the status field of the message indicates the type of event. Possible values are listed in the following table, which also lists the meaning of the id field in each case.

Mnemonic	Code	Id	Description
INAPME_INVALID_AC	0x1	dlg_id	Dialogue received from TCAP with unrecognized Application Context.
INAPME_INVALID_NC	0x02	dlg_id	Dialogue received from INAP-User or TCAP with unrecognized Network Context.

5.9 INAP Management Event Indication

Synopsis

This message is issued by the INAP module to notify system management of general software events that under normal operating conditions should not occur. These events may be due to lack of system resources or errors within the software.

Message Format

Message Header	
Field Name	Meaning
type	MGT_MSG_EVENT_IND (0x0008)
id	0
src	MAP_TASK_ID
dst	Management module ID
rsp_req	0
hclass	0
status	Management event code (see below)
err_info	Time-stamp
reserved	0
len	0

Management Event Code

The Management event code contained in the status field of the message indicates the type of event. Possible values are listed in the following table which also lists the meaning of the id field in each case.

Mnemonic	Value		id	Description
ERR_SDLSIG_LOW	47	0x2f	0	The internal signal queue is running short of entries. If this fault persists, the software should be re-built with more signals allocated to the signal queue.
ERR_NO_SDLSIG	46	0x2e	0	The internal signal queue has been exhausted. If this event occurs then correct operation of the module is not guaranteed.

5.10 INAP Trace Mask Request

Synopsis

Message used to configure INAP to send a trace message to the trace module whenever a specific message type is sent or received. The trace module is identified in the INAP configuration request message.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_TRACE_MASK (0x57fb)	
id	0	
src	Sending module ID	
dst	INAP_TASK_ID	
rsp_req	Used to request a confirmation	
hclass	0	
status	0	
err_info	0	
len	12	
Parameter Area		
Offset	Size	Name
0	4	op_evt_mask - Output event trace mask
4	4	ip_evt_mask - Input event trace mask
8	4	non_prim_mask - Non-primitive trace mask

Description

op_evt_mask

The output event trace mask. This is a 32-bit value with bits set to 1 to cause a trace message to be sent to the system trace module when INAP sends the associated protocol message.

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

23	22	21	20	19	18	17	16
0	0	0	0	0	0	0	0

7	6	5	4	3	2	1	0
0	0	0	0	TCCMP IND ²	TCDLG IND ³	INAPSRV REQ ⁴	INAPDLG REQ ⁵

ip_evt_mask

The input event trace mask. This is a 32-bit value with bits set to 1 to cause a trace message to be sent to the system trace module when INAP receives the associated protocol message.

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

23	22	21	20	19	18	17	16
0	0	0	0	0	0	0	0

7	6	5	4	3	2	1	0
0	0	0	0	TCCMP IND ⁶	TCDLG IND ⁷	INAPSRV REQ ⁸	INAPDLG REQ ⁹

² TCCMP_IND – Component request primitive from INAP to TCAP.

³ TCDLG_IND – Dialogue request primitive from INAP to TCAP.

⁴ INAPSRV_REQ – Service indication primitive from INAP to the user.

⁵ INAPDLG_REQ – Dialogue indication primitive from INAP to the user.

⁶ TCCMP_IND – Component Indication primitive from TCAP to INAP.

⁷ TCDLG_IND – Dialogue Indication primitive from TCAP to INAP.

⁸ INAPSRV_REQ – Service request primitive from the User to INAP.

⁹ INAPDLG_REQ – Dialogue request primitive from the User to INAP.

non_prim_mask

The non-primitive trace mask. This is a 32-bit value with bits set to 1 to cause a trace message to be sent to the system trace module when INAP receives the associated non-primitive message.

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

31	30	29	28	27	26	25	24
0	0	0	0	0	0	0	0

23	22	21	20	19	18	17	16
0	0	0	0	0	0	0	0

7	6	5	4	3	2	1	0
0	CNF_AC ¹⁰	CNF_FE ¹¹	SSW_MSK ¹²	SMT_MSK ¹³	SW_EVT ¹⁴	MT_EVT ¹⁵	CNF_TIM ¹⁶

5.11 Trace Event Indication

Synopsis

The INAP trace event masks are used to enable tracing of all messages sent or received by the INAP module. The traced messages are reported in event indication messages as shown below:

Message Format

Message Header	
Field Name	Meaning
type	MGT_MSG_TRACE_EV (0x0003)
id	0
src	INAP_TASK_ID
dst	Trace module id
rsp_req	0
hclass	0
status	0
err_info	0

¹⁰ CNF_AC - Application Context Configuration Message received by INAP.

¹¹ CNF_FE - Functional Entity Configuration Message received by INAP.

¹² SSW_MSK - Software Event Mask Request message received by INAP.

¹³ SMT_MSK - Maintenance Mask Request message received by INAP.

¹⁴ SW_EVT - Software Error Event indication message sent by INAP to the management module.

¹⁵ MT_EVT - Maintenance Event indication message sent by INAP to the maintenance module.

¹⁶ CNF_TIM - Timer Configuration Message received by INAP.

Message Header		
Field Name	Meaning	
len	18 + length of traced data	
Parameter Area		
Offset	Size	Name
0	1	source module id
1	1	destination module id
2	2	id
4	2	type
6	2	status
8	4	timestamp
12	4	pointer to the message being traced
16	2	data length
18	0 .. 280	data - Data taken from the contents of the MSG parameter area.

5.12 INAP Maintenance Mask Request

Synopsis

Message used to configure which maintenance events INAP should trigger the sending of a maintenance event indication message.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_S_MAINT_MASK (0x57fd)	
id	0	
src	Sending module ID	
dst	INAP_TASK_ID	
rsp_req	Used to request a confirmation	
class	0	
status	0	
err_info	0	
len	9	
Parameter Area		
Offset	Size	Name
0	9	mask

Mask

A bit mask indicating the maintenance events which are active. A '1' indicates that an event is active and a '0' indicates that it is not. The first octet sent is for maintenance event codes 0-7, (bit 0 for event code 0) the second octet for maintenance event codes 8-15, (bit 0 for event code 8) etc.

Pad unused bits with zeros.

The maintenance events currently reported in the INAP Maintenance Event Indication message detailed in [Section 5.8 INAP Maintenance Event Indication on page 68](#) are enabled by default.

5.13 INAP Software Event Mask Request

Synopsis

Message used to configure the software error events for which INAP will send a software event indication message.

Message Format

Message Header		
Field Name	Meaning	
type	INAP_MSG_S_ERROR_MASK (0x57fc)	
id	0	
src	Sending module ID	
dst	INAP_TASK_ID	
rsp_req	Used to request a confirmation	
class	0	
status	0	
err_info	0	
len	9	
Parameter Area		
Offset	Size	Name
0	9	mask

Mask

A bit mask indicating the software events which are active. A '1' indicates that an event is active, and a '0' indicates that is not active. The first octet sent is for software event codes 0-7 (bit 0 for event code 0), the second octet for software event codes 8-15 (bit 0 for event code 8), etc.

Pad unused bits with zeros.

All software events currently reported in the INAP Software Event Indication message detailed in [Section 5.7 INAP Software Event Indication on page 67](#) are enabled by default.

Appendix A. Tick Timer Message Format

A.1 Tick Timer Message Format

Synopsis

The INAP module requires a periodic “tick timer” message. This must be sent at the required frequency, nominally every tenth of a second.

Message Format

Message Header		
Field Name	Meaning	
type	TM_EXP (0xc002)	
id	Index to timer table	
src	Sending module ID	
dst	INAP_TASK_ID	
rsp_req	0	
class	0	
status	0	
err_info	0	
len	4	
Parameter Area		
Offset	Size	Name
0	4	Timer type

Appendix B. Supported INAP Application Contexts

B.1 Overview

This appendix contains the following information:

- Supported INAP Application Contexts. See page 78.
- Supported INAP Operations. See page 82.
- Supported INAP Operation Parameters. See page 85.
- ETSI CS-1 Operation Definitions. See page 87.
- ITU-T CS-1 Operation Definitions. See page 102.
- CAMEL v1 Operation Definitions. See page 117.
- CAMEL v2 Operation Definitions. See page 121.
- CAMEL v3 Operation Definitions. See page 133.
- CAMEL v4 Operation Definitions. See page 160.
- CAMEL v4 for IMS Operation Definitions. See page 199.
- ETSI CS-2 Operation Definitions. See page 203.
- AIN Operation Definitions. See page 246.
- Operation Extensions. See page 257.
- Supported INAP Parameter List. See page 259.
- Supported INAP Operation Result. See page 283.
- Supported INAP Errors. See page 288.
- Supported INAP Error Parameters. See page 289.

B.2 Supported INAP Application Contexts

The API functions support INAP operations specified to ETSI, ITU-T, CAMEL and AIN standards. The supported operations form part of the Application Contexts listed below. Mnemonics are defined to allow the User application to easily refer to a particular context.

The mnemonics identified below are defined in the `in_inc.h` header file accompanying the API suite. They provide the parameter data for the "data_ptr" parameter of the `IN_set_dialogue_param()` and `IN_get_dialogue_param()` API functions when setting or recovering the "Application context index" dialogue parameter.

Note: The INAP module may be configured to supply raw Application Context data to the User Application if required. See [Section 5.1 INAP Configuration Request on page 57](#).

B.2.1 ETSI CS-1

Specification: ETS 300 374-1, Sept 1994

Application context	Mnemonic	Value (dec)	Value (hex)
Core-INAP-CS1-SSP-to-SCP-AC	INETS_AC_CS1_SSP_TO_SCP	0	0x0
Core-INAP-CS1-ASSIST-HANDOFF-TO-SSP-TO-SCP	INETS_AC_CS1_ASSIST_HANDOFF_TO_SSP_TO_SCP	1	0x1
Core-INAP-CS1-IP-TO-SCP	INETS_AC_CS1_IP_TO_SCP	2	0x2
Core-INAP-CS1-SSP-to-SCP-AC	INETS_AC_CS1_SCP_TO_SSP	3	0x3
Core-INAP-CS1-SCP-TO-SSP-TRAFFIC-MANAGEMENT	INETS_AC_CS1_SCP_TO_SSP_TRAFFIC_MANAGEMENT	4	0x4
Core-INAP-CS1-SCP-TO-SSP-SERVICE-MANAGEMENT	INETS_AC_CS1_SCP_TO_SSP_SERVICE_MANAGEMENT	5	0x5
Core-INAP-CS1-SSP-TO-SCP-SERVICE-MANAGEMENT	INETS_AC_CS1_SSP_TO_SCP_SERVICE_MANAGEMENT	6	0x6

B.2.2 ITU-T CS-1

Specification: Q.1218, October 1995

Application context	Mnemonic	Value (dec)	Value (hex)
IN-CS1-SSF-TO-SCF-GENERIC-AC	INITU_CS1_SSF_TO_SCF_GENERIC_AC	16	0x10
IN-CS1-SSF-TO-SCF-DPSPECIFIC-AC	INITU_CS1_SSF_TO_SCF_DPSPECIFIC_AC	17	0x11
IN-CS1-ASSIST-HANDOFF-SSF-TO-SCF-AC	INITU_CS1_ASSIST_HANDOFF_SSF_TO_SCF_AC	18	0x12
IN-CS1-SRF-TO-SCF-AC	INITU_CS1_SRF_TO_SCF_AC	19	0x13
IN-CS1-SCF-TO-SSF-AC	INITU_CS1_SCF_TO_SSF_AC	20	0x14
IN-CS1-DP-SPECIFIC-SCF-TO-SSF-AC	INITU_CS1_DP_SPECIFIC_SCF_TO_SSF_AC	21	0x15

Application context	Mnemonic	Value (dec)	Value (hex)
IN-CS1-SCF-TO-SSF-TRAFFIC-MANAGEMENT-AC	INITU_CS1_SCF_TO_SSF_TRAFFIC_MANAGEMENT_AC	22	0x16
IN-CS1-SCF-TO-SSF-SERVICE-MANAGEMENT-AC	INITU_CS1_SCF_TO_SSF_SERVICE_MANAGEMENT_AC	23	0x17
IN-CS1-SSF-TO-SCF-SERVICE-MANAGEMENT-AC	INITU_CS1_SSF_TO_SCF_SERVICE_MANAGEMENT_AC	24	0x18
IN-CS1-SCF-TO-SSF-STATUS-REPORTING-AC	INITU_CS1_SCF_TO_SSF_STATUS_REPORTING_AC	25	0x19

B.2.3 CAMEL v1

Specification: CAMEL Application Part (CAP) GSM 09.78 version 5.6.0 Release 1996

Application context	Mnemonic	Value (dec)	Value (hex)
CAP-v1-gsmSSF-TO-gsmSCF	INCAP_V1_GSMSSF_TO_GSMSCF	32	0x20

B.2.4 CAMEL v2

Specification: CAMEL Application Part (CAP) GSM 09.78 version 6.3.0 Release 1997

Application context	Mnemonic	Value (dec)	Value (hex)
CAP-v2-gsmSSF-to-gsmSCF	INCAP_V2_GSMSSF_TO_GSMSCF	33	0x21
CAP-v2-ASSIST-HANDOFF-gsmSSF-to-gsmSCF	INCAP_V2_ASSIST_HANDOFF_GSMSSF_TO_GSMSCF	34	0x22
CAP-v2-gsmSRF-to-gsmSCF	INCAP_V2_GSMSRF_TO_GSMSCF	35	0x23

B.2.5 CAMEL v3

Specification: CAMEL Application Part (CAP) 3GPP TS 29.078 version 4.6.0 Release 2002

Application context	Mnemonic	Value (dec)	Value (hex)
CAP-gsmSSF-scfGenericAC	INCAP_V3_GSMSSF_TO_GSMSCF_GENERIC	80	0x50
CAP-gsmSSF-scfAssistHandoffAC	INCAP_V3_ASSIST_HANDOFF_GSMSSF_TO_GSMSCF	81	0x51
CAP-gsmSRF-gsmSCF	INCAP_V3_GSMSRF_TO_GSMSCF	82	0x52
CAP-gprsSSF-gsmSCF-AC	INCAP_V3_GPRSSSF_TO_GSMSCF	83	0x53
CAP-gsmSCF-gprsSSF-AC	INCAP_V3_GSMSCF_TO_GPRSSSF	84	0x54
CAP-v3-sms-AC	INCAP_V3_SMS	85	0x55

B.2.6 CAMEL v4

Specification: CAMEL Application Part (CAP) 3GPP TS 29.078 7.3.0 (2006-06). See [Section B.10 CAMEL v4 Operation Definitions on page 160](#) for operation parameter definitions.

Application context	Mnemonic	Value (dec)	Value (hex)
CAP-gsmSSF-scfGenericAC	INCAP_V4_GSMSSF_TO_GSMSCF_GENERIC	112	0x70
CAP-gsmSSF-scfAssistHandoffAC	INCAP_V4_ASSIST_HANDOFF_GSMSSF_TO_GSMSCF	113	0x71
CAP-scf-gsmSSFGenericAC	INCAP_V4_SCF_TO_GSMSSF_GENERIC	114	0x72
gsmSRF-gsmSCF	INCAP_V4_GSMSCF_TO_GSMSCF	115	0x73
CAP-gprsSSF-gsmSCF-AC	INCAP_V4_GPRSSSF_TO_GSMSCF	116	0x74
CAP-gsmSCF-gprsSSF-AC	INCAP_V4_GSMSCF_TO_GPRSSSF	117	0x75
cap4-sms-AC	INCAP_V4_SMS	118	0x76

B.2.7 CAMEL v4 for IMS

Specification: CAMEL v4 for IMS protocol (3GPP TS 29.278 7.0.0). See [Section B.11 CAMEL v4 for IMS Operation Definitions on page 199](#) for operation parameter definitions.

Application context	Mnemonic	Value (dec)	Value (hex)
CAP-IMSSF-scfGenericAC	INCAP_V4_IM_SSF_TO_GSMSCF_GENERIC	144	0x90

B.2.8 ETSI CS-2

Specification: EN 301 140-1, June 1999

Application context	Mnemonic	Value (dec)	Value (hex)
CS2-SSF-to-SCF-AC GENERIC	INETS_AC_CS2_SSF_SCF_GNERIC	52	0x34
CS2-SSF-SCF-ASSIST-HANDOFF	INETS_AC_CS2_SSF_SCF_ASSIST_HANDOFF	54	0x36
CS2-SSF-SCF-SERVICE-MANAGEMENT	INETS_AC_CS2_SSF_SCF_SERVICE_MANAGEMENT	55	0x37
CS2-SCF-SSF-GENERIC	INETS_AC_CS2_SCF_SSF_GENERIC	56	0x38
CS2-SCF-SSF-TRAFFIC-MANAGEMENT	INETS_AC_CS2_SCF_SSF_TRAFFIC_MANAGEMENT	58	0x3a
CS2-SCF-SSF-SERVICE-MANAGEMENT	INETS_AC_CS2_SCF_SSF_SERVICE_MANAGEMENT	59	0x3b
CS2-SCF-SSF-TRIGGER-MANAGEMENT	INETS_AC_CS2_SCF_SSF_TRIGGER_MANAGEMENT	61	0x3d
CS2-SCF-to-SRF-AC	INETS_AC_CS2_SRF_SCF	62	0x3e
CS2-SCF-SCF- OPERATIONS	INETS_AC_CS2_SCF_SCF_OPERATIONS	69	0x45
CS2-DISTRIBUTED-SCF-SYSTEM	INETS_AC_CS2_DISTRIBUTED_SCF_SYSTEM	70	0x46
CS2-SCF-SCF- OPERATIONS-WITH-3SE	INETS_AC_CS2_SCF_SCF_OPERATIONS_WITH_3SE	71	0x47

Application context	Mnemonic	Value (dec)	Value (hex)
CS2-DISTRIBUTED-SCF-SYSTEM-WITH-3SE	INETS_AC_CS2_DISTRIBUTED_SCF_SYSTEM_WITH_3SE	72	0x48
CS2-SCF-CUSF	INETS_AC_CS2_SCF_CUSF	73	0x49
CS2-CUSF-SCF	INETS_AC_CS2_CUSF_SCF	74	0x4a

B.2.9 AIN

Specification: GR-1299-CORE, Issue 7, November 2001

Application context	Mnemonic	Value (dec)	Value (hex)
AIN-AC-GENERIC	AINGR_1299_AC_GENERIC	60	0x3c

B.3 Supported INAP Operations

The API functions supports INAP and AIN operations specified to the standard appropriate to the application context being supported; for example, the ETSI application contexts conform to ETS 300 374-1. Not all of the operations supported are present in every of the protocol standards. The later operation definition sections show the operations appropriate to each standard.

The mnemonics identified below are defined in the `in_inc.h` header file accompanying the API suite. They are used in the "op_name" parameter of the `IN_set_operation()` and `IN_get_operation()` API functions.

The following INAP operations are currently supported.

Operation	Mnemonic	Value (dec)	Value (hex)
ActivateServiceFiltering	INOP_ActivateServiceFiltering	42	0x2a
ActivityTest	INOP_ActivityTest	55	0x37
ActivityTestGPRS	INOP_ActivityTestGPRS	70	0x46
ApplyCharging	INOP_ApplyCharging	35	0x23
ApplyChargingGPRS	INOP_ApplyChargingGPRS	71	0x47
ApplyChargingReport	INOP_ApplyChargingReport	36	0x24
ApplyChargingReportGPRS	INOP_ApplyChargingReport GPRS	72	0x48
AssistRequestInstructions	INOP_AssistRequestInstructions	16	0x10
CallGap	INOP_CallGap	41	0x29
CallInformationReport	INOP_CallInformationReport	44	0x2c
CallInformationRequest	INOP_CallInformationRequest	45	0x2d
Cancel	INOP_Cancel	53	0x35
CancelGPRS	INOP_CancelGPRS	73	0x49
CollectInformation	INOP_CollectInformation	27	0x1b
ConfirmedNotificationProvided	INOP_ConfirmedNotification Provided	117	0x75
ConfirmedReportCharging Information	INOP_ConfirmedReportChargingInformation	119	0x77
Connect	INOP_Connect	20	0x14
ConnectAssociation	INOP_ConnectAssociation	132	0x84
ConnectGPRS	INOP_ConnectGPRS	74	0x4a
ConnectSMS	INOP_ConnectSMS	62	0x3e
ConnectToResource	INOP_ConnectToResource	19	0x13
Continue	INOP_Continue	31	0x1f
ContinueAssociation	INOP_ContinueAssociation	133	0x85
ContinueGPRS	INOP_ContinueGPRS	75	0x4b
ContinueSMS	INOP_ContinueSMS	65	0x41
ContinueWithArgument	INOP_ContinueWithArgument	88	0x58
ContinueWithArgument (for CAP v3)	INOP_CAPv3_ContinueWithArgument	56	0x38

Operation	Mnemonic	Value (dec)	Value (hex)
CreateCallSegmentAssociation	INOP_CreateCallSegmentAssociation	89	0x59
DFC_with_Argument	INOP_DFC_with_Argument	86	0x56
DisconnectForwardConnection	INOP_DisconnectForward Connection	18	0x12
DisconnectLeg	INOP_DisconnectLeg	90	0x5a
EntityReleased	INOP_EntityReleased	96	0x60
EntityReleasedGPRS	INOP_EntityReleasedGPRS	76	0x4d
EstablishChargingRecord	INOP_EstablishChargingRecord	112	0x70
EstablishTemporaryConnection	INOP_EstablishTemporary Connection	17	0x11
EventNotificationCharging	INOP_EventNotificationCharging	26	0x1a
EventReportBCSM	INOP_EventReportBCSM	24	0x18
EventReportBCUSM	INOP_EventReportBCUSM	134	0x86
EventReportGPRS	INOP_EventReportGPRS	80	0x50
EventReportSMS	INOP_EventReportSMS	64	0x40
FurnishChargingInformation	INOP_FurnishCharging Information	34	0x22
FurnishChargingInformationGPRS	INOP_FurnishCharging InformationGPRS	77	0x4d
FurnishChargingInformationSMS	INOP_FurnishCharging InformationSMS	61	0x3d
HandlingInformationRequest	INOP_HandlingInformation Request	113	0x71
HandlingInformationResult	INOP_HandlingInformation Result	114	0x72
InitialAssociationDP	INOP_InitialAssociationDP	131	0x83
InitialDP	INOP_InitialDP	0	0x00
InitialDPGPRS	INOP_InitialDPGPRS	78	0x4e
InitialDPSMS	INOP_InitialDPSMS	60	0x3c
InitiateAssociation	INOP_InitiateAssociation	123	0x7b
InitiateCallAttempt	INOP_InitiateCallAttempt	32	0x20
ManageTriggerData	INOP_ManageTriggerData ¹⁷	97	0x61
MergeCallSegments	INOP_MergeCallSegments	91	0x5b
MoveCallSegments	INOP_MoveCallSegment	92	0x5c
MoveLeg	INOP_MoveLeg	93	0x5d
NetworkCapability	INOP_NetworkCapability	115	0x73
NotificationProvided	INOP_NotificationProvided	116	0x74
PlayAnnouncement	INOP_PlayAnnouncement	47	0x2f
PlayTone	INOP_PlayTone ¹⁷	97	0x61
PromptAndCollectUserInformation	INOP_PromptAndCollectUser Information	48	0x30
PromptAndReceive Message	INOP_PromptAndReceive Message	107	0x6b

¹⁷ INOP_PlayTone and INOP_ManageTriggerData both use value 97. INOP_PlayTone is used for CAMEL v4 and INOP_ManageTriggerData is used for ETSI CS-2.

Operation	Mnemonic	Value (dec)	Value (hex)
ProvideUserInformation	INOP_ProvideUserInformation	118	0x76
ReleaseAssociation	INOP_ReleaseAssociation	126	0x7e
ReleaseCall	INOP_ReleaseCall	22	0x16
ReleaseGPRS	INOP_ReleaseGPRS	79	0x4f
ReleaseSMS	INOP_ReleaseSMS	66	0x42
ReportChargingInformation	INOP_ReportCharging Information	120	0x78
ReportUTSI	INOP_ReportUTSI	101	0x65
RequestNotification	INOP_RequestNotification	121	0x79
RequestNotificationChargingEvent	INOP_RequestNotification ChargingEvent	25	0x19
RequestReportBCSMEvent	INOP_RequestReportBCSM Event	23	0x17
RequestReportBCUSMEvent	INOP_RequestReportBCUSM Event	127	0x7f
RequestReportGPRSEvent	INOP_RequestReportGPRS Event	81	0x51
RequestReportSMSEvent	INOP_RequestReportSMSEvent	63	0x3f
RequestReportUTSI	INOP_RequestReportUTSI	98	0x62
ResetTimer	INOP_ResetTimer	33	0x21
ResetTimerGPRS	INOP_ResetTimerGPRS	82	0x52
ResetTimerSMS	INOP_ResetTimerSMS	67	0x43
ScriptClose	INOP_ScriptClose	111	0x6f
ScriptEvent	INOP_ScriptEvent	109	0x6d
ScriptInformation	INOP_ScriptInformation	108	0x6c
ScriptRun	INOP_ScriptRun	110	0x6e
SendChargingInformation	INOP_SendChargingInformation	46	0x2e
SendChargingInformationGPRS	INOP_SendChargingInformation GPRS	83	0x53
SendSTUI	INOP_SendSTUI	100	0x64
ServiceFilteringResponse	INOP_ServiceFilteringResponse	43	0x2b
SpecializedResourceReport	INOP_SpecializedResource Report	49	0x31
SplitLeg	INOP_SplitLeg	95	0x5f

The following AIN operations are currently supported:

Operation	Mnemonic	Value (dec)	Value (hex)
AnalyzeRoute	AINOP_AnalyzeRoute	25857	0x6501
Disconnect	AINOP_Disconnect	25859	0x6503
InfoAnalyzed	AINOP_InfoAnalyzed	25603	0x6403
InfoCollected	AINOP_InfoCollected	25602	0x6402
SendToResource	AINOP_SendToResource	26113	0x6601

B.4 Supported INAP Operation Parameters

The parameters that may be placed in the component structure for each of the supported operations are summarized below.

The mnemonics identified below are defined in the `in_inc.h` or `ain_inc.h` header file accompanying the API suite. They are used in the "param_name" parameter of the `IN_set_component_param()` and `IN_get_component_param()` API functions.

There are two forms of parameter names:

- `INPN_ParameterName`

This is the form used for primitive parameters where there is only one of the specified parameter in each operation.

For AIN the prefix is `AINPN_`, eg. `AINPN_ParameterName`

- `INPN_ParameterName(n)`

This form is used in cases when more than one parameter of the specified parameter name is possible in the operation. This can occur when the ASN coding of a parameter is one of the forms shown below.

For AIN the prefix is `AINPN_`, eg. `AINPN_ParameterName(n)`.

Case 1

```
PrimParamA ::= SEQUENCE Size (1 to 3) OF PrimType
```

In the case 1 above the parameter name mnemonic for `PrimParamA` would be `INPN_PrimaryParamA(n)`. In this form, the 'n' represents the position in the sequence. Thus, to get the first, second or third element in the sequence, the parameter names `INPN_PrimaryParamA(0)`, `INPN_PrimaryParamA(1)` or `INPN_PrimaryParamA(2)` should be used.

Case 2

```
ConstTypeB ::= SEQUENCE {
  PrimParamC [0] PrimType
}
ConstParamB ::= SEQUENCE Size (1 to 16) OF ConstTypeB
```

In case 2, although the parameter PrimParamC is not a sequence itself, it is part of a constructed type which is. This means in order to identify the correct PrimParamC, the form INPN_PrimParamC(n) should be used. In this case, 'n' refers to the element in the sequence of ConstParamB.

This form of parameter name makes it possible to use the parameter names in loops:

```
for (n=0; n<3; n++)
{
...
IN_set_component_param(INPN_PrimParamC(n), len, data_ptr[n],
cpt);
...
}
```

Key

Symbol	Description	
M	Mandatory	The message will be discarded if the corresponding parameter is omitted. It must be present for the operation to be formatted.
O	Optional	The parameter is not essential and need not be present in order to format or recover an operation.
C	Choice	This parameter is part of a choice structure. Only one of the parameters in the choice should be present.
D	Default	The parameter may be omitted from a message being sent. On reception, if the parameter is not present in the message, the default value for the parameter is recovered into the cpt structure.
A	ASN.1 Encoded	This parameter is sent or received in raw ASN.1 coded form. The parameter is included to allow user defined extensions to the operations with the operation definition needing to be changed. If more than one encoded parameter is present in the case of Ellipsis data the component parameter will be a concatenation of all of the encoded data.

For each letter, the number following it represents the depth of the sub-table in constructed parameters. For example, the ConnectToResource operation ([Appendix B.5.5 ConnectToResource on page 89](#)) has the IPRoutingAddress and Null parameters marked as C2. The depth of two shows they are part of the constructed parameter ResourceAddress marked as M.

ResourceAddress (constructor, sub-table depth 1)	M
IPRoutingAddress (primitive, sub-table depth 2)	C2
Null (primitive, sub-table depth 2)	C2

B.5 ETSI CS-1 Operation Definitions

B.5.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
DialledDigits	INPN_DialledDigits	4	0x4	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartyBuisness GroupID	INPN_CallingPartyBuisness GroupID	7	0x7	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
CallingPartySubaddress	INPN_CallingPartySubaddress	9	0x9	O
CGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
IPAvailable	INPN_IPAvailable	12	0xc	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceProfileIdentifier	INPN_ServiceProfileIdentifier	16	0x10	O
TerminalType	INPN_TerminalType	17	0x11	O
TriggerType	INPN_TriggerType	18	0x12	O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
ForwardCallIndicators	INPN_ForwardCallIndicators	22	0x16	O
BearerCapability	INPN_BearerCapability	23	0x17	O
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x20	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.2 AssistRequestInstructions

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPAvailable	INPN_IPAvailable	12	0xc	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x66	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.4 DisconnectForwardConnection

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.5.5 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ResourceAddress				M
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	C2
Null	n/a			C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
Ellipsis	INPN_Ellipsis	112	0x70	A

If no IPRouting address is supplied a **null** resource address will be formatted.

B.5.6 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
CorrelationID	INPN_CorrelationID	31	0x1f	O
CutAndPaste	INPN_CutAndPaste	32	0x20	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0cf	O
RouteList	INPN_RouteList(n) (n = 0 to 2)	35 to 37	0x23 to 0x25	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ScfID	INPN_ScfID	38	0x26	O
ForwardingCondition	INPN_ForwardingCondition	33	0x21	O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x15	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.7 ReleaseCall

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	O

B.5.8 RequestReportBCSMEEvent

INOP_RequestReportBCSMEEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEEvents (SEQUENCE, size = 0 to 15)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria				O2
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	C3
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEEvent structure can be repeated up to sixteen times for each operation. Replace 'n' with the position in the sequence of BCSMEEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events, the LegID parameter is mandatory, e.g. events O-MidCall, O-Disconnect, T-MidCall and T-Disconnect in ETSI 300 374-1 must have this parameter present. For other events, the legID may take default values. Similarly, the DPSpecificCriteria for each event may be specified as either NumberOfDigits or ApplicationTimer.

B.5.9 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192 to 207	0xc0 to 0xcf	M
EventSpecificInformationBCSM				O
CollectedInfo				C2
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
AnalyzedInformation				C2
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	M3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
RouteSelectFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OmidCall				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
Tanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TmidCall				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2

The event specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is collectedInfo (2), then the format procedures will use the parameter INPN_CalledPartyNumber.

B.5.10

RequestNotificationChargingEvent

INOP_RequestNotificationChargingEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ChargingEvent (SEQUENCE, size = 1 to 16)				M
EventTypeCharging	INPN_EventTypeCharging(n)	272 to 287	0x110 to 0x11f	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.11 EventNotificationCharging

INOP_EventNotificationCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeCharging	INPN_EventTypeCharging(0)	272	0x110	M
EventSpecificInformationCharging	INPN_EventSpecificInformationCharging	58	0x3a	O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
MonitorMode	INPN_MonitorMode(0)	208	0xd0	M
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.12 CollectInformation

INOP_CollectInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.13 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.5.14 InitiateCallAttempt

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x15	O

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		dec	hex	
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.15**ResetTimer**

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	M
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.16**FurnishChargingInformation**

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FurnishCharging Information	INPN_FCIBillingChargingCharacteristics	34	0x22	M

B.5.17**ApplyCharging**

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AchBillingCharging Characteristics	INPN_AchBillingCharging Characteristics	52	0x34	M
SendCalculationToSCP Indication Default = False	INPN_SendCalculationToSCP Indication	53	0x35	D
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.18 ApplyChargingReport

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallResult	INPN_CallResult	55	0x37	M

B.5.19 CallGap

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GapCriteria				M
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	C2
GapOnService				C2
ServiceKey	INPN_ServiceKey	3	0x3	M3
CalledAddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressAndService				C2
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
LocationNumber	INPN_LocationNumber	13	0xd	O3
GapIndicators				M
Gap Duration	INPN_Gap_Duration	72	0x48	M2
GapInterval	INPN_GapInterval	73	0x49	M2
ControlType	INPN_ControlType	101	0x65	O
GapTreatment				O
InformationToSend				C2
	See InformationToSend (Sub-table) on page 96.			
ReleaseCause	INPN_ReleaseCause	96	0x60	C2
Both				C2
InformationToSend				M3
	See InformationToSend (Sub-table) on page 96.			
ReleaseCause	INPN_ReleaseCause	96	0x60	M3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

InformationToSend (Sub-table)

InformationToSend				
Parameter	Mnemonic	Value		
		dec	hex	
InbandInfo				C
MessageID				O2
ElementaryMessageID	INPN_ElementaryMessageID	628	0x274	C3
Text				C3
MessageContent	INPN_MessageContent	65	0x41	M4
Attributes	INPN_Attributes	66	0x42	O4
ElementaryMessageIDs	INPN_Elementary MessageIDs(n)	256 to 271	0x100 to 0x11f	C3
VariableMessage				C3
ElementaryMessageID	INPN_Variable_MessageID	629	0x275	M4
VariableParts				M4
Integer	INPN_Integer(n)	528 to 532	0x210 to 0x214	C5
Number	INPN_Number(n)	533 to 537	0x215 to 0x210	C5
Time	INPN_Time(n)	538 to 541	0x21a to x21e	C5
Date	INPN_Date(n)	542 to 547	0x21f to 0x223	C5
Price	INPN_Price(n)	548 to 552	0x224 to x229	C5
NumberOfRepetitions	INPN_NumberOfRepetitions	88	0x58	O2
Duration	INPN_Duration	89	0x59	O2
Interval	INPN_Interval	90	0x5a	O2
Ellipsis (present in CAP V3 only)	INPN_InbandInfo_Ellipsis	1383	0x567	A2
Tone				C
ToneID	INPN_ToneID	64	0x40	M2
Duration	INPN_Duration	89	0x59	O2
Ellipsis (present in CAP V3 and CAP V4 only)	INPN_Tone_Ellipsis	1375	0x55f	A2
DisplayInformation (absent in CAP V3 and CAP V4)	INPN_DisplayInformation	91	0x5b	C
InfoToSend_Ellipsis (absent in CAP V3 and CAP V4)	INPN_InfoToSend_Ellipsis	634	0x27a	C

B.5.20 ActivateServiceFiltering

INOP_ActivateServiceFiltering				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FilteredCallTreatment				M
SFBillingCharging Characteristics	INPN_SFBillingCharging Characteristics	92	0x5c	M2
InformationToSend See InformationToSend (Sub-table) on page 96 .				O2
MaximumNumberOf Counters	INPN_MaximumNumberOf Counters	93	0x5d	O2
ReleaseCause	INPN_ReleaseCause	96	0x60	O2
FilteringCharacteristics				M
Interval	INPN_Interval	90	0x5a	C2
NumberOfCalls	INPN_NumberOfCalls	97	0x61	C2
FilteringTimeout				M
Filtering Duration	INPN_Filtering_Duration	98	0x62	C2
StopTime	INPN_StopTime	100	0x64	C2
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
StartTime				O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.21 ServiceFilteringResponse

INOP_ServiceFilteringResponse				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CountersValue (SEQUENCE, size = 1 to 100)				M
CounterID	INPN_CounterID	328 to 427	0x148 to 0x1ab	M2

INOP_ServiceFilteringResponse				
Parameter	Mnemonic	Value		
		dec	hex	
CounterValue	INPN_CounterValue	428 to 527	0x1ac to 0x20f	M2
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.22

CallInformationReport

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
RequestedInformationValue				M2
CallAttemptEllapsedTimeValue	INPN_CallAttemptEllapsedTimeValue(n)	293 to 297	0x125 to 0x129	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 302	0x12a to 0x12e	C3
CallConnectedElapsedTimeValue	INPN_CallConnectedElapsedTimeValue(n)	303 to 307	0x12f to 0x133	C3
CalledAddressValue	INPN_CalledAddressValue(n)	308 to 312	0x134 to 0x138	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(in	313 to 317	0x139 to 0x13d	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.23 CallInformationRequest

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.24 SendChargingInformation

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
SCIBillingCharging Characteristics	INPN_SCIBillingCharging Characteristics	87	0x57	M
LegID				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.25 PlayAnnouncement

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InformationToSend				O
InformationToSend See InformationToSend (Sub-table) on page 96 .				M2
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement Complete Default = True	INPN_RequestAnnouncement Complete	60	0x3c	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.26 PromptAndCollectUserInformation

INOP_ PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CollectedInfo				M
CollectedDigits				M2
MinimumNumberOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x3b	D3
MaximumNumberOf Digits	INPN_MaximumNumberOf Digits	75	0x3c	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x3d	O3
CancelDigit	INPN_CancelDigit	77	0x3e	O3
StartDigit	INPN_StartDigit	78	0x3f	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x40	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x41	O3
ErrorTreatment Default = StfErrorAndInfo	INPN_ErrorTreatment	81	0x42	D3
InterDigitTimeOut Default = True	INPN_InterDigitTimeOut	82	0x43	D3
InterruptableAndInd Default = False	INPN_InterruptableAnnInd	83	0x44	D3
VoiceBack Default = False	INPN_VoiceBack	84	0x45	D3
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
InformationToSend See InformationToSend (Sub-table) on page 96 .				M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.5.27 SpecializedResourceReport

INOP_ SpecializedResourceReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LinkedID	INPN_LinkedID	2	0x2	O

B.5.28 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O

If the parameter IPN_Cancel_InvokeID is not set, then the operation will be sent with the null parameter 'All Requests' indicating all operations on that dialogue should be cancelled.

B.5.29 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.6 ITU-T CS-1 Operation Definitions

B.6.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	O
DialledDigits	INPN_DialledDigits	4	0x4	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartyBuisness GroupID	INPN_CallingPartyBuisness GroupID	7	0x7	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
CallingPartySubaddress	INPN_CallingPartySubaddress	9	0x9	O
CGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
IPAvailable	INPN_IPAvailable	12	0xc	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
ServiceProfileIdentifier	INPN_ServiceProfileIdentifier	16	0x10	O
TerminalType	INPN_TerminalType	17	0x12	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
TriggerType	INPN_TriggerType	18	0x13	O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x14	O
ServiceInteractionIndicators	INPN_ServiceInteractionIndicators	20	0x15	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x16	O
ForwardCallIndicators	INPN_ForwardCallIndicators	22	0x17	O
BearerCapability	INPN_BearerCapability	23	0x2a	O
EventTypeBCSM	INPN_EventTypeBCSM	24	0x2a	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x2a	O
RedirectionInformation	INPN_RedirectionInformation	26	0x2b	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.2 AssistRequestInstructions

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPAvailable	INPN_IPAvailable	12	0xc	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x1	M
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
CorrelationID	INPN_CorrelationID	31	0x1f	O
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.4 DisconnectForwardConnection

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.6.5 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ResourceAddress				M
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	C2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
Both				O2
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	M3
LegID				M3
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	O3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	O3
Null	n/a			C2
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x15	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

If no IPRouting address is supplied a null resource address will be formatted. If both IPRouting address and LegID are supplied, the message will be appropriately formatted to handle the 'both' choice.

B.6.6 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
CorrelationID	INPN_CorrelationID	31	0x1f	O
CutAndPaste	INPN_CutAndPaste	32	0x20	O
ForwardingCondition	INPN_ForwardingCondition	33	0x21	O
ISDNAccessRelated Information	INPN_ISDNAccessRelated Information	34	0x22	O

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
RouteList	INPN_RouteList(n) (n = 0 to 2)	35 to 37	0x23 to 0x25	O
ScfID	INPN_ScfID	38	0x26	O
TravellingClassMark	INPN_TravellingClassMark	39	0x27	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x15	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.7**ReleaseCall**

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	O

B.6.8**RequestReportBCSMEvent**

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEvents (SEQUENCE, size = 0 to 15)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria				O2
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	C3

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
BCSMEventCorrelationID	INPN_BCSMEventCorrelationID	24	0x18	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEvent structure can be repeated up to sixteen times for each operation. Replace 'n' with the position in the sequence of BCSMEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events, the LegID parameter is mandatory; for example, events O-MidCall, O-Disconnect, T-MidCall and T-Disconnect in ETSI 300 374-1 must have this parameter present. For other events, the legID may take default values. Similarly, the DPSTSpecificCriteria for each event may be specified as either NumberOfDigits or ApplicationTimer.

B.6.9

EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192 to 207	0xc0 to 0xcf	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
EventSpecificInformationBCSM				O
CollectedInfo				C2
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
AnalyzedInformation				C2
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	M3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
RouteSelectFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
Answer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OmidCall				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy	C2			
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TmidCall				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2
DPAssignment	INPN_DPAssignment	14	0xe	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The event specific information formatted is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is collectedInfo (2), then the format procedures will expect INPN_CalledPartyNumber to be present.

B.6.10 RequestNotificationChargingEvent

INOP_RequestNotificationChargingEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ChargingEvent (SEQUENCE, size = 1 to 16)				M
EventTypeCharging	INPN_EventTypeCharging(n)	272 to 287	0x110 to 0x11f	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.11 EventNotificationCharging

INOP_EventNotificationCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeCharging	INPN_EventTypeCharging(0)	272	0x110	M
EventSpecificInformationCharging	INPN_EventSpecificInformationCharging	58	0x3a	O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
MonitorMode	INPN_MonitorMode(0)	208	0xd0	M
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.12 CollectInformation

INOP_CollectInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
NumberingPlan	INPN_NumberingPlan	107	0x6b	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
TravellingClassMark	INPN_TravellingClassMark	39	0x27	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
DialledDigits	INPN_DialledDigits	4	0x4	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.13 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.6.14 InitiateCallAttempt

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
ISDNAccessRelated Information	INPN_ISDNAccessRelated Information	34	0x22	O
TravellingClassMark	INPN_TravellingClassMark	39	0x27	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x15	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.15 ResetTimer

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	M
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.16 FurnishChargingInformation

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
Invokeld	INPN_Invokeld	1	0x1	M
FurnishCharging Information	INPN_FCIBillingChargingCharacteristics	34	0x22	M

B.6.17 ApplyCharging

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AchBillingCharging Characteristics	INPN_AchBillingCharging Characteristics	52	0x34	M
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.18 ApplyChargingReport

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallResult	INPN_CallResult	55	0x37	M

B.6.19 CallGap

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GapCriteria				M
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	C2
GapOnService				C2
ServiceKey	INPN_ServiceKey	3	0x3	M3
CalledAddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressAndService				C2
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
LocationNumber	INPN_LocationNumber	13	0xd	O3
GapIndicators				M
Gap Duration	INPN_Gap_Duration	72	0x48	M2
GapInterval	INPN_GapInterval	73	0x49	M2
ControlType	INPN_ControlType	101	0x65	O
GapTreatment				O
InformationToSend See InformationToSend (Sub-table) on page 96				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	C2
Both				C2
InformationToSend See InformationToSend (Sub-table) on page 96				M3
ReleaseCause	INPN_ReleaseCause	96	0x60	M3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.20 ActivateServiceFiltering

INOP_ActivateServiceFiltering				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FilteredCallTreatment				M
SFBillingCharging Characteristics	INPN_SFBillingCharging Characteristics	92	0x5c	M2
InformationToSend See InformationToSend (Sub-table) on page 96				O2
MaximumNumberOf Counters	INPN_MaximumNumberOf Counters	93	0x5d	O2
ReleaseCause	INPN_ReleaseCause	96	0x60	O2
FilteringCharacteristics				M
Interval	INPN_Interval	90	0x5a	C2
NumberOfCalls	INPN_NumberOfCalls	97	0x61	C2
FilteringTimeout				M
Filtering Duration	INPN_Filtering_Duration	98	0x62	C2
StopTime	INPN_StopTime	100	0x64	C2
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
StartTime				O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.21 ServiceFilteringResponse

INOP_ServiceFilteringResponse				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CountersValue (SEQUENCE, size = 1 to 100)				M
CounterID	INPN_CounterID	328 to 427	0x148 to 0x1ab	M2
CounterValue	INPN_CounterValue	428 to 527	0x1ac to 0x20f	M2
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ResponseCondition	INPN_ResponseCondition	105	0x69	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.22 CallInformationReport

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
RequestedInformationValue				M2
CallAttemptElapsd TimeValue	INPN_CallAttemptElapsdTime Value(n)	293 to 297	0x125 to 0x129	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 302	0x12a to 0x12e	C3
CallConnectedElapsdTimeValue	INPN_CallConnectedElapsdTimeValue(n)	303 to 307	0x12f to 0x133	C3
CalledAddressValue	INPN_CalledAddressValue(n)	308 to 312	0x134 to 0x138	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(in	313 to 317	0x139 to 0x13d	C3
CorrelationID	INPN_CorrelationID	31	0x1f	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.23 CallInformationRequest

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
CorrelationID	INPN_CorrelationID	31	0x1f	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.24 SendChargingInformation

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
SCIBillingCharging Characteristics	INPN_SCIBillingCharging Characteristics	87	0x57	M
LegID				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.25 PlayAnnouncement

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InformationToSend See InformationToSend (Sub-table) on page 96				O M2
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement Complete Default = True	INPN_RequestAnnouncement Complete	60	0x3c	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.26 PromptAndCollectUserInformation

INOP_ PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CollectedInfo				M
CollectedDigits				M2
MinimumNumberOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x4a	D3
MaximumNumberOfDigits	INPN_MaximumNumberOfDigits	75	0x4b	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x4c	O3
CancelDigit	INPN_CancelDigit	77	0x4d	O3
StartDigit	INPN_StartDigit	78	0x4e	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x4f	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x50	O3
ErrorTreatment Default = StfErrorAndInfo	INPN_ErrorTreatment	81	0x51	D3
InterDigitTimeOut Default = True	INPN_InterDigitTimeOut	82	0x52	D3
InterruptableAndInd Default = False	INPN_InterruptableAnnInd	83	0x53	D3
VoiceBack Default = False	INPN_VoiceBack	84	0x54	D3
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x55	D
InformationToSend InformationToSend (Sub-table) on page 96				O M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.6.27 SpecializedResourceReport

INOP_ SpecializedResourceReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LinkedID	INPN_LinkedID	2	0x2	O

B.6.28 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O

If the parameter INPN_Cancel_InvokeID is not set, then the operation will be sent with the null parameter 'All Requests' indicating all operations on that dialogue should be cancelled.

B.6.29 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.7 CAMEL v1 Operation Definitions

B.7.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
DialledDigits	INPN_DialledDigits	4	0x4	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartyBuisness GroupID	INPN_CallingPartyBuisness GroupID	7	0x7	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
CallingPartySubaddress	INPN_CallingPartySubaddress	9	0x9	O
CGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
IPAvailable	INPN_IPAvailable	12	0xc	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceProfileIdentifier	INPN_ServiceProfileIdentifier	16	0x10	O
TerminalType	INPN_TerminalType	17	0x11	O
TriggerType	INPN_TriggerType	18	0x12	O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
ForwardCallIndicators	INPN_ForwardCallIndicators	22	0x16	O
BearerCapability	INPN_BearerCapability	23	0x17	O
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x20	O
IMSI	INPN_IMSI	130	0x81	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x85	C2
CamelBusy	INPN_CamelBusy	135	0x86	C2
NetDetNotReachable	INPN_NetDetNotReachable	136	0x88	C2
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	C2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
LocationInfo				O
AgeOfLocation Information	INPN_AgeOfLocation Information	124	0x7c	O2
GeographicalInformation	INPN_GeographicalInformation	125	0x7d	O2
Vlr_Number	INPN_Vlr_Number	126	0x7e	O2
LocationNumber	INPN_LI_LocationNumber	127	0x7f	O2
CellIdOrLAIb				O2
CellIdFixedLength	INPN_CellIdFixedLength	122	0x7a	C3
LAIFixedLength	INPN_LAIFixedLength	123	0x7b	C3
ExtensionContainer	INPN_ExtensionContainer	128	0x80	O2
LocationInfo Ellipsis	INPN_LocationInfo_Ellipsis	114	0x72	O2
Ext_BasicSrvCode				O
BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x83	O
MSCAddress	INPN_MSCAddress	132	0x84	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x81	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.7.2

Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Generic Numbers (SEQUENCE, size 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
SuppressionOfAnnouncement	INPN_SuppressionOfAnnouncement	109	0x6d	O
OCSIAplicable	INPN_OCSIAplicable	110	0x6e	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.7.3**ReleaseCall**

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	O

B.7.4**RequestReportBCSMEEvent**

INOP_RequestReportBCSMEEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEEvents (SEQUENCE, size = 0 to 15)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID	O2			
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria	O2			
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	C3
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEEvent structure can be repeated up to sixteen times for each operation. Replace 'n' with the position in the sequence of BCSMEEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events the LegID parameter is mandatory. For other events, the legID may take default values. Similarly, the DPSpecificCriteria for each event may be specified as either NumberOfDigits or ApplicationTimer.

B.7.5 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192 to 207	0xc0 to 0xcf	M
EventSpecificInformationBCSM				O
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The event-specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is Tdisconnect, then the format procedures will use the parameter INPN_ReleaseCause.

B.7.6 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.7.7 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.8 CAMEL v2 Operation Definitions

B.8.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartyBuisness GroupID	INPN_CallingPartyBuisness GroupID	7	0x7	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
BearerCapability	INPN_BearerCapability	23	0x17	O
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
IMSI	INPN_IMSI	130	0x81	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x86	C2
CamelBusy	INPN_CamelBusy	135	0x87	C2
NetDetNotReachable	INPN_NetDetNotReachable	136	0x88	C2
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	C2
LocationInfo				O
AgeOfLocation Information	INPN_AgeOfLocation Information	124	0x7c	O2
GeographicalInformation	INPN_GeographicalInformation	125	0x7d	O2
Vlr_Number	INPN_Vlr_Number	126	0x7e	O2
LocationNumber	INPN_LI_LocationNumber	127	0x7f	O2
CellIdOrLAIf				O2
CellIdFixedLength	INPN_CellIdFixedLength	122	0x7a	C3
LAIFixedLength	INPN_LAIFixedLength	123	0x7b	C3
ExtensionContainer	INPN_ExtensionContainer	128	0x80	O2
LocationInfo Ellipsis	INPN_LocationInfo_Ellipsis	114	0x72	O2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
Ext_BasicSrvCode				O
BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x82	O
MSCAddress	INPN_MSCAddress	132	0x83	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x81	O
TimeAndTimezone	INPN_TimeAndTimezone	132	0x84	O
GSM_Forwarding Pending	INPN_GSM_ForwardingPending	133	0x85	O
Ellipsis	INPN_Ellipsis	112	0x70	A
IDPArgExtension				O
NACCarrierInfo				O2
NACCarrierID	INPN_NACCarrierID	140	0x8c	O3
NACICSelectionType	INPN_NACICSelectionType	139	0x8b	O3
NACCarrierInfo_Ellipsis	INPN_NACCarrierInfo_Ellipsis	116	0x74	O3
NAOIInfo	INPN_NAOIInfo	141	0x8d	O2
NACChargeNumber	INPN_NACChargeNumber	142	0x8e	O2
InitialDPArgExt_Ellipsis	INPN_InitialDPArgExt_Ellipsis	117	0x75	O2

B.8.2

AssistRequestInstructions

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo				O
BothwayThrough ConnectionIndicator	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.4 DisconnectForwardConnection

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.8.5 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ResourceAddress	M			
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	C2
Null	n/a			C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo				O
BothwayThrough ConnectionIndicator	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.6 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(n) (n = 0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Generic Numbers (SEQUENCE, size 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O
SuppressionOf Announcement	INPN_SuppressionOf Announcement	109	0x6d	O
OCSIApplicable	INPN_OCSIApplicable	110	0x6e	O
Ellipsis	INPN_Ellipsis	112	0x70	A
NA-Info				O
NACarrierInfo				O2
NACarrierID	INPN_NACarrierID	140	0x8c	O3
NACICSelectionType	INPN_NACICSelectionType	139	0x8b	O3
NACarrierInfo_Ellipsis	INPN_NACarrierInfo_Ellipsis	116	0x74	O3
NAOIInfo	INPN_NAOIInfo	141	0x8d	O2
NAChargeNumber	INPN_NAChargeNumber	142	0x8e	O2
NAInfo_Ellipsis	INPN_NAInfo_Ellipsis	115	0x73	O2

B.8.7 ReleaseCall

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	O

B.8.8 RequestReportBCSMEvent

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEvents (SEQUENCE, size = 1 to 16)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID	O2			
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria	O2			
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	C3
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEvent structure can be repeated up to sixteen times for each operation. Replace 'n' with the position in the sequence of BCSMEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events, the LegID parameter is mandatory; for example, events O-MidCall, O-Disconnect, T-MidCall and T-Disconnect in CAMEL CAP v2 must have this parameter present. For other events, the legID may take default values. Similarly, the DPSpecificCriteria for each event may be specified as either NumberOfDigits or ApplicationTimer.

B.8.9 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192 to 207	0xc0 to 0xcf	M
EventSpecificInformationBCSM				O
RouteSelectFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OnoAnswer				C2

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The event-specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is Tdisconnect, then the format procedures will use the parameter INPN_ReleaseCause.

B.8.10 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.8.11 ResetTimer

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	M
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.12 FurnishChargingInformation

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FCIBCCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
PartyToCharge				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
AppendFreeFormatData	INPN_AppendFreeFormData	637	0x27d	O2

B.8.13 ApplyCharging

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AchBillingCharging Characteristics				M
TimeDurationCharging				M2
MaxCallPeriodDuration	INPN_MaxCallPeriodDuration	159	0x9f	M3
ReleaselfDurationExceeded				O3

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
Tone Default = False	INPN_Tone	778	0x30a	D4
Ellipsis	INPN_RelIfDurEx_Ellipsis	4179	0x1053	A4
Extensions (see Appendix B.14 Operation Extensions on page 257)				O4
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O3
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.14**ApplyChargingReport**

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallResult	INPN_CallResult	55	0x37	M

B.8.15**CallInformationReport**

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
RequestedInformationValue				M2
CallAttemptElapsedTimeValue	INPN_CallAttemptElapsedTimeValue(n)	293 to 297	0x125 to 0x129	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 302	0x12a to 0x12e	C3
CallConnectedElapsedTimeValue	INPN_CallConnectedElapsedTimeValue(n)	303 to 307	0x12f to 0x133	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(in	313 to 317	0x139 to 0x13d	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.16 CallInformationRequest

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformation Type	INPN_RequestedInformation Type	288 to 292	0x120 to 0x124	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.17 SendChargingInformation

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CAMEL SCIBillingCharging Characteristics				M
AOC BeforeAnswer				C2
CAMEL AOC BeforeAnswer	INPN_CAMEL_AOC_ BeforeAnswer	143	0x8f	Note ¹⁸
InitialCAI				M3
Initial CAI E1	INPN_Initial_CAI_E1	144	0x90	O4
Initial CAI E2	INPN_Initial_CAI_E2	145	0x91	O4
Initial CAI E3	INPN_Initial_CAI_E3	146	0x92	O4
Initial CAI E4	INPN_Initial_CAI_E4	147	0x93	O4
Initial CAI E5	INPN_Initial_CAI_E5	148	0x94	O4
Initial CAI E6	INPN_Initial_CAI_E6	149	0x95	O4

¹⁸INPN_CAMEL_AOC_BeforeAnswer will not be formatted or decoded. It is used to determine if the AOC is for before or after answer. If present, AOCBeforeAnswer will be sent, otherwise AOCAfterAnswer will be sent. The data stored in the INPN_CAMEL_AOC_BeforeAnswer may be of any value.

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
Initial CAI E7	INPN_Initial_CAI_E7	150	0x96	O4
AOC Subsequent				O3
Subsequent CAI E1	INPN_Subsequent_CAI_E1	151	0x97	O4
Subsequent CAI E2	INPN_Subsequent_CAI_E2	152	0x98	O4
Subsequent CAI E3	INPN_Subsequent_CAI_E3	153	0x99	O4
Subsequent CAI E4	INPN_Subsequent_CAI_E4	154	0x9a	O4
Subsequent CAI E5	INPN_Subsequent_CAI_E5	155	0x9b	O4
Subsequent CAI E6	INPN_Subsequent_CAI_E6	156	0x9c	O4
Subsequent CAI E7	INPN_Subsequent_CAI_E7	157	0x9d	O4
AOC Subsequent				C2
Subsequent CAI E1	INPN_Subsequent_CAI_E1	151	0x97	O3
Subsequent CAI E2	INPN_Subsequent_CAI_E2	152	0x98	O3
Subsequent CAI E3	INPN_Subsequent_CAI_E3	153	0x99	O3
Subsequent CAI E4	INPN_Subsequent_CAI_E4	154	0x9a	O3
Subsequent CAI E5	INPN_Subsequent_CAI_E5	155	0x9b	O3
Subsequent CAI E6	INPN_Subsequent_CAI_E6	156	0x9c	O3
Subsequent CAI E7	INPN_Subsequent_CAI_E7	157	0x9d	O3
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O2
SendingSideID				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	M
Extensions				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.18**PlayAnnouncement**

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InformationToSend				O
See InformationToSend (Sub-table) on page 96				M2
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement Complete Default = True	INPN_RequestAnnouncement Complete	60	0x3c	D

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.19**PromptAndCollectUserInformation**

INOP_PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CollectedInfo				M
CollectedDigits				M2
MinimumNumberOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x3b	D3
MaximumNumberOf Digits	INPN_MaximumNumberOf Digits	75	0x3c	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x3d	O3
CancelDigit	INPN_CancelDigit	77	0x3e	O3
StartDigit	INPN_StartDigit	78	0x3f	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x40	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x41	O3
ErrorTreatment Default = StfErrorAndInfo	INPN_ErrorTreatment	81	0x42	D3
InterDigitTimeOut Default = True	INPN_InterDigitTimeOut	82	0x43	D3
InterruptableAndInd Default = False	INPN_InterruptableAnnInd	83	0x44	D3
VoiceBack Default = False	INPN_VoiceBack	84	0x45	D3
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
InformationToSend See InformationToSend (Sub-table) on page 96				O M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.8.20 SpecializedResourceReport

INOP_SpecializedResourceReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LinkedID	INPN_LinkedID	2	0x2	O

B.8.21 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O

If the parameter IPN_Cancel_InvokeID is not set, then the operation will be sent with the null parameter 'All Requests' indicating all operations on that dialogue should be cancelled.

B.8.22 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9 CAMEL v3 Operation Definitions

B.9.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
cGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
BearerCapability				
BearerCapability	INPN_BearerCapability	23	0x17	O2
Ellipsis	INPN_BearerCap_Ellipsis	119	0x77	O2
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Cause	INPN_Cause	41	0x29	O
ServiceInteractionIndicatorsTwo				O
See ServiceInteractionIndicatorsTwo (sub-table) on page 134				O2
Carrier	INPN_Carrier	40	0x28	O
CUG-Index	INPN_CUG_Index	644	0x284	O
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
IMSI	INPN_IMSI	130	0x81	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x86	C2
CamelBusy	INPN_CamelBusy	135	0x87	C2
NetDetNotReachable	INPN_NetDetNotReachable	136	0x88	C2
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	C2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
LocationInformation				O
See LocationInformation (sub-table) on page 135				O2
Ext_BasicSrvCode				O
BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x82	O
MSCAddress	INPN_MSCAddress	132	0x83	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x81	O
TimeAndTimezone	INPN_TimeAndTimezone	132	0x84	O
GSM_Forwarding Pending	INPN_GSM_ForwardingPending	133	0x85	O
IDPArgExtension				O
GMSC Address	INPN_GMSC_Address	653	0x28d	O2
InitialDPArgExt_Ellipsis	INPN_InitialDPArgExt_Ellipsis	117	0x75	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

ServiceInteractionIndicatorsTwo (sub-table)

ServiceInteractionIndicatorsTwo				
Parameter	Mnemonic	Value		
		dec	hex	
ForwardServiceInteractionInd				O
ConferenceTreatment Indicator	INPN_Fw_Conference TreatmentInd	711	0x2c7	O2
CallDiversionTreatment Indicator	INPN_CallDiversionTreatment Ind	712	0x2c8	O2
CallingPartyRestriction Indicator	INPN_CallingPartyRestriction Ind	714	0x2ca	O2
Ellipsis	INPN_ForwardServIntInd_Ellipsis	1402	0x57a	A2
BackwardServiceInteractionInd				O
ConferenceTreatmentIndicator	INPN_Bw_Conference TreatmentInd	710	0x2c6	O2
CallCompletionTreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O2
Ellipsis	INPN_BackwardServIntInd_Ellipsis	1403	0x57b	A2
BothwayThrough ConnectionInd	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O
ConnectedNumber Treatment	INPN_ConnectedNumber Treatment	718	0x2ce	O
NonCUGCall	INPN_NonCUGCall	663	0x297	O
HoldTreatmentIndicator	INPN_HoldTreatmentInd	656	0x290	O
CWTreatmentIndicator	INPN_CWTreatmentInd	647	0x287	O

ServiceInteractionIndicatorsTwo				
Parameter	Mnemonic	Value		
		dec	hex	
ECTTreatmentindicator	INPN_ECTTreatmentind	709	0x2c5	O
Ellipsis	INPN_ServIntActInd2_Ellipsis	1404	0x57c	A

LocationInformation (sub-table)

LocationInformation				
Parameter	Mnemonic	Value		
		dec	hex	
AgeOfLocation Information	INPN_AgeOfLocation Information	124	0x7c	O
GeographicalInformation	INPN_GeographicalInformation	125	0x7d	O
Vlr_Number	INPN_Vlr_Number	126	0x7e	O
LocationNumber	INPN_LI_LocationNumber	127	0x7f	O
CellGlobalIdOrServiceAreaIdOrLAI				O
CellGlobalIdOrServiceAreaIdFixedLength	INPN_CellIdFixedLength	122	0x7a	C2
LAIFixedLength	INPN_LAIFixedLength	123	0x7b	C2
ExtensionContainer	INPN_ExtensionContainer	128	0x80	O
Ellipsis	INPN_LocationInfo_Ellipsis	114	0x72	A
SelectLSA-Id	INPN_SelectLSAIdentity	765	0x2fd	O
ISDNAddressString	INPN_ISDNAddressString	726	0x2d6	O
GeodeticInformation	INPN_GeodeticInformation	4229	0x1085	O
CurrentLocationRetrieved	INPN_CurLocRetrieved	4228	0x1084	O
SAI-Present	INPN_SAIPresent	763	0x2fb	O

B.9.2**AssistRequestInstructions**

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
ServiceInteractionIndicatorsTwo See ServiceInteractionIndicatorsTwo (sub-table) on page 134				O O2
NaOliInfo	INPN_NaOliInfo	141	0x8d	O
ChargeNumber	INPN_ChargeNumber	642	0x282	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.4 DisconnectForwardConnection

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9.5 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ResourceAddress				M
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	C2
None	INPN_None	650	0x28a	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo See ServiceInteractionIndicatorsTwo (sub-table) on page 134				O O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.6 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
GenericNumbers (SEQUENCE, size = 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O2
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O O2
ChargeNumber	INPN_ChargeNumber	642	0x282	O
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
Suppression of Announcement	INPN_SuppressionOfAnnouncement	109	0x6d	O
OCSIAplicable	INPN_OCSIAplicable	110	0x6e	O
NaOliInfo	INPN_NAOliInfo	141	0x8d	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.7 ReleaseCall

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	O

B.9.8 RequestReportBCSMEvent

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEvents (SEQUENCE, size = 1 to 10)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 201	0xc0 to 0xc9	M2
MonitorMode	INPN_MonitorMode(n)	208 to 217	0xd0 to 0xd9	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 233	0xe0 to 0xe9	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 249	0xf0 to 0xf9	C3
DpSpecificCriteria				O2
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 185	0xb0 to 0xb9	O3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEvent structure can be repeated up to ten times for each operation. Replace 'n' with the position in the sequence of BCSMEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events, the LegID parameter is mandatory; for example, events O-MidCall, O-Disconnect, T-MidCall and T-Disconnect in CAMEL CAP v2 must have this parameter present. For other events, the legID may take default values.

B.9.9 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192	0xc0	M
EventSpecificInformationBCSM				O
RouteSelectFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
OnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oanswer				C2
DestinationAddress	INPN_DestinationAddr	648	0x288	O3
Or-Call	INPN_OrCall	664	0x298	O3
ForwardedCall	INPN_ForwardedCall	651	0x28b	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
CallForwarded	INPN_CallForwarded	639	0x27f	O3
RouteNotPermitted	INPN_RouteNotPermitted	753	0x2f1	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TnoAnswer				C2
CallForwarded	INPN_CallForwarded	639	0x27f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tanswer				C2
DestinationAddress	INPN_DestinationAddr	648	0x288	O3
Or-Call	INPN_OrCall	664	0x298	O3
ForwardedCall	INPN_ForwardedCall	651	0x28b	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
LegID				O
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	O2
MiscCallInfo				O
MessageType	INPN_MessageType	56	0x38	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The event-specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is Tdisconnect, then the format procedures will use the parameter INPN_ReleaseCause.

B.9.10 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9.11 ResetTimer

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	M
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.12 FurnishChargingInformation

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FCIBCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
PartyToCharge				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O3
AppendFreeFormatData Default = overwrite (0)	INPN_AppendFreeFormData	637	0x27d	D2

B.9.13 ApplyCharging

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimeDurationCharging				M
MaxCallPeriodDuration	INPN_MaxCallPeriodDuration	159	0x9f	M2
ReleaseIfDuration Exceeded Default = False	INPN_ReleaseIfDurExceeded	750	0x2ee	D2
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O2
Tone Default = False	INPN_Tone	778	0x30a	D2
Extensions2 (see Appendix B.14 Operation Extensions on page 257)				O2
Ellipsis	INPN_TmDurChar_Ellipsis	1374	0x55e	A2
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.14 ApplyChargingReport

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CAMEL-CallResult				M
TimeDurationChargingResult				M2
PartyToCharge				M3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	M4
TimeInformation				M3
TimeIfNoTariffSwitch	INPN_TimeIfNoTariffSwitch	776	0x308	C4
TimeIfTariffSwitch				C4
TimeSinceTariffSwitch	INPN_TmSinceTariffSwch	777	0x309	M5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O5
CallActive Default = True	INPN_CallActive	638	0x27e	D3
CallReleasedAtTcpExpiry	INPN_CallReleasedAtTcpExp	640	0x280	O3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O3
Ellipsis	INPN_TmDurCharRes_Ellipsis	1373	0x55d	O3

B.9.15

CallGap

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GapCriteria				M
BasicGapCriteria				C1
CalledAddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
Ellipsis	INPN_CldAddrServ_Ellipsis	1398	0x576	O3
CallingAddressAndService				C2
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
Ellipsis	INPN_ClgAddrServ_Ellipsis	1400	0x578	O3
GapOnService				C2
ServiceKey	INPN_ServiceKey	3	0x3	M3
Ellipsis	INPN_GapOnServ_Ellipsis	1401	0x579	O3
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	C2
CompoundGapCriteria				C1
CompoundCalledAddressAndService				C2
CalledAddressValue	INPN_ComCalledAddressValue	894	0x37e	M3
ServiceKey	INPN_ComServiceKey	893	0x37d	M3
Ellipsis	INPN_CldAddrServ_Ellipsis	1398	0x576	O3
CompoundCallingAddressAndService				C2
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M3
ServiceKey	INPN_ComServiceKey	893	0x37d	M3
Ellipsis	INPN_ClgAddrServ_Ellipsis	1400	0x578	O3
CompoundGapOnService				C2
ServiceKey	INPN_ComServiceKey	893	0x37d	M3
Ellipsis	INPN_GapOnServ_Ellipsis	1401	0x579	O3
CompoundCalledAddressValue	INPN_ComCalledAddressValue	894	0x37e	C2
Scfld	INPN_ScflD	38	0x26	O2
GapIndicators				M
GapDuration	INPN_Gap_Duration	72	0x48	M2
GapInterval	INPN_GapInterval	73	0x49	M2
Ellipsis	INPN_GapInd_Ellipsis	1411	0x583	A2
ControlType	INPN_ControlType	101	0x65	O

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
GapTreatment				O
InformationToSend				C2
See InformationToSend (Sub-table) on page 96				O3
ReleaseCause	INPN_ReleaseCause	96	0x60	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.16

CallInformationReport

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationList (SEQUENCE, size = 1 to 4)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 291	0x120 to 0x123	M2
RequestedInformationValue				M2
CallAttemptElapsedTimeValue	INPN_CallAttemptElapsedTimeValue(n)	293 to 296	0x125 to 0x128	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 301	0x12a to 0x12d	C3
CallConnectedElapsedTimeValue	INPN_CallConnectedElapsedTimeValue(n)	303 to 306	0x12f to 0x132	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(n)	313 to 316	0x139 to 0x13c	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.17 CallInformationRequest

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 4)				M
RequestedInformation Type(n)	INPN_RequestedInformation Type(n)	288 to 291	0x120 to 0x123	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.18 SendChargingInformation

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CAMEL-SCIBillingChargingCharacteristics				M
AOCBeforeAnswer				C2
AOCInitial				M3
E1	INPN_Initial_CAI_E1	144	0x90	O4
E2	INPN_Initial_CAI_E2	145	0x91	O4
E3	INPN_Initial_CAI_E3	146	0x92	O4
E4	INPN_Initial_CAI_E4	147	0x93	O4
E5	INPN_Initial_CAI_E5	148	0x94	O4
E6	INPN_Initial_CAI_E6	149	0x95	O4
E7	INPN_Initial_CAI_E7	150	0x96	O4
AOCSubsequent				O3
CAI-GSM0224				M4
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
AOCAfterAnswer				C2
AOCSubsequent				O3
CAI-GSM0224				M4
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4
PartyToCharge				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

Note: INPN_CAMEL_AOC_BeforeAnswer will not be formatted or decoded. It is used to determine if the AOC is for before or after answer. If present, AOCBeforeAnswer will be sent, otherwise AOCAfterAnswer will be sent. The data stored in the INPN_CAMEL_AOC_BeforeAnswer may be of any value.

B.9.19 PlayAnnouncement

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InformationToSend				M
See InformationToSend (Sub-table) on page 96				M2
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement Complete Default = True	INPN_RequestAnnouncement Complete	60	0x3c	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.20 PromptAndCollectUserInformation

INOP_ PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CollectedInfo				M
CollectedDigits				M2
MinimumNumberOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x4a	D3
MaximumNumberOf Digits	INPN_MaximumNumberOf Digits	75	0x4b	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x4c	O3
CancelDigit	INPN_CancelDigit	77	0x4d	O3
StartDigit	INPN_StartDigit	78	0x4e	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x4f	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x50	O3
ErrorTreatment Default = StfErrorAndInfo	INPN_ErrorTreatment	81	0x51	D3
InterruptableAndInd Default = True	INPN_InterruptableAnnInd	82	0x52	D3
VoiceInformation Default = False	INPN_VoiceInformation	83	0x53	D3
VoiceBack Default = False	INPN_VoiceBack	84	0x54	D3
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
InformationToSend See InformationToSend (Sub-table) on page 96				O M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.21 SpecializedResourceReport

INOP_ SpecializedResourceReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LinkedID	INPN_LinkedID	2	0x2	O

B.9.22 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O

If the parameter INPN_Cancel_InvokeID is not set then the operation will be sent with the null parameter 'All Requests' indicating all operations on that dialogue should be cancelled.

B.9.23 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9.24 ContinueWithArg

INOP_ContinueWithArgument				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo				O
See ServiceInteractionIndicatorsTwo (sub-table) on page 134				O2
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
GenericNumbers (SEQUENCE, size = 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O2
CUG_Interlock	INPN_CUG_Interlock	645	0x285	O
CUG_OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
ChargeNumber	INPN_ChargeNumber	642	0x282	O
Carrier	INPN_Carrier	40	0x28	O
SuppressionOfAnnouncement	INPN_SuppressionOfAnnouncement	109	0x6d	O
NAOliInfo	INPN_NAOliInfo	141	0x8d	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.25

InitialDPSMS

INOP_InitialDPSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Servicekey	INPN_ServiceKey	3	0x3	O
DestinationSubscriber Number	INPN_DestSubscriberNumber	649	0x289	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
EventTypeSMS	INPN_EventTypeSMS(0)	861	0x35d	O
IMSI	INPN_IMSI	130	0x82	O
LocationInformationMSC See LocationInformation (sub-table) on page 135				O O2
LocationInformationGPRS See LocationInformationGPRS (sub-table) below				O O2
SMSCAddress	INPN_SMSCAddress	768	0x300	O
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O
TPShortMessage SubmissionInfo	INPN_TPShMsgSubInfo	781	0x30d	O
TPProtocolIdentifier	INPN_TPProtocolID	780	0x30c	O
TPDataCodingScheme	INPN_TPDataCodingScheme	779	0x30b	O
TPValidityPeriod	INPN_TPValidityPeriod	782	0x30e	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A
SMSReferenceNumber	INPN_SMSReferenceNumber	770	0x302	O
MSCAddress	INPN_MSCAddress	132	0x84	O
SGSN Number	INPN_SGSNNumber	767	0x2ff	O

LocationInformationGPRS (sub-table)

LocationInformationGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
CellGlobalIdOrService AreaIdOrLAI	INPN_CGlobal_Sarea_LAI	641	0x281	O
RoutingAreaIdentity	INPN_GPRSRoutingAreaID	897	0x381	O
GeographicalInformation	INPN_GPRSGeographical Information	895	0x37f	O
SGSN Number	INPN_LocationInfoGPRS_SGSNNumber	4231	0x1087	O
SelectedLSAIdentity	INPN_LocationInfoGPRS_SelLSAIdentity	4281	0x10b9	O
ExtensionContainer	INPN_GPRSExtensionContainer	896	0x380	O
Ellipsis	INPN_LocationInfoGPRS_Ellipsis	1369	0x559	A
SAI-Present	INPN_LocationInfoGPRS_SAIPresent	4232	0x1088	O

B.9.26 FurnishChargingInformationSMS

INOP_FurnishChargingInformationSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FCIBCCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
AppendFreeFormatData Default = overwrite (0)	INPN_AppendFreeFormData	637	0x27d	D2

B.9.27 Connect SMS

INOP_ConnectSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallingPartysNumber	INPN_CallingPartyNumber	6	0x6	O
DestinationSubscriber Number	INPN_DestSubscriberNumber	649	0x289	O
SMSCAddress	INPN_SMSCAddress	768	0x300	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.28 RequestReportSMSEvent

INOP_RequestReportSMSEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
SMSEvents (SEQUENCE, size = 1 to 10)				M
EventTypeSMS	INPN_EventTypeSMS(n)	861 to 870	0x35d to 0x366	M2
MonitorMode	INPN_MonitorMode(n)	208 to 217	0xd0 to 0xd9	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.29 EventReportSMS

INOP_EventReportSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeSMS	INPN_EventType(0)	861		M
EventSpecificInformationSMS				O
O-SMSFailureSpecificInfo				C2
FailureCause	INPN_FailureCause	94	0x5e	M3
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
O-SMSSubmitSpecificInfo				C2
--No Info--				
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
MiscCallInfo				O
MessageType	INPN_MessageType	56	0x38	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.30 ContinueSMS

INOP_ContinueSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9.31 ReleaseSMS

INOP_ReleaseSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RPCause	INPN_RPCause	762	0x2fa	M

B.9.32 ResetTimerSMS

INOP_ResetTimerSMS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	M
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.33 ActivityTestGPRS

INOP_ActivityTestGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.9.34 ApplyChargingGPRS

INOP_ApplyChargingGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ChargingCharacteristics				M
MaxTransferredVolume	INPN_MaxTransferredVol	659	0x293	C2
MaxElapsedTime	INPN_MaxElapsedTime	658	0x292	C2
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.35 ApplyChargingReportGPRS

INOP_ApplyChargingReportGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ChargingResult				M
TransferredVolume				C2
VolumelfNoTariffSwitch	INPN_VollfNoTariffSwch	785	0x311	C3
VolumelfTariffSwitch				C3

INOP_ApplyChargingReportGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
VolumeSinceLastTariff Switch	INPN_VolLastTariffSwch	783	0x30f	M4
VolumeTariffSwitch Interval	INPN_VolTariffSwchInt	784	0x310	O4
ElapsedTime				C2
TimeGPRSIfNoTariff Switch	INPN_TmGPRSIfNoTariffSwch	776	0x308	C3
TimeGPRSIfTariffSwitch				C3
TimeGPRSSinceLast TariffSwitch	INPN_TmGPRSSinceLast TariffSwch	774	0x306	M4
TimeGPRSTariffSwitch Interval	INPN_TmGPRSTariffSwchInt	775	0x307	O4
QualityOfService See CAMEL v.3 QualityOfService (sub-table) on page 153				O O2
Active Default = True	INPN_Active	636	0x27c	D
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A
ChargingRollOver				O
TransferredVolumeRollOver				C2
Ro-VolumelfNoTariff Switch	RO-VollfNoTariffSwch	761	0x2f9	C3
Ro-VolumelfTariffSwitch				C3
Ro-VolumeSinceLast TariffSwitch	RO-VolLastTariffSwch	759	0x2f7	M4
Ro-VolumeTariffSwitch Interval	RO-VolTariffSwchInt	760	0x2f8	O4
ElapsedTimeRollOver				C2
Ro-TimeGPRSIfNoTariff Switch	RO-TmGPRSNoTariff Swch	756	0x2fe	C3
Ro-TimeGPRSIfTariffSwitch				C3
Ro-TimeGPRSSinceLast TariffSwitch	RO-TmGPRSLastTariffSwch	757	0x2f5	M4
Ro-TimeGPRSTariff SwitchInterval	RO-TmGPRSTariffSwchInt	758	0x2f6	O4

CAMEL v.3 QualityOfService (sub-table)

QualityOfService				
Parameter	Mnemonic	Value		
		dec	hex	
Requested-QoS				O
Short-QoS-Format	INPN_ReqShtQoSFormat	751	0x2ef	C2
Long-QoS-Format	INPN_ReqLngQoSFormat	752	0x2f0	C2
Subscribed-QoS				O
Short-QoS-Format	INPN_SubShtQoSFormat	771	0x303	C2
Long-QoS-Format	INPN_SubLngQoSFormat	772	0x304	C2
Negotiated-QoS				O
Short-QoS-Format	INPN_NegShtQoSFormat	746	0x2ea	C2
Long-QoS-Format	INPN_NegLngQoSFormat	747	0x2eb	C2

B.9.36**CancelGPRS**

INOP_CancelGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.37**ConnectGPRS**

INOP_ConnectGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AccessPointName	INPN_AccessPtName	592	0x250	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.38 ContinueGPRS

INOP_ContinueGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.39 EntityReleasedGPRS

INOP_EntityReleasedGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GPRSCause	INPN_GPRSCause	654	0x28e	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.40 FurnishChargingInformationGPRS

INOP_FurnishChargingInformationGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FCIBCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
PDPID	INPN_PDPID	665	0x299	O2
AppendFreeFormatData Default = overwrite (0)	INPN_AppendFreeFormData	637	0x27d	D2
Ellipsis	INPN_FCIGPRSseq_Ellipsis	1367	0x557	

B.9.41 InitialDPGPRS

INOP_InitialDPGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Servicekey	INPN_Servicekey	3	0x3	M
GPRSEventType	INPN_GPRSEventType(0)	877	0x36d	M
MSISDN	INPN_MSISDN	660	0x294	M
IMSI	INPN_IMSI	130	0x82	M
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	M
GPRSMSCClass				O
MSNetworkCapability	INPN_MSNetworkCapability	661	0x295	M2
MSRadioAccess Capability	INPN_MSRadioAccess Capability	662	0x296	O2
EndUserAddress				O
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M2
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M2
PDPAddress	INPN_PDPAddress	666	0x29a	O2
QualityOfService				O
See CAMEL v.3 QualityOfService (sub-table) on page 153				O2
AccessPointName	INPN_AccessPtName	592	0x250	O
RoutingAreaIdentity	INPN_RoutingAreaID	754	0x2f2	O
ChargingID	INPN_ChargingID	643	0x283	O
SGSNCapabilities	INPN_SGSNCapabilities	766	0x2fe	O
LocationInformationGPRS				O
See LocationInformationGPRS (sub-table) on page 148				O2
PDPInitiationType	INPN_PDPInitiationType	667	0x29b	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A
GGSNAddress	INPN_GGSNAddress	652	0x28c	O
SecondaryPDP-Context	INPN_SecondaryPDPContext	764	0x2fc	O

B.9.42 ReleaseGPRS

INOP_ReleaseGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GPRSCause	INPN_GPRSCause	654	0x28e	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.43 EventReportGPRS

INOP_EventReportGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GPRSEventType	INPN_GPRSEventType(0)	877	0x36d	M
MiscCallInfo				O
MessageType	INPN_MessageType	56	0x38	O2
GPRSEventSpecificInformation				O
AttachChangeOfPositionSpecificInformation				C2
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3 O4
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
PDP-ContextChangeOfPositionSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
GPRSChargingID	INPN_GPRSChargingID	655	0x28f	O3
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3 O4
EndUserAddress				O3
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v.3 QualityOfService (sub-table) on page 153)				O3 O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
GGSNAddress	INPN_GGSNAddress	652	0x28c	O3
DetachSpecificInformation				C2
InitiatingEntity	INPN_InitiatingEntity	942	0x3ae	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
RoutingAreaUpdate	INPN_RoutingAreaUpdate	755	0x2f3	O3
DisconnectSpecificInformation				C2
InitiatingEntity	INPN_InitiatingEntity	942	0x3ae	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
RoutingAreaUpdate	INPN_RoutingAreaUpdate	755	0x2f3	O3
PDPCContextEstablishmentSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
EndUserAddress				O3

INOP_EventReportGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v.3 QualityOfService (sub-table) on page 153)				O3
				O4
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3
				O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
PDPIInitiationType	INPN_PDPIInitiationType	667	0x29b	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
SecondaryPDP-Context	INPN_SecondaryPDPContext	764	0x2fc	O3
PDPContextEstablishmentAcknowledgementSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
GPRSChargingID	INPN_GPRSChargingID	655	0x28f	O3
EndUserAddress				O3
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v.3 QualityOfService (sub-table) on page 153)				O3
				O4
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3
				O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
GGSNAddress	INPN_GGSNAddress	652	0x28c	O3
PDPID	INPN_PDPID	655	0x28f	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.44 RequestReportGPRSEvent

INOP_RequestReportGPRSEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GPRSEvent (SEQUENCE, size = 1 to 10)				M
GPRSEventType	INPN_GPRSEventType(n)	877 to 886	0x36d to 0x376	M2
MonitorMode	INPN_MonitorMode(n)	208 to 217	0xd0 to 0xd9	M2
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.45 ResetTimerGPRS

INOP_ResetTimerGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID Default = tssf (0)	INPN_TimerID	61	0x3d	D
TimerValue	INPN_TimerValue	62	0x3e	M
Ellipsis	INPN_Ellipsis	112	0x70	A

B.9.46 SendChargingInformationGPRS

INOP_SendChargingInformationGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CAMEL-SCIGPRSBillingChargingCharacteristics				M
AOCGPRS				M2
AOCInitial				M3
E1	INPN_Initial_CAI_E1	144	0x90	O4
E2	INPN_Initial_CAI_E2	145	0x91	O4
E3	INPN_Initial_CAI_E3	146	0x92	O4
E4	INPN_Initial_CAI_E4	147	0x93	O4
E5	INPN_Initial_CAI_E5	148	0x94	O4
E6	INPN_Initial_CAI_E6	149	0x95	O4
E7	INPN_Initial_CAI_E7	150	0x96	O4
AOCSubsequent				O3
CAI-GSM0224				M4

INOP_SendChargingInformationGPRS				
Parameter	Mnemonic	Value		
		dec	hex	
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4
PDPID	INPN_PDPID	665	0x299	O2
Ellipsis	INPN_Ellipsis	112	0x70	A2

B.10 CAMEL v4 Operation Definitions

B.10.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
ServiceKey	INPN_ServiceKey	3	0x03	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x05	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x06	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x08	O
cGEncountered	INPN_cGEncountered	10	0x0a	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0x0b	O
LocationNumber	INPN_LocationNumber	13	0x0d	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0x0f	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
BearerCapability				O
BearerCapability	INPN_BearerCapability	23	0x17	C2
Ellipsis	INPN_BearerCap_Ellipsis	119	0x77	C2
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Cause	INPN_Cause	41	0x29	O
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O O2
Carrier	INPN_Carrier	40	0x28	O
CUG-Index	INPN_CUG_Index	644	0x284	O
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
IMSI	INPN_IMSI	130	0x81	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x86	C2
CamelBusy	INPN_CamelBusy	135	0x87	C2
NetDetNotReachable	INPN_NetDetNotReachable	136	0x88	C2
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	C2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
LocationInformation (see LocationInformation (sub-table) on page 135)				O
				O2
Ext_BasicServicesCode				O
BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x82	O
MSCAddress	INPN_MSCAddress	132	0x83	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x80	O
TimeAndTimezone	INPN_TimeAndTimezone	132	0x84	O
CallForwardingSS Pending	INPN_GSM_ForwardingPending	133	0x85	O
IDPArgExtension				O
GMSC Address	INPN_GMSCAddress	653	0x28d	O2
ForwardingDestNumber	INPN_ForwardingDestNumber	2776	0xad8	O2
MSCClassMark2	INPN_MSCClassMark2	2777	0xad9	O2
IMEI	INPN_IMEI	2778	0xada	O2
SupportedCamelPhases	INPN_SupportedCamelPhases	2779	0xadb	O2
OfferedCamel4Functionalities	INPN_OfferedCamel4Functionalities	2780	0xadc	O2
BearerCapability2				O2
BearerCapability2	INPN_BearerCapability2	2771	0xad3	O3
Ext_BasicServiceCode2				O2
Ext_BearerServiceCode2	INPN_Ext_BearerServiceCode2	2764	0xacc	C3
Ext_TeleserviceCode2	INPN_Ext_TeleserviceCode2	2765	0xacd	C3
HighLayerCompatibility2	INPN_HighLayerCompatibility2	2781	0xadd	O2
LowLayerCompatibility	INPN_LowLayerCompatibility	2782	0xade	O2
LowLayerCompatibility2	INPN_LowLayerCompatibility2	2783	0xadf	O2
Ellipsis	INPN_InitialDPArgExt_Ellipsis	117	0x75	A2
EnhancedDialledServicesAllowed	INPN_EnhancedDialledServicesAllowed	2784	0xae0	O2
UU_Data				O2
UUIndicator	INPN_UUIndicator	2773	0xad5	O3
UUI	INPN_UUI	2774	0xad6	O3
uusCFInteraction	INPN_uusCFInteraction	2775	0xad7	O3
UU_ExtensionContainer	INPN_UU_ExtensionContainer	4230	0x1086	O3
Ellipsis	INPN_UU_Ellipsis	4216	0x1078	A3
CollectInformationAllowed	INPN_collectInformationAllowed	2785	0xae1	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.2 AssistRequestInstructions

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0x0b	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x66	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O O2
CallSegmentId	INPN_CallSegmentID	320	0x140	O
NAOliInfo	INPN_NAOliInfo	141	0x8d	O
ChargeNumber	INPN_ChargeNumber	642	0x282	O
Ellipsis	INPN_Ellipsis	112	0x70	A
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0x0f	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x06	O

B.10.4 DisconnectForwardConnection

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.5 DFCWithArgument

INOP_DFC_with_Argument				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.6 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
ResourceAddress				M
IPRoutingAddress	INPN_IPRoutingAddress	31	0x1f	C2
None	INPN_None	650	0x28a	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O O2
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.7 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0x0f	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x08	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
GenericNumbers (SET, size = 1 to 5)				O

INOP_Connect				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O2
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O O2
ChargeNumber	INPN_ChargeNumber	642	0x282	O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
Suppression of Announcement	INPN_SuppressionOfAnnouncement	109	0x6d	O
OCSIApplicable	INPN_OCSIApplicable	110	0x6e	O
NaOlInfo	INPN_NAOlInfo	141	0x8d	O
BorInterrogationRequested	INPN_BorInterrogationRequested	2787	0xae3	O
Ellipsis	INPN_Ellipsis	112	0x70	A
SuppressNCSI	INPN_SuppressNCSI	2788	0xae4	O

B.10.8

ReleaseCall

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
Cause	INPN_Cause	41	0x29	M

B.10.9 RequestReportBCSMEvent

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
BCSMEvents (SEQUENCE, size = 1 to 16) ¹⁹				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSidelD	INPN_SendingSidelD(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSidelD	INPN_ReceivingSidelD(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria				O2
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
MidCallControlInfo				C3
MinimumNumberOfDigitsSeq	INPN_MinimumNumberOfDigitsSeq(n)	2789 to 2804	0x to 0x	O4
MaximumNumberOfDigitsSeq	INPN_MaximumNumberOfDigitsSeq(n)	2805 to 2820	0x to 0x	O4
EndOfReplyDigitSeq	INPN_EndOfReplyDigitSeq(n)	2821 to 2836	0x to 0x	O4
CancelDigitSeq	INPN_CancelDigitSeq(n)	2837 to 2852	0x to 0x	O4
StartDigitSeq	INPN_StartDigitSeq(n)	2853 to 2868	0x to 0x	O4
InterDigitTimeout	INPN_MC_InterDigitTimeout(n)	4265 to 4280	0x to 0x	O4
Ellipsis	INPN_MidCallCtlInfoEllipsis(n)	4249 to 4264	0x to 0x	A4
DpSpecificCriteriaAlt				C3
ChangeOfPositionControlInfo (SEQUENCE, size = 1 to 10) ²⁰				O4
ChangeOfLocation[0]				O5
CellGlobalId	INPN_CellGlobalId0(n)	2885 to 2900	0xb45 to 0xb54	O6

¹⁹ The BCSMEvent structure can be repeated up to 16 times for each operation. Replace 'n' with the position in the sequence of BCSMEvents starting from 0. The CAP v4 specification indicates that the structure may be repeated up to 30 times. This has not been implemented due to implementation reasons.

²⁰ The ChangeOfLocation structure can be repeated up to 10 times – for each instance of BCSMEvent. This nesting has required that the instances of the ChangeOfLocation parameters are given unique names: for example, INPN_ServiceAreaId9(15) for the ServiceAreaId parameter in the 10th instance of ChangeOfLocation within the 16th BCSM Event.

INOP_RequestReportBCSMEEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
ServiceAreald	INPN_ServiceAreald0(n)	2901 to 2916	0xb55 to 0xb64	O6
LocationAreald	INPN_LocationAreald0(n)	2917 to 2932	0xb65 to 0xb74	O6
InterSystemHandOver	INPN_InterSystemHandOver0(n)	2933 to 2948	0xb75 to 0xb84	O6
InterPLMNHandOver	INPN_InterPLMNHandOver0(n)	2949 to 2964	0xb85 to 0xb94	O6
InterMSCHandOver	INPN_InterMSCHandOver0(n)	2965 to 2980	0xb95 to 0xba4	O6
ChangeOfLocationAlt0				O6
Ellipsis	INPN_ChangeOfLocationEllipsis0(n)	2981 to 2996	0xba5 to 0xbb4	A7
ChangeOfLocation[1]				O5
CellGlobalId	INPN_CellGlobalId1(n)	2997 to 3012	0xbb5 to 0xbc4	O6
ServiceAreald	INPN_ServiceAreald1(n)	3013 to 3028	0xbc5 to 0xbd4	O6
LocationAreald	INPN_LocationAreald1(n)	3029 to 3044	0xbd5 to 0xbe4	O6
InterSystemHandOver	INPN_InterSystemHandOver1(n)	3045 to 3060	0xbe5 to 0xbf4	O6
InterPLMNHandOver	INPN_InterPLMNHandOver1(n)	3061 to 3076	0xbf5 to 0xc04	O6
InterMSCHandOver	INPN_InterMSCHandOver1(n)	3077 to 3092	0xc05 to 0xc14	O6
ChangeOfLocationAlt1				O6
Ellipsis	INPN_ChangeOfLocationEllipsis1(n)	3093 to 3108	0xc15 to 0xc24	A7
ChangeOfLocation[2]				O5
CellGlobalId	INPN_CellGlobalId2(n)	3109 to 3124	0xc25 to 0xc34	O6
ServiceAreald	INPN_ServiceAreald2(n)	3125 to 3140	0xc35 to 0xc44	O6
LocationAreald	INPN_LocationAreald2(n)	3141 to 3156	0xc45 to 0xc54	O6
InterSystemHandOver	INPN_InterSystemHandOver2(n)	3157 to 3172	0xc55 to 0xc64	O6
InterPLMNHandOver	INPN_InterPLMNHandOver2(n)	3173 to 3188	0xc65 to 0xc74	O6
InterMSCHandOver	INPN_InterMSCHandOver2(n)	3189 to 3204	0xc75 to 0xc84	O6
ChangeOfLocationAlt2				O6

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Ellipsis	INPN_ChangeOfLocationEllipsis2(n)	3205 to 3220	0xc85 to 0xc94	A7
ChangeOfLocation[3]				O5
CellGlobalId	INPN_CellGlobalId3(n)	3221 to 3236	0xc95 to 0xca4	O6
ServiceAreaId	INPN_ServiceAreaId3(n)	3237 to 3252	0xca5 to 0xcb4	O6
LocationAreaId	INPN_LocationAreaId3(n)	3253 to 3268	0xcb5 to 0xcc4	O6
InterSystemHandOver	INPN_InterSystemHandOver3(n)	3269 to 3284	0xcc5 to 0xcd4	O6
InterPLMNHandOver	INPN_InterPLMNHandOver3(n)	3285 to 3300	0xcd5 to 0xce4	O6
InterMSCHandOver	INPN_InterMSCHandOver3(n)	3301 to 3316	0xce5 to 0xcf4	O6
ChangeOfLocationAlt3				O6
Ellipsis	INPN_ChangeOfLocationEllipsis3(n)	3317 to 3332	0xcf5 to 0xd04	A7
ChangeOfLocation[4]				O5
CellGlobalId	INPN_CellGlobalId4(n)	3333 to 3348	0xd05 to 0xd14	O6
ServiceAreaId	INPN_ServiceAreaId4(n)	3349 to 3364	0xd15 to 0xd24	O6
LocationAreaId	INPN_LocationAreaId4(n)	3365 to 3380	0xd25 to 0xd34	O6
InterSystemHandOver	INPN_InterSystemHandOver4(n)	3381 to 3396	0xd35 to 0xd44	O6
InterPLMNHandOver	INPN_InterPLMNHandOver4(n)	3397 to 3412	0xd45 to 0xd54	O6
InterMSCHandOver	INPN_InterMSCHandOver4(n)	3413 to 3428	0xd55 to 0xd64	O6
ChangeOfLocationAlt4				O6
Ellipsis	INPN_ChangeOfLocationEllipsis4(n)	3429 to 3444	0xd65 to 0xd74	A7
ChangeOfLocation[5]				O5
CellGlobalId	INPN_CellGlobalId5(n)	3445 to 3460	0xd75 to 0xd84	O6
ServiceAreaId	INPN_ServiceAreaId5(n)	3461 to 3476	0xd85 to 0xd94	O6
LocationAreaId	INPN_LocationAreaId5(n)	3477 to 3492	0xd95 to 0xda4	O6
InterSystemHandOver	INPN_InterSystemHandOver5(n)	3493 to 3508	0xda5 to 0xdb4	O6

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InterPLMNHandOver	INPN_InterPLMNHandOver5(n)	3509 to 3524	0xdb5 to 0xdc4	O6
InterMSCHandOver	INPN_InterMSCHandOver5(n)	3525 to 3540	0xdc5 to 0xdd4	O6
ChangeOfLocationAlt5				O6
Ellipsis	INPN_ChangeOfLocationEllipsis5(n)	3541 to 3556	0xdd5 to 0xde4	A7
ChangeOfLocation[6]				O5
CellGlobalId	INPN_CellGlobalId6(n)	3557 to 3572	0xde5 to 0xdf4	O6
ServiceAreaId	INPN_ServiceAreaId6(n)	3573 to 3588	0xdf5 to 0xe04	O6
LocationAreaId	INPN_LocationAreaId6(n)	3589 to 3604	0xe05 to 0xe14	O6
InterSystemHandOver	INPN_InterSystemHandOver6(n)	3605 to 3620	0xe15 to 0xe24	O6
InterPLMNHandOver	INPN_InterPLMNHandOver6(n)	3621 to 3636	0xe25 to 0xe34	O6
InterMSCHandOver	INPN_InterMSCHandOver6(n)	3637 to 3652	0xe35 to 0xe44	O6
ChangeOfLocationAlt6				O6
Ellipsis	INPN_ChangeOfLocationEllipsis6(n)	3653 to 3668	0xe45 to 0xe54	A7
ChangeOfLocation[7]				O5
CellGlobalId	INPN_CellGlobalId7(n)	3669 to 3684	0xe55 to 0xe64	O6
ServiceAreaId	INPN_ServiceAreaId7(n)	3685 to 3700	0xe65 to 0xe74	O6
LocationAreaId	INPN_LocationAreaId7(n)	3701 to 3716	0xe75 to 0xe84	O6
InterSystemHandOver	INPN_InterSystemHandOver7(n)	3717 to 3732	0xe85 to 0xe94	O6
InterPLMNHandOver	INPN_InterPLMNHandOver7(n)	3733 to 3748	0xe95 to 0xea4	O6
InterMSCHandOver	INPN_InterMSCHandOver7(n)	3749 to 3764	0xea5 to 0xeb4	O6
ChangeOfLocationAlt7				O6
Ellipsis	INPN_ChangeOfLocationEllipsis7(n)	3765 to 3780	0xeb5 to 0xec4	A7
ChangeOfLocation[8]				O5
CellGlobalId	INPN_CellGlobalId8(n)	3781 to 3796	0xec5 to 0xed4	O6

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
ServiceAreald	INPN_ServiceAreald8(n)	3797 to 3812	0xed5 to 0xee4	O6
LocationAreald	INPN_LocationAreald8(n)	3813 to 3828	0xee5 to 0xef4	O6
InterSystemHandOver	INPN_InterSystemHandOver8(n)	3829 to 3844	0xef5 to 0xf04	O6
InterPLMNHandOver	INPN_InterPLMNHandOver8(n)	3845 to 3860	0xf05 to 0xf14	O6
InterMSCHandOver	INPN_InterMSCHandOver8(n)	3861 to 3876	0xf15 to 0xf24	O6
ChangeOfLocationAlt8				O6
Ellipsis	INPN_ChangeOfLocationEllipsis8(n)	3877 to 3892	0xf25 to 0xf34	A7
ChangeOfLocation[9]				O5
CellGlobalId	INPN_CellGlobalId9(n)	3893 to 3908	0xf35 to 0xf44	O6
ServiceAreald	INPN_ServiceAreald9(n)	3909 to 3924	0xf45 to 0xf54	O6
LocationAreald	INPN_LocationAreald9(n)	3925 to 3940	0xf55 to 0xf64	O6
InterSystemHandOver	INPN_InterSystemHandOver9(n)	3941 to 3956	0xf65 to 0xf74	O6
InterPLMNHandOver	INPN_InterPLMNHandOver9(n)	3957 to 3972	0xf75 to 0xf84	O6
InterMSCHandOver	INPN_InterMSCHandOver9(n)	3973 to 3988	0xf85 to 0xf94	O6
ChangeOfLocationAlt9				O6
Ellipsis	INPN_ChangeOfLocationEllipsis9(n)	3989 to 4004	0xf95 to 0xfa4	A7
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	O4
InterDigitTimeout	INPN_InterDigitTimeout(n)	2869 to 2884	0xb35 to 0xb44	O4
Ellipsis	INPN_DpSpecCritAltEllipsis(n)			A4
	INPN_AutomaticRearm(n)	4005 to 4020	0xfa5 to 0xfb4	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.10 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
EventTypeBCSM	INPN_EventTypeBCSM(0). See BCSM Event Codes on page 174	192	0xc0	M
EventSpecificInformationBCSM				O
RouteSelectFailure ²¹				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OnoAnswer				C2
--No Info--				
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oanswer				C2
DestinationAddress	INPN_DestinationAddr	648	0x288	O3
Or-Call	INPN_OrCall	664	0x298	O3
ForwardedCall	INPN_ForwardedCall	651	0x28b	O3
ChargeIndicator	INPN_ChargeIndicator	4182	0x1056	O3
Ext_BasicServiceCode				O3
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C4
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C4
Ext_BasicServiceCode2				O3
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode2	2764	0xacc	C4
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode2	2765	0xacd	C4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Omidcall				C2
MidCallEvents				O3
DTMFDigitsCompleted	INPN_DTMFDigitsCompleted	4183	0x1057	C4
DTMFDigitsTimeOut	INPN_DTMFDigitsTimeOut	4184	0x1058	C4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3

²¹ The event specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is Tdisconnect, then the format procedures will use the parameter INPN_ReleaseCause.

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
CallForwarded	INPN_CallForwarded	639	0x27f	O3
RouteNotPermitted	INPN_RouteNotPermitted	753	0x2f1	O3
ForwardingDestinationNumber	INPN_forwardingDestinationNumber	4185	0x1059	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TnoAnswer				C2
CallForwarded	INPN_CallForwarded	639	0x27f	O3
ForwardingDestinationNumber	INPN_forwardingDestinationNumber	4185	0x1059	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tanswer				C2
DestinationAddress	INPN_DestinationAddr	648	0x288	O3
Or-Call	INPN_OrCall	664	0x298	O3
ForwardedCall	INPN_ForwardedCall	651	0x28b	O3
ChargeIndicator	INPN_ChargeIndicator	4182	0x1056	O3
Ext_BasicServiceCode				O3
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C4
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C4
Ext_BasicServiceCode2				O3
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode2	2764	0xacc	C4
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode2	2765	0xacd	C4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tmidcall				C2
MidCallEvents				O3
DTMFDigitsCompleted	INPN_DTMFDigitsCompleted	4183	0x1057	C4
DTMFDigitsTimeOut	INPN_DTMFDigitsTimeOut	4184	0x1058	C4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OtermSeized				C2
LocationInformation (see LocationInformation (sub-table) on page 135)				O3
				O4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
CallAccepted				C2
LocationInformation (see LocationInformation (sub-table) on page 135)				O3
				O4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oabandon				C2
RouteNotPermitted	INPN_RouteNotPermitted	753	0x2f1	O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OchangeOfPosition				C2
LocationInformation (see LocationInformation (sub-table) on page 135)				O3
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
MetDPCriteriaList (SEQUENCE, size = 1 to 10) ²²				O3
EnteringCellGlobalId	INPN_EnteringCellGlobalId(n)	4053 to 4062	0xfd5 to 0xfde	C4
LeavingCellGlobalId	INPN_LeavingCellGlobalId(n)	4063 to 4072	0xdfd to 0xfe8	C4
EnteringServiceAreaId	INPN_EnteringServiceAreaId(n)	4073 to 4082	0xfe9 to 0xff2	C4
LeavingServiceAreaId	INPN_LeavingServiceAreaId(n)	4083 to 4092	0xff3 to 0xffc	C4
EnteringLocationAreaId	INPN_EnteringLocationAreaId(n)	4093 to 4102	0xffd to 0x1006	C4
LeavingLocationAreaId	INPN_LeavingLocationAreaId(n)	4103 to 4112	0x1007 to 0x1010	C4
InterSystemHandOverToUMTS	INPN_InterSystemHandOverToUMTS(n)	4113 to 4122	0x1011 to 0x101a	C4
InterSystemHandOverToGSM	INPN_InterSystemHandOverToGSM(n)	4123 to 4132	0x101b to 0x1024	C4
InterPLMNHandOver	INPN_InterPLMNHandOver(n)	4133 to 4142	0x1025 to 0x102e	C4
InterMSCHandOver	INPN_InterMSCHandOver(n)	4143 to 4152	0x102f to 0x1038	C4
MetDPCriterionAlt				C4
Ellipsis	INPN_MetDPCriterion_Ellipsis(n)	4153 to 4162	0x1039 to 0x1042	A5
TchangeOfPosition				C2
LocationInformation (see LocationInformation (sub-table) on page 135)				O3
				O4
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

²² For MetDPCriteriaList, each of the up to 10 instances may use any of the parameters listed after it.

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
MetDPCriteriaList – defined as above				O3
DpSpecificInfoAlt (default match)				C2
Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
oServiceChangeSpecificInfo				O3
Ext_BasicServiceCode				O4
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C5
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C5
Ellipsis	INPN_oServiceChargeInfo_Ellipsis	4222	0x107e	A4
InitiatorOfServiceCharge	INPN_oInitiatorOfServiceCharge	4224	0x1080	O4
NatureOfServiceCharge	INPN_oNatureOfServiceCharge	4226	0x1082	O4
tServiceChangeSpecificInfo				O3
Ext_BasicServiceCode				O4
Ext_BearerServiceCode	INPN_Ext_BearerServiceCode_tServChng	4180	0x1054	C5
Ext_TeleserviceCode	INPN_Ext_TeleserviceCode_tServChng	4181	0x1055	C5
Ellipsis	INPN_tServiceChargeInfo_Ellipsis	4223	0x107f	A4
InitiatorOfServiceCharge	INPN_tInitiatorOfServiceCharge	4225	0x1081	O4
NatureOfServiceCharge	INPN_tNatureOfServiceCharge	4227	0x1083	O4
collectedInfoSpecificInfo				O3
CalledPartyNumber	INPN_CalledPartyNumber	5	0x05	O4
Ellipsis	INPN_CollectedInfo_Ellipsis	4221	0x107d	A4
LegID				O
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	O2
MiscCallInfo				O
MessageType	INPN_MessageType	56	0x38	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

BCSM Event Codes

BCSM Event Codes are shown in the following table.

Event Name	Code
INEV_origAttemptAuthorized	1
INEV_collectedInfo	2
INEV_analyzedInformation	3
INEV_routeSelectFailure	4
INEV_oCalledPartyBusy	5
INEV_oNoAnswer	6
INEV_oAnswer	7
INEV_oMidCall	8
INEV_oDisconnect	9
INEV_oAbandon	10
INEV_termAttemptAuthorized	12
INEV_tCalledPartyBusy	13
INEV_tNoAnswer	14
INEV_tAnswer	15
INEV_tMidCall	16
INEV_tDisconnect	17
INEV_tAbandon	18
INEV_oTermSeized	19
INEV_oSuspended	20
INEV_tSuspended	21
INEV_origAttempt	22
INEV_oReAnswer	24
INEV_tReAnswer	25
INEV_facilityAcceptedAndAvailable	26
INEV_callAccepted	27
INEV_oChangeOfPosition	50
INEV_tChangeOfPosition	51
INEV_oServiceChange	52
INEV_tServiceChange	53

B.10.11**Collect Information**

INOP_CollectInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.12 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.13 InitiateCallAttempt

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
DestinationRoutingAddress	INPN_DestinationRoutingAddress(0)	27	0x1b	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegToBeCreated				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
NewCallSegment	INPN_NewCallSegment(0)	1036	0x40c	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x06	O
CallReferenceNumber	INPN_CallReferenceNumber	131	0x83	O
GsmSCFAddress	INPN_GsmSCFAddress	4186	0x105a	O
Suppress-T-CSI	INPN_SuppressTCSI	4187	0x105b	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.14 ResetTimer

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
TimerID Default = tssf (0)	INPN_TimerID	61	0x3d	D
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.15 FurnishChargingInformation

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Invokeld	INPN_Invokeld	1	0x01	M
FCIBCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
PartyToCharge				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O3
AppendFreeFormatData Default = overwrite(0)	INPN_AppendFreeFormData	637	0x27d	D2

B.10.16 ApplyCharging

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Invokeld	INPN_Invokeld	1	0x01	M
AChBillingChargingCharacteristics				M
TimeDurationCharging				M2
MaxCallPeriodDuration	INPN_MaxCallPeriodDuration	159	0x9f	M3
ReleaseIfDuration Exceeded Default = FALSE	INPN_ReleaseIfDurExceeded	750	0x2ee	D3
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O3
AudibleIndicator				O3
Tone	INPN_AudibleIndicTone	4214	0x1076	C4
BurstListO3				C4
WarningPeriod Default = 30	INPN_warningPeriod	4213	0x1075	D5
Burst				O5
NumberOfBursts Default = 1	INPN_numberOfBursts	4193	0x1061	D6
BurstInterval Default = 2	INPN_burstInterval	4194	0x1062	D6
NumberOfTonesInBurst Default = 3	INPN_numberOfTonesInBurst	4195	0x1063	D6
ToneDuration Default = 2	INPN_toneDuration	4196	0x1064	D6
ToneInterval Default = 2	INPN_toneInterval	4197	0x1065	D6
Ellipsis	INPN_BurstEllipsis	4211	0x1073	A6

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Ellipsis	INPN_BurstListEllipsis	4212	0x1074	A5
Extensions2 (see Appendix B.14 Operation Extensions on page 257)				O3
Ellipsis	INPN_TmDurChar_Ellipsis	1374	0x55e	A3
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
AChChargingAddress				O
LegID				C2
SendingSideID	INPN_SendingSideID(1)	225	0xe1	C3
ReceivingSideID	INPN_ReceivingSideID(1)	241	0xf1	C3
SrfConnection	INPN_SrfConnection	2786	0xae2	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.17**ApplyChargingReport**

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CallResult				M
TimeDurationChargingResult				M2
PartyToCharge				M3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	M4
TimeInformation				M3
TimeIfNoTariffSwitch	INPN_TmIfNoTariffSwch	776	0x308	C4
TimeIfTariffSwitch				C4
TimeSinceTariffSwitch	INPN_TmSinceTariffSwch	777	0x309	M5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O5
LegActive Default = TRUE	INPN_LegActive	4215	0x1077	D3
CallLegReleasedAtTcpExpiry	INPN_CallReleasedAtTcpExp	640	0x280	O3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O3
AChChargingAddress				O3
LegID				C4
SendingSideID	INPN_SendingSideID(1)	225	0xe1	C5
ReceivingSideID	INPN_ReceivingSideID(1)	241	0xf1	C5

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
SrfConnection	INPN_SrfConnection	2786	0xae2	C4
Ellipsis	INPN_TmDurCharRes_Ellipsis	112	0x70	A3

B.10.18**CallGap**

INOP_CallGap				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
GapCriteria				M
BasicGapCriteria				C2
CalledAddressAndService				C3
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M4
ServiceKey	INPN_ServiceKey	3	0x03	M4
Ellipsis	INPN_CldAddrServ_Ellipsis	1398	0x576	A4
CallingAddressAndService				C3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M4
ServiceKey	INPN_ServiceKey	3	0x03	M4
Ellipsis	INPN_ClgAddrServ_Ellipsis	1400	0x578	A4
GapOnService				C3
ServiceKey	INPN_ServiceKey	3	0x03	M4
Ellipsis	INPN_GapOnServ_Ellipsis	1401	0x579	A4
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	C3
CompoundGapCriteria				C2
CompoundBasicGapCriteria				M3
CompoundCalledAddressAndService				C4
CalledAddressValue	INPN_ComCalledAddressValue	894	0x37e	M5
ServiceKey	INPN_ComServiceKey	893	0x37d	M5
Ellipsis	INPN_CldAddrServ_Ellipsis	1398	0x576	A5
CompoundCallingAddressAndService				C4
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M5
ServiceKey	INPN_ComServiceKey	893	0x37d	M5
Ellipsis	INPN_ClgAddrServ_Ellipsis	1400	0x578	A5
CompoundGapOnService				C4
ServiceKey	INPN_ComServiceKey	893	0x37d	M5
Ellipsis	INPN_GapOnServ_Ellipsis	1401	0x579	A5

INOP_CallGap				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
CalledAddressValue	INPN_ComCalledAddressValue	894	0x37e	C4
ScfID	INPN_ScfID	38	0x26	O3
GapIndicators				M
GapDuration	INPN_Gap_Duration	72	0x48	M2
GapInterval	INPN_GapInterval	73	0x49	M2
Ellipsis	INPN_GapInd_Ellipsis	1411	0x583	A2
ControlType	INPN_ControlType	101	0x65	O
GapTreatment				O
InformationToSend (see InformationToSend (Sub-table) on page 96)				C2
				O3
ReleaseCause	INPN_ReleaseCause	96	0x60	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.19

Call Information Report

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
RequestedInformationList (SEQUENCE, size = 1 to 4)				M
RequestedInformationType	INPN_RequestedInformationType(n)	288 to 291	0x120 to 0x123	M2
RequestedInformationValue				M2
CallAttemptEllapsedTimeValue	INPN_CallAttemptEllapsedTimeValue(n)	293 to 296	0x125 to 0x128	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 301	0x12a to 0x12d	C3
CallConnectedElapsedTimeValue	INPN_CallConnectedElapsedTimeValue(n)	303 to 306	0x12f to 0x132	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(n)	313 to 316	0x139 to 0x13c	C3
Ellipsis	INPN_ReqInfo_Ellipsis(n)	1376 to 1379	0x560 to 0x563	A2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
LegID				O
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.20

CallInformationRequest

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
RequestedInformationReport (SEQUENCE, size = 1 to 4)				M
RequestedInformation Type	INPN_RequestedInformationType(n)	288 to 291	0x120 to 0x123	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.21

SendChargingInformation

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CAMEL-SCIBillingChargingCharacteristics				M
AOCBeforeAnswer ²³				C2
AOCInitial				M3
E1	INPN_Initial_CAI_E1	144	0x90	O4
E2	INPN_Initial_CAI_E2	145	0x91	O4
E3	INPN_Initial_CAI_E3	146	0x92	O4
E4	INPN_Initial_CAI_E4	147	0x93	O4
E5	INPN_Initial_CAI_E5	148	0x94	O4
E6	INPN_Initial_CAI_E6	149	0x95	O4
E7	INPN_Initial_CAI_E7	150	0x96	O4

²³ The parameters INPN_CAMEL_AOC_BeforeAnswer and INPN_CAMEL_AOC_AfterAnswer are used to determine if the AOC is for before or after answer. If present, AOCBeforeAnswer or AOCAfterAnswer will be sent, otherwise the AOC-Extension will be sent. The parameters are not formatted or decoded and may be of any value.

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
AOCSubsequent				O3
CAI-GSM0224				M4
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4
AOCAfterAnswer ²⁴				C2
AOCSubsequent				O3
CAI-GSM0224				M4
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4
AOC-Extension (CAMEL-SCIBillingChargingCharacteristicsAlt) ²⁴				C2
Ellipsis	INPN_SCIBCCAlt_Ellipsis	4218	0x107a	A3
PartyToCharge				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

²⁴ The parameters INPN_CAMEL_AOC_BeforeAnswer and INPN_CAMEL_AOC_AfterAnswer are used to determine if the AOC is for before or after answer. If present, AOCBeforeAnswer or AOCAfterAnswer will be sent, otherwise the AOC-Extension will be sent. The parameters are not formatted or decoded and may be of any value.

B.10.22 PlayAnnouncement

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
InformationToSend (see InformationToSend (Sub-table) on page 96)				M
				M2
DisconnectFromIP Forbidden Default = TRUE	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement CompleteNotification Default = TRUE	INPN_RequestAnnouncement Complete	60	0x3c	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
RequestAnnouncementStartedNotification Default - FALSE	INPN_RequestAnnouncementStarted	4189	0x105d	D
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.23 PromptAndCollectUserInformation

INOP_PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CollectedInfo				M
CollectedDigits				M2
MinimumNbOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x4a	D3
MaximumNbOf Digits	INPN_MaximumNumberOfDigits	75	0x4b	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x4c	O3
CancelDigit	INPN_CancelDigit	77	0x4d	O3
StartDigit	INPN_StartDigit	78	0x4e	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x4f	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x50	O3
ErrorTreatment Default: = StfErrorAndInfo	INPN_Errortreatment	81	0x51	D3
InterruptableAndInd Default = TRUE	INPN_InterruptableAnnInd	82	0x52	D3
VoiceInformation Default = FALSE	INPN_VoiceInformation	83	0x53	D3

INOP_PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
VoiceBack Default = FALSE	INPN_VoiceBack	84	0x54	D3
DisconnectFromIP Forbidden Default = TRUE	INPN_DisconnectFromIPForbidden	59	0x3b	D
InformationToSend (see InformationToSend (Sub-table) on page 96)				O
				O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
RequestAnnouncementStartedNotification Default - FALSE	INPN_RequestAnnouncementStarted	4189	0x105d	D
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.24 SpecializedResourceReport

INOP_SpecializedResourceReport				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
LinkedID	INPN_LinkedID	2	0x02	O
AllAnnouncementsComplete	INPN_AllAnnouncementsComplete	4190	0x105e	C
FirstAnnouncementStarted	INPN_FirstAnnouncementStarted	4191	0x105f	C

B.10.25 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	C
AllRequests	INPN_CancelAllRequests	4219	0x107b	C
CallSegmentToCancel				C
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O2
CallSegmentID	INPN_CallSegmentID	320	0x140	O2
Ellipsis	INPN_CallSegToCancelEllipsis	4210	0x1072	A2

B.10.26 ActivityTest

INOP_ ActivityTest				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.27 ContinueWithArg

INOP_ ContinueWithArgument				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O
				O2
CallingPartysCategory	INPN_CallingPartysCategory	8	0x08	O
GenericNumbers (SET, size = 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O2
CUG_Interlock	INPN_CUG_Interlock	645	0x285	O
CUG_OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
ChargeNumber	INPN_ChargeNumber	642	0x282	O
Carrier	INPN_Carrier	40	0x28	O
SuppressionOfAnnouncement	INPN_SuppressionOfAnnouncement	109	0x6d	O
NAOIInfo	INPN_NAOIInfo	141	0x8d	O
BorInterrogationRequested	INPN_BorInterrogationRequested	2787	0xae3	O
Suppress-O-CSI	INPN_SuppressOCSI	4200	0x1068	O
ContinueWithArgumentArgExtension				O
Suppress-D-CSI	INPN_SuppressDCSI	4198	0x1066	O2
Suppress-N-CSI	INPN_SuppressNCSI	2788	0xae4	O2
SuppressOutgoingCallBarring	INPN_SuppressOutgoingCallBarring	4199	0x1067	O2
LegOrCallSegment				O2
CallSegmentID	INPN_CallSegmentID	320	0x140	C3
LegID				C3
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C4
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C4
Ellipsis	INPN_ContinueWithArgumentExtensionEllipsis	4209	0x1071	A2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.28 DisconnectLeg

INOP_DisconnectLeg				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
LegToBeReleased				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.29 MoveLeg

INOP_MoveLeg				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
LegIDToMove				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.30 SplitLeg

INOP_SplitLeg				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
LegToBeSplit				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
NewCallSegment	INPN_NewCallSegment(0)	1036	0x40c	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.31 EntityReleased

INOP_EntityReleased				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CallSegmentFailure				C
CallSegmentID	INPN_CallSegmentID	320	0x140	O2
Cause	INPN_Cause	41	0x29	O2
Ellipsis	INPN_CallSegmentFailure_Ellipsis	4192	0x1060	A2
BCSMFailure				C
LegId				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Cause	INPN_BCSMCause	4208	0x1070	O2
Ellipsis	INPN_BCSMFailure_Ellipsis	946	0x3b2	A2

B.10.32 PlayTone

INOP_PlayTone				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
LegOrCallSegment				M
CallSegmentID	INPN_CallSegmentID	320	0x140	C2
LegId				C2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Burst				M
NumberOfBursts Default = 1	INPN_numberOfBursts	4193	0x1061	D2
BurstInterval Default = 2	INPN_burstInterval	4194	0x1062	D2
NumberOfTonesInBurst Default = 3	INPN_numberOfTonesInBurst	4195	0x1063	D2
ToneDuration Default = 2	INPN_toneDuration	4196	0x1064	D2
ToneInterval Default = 2	INPN_toneInterval	4197	0x1065	D2
Ellipsis	INPN_BurstEllipsis	4211	0x1073	A2

INOP_PlayTone				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.33**InitialDPSMS**

INOP_InitialDPSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
Servicekey	INPN_ServiceKey	3	0x03	O
DestinationSubscriber Number	INPN_DestSubscriberNumber	649	0x289	O
CallingPartyNumber	INPN_CallingPartyNumberSMS	4188	0x105c	O
EventTypeSMS	INPN_EventTypeSMS(0)	861	0x35d	O
IMSI	INPN_IMSI	130	0x82	O
LocationInformation (see LocationInformation (sub-table) on page 135)				O
				O2
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O
				O2
SMSAddress	INPN_SMSAddress	768	0x300	O
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O
TPShortMessage SpecificInfo	INPN_TPShMsgSubInfo	781	0x30d	O
TPProtocolIdentifier	INPN_TPProtocolID	780	0x30c	O
TPDataCodingScheme	INPN_TPDataCodingScheme	779	0x30b	O
TPValidityPeriod	INPN_TPValidityPeriod	782	0x30e	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A
SMSReferenceNumber	INPN_SMSReferenceNumber	770	0x302	O
MSCAddress	INPN_MSCAddress	132	0x84	O
SGSN Number	INPN_SGSNNumber	767	0x2ff	O
MS-ClassMark2	INPN_MSClassMark2	2777	0xad9	O
GPRSMSCClass				O
MSNetworkCapability	INPN_MSNetworkCapability	661	0x295	O2
MSRadioAccessCapability	INPN_MSRadioAccessCapability	662	0x296	O2
IMEI	INPN_IMEI	2778	0xada	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x05	O

B.10.34 FurnishChargingInformationSMS

INOP_FurnishChargingInformationSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
FCIBCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
AppendFreeFormatData Default = overwrite (0)	INPN_AppendFreeFormData	637	0x27d	D2

B.10.35 Connect SMS

INOP_ConnectSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CallingPartysNumber	INPN_CallingPartyNumberSMS	4188	0x105c	O
DestinationSubscriber Number	INPN_DestSubscriberNumber	649	0x289	O
SMSCAddress	INPN_SMSCAddress	768	0x300	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.36 RequestReportSMSEvent

INOP_RequestReportSMSEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
SMSEvents (SEQUENCE, size = 1 to 10)				M
EventTypeSMS	INPN_EventTypeSMS(n)	861 to 870	0x35d to 0x366	M2
MonitorMode	INPN_MonitorMode(n)	208 to 217	0xd0 to 0xd9	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.37 EventReportSMS

INOP_EventReportSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
EventTypeSMS	INPN_EventTypeSMS(0) See SMS Event Codes below	861	0x35d	M
EventSpecificInformationSMS				O
O-SMSFailureSpecificInfo ²⁵				C2
FailureCause	INPN_SMSCause	769	0x301	M3
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
O-SMSSubmittedSpecificInfo				C2
--No Info--				
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
T-SMSFailureSpecificInfo				C2
FailureCause	INPN_MT_SMSCause	2772	0xad4	M3
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
T-SMSDeliverySpecificInfo				C2
--No Info--				
Ellipsis	INPN_EventSpecInfoSMS_Ellipsis	1371	0x55b	A3
MiscCallInfo				O
MessageType Default = request	INPN_MessageType	56	0x38	D2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

SMS Event Codes

The SMS Event Codes are listed in the following table.

Event Name	Event Code
INEVS_SMSCollectedInfo	1
INEVS_oSMSFailure	2
INEVS_oSMSSubmitted	3
INEVS_SMSDeliveryRequested	11
INEVS_tSMSFailure	12
INEVS_tSMSDelivery	13

²⁵ The event-specific information formatted or recovered is dependent on the value of INPN_EventTypeSMS(0).

B.10.38 ContinueSMS

INOP_ContinueSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.39 ReleaseSMS

INOP_ReleaseSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
RPCause	INPN_RPCause	762	0x2fa	M

B.10.40 ResetTimerSMS

INOP_ResetTimerSMS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
TimerID Default = tssf (0)	INPN_TimerID	61	0x3d	D
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.41 ActivityTestGPRS

INOP_ActivityTestGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

B.10.42 ApplyChargingGPRS

INOP_ApplyChargingGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
ChargingCharacteristics				M
MaxTransferredVolume	INPN_MaxTransferredVol	659	0x293	C2

INOP_ApplyChargingGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
MaxElapsedTime	INPN_MaxElapsedTime	658	0x292	C2
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.43**ApplyChargingReportGPRS**

INOP_ApplyChargingReportGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
ChargingResult				M
TransferredVolume				C2
VolumeIfNoTariffSwitch	INPN_VolIfNoTariffSwch	785	0x311	C3
VolumeIfTariffSwitch				C3
VolumeSinceLastTariff Switch	INPN_VolLastTariffSwch	783	0x30f	M4
VolumeTariffSwitch Interval	INPN_VolTariffSwchInt	784	0x310	O4
ElapsedTime				C2
TimeGPRSIfNoTariff Switch	INPN_TmGPRSIfNoTariffSwch	776	0x308	C3
TimeGPRSIfTariffSwitch				C3
TimeGPRSSinceLast TariffSwitch	INPN_TmGPRSSinceLastTariffSwch	774	0x306	M4
TimeGPRSTariffSwitch Interval	INPN_TmGPRSTariffSwchInt	775	0x307	O4
QualityOfService (see CAMEL v4 QualityOfService (sub-table) on page 192)				O O2
Active Default = TRUE	INPN_Active	636	0x27c	D
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A
ChargingRollOver				O
TransferredVolumeRollOver				C2
Ro-VolumeIfNoTariff Switch	INPN_RO_VolIfNoTariffSwch	761	0x2f9	C3
Ro-VolumeIfTariffSwitch				C3
Ro-VolumeSinceLast TariffSwitch	INPN_RO_VolLastTariffSwch	759	0x2f7	M4
Ro-VolumeTariffSwitch Interval	INPN_RO_VolTariffSwchInt	760	0x2f8	O4
ElapsedTimeRollOver				C2

INOP_ApplyChargingReportGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Ro-TimeGPRSIfNoTariff Switch	INPN_RO_TmGPRSNoTariffSwch	756	0x2f4	C3
Ro-TimeGPRSIfTariffSwitch				C3
Ro-TimeGPRSSinceLast TariffSwitch	INPN_RO_TmGPRSLastTariffSwch	757	0x2f5	O4
Ro-TimeGPRSTariff SwitchInterval	INPN_RO_TmGPRSTariffSwchInt	758	0x2f6	O4

CAMEL v4 QualityOfService (sub-table)

QualityOfService				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Requested-QoS				O
Short-QoS-Format	INPN_ReqShtQoSFormat	751	0x2ef	C2
Long-QoS-Format	INPN_ReqLngQoSFormat	752	0x2f0	C2
Subscribed-QoS				O
Short-QoS-Format	INPN_SubShtQoSFormat	771	0x303	C2
Long-QoS-Format	INPN_SubLngQoSFormat	772	0x304	C2
Negotiated-QoS				O
Short-QoS-Format	INPN_NegShtQoSFormat	746	0x2ea	C2
Long-QoS-Format	INPN_NegLngQoSFormat	747	0x2eb	C2
Ellipsis	INPN_QoS_Ellipsis	1370	0x55a	A
Requested-QoS-Extension				O
SupplementToLongQoSFormat	INPN_ReqSupToLongQoSFormat	4202	0x106a	O2
Ellipsis	INPN_ReqGPRSQoSExt_Ellipsis	4203	0x106b	A2
Subscribed-QoS-Extension				O
SupplementToLongQoSFormat	INPN_SubSupToLongQoSFormat	4204	0x106c	O2
Ellipsis	INPN_SubGPRSQoSExt_Ellipsis	4205	0x106d	A2
Negotiated-QoS-Extension				O
SupplementToLongQoSFormat	INPN_NegSupToLongQoSFormat	4206	0x106e	O2
Ellipsis	INPN_NegGPRSQoSExt_Ellipsis	4207	0x106f	A2

B.10.44**CancelGPRS**

INOP_CancelGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M

INOP_CancelGPRS				
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.45 ConnectGPRS

INOP_ConnectGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
AccessPointName	INPN_AccessPtName	592	0x250	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.46 ContinueGPRS

INOP_ContinueGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.47 EntityReleasedGPRS

INOP_EntityReleasedGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
GPRSCause	INPN_GPRSCause	654	0x28e	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.48 FurnishChargingInformationGPRS

INOP_FurnishChargingInformationGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
FCIBCCAMELsequence1				M
FreeFormatData	INPN_FreeFormData	319	0x13f	M2
PDPID	INPN_PDPID	665	0x299	O2
AppendFreeFormatData Default = overwrite (0)	INPN_AppendFreeFormData	637	0x27d	D2
Ellipsis	INPN_FCIGPRSseq_Ellipsis	1367	0x557	A2

B.10.49 InitialDPGPRS

INOP_InitialDPGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
Servicekey	INPN_Servicekey	3	0x03	M
GPRSEventType	INPN_GPRSEventType(0)	877	0x36d	M
MSISDN	INPN_MSISDN	660	0x294	M
IMSI	INPN_IMSI	130	0x82	M
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	M
GPRSMSCClass				O
MSNetworkCapability	INPN_MSNetworkCapability	661	0x295	M2
MSRadioAccess Capability	INPN_MSRadioAccessCapability	662	0x296	O2
EndUserAddress				O
PDPTTypeOrganization	INPN_PDPTTypeOrganization	749	0x2ed	M2
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M2
PDPAddress	INPN_PDPAddress	666	0x29a	O2
QualityOfService (see CAMEL v4 QualityOfService (sub-table) on page 192)				O O2
AccessPointName	INPN_AccessPtName	592	0x250	O
RoutingAreaIdentity	INPN_RoutingAreaID	754	0x2f2	O
ChargingID	INPN_ChargingID	643	0x283	O
SGSNCapabilities	INPN_SGSNCapabilities	766	0x2fe	O
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O O2
PDPInitiationType	INPN_PDPInitiationType	667	0x29b	O

INOP_InitialDPGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A
GGSNAddress	INPN_GGSNAddress	652	0x28c	O
SecondaryPDP-Context	INPN_SecondaryPDPContext	764	0x2fc	O
IMEI	INPN_IMEI	2778	0xada	O

B.10.50 ReleaseGPRS

INOP_ReleaseGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
GPRSCause	INPN_GPRSCause	654	0x28e	M
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.51 EventReportGPRS

INOP_EventReportGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
GPRSEventType	INPN_GPRSEventType(0) See GPRS Event Codes on page 197	877	0x36d	M
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2
GPRSEventSpecificInformation				O
AttachChangeOfPositionSpecificInformation ²⁶				C2
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3 O4
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
PDP-ContextChangeOfPositionSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
GPRSChargingID	INPN_GPRSChargingID	655	0x28f	O3
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3

²⁶ The event specific information formatted or recovered is dependent on the value of INPN_GPRSEventType(0).

INOP_EventReportGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
				O4
EndUserAddress				O3
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v4 QualityOfService (sub-table) on page 192)				O3
				O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
GGSNAddress	INPN_GGSNAddress	652	0x28c	O3
DetachSpecificInformation				C2
InitiatingEntity	INPN_InitiatingEntity	942	0x3ae	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
RoutingAreaUpdate	INPN_RoutingAreaUpdate	755	0x2f3	O3
DisconnectSpecificInformation				C2
InitiatingEntity	INPN_InitiatingEntity	942	0x3ae	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
RoutingAreaUpdate	INPN_RoutingAreaUpdate	755	0x2f3	O3
PDPCContextEstablishmentSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
EndUserAddress				O3
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v4 QualityOfService (sub-table) on page 192)				O3
				O4
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3
				O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
PDPInitiationType	INPN_PDPInitiationType	667	0x29b	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
SecondaryPDP-Context	INPN_SecondaryPDPContext	764	0x2fc	O3
PDPCContextEstablishmentAcknowledgementSpecificInformation				C2
AccessPointName	INPN_AccessPtName	592	0x250	O3
GPRSChargingID	INPN_GPRSChargingID	655	0x28f	O3

INOP_EventReportGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
EndUserAddress				O3
PDPTTypeOrganisation	INPN_PDPTTypeOrganisation	749	0x2ed	M4
PDPTTypeNumber	INPN_PDPTTypeNumber	748	0x2ec	M4
PDPAddress	INPN_PDPAddress	666	0x29a	O4
QualityOfService (see CAMEL v4 QualityOfService (sub-table) on page 192)				O3 O4
LocationInformationGPRS (see LocationInformationGPRS (sub-table) on page 148)				O3 O4
TimeAndTimeZone	INPN_TimeAndTimezone	703	0x2bf	O3
Ellipsis	INPN_EventSpecInfoGPRS_Ellipsis	1372	0x55c	A3
GGSNAddress	INPN_GGSNAddress	652	0x28c	O3
PDPID	INPN_PDPID	655	0x28f	O
Ellipsis	INPN_Ellipsis	112	0x70	A

GPRS Event Codes

GPRS Event Codes are listed in the following table.

GPRS Event Name	Code
INEVG_Attach	1
INEVG_AttachChangeOfPosition	2
INEVG_Detached	3
INEVG_PDPContextEstablishment	11
INEVG_PDPContextEstablishmentAck	12
INEVG_Disconnect	13
INEVG_PDPContextChangeOfPosition	14

B.10.52 RequestReportGPRSEvent

INOP_RequestReportGPRSEvent				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
GPRSEvent (SEQUENCE OF, size = 1 to 10)				M
GPRSEventType	INPN_GPRSEventType(n)	877 to 886	0x36d to 0x376	M2
MonitorMode	INPN_MonitorMode(n)	208 to 217	0xd0 to 0xd9	M2
PDPID	INPN_PDPID	665	0x299	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.53 ResetTimerGPRS

INOP_ResetTimerGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
TimerID Default = tssf (0)	INPN_TimerID	61	0x3d	D
TimerValue	INPN_TimerValue	62	0x3e	M
Ellipsis	INPN_Ellipsis	112	0x70	A

B.10.54 SendChargingInformationGPRS

INOP_SendChargingInformationGPRS				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x01	M
CAMEL-SCIGPRSBillingChargingCharacteristics				M
AOCGPRS				M2
AOCInitial				M3
E1	INPN_Initial_CAI_E1	144	0x90	O4
E2	INPN_Initial_CAI_E2	145	0x91	O4
E3	INPN_Initial_CAI_E3	146	0x92	O4
E4	INPN_Initial_CAI_E4	147	0x93	O4
E5	INPN_Initial_CAI_E5	148	0x94	O4
E6	INPN_Initial_CAI_E6	149	0x95	O4
E7	INPN_Initial_CAI_E7	150	0x96	O4
AOCSubsequent				O3
CAI-GSM0224				M4
E1	INPN_Subsequent_CAI_E1	151	0x97	O5
E2	INPN_Subsequent_CAI_E2	152	0x98	O5
E3	INPN_Subsequent_CAI_E3	153	0x99	O5
E4	INPN_Subsequent_CAI_E4	154	0x9a	O5
E5	INPN_Subsequent_CAI_E5	155	0x9b	O5
E6	INPN_Subsequent_CAI_E6	156	0x9c	O5
E7	INPN_Subsequent_CAI_E7	157	0x9d	O5
TariffSwitchInterval	INPN_TariffSwitchInterval	158	0x9e	O4
PDPID	INPN_PDPID	665	0x299	O2
Ellipsis	INPN_Ellipsis	112	0x70	A2

B.11 CAMEL v4 for IMS Operation Definitions

Specification: CAMEL Application Part (CAP) 3GPP TS 29.278 7.0.0 (2005-12)

B.11.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
cGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
BearerCapability				
BearerCapability	INPN_BearerCapability	23	0x17	O2
Ellipsis	INPN_BearerCap_Ellipsis	119	0x77	O2
EventTypeBCSM	INPN_EventTypeBCSM	24	0x18	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
Cause	INPN_Cause	41	0x29	O
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O
Carrier	INPN_Carrier	40	0x28	O
CUG-Index	INPN_CUG_Index	644	0x284	O
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
IMSI	INPN_IMSI	130	0x81	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x86	C2
CamelBusy	INPN_CamelBusy	135	0x87	C2
NetDetNotReachable	INPN_NetDetNotReachable	136	0x88	C2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	C2
LocationInfo (see LocationInformation (sub-table) on page 135)				O
Ext_BasicSrvCode				O
BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x82	O
IMSSFAddress	INPN_IMSSFAddress	4335	0x10EF	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x80	O
TimeAndTimezone	INPN_TimeAndTimezone	132	0x84	O
GSM_Forwarding Pending	INPN_GSM_ForwardingPending	133	0x85	O
IDPArgExtension				O
GMSC Address	INPN_GMSC_Address	653	0x28d	O2
MediaTypeInfoList	INPN_MediaTypeInfo	4359-4363	0x1107 to 0x110B	O3
sipCallid	INPN_SipCallId	4356	0x1104	O2
calledPartyURL	INPN_CalledPartyURL	4357	0x1105	O2
callingPartyURL	INPN_CallingPartyURL	4358	0x1106	O2
OriginalCalledPartyURL	INPN_OriginalCalledPartyURL	4353	0x1101	O2
RedirectingPartyURL	INPN_RedirectingPartyURL	4352	0x1100	O2
InitialDPArgExt_Ellipsis	INPN_InitialDPArgExt_Ellipsis	117	0x75	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.11.2 ActivityTest

See CAP v.3. ([Appendix B.9.23 ActivityTest on page 147](#)).

B.11.3 ApplyCharging

See CAP v.3. ([Appendix B.9.13 ApplyCharging on page 141](#)).

B.11.4 ApplyChargingReport

See CAP v.3. ([Appendix B.9.14 ApplyChargingReport on page 141](#)).

B.11.5 CallGap

See CAP v.3. ([Appendix B.9.15 CallGap on page 142](#)).

B.11.6 CallInformationReport

See CAP v.3. ([Appendix B.9.16 CallInformationReport on page 143](#)).

B.11.7 CallInformationRequest

See CAP v.3. ([Appendix B.9.17 CallInformationRequest on page 144](#)).

B.11.8 PlayAnnouncement

See CAP v.3. ([Appendix B.9.19 PlayAnnouncement on page 145](#)).

B.11.9 PromptAndCollectUserInformation

See CAP v.3. ([Appendix B.9.20 PromptAndCollectUserInformation on page 146](#)).

B.11.10 SpecializedResourceReport

See CAP v.3. ([Appendix B.9.21 SpecializedResourceReport on page 146](#)).

B.11.11 Cancel

See CAP v.3. ([Appendix B.9.22 Cancel on page 147](#)).

B.11.12 ContinueWithArg

See CAP v.3. ([Appendix B.9.24 ContinueWithArg on page 147](#)).

B.11.13 FurnishChargingInformation

See CAP v.3. ([Appendix B.9.12 FurnishChargingInformation on page 140](#)).

B.11.14 Continue

See CAP v.3. ([Appendix B.9.10 Continue on page 140](#)).

B.11.15 DisconnectForwardConnection

See CAP v.3. ([Appendix B.9.4 DisconnectForwardConnection on page 136](#)).

B.11.16 ConnectToResource

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x1	M

B.11.17 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O

INOP_Connect				
Parameter	Mnemonic	Value		
		(dec)	(hex)	
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
GenericNumbers (SEQUENCE, size = 1 to 5)				O
GenericNumber	INPN_GenericNumber(n)	67 to 71	0x43 to 0x47	O2
ServiceInteractionIndicatorsTwo (see ServiceInteractionIndicatorsTwo (sub-table) on page 134)				O
ChargeNumber	INPN_ChargeNumber	642	0x282	O
CUG-Interlock	INPN_CUG_Interlock	645	0x285	O
CUG-OutgoingAccess	INPN_CUG_OutgoingAccess	646	0x286	O
Suppression of Announcement	INPN_SuppressionOfAnnouncement	109	0x6d	O
OCSIApplicable	INPN_OCSIApplicable	110	0x6e	O
NaOlInfo	INPN_NAOlInfo	141	0x8d	O
ConnectArgExtension				O
DestinationRoutingAddressURL	INPN_DestinationRoutingAddressURL	4354	0x1102	O2
OriginalCalledPartyURL	INPN_OriginalCalledPartyURL	4353	0x1101	O2
RedirectingPartyURL	INPN_RedirectingPartyURL	4352	0x1100	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.11.18 ReleaseCall

See CAP v.3. ([Appendix B.9.7 ReleaseCall on page 137](#)).

B.11.19 ResetTimer

See CAP v.3. ([Appendix B.9.11 ResetTimer on page 140](#)).

B.11.20 RequestReportBCSMEvent

See CAP v.3. ([Appendix B.9.8 RequestReportBCSMEvent on page 138](#)).

B.11.21 EventReportBCSM

See CAP v.3. ([Appendix B.9.9 EventReportBCSM on page 138](#)).

B.12 ETSI CS-2 Operation Definitions

B.12.1 InitialDP

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ServiceKey	INPN_ServiceKey	3	0x3	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartyBuisness GroupID	INPN_CallingPartyBusiness GroupID	7	0x7	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
CGEncountered	INPN_cGEncountered	10	0xa	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
IPAvailable	INPN_IPAvailable	12	0xc	O
LocationNumber	INPN_LocationNumber	13	0xd	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
TerminalType	INPN_TerminalType	17	0x11	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
AdditionalCallingParty Number	INPN_AdditionalCallingParty Number	21	0x15	O
ForwardCallIndicators	INPN_ForwardCallIndicators	22	0x16	O
BearerCapability				O
BearerCap	INPN_BearerCapability	23	0x17	C2
Tmr	INPN_Tmr	104	0x68	C2
EventTypeBCSM	INPN_EventTypeBCSM(0)	192	0xC0	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x20	O
Cause	INPN_Cause	41	0x29	O
ISDNAccessRelated Information	INPN_ISDNAccessRelated Information	34	0x22	O
INServiceCompatibilityIndication (1..15)				O
Agreements	INPN_Agreements(0)	668	0x29c	C2
NetworkSpecific	INPN_NetworkSpecific(0)	684	0x2ac	C2
GenericNumber	INPN_GenericNumber(0)	67	0x43	O
ServiceInteractionIndicatorsTwo				O
ForwardServiceInteractionInd				O2
ConferenceTreatmentIndicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
CallDiversionTreatmentIndicator	INPN_CallDiversionTreatmentInd	712	0x2c8	O3
CallOfferingTreatmentIndicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestrictionIndicator	INPN_CallingPartyRestrictionInd	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatmentIndicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3
CallCompletionTreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThroughConnectionInd	INPN_BothwayThroughConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumberTreatment	INPN_ConnectedNumberTreatment	718	0x2ce	O2
SuppressCallDiversionNotification	INPN_SuppressCallDiverNot	719	0x2cf	O2
SuppressCallTransferNotification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNoPresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
ForwardGVNS	INPN_ForwardGVNS	724	0x2d4	O
CreatedCallSegmentAssociation	INPN_CSAID	725	0x2d5	O
USIServiceIndicator				O
Global	INPN_Global(0)	828	0x33c	C2
Local	INPN_Local(0)	844	0x34c	C2
USIInformation	INPN_USIInformation	704	0x2c0	O
Carrier	INPN_Carrier	40	0x28	O
IMSI	INPN_IMSI	130	0x82	O
SubscriberState				O
AssumedIdle	INPN_AssumedIdle	134	0x86	M2
CamelBusy	INPN_CamelBusy	135	0x87	M2
NetworkDetectionNotReachable	INPN_NetDetNotReachable	136	0x88	M2
NotProvidedFromVLR	INPN_NotProvidedFromVLR	137	0x89	M2
LocationInformation				O
AgeOfLocation Information	INPN_AgeOfLocation Information	124	0x7c	O2
GeographicalInformation	INPN_GeographicalInformation	125	0x7d	O2
Vlr_Number	INPN_Vlr_Number	126	0x7e	O2
LI_LocationNumber	INPN_LI_LocationNumber	127	0x7f	O2
CellIdOrLAI				O
CellIdFixedLength	INPN_CellIdFixedLength	122	0x7a	C2
LAIFixedLength	INPN_LAIFixedLength	123	0x7b	C2
ExtensionContainer	INPN_ExtensionContainer	128	0x80	O2

INOP_InitialDP				
Parameter	Mnemonic	Value		
		dec	hex	
Ext-BasicServiceCode				O
Ext-BearerServiceCode	INPN_Ext_BearerServiceCode	120	0x78	C2
Ext-TeleserviceCode	INPN_Ext_TeleserviceCode	121	0x79	C2
CallReferenceNumber	INPN_CallReferenceNumber	131	0x83	O
MSCAddress	INPN_ISDNAddressString	726	0x2d6	O
CalledPartyBCDNumber	INPN_CalledPartyBCDNumber	129	0x81	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.2 AssistRequestInstructions

INOP_AssistRequestInstructions				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CorrelationID	INPN_CorrelationID	31	0x1f	M
IPAvailable	INPN_IPAvailable	12	0xc	O
IPSSPCapabilities	INPN_IPSSPCapabilities	11	0xb	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.3 EstablishTemporaryConnection

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AssistingSSPIPRouting Address	INPN_AssistingSSPIPRouting Address	102	0x66	M
CorrelationID	INPN_CorrelationID	31	0x1f	O
LegID				C
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
CallSegmentID	INPN_CallSegmentID	320	0x140	C2
ScfID	INPN_ScfID	38	0x26	C
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
ServiceInteractionIndicatorsTwo				O

INOP_EstablishTemporaryConnection				
Parameter	Mnemonic	Value		
		dec	hex	
ForwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3
CallDiversionTreatment Indicator	INPN_CallDiversionTreatmentInd	712	0x2c8	O3
CallOfferingTreatment Indicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestriction Indicator	INPN_CallingPartyRestrictionInd	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3
CallCompletion TreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThrough ConnectionInd	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumber Treatment	INPN_ConnectedNumberTreatment	718	0x2ce	O2
SupressCallDiversion Notification	INPN_SuppressCallDiverNot	719	0x2cf	O2
SupressCallTransfer Notification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNo PresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.4**DisconnectForwardConnection**

INOP_DisconnectForwardConnection				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.12.5**ConnectToResource**

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokelD	1	0x1	M
IPAddressAndLegID				C
IPRoutingAddress	INPN_IPRoutingAddress	85	0x55	M2
LegID				M2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
IPAddressAndCallSegID				C

INOP_ConnectToResource				
Parameter	Mnemonic	Value		
		dec	hex	
IPRoutingAddress	INPN_IPRoutingAddress	85	0x1f	M2
CallSegmentID	INPN_CallSegmentID	320	0x140	M2
IPRoutingAddress	INPN_IPRoutingAddress	85	0x1f	C
LegID				C
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Null	n/a			C
CallSegmentID	INPN_CallSegmentID	320	0x140	C
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
ServiceInteractionIndicatorsTwo				O
ForwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3
CallDiversionTreatment Indicator	INPN_CallDiversionTreatment Ind	712	0x2c8	O3
CallOfferingTreatment Indicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestriction Indicator	INPN_CallingPartyRestriction Ind	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3
CallCompletion TreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThrough ConnectionInd	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumber Treatment	INPN_ConnectedNumber Treatment	718	0x2ce	O2
SupressCallDiversion Notification	INPN_SuppressCallDiverNot	719	0x2cf	O2
SupressCallTransfer Notification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNo PresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

If no IPRouting address is supplied, a null resource address will be formatted.

B.12.6 Connect

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	O
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
CorrelationID	INPN_CorrelationID	31	0x1f	O
CutAndPaste	INPN_CutAndPaste	32	0x20	O
ISDNAccessRelated Information	INPN_ISDNAccessRelated Information	34	0x22	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
RouteList				
RouteList	INPN_RouteList(0)	35	0x23	
RouteList	INPN_RouteList(1)	36	0x24	
RouteList	INPN_RouteList(2)	37	0x25	
ScfID	INPN_ScfID	38	0x26	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Carrier	INPN_Carrier	40	0x28	O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
DisplayInformation	INPN_DisplayInformation	91	0x5b	O
ForwardCallIndicators	INPN_ForwardCallIndicators	22	0x16	O
GenericNumber	INPN_GenericNumber(0)	67	0x43	O
ServiceInteractionIndicatorsTwo				O
ForwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3
CallDiversionTreatment Indicator	INPN_CallDiversionTreatment Ind	712	0x2c8	O3
CallOfferingTreatment Indicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestriction Indicator	INPN_CallingPartyRestriction Ind	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3

INOP_Connect				
Parameter	Mnemonic	Value		
		dec	hex	
CallCompletion TreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThrough ConnectionInd	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumber Treatment	INPN_ConnectedNumber Treatment	718	0x2ce	O2
SupressCallDiversion Notification	INPN_SuppressCallDiverNot	719	0x2cf	O2
SupressCallTransfer Notification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNo PresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
INServiceCompatibilityIndication (1..15)				O
Agreements	INPN_Agreements(0)	668	0x29c	C2
NetworkSpecific	INPN_NetworkSpecific(0)	684	0x2ac	C2
ForwardGVNS	INPN_ForwardGVNS	724	0x2d4	O
BackwardGVNS	INPN_BackwardGVNS	723	0x2d5	O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
LocationNumber	INPN_LocationNumber	13	0xd	O
BearerCapability				O
BearerCap	INPN_BearerCapability	23	0x17	C2
Tmr	INPN_Tmr	104	0x68	C2
SuppressionOfAnnouncement	INPN_SuppressionOfAnnouncement	109	0x6d	O
OCSIAplicable	INPN_OCSIAplicable	110	0x6e	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.7**ReleaseCall**

INOP_ReleaseCall				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InitialCallSegment	INPN_InitialCallSegment	745	0x2e9	M
AssociatedCallSegment				M
CallSegment	INPN_CallSegment	744	0x2e8	M2
ReleaseCause	INPN_Cause	41	0x29	O2
AllCallSegments				M
ReleaseCause	INPN_Cause	41	0x29	O2

B.12.8**RequestReportBCSMEvent**

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCSMEvents (SEQUENCE, n = 0 to 15)				M
EventTypeBCSM	INPN_EventTypeBCSM(n)	192 to 207	0xc0 to 0xcf	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
DPSpecificCriteria				O2
NumberOfDigits	INPN_NumberOfDigits(n)	160 to 175	0xa0 to 0xaf	C3
ApplicationTimer	INPN_ApplicationTimer(n)	176 to 191	0xb0 to 0xbf	C3
MidCallControlInfo				C3
MidCallCtrlSeq0				M4
MidCallInfoType0				M5
INServiceControlCode Low0	INPN_INServiceControlCode Low0(n)	1448 to 1463	0x5a8 to 0x5b7	M6
INServiceControlCode High0	INPN_INServiceControlCode High0(n)	1464 to 1479	0x5b8 to 0x5c7	O6
MidCallReportType0	INPN_MidCallReportType0(n)	1480 to 1495	0x5c8 to 0x5d7	D5

INOP_RequestReportBCSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
MidCallCtrlSeq1				O4
MidCallInfoType1				O2 O5
INServiceControlCode Low1	INPN_INServiceControlCode Low1(n)	1528 to 1543	0x5f8 to 0x607	M6
INServiceControlCode High1	INPN_INServiceControlCode High1(n)	1544 to 1559	0x608 to 0x617	O6
MidCallReportType1	INPN_MidCallReportType1(n)	1560 to 1575	0x618 to 0x627	D5
MidCallCtrlSeq2				O4
MidCallInfoType2				O5
INServiceControlCode Low2	INPN_INServiceControlCode Low2(n)	1608 to 1623	0x648 to 0x657	M6
INServiceControlCode High2	INPN_INServiceControlCode High2(n)	1624 to 1639	0x658 to 0x667	O6
MidCallReportType2	INPN_MidCallReportType2(n)	1640 to 1655	0x668 to 0x677	D5
MidCallCtrlSeq3				O4
MidCallInfoType3				O5
INServiceControlCode Low3	INPN_INServiceControlCode Low3(n)	1688 to 1703	0x698 to 0x6a7	M6
INServiceControlCode High3	INPN_INServiceControlCode High3(n)	1704 to 1719	0x6a8 to 0x6b7	O6
MidCallReportType3	INPN_MidCallReportType3(n)	1720 to 1735	0x6b8 to 0x6c7	D5
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

The BCSMEvent structure can be repeated up to sixteen times for each operation. Replace 'n' with the position in the sequence of BCSMEvents starting from 0. The LegID for each event may be specified as either a SendingSideID or a ReceivingSideID. For some events, the LegID parameter is mandatory; for example, events O-MidCall, O-Disconnect, T-MidCall and T-Disconnect in ETSI 300 374-1 must have this parameter present. For other events, the legID may take default values. Similarly, the DPSSpecificCriteria for each event may be specified as either NumberOfDigits or ApplicationTimer.

B.12.9 EventReportBCSM

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCSM	INPN_EventTypeBCSM(0)	192	0xc0	M
EventSpecificInformationBCSM				O
CollectedInfo				C2
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M 3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
AnalyzedInformation				C2
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	M 3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
RouteSelectFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Oanswer				C2
BackwardGVNS	INPN_BackwardGVNS	723	0x2d3	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
OmidCall				C2
ConnectTime	INPN_ConnectTime	103	0x65	O3
oMidCallInfo				C2
INServiceControlCode	INPN_INServiceControlCode	701	0x2bd	O4
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Odisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
ConnectTime	INPN_ConnectTime	103	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TcalledPartyBusy				C2
BusyCause	INPN_BusyCause	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
TnoAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tanswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
TmidCall				C2
ConnectTime	INPN_ConnectTime	103	0x5f	O3
tMidCallInfo				O3
INServiceControlCode	INPN_INServiceControlCode	701	0x2bd	O4
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
Tdisconnect				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
ConnectTime	INPN_ConnectTime	95	0x5f	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
oTermSeizedSpecificInfo				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
oSuspended				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
origAttemptAuthorized				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
oReAnswer				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
facilitySelectedAndAvailable				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
callAccepted				C2
--No Info--				
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
oAbandon				C2
abandonCause	INPN_AbandonCause	95	0x5f	O3

INOP_EventReportBCSM				
Parameter	Mnemonic	Value		
		dec	hex	
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
tAbandon				C2
abandonCause	INPN_AbandonCause	860	0x35c	O3
EventSpecInfo_Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
terminationAttemptAuthorized				C2
--No Info--				
LegID				O
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C2
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C2
MiscCallInfo				O
MessageType Default = request(0)	INPN_MessageType	56	0x38	D2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O

The event specific information formatted or recovered is dependent on the value of INPN_EventTypeBCSM(0). For example, if its value is collectedInfo (2), then the format procedures will use the parameter INPN_CalledPartyNumber.

B.12.10

RequestNotificationChargingEvent

INOP_RequestNotificationChargingEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ChargingEvent (SEQUENCE, n = 0 to 15)				M
EventTypeCharging	INPN_EventTypeCharging(n)	272 to 287	0x110 to 0x11f	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
LegID				O2
SendingSideID	INPN_SendingSideID(n)	224 to 239	0xe0 to 0xef	C3
ReceivingSideID	INPN_ReceivingSideID(n)	240 to 255	0xf0 to 0xff	C3
EventTypeTariff	INPN_EventTypeTariff(n)	794 to 809	0x31a to 0x329	O2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.11 EventNotificationCharging

INOP_EventNotificationCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeCharging	INPN_EventTypeCharging(0)	272	0x110	M
EventSpecificInformationCharging	INPN_EventSpecificInformationCharging	58	0x3a	O
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
MonitorMode	INPN_MonitorMode(0)	208	0xd0	D
EventTypeTariff	INPN_EventTypeTariff(0)	794	0x31a	O
EventSpecificInformationTariff	INPN_EventSpecificInformationTariff	707	0x2c3	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.12 CollectInformation

INOP_CollectInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.13 Continue

INOP_Continue				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.12.14 InitiateCallAttempt

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	M
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
ISDNAccessRelatedInformation	INPN_ISDNAccessRelatedInformation	34	0x22	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteraction Indicators	INPN_ServiceInteraction Indicators	20	0x14	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
LegID				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
CallSegmentID	INPN_CallSegmentID	320	0x140	M
INServiceCompatibilityResponse				O
Agreements	INPN_Agreements(0)	668	0x29c	C2
NetworkSpecific	INPN_NetworkSpecific(0)	684	0x2ac	C2
ServiceInteractionIndicatorsTwo				O
ForwardServiceInteractionInd				O2
ConferenceTreatment Indicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3
CallDiversionTreatment Indicator	INPN_CallDiversionTreatment Ind	712	0x2c8	O3
CallOfferingTreatment Indicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestriction Indicator	INPN_CallingPartyRestriction Ind	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatmentIndicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3
CallCompletionTreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThrough ConnectionInd	INPN_BothwayThrough ConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumberTreatment	INPN_ConnectedNumberTreatment	718	0x2ce	O2
SupressCallDiversionNotification	INPN_SuppressCallDiverNot	719	0x2cf	O2
SupressCallTransferNotification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNoPresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
Carrier	INPN_Carrier	40	0x28	O
LocationNumber	INPN_LocationNumber	13	0xd	O
BearerCapability				O

INOP_InitiateCallAttempt				
Parameter	Mnemonic	Value		
		dec	hex	
BearerCap	INPN_BearerCapability	23	0x17	C2
Tmr	INPN_Tmr	104	0x68	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.15 ResetTimer

INOP_ResetTimer				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TimerID	INPN_TimerID	61	0x3d	D
TimerValue	INPN_TimerValue	62	0x3e	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.16 FurnishChargingInformation

INOP_FurnishChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FurnishCharging InformationBilling ChargingCharacteristics	INPN_FCIBCCS1	715	0x2cb	M
FCIBCCSequenceCS2				M
FCIBCC	INPN_FCIBCC	708	0x2c4	O
Tariff				O
Crgt	INPN_Crgt	810	0x32a	M2
Aocrg	INPN_Aocrg	811	0x32b	M2

B.12.17 ApplyCharging

INOP_ApplyCharging				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
AchBillingCharging Characteristics	INPN_AchBillingCharging Characteristics	52	0x34	M
SendCalculationToSCP Indication Default = False	INPN_SendCalculationToSCP Indication	53	0x35	D
PartyToCharge				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.18 ApplyChargingReport

INOP_ApplyChargingReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallResult	INPN_CallResult	55	0x37	M

B.12.19 CallGap

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
GapCriteria				M
CalledAddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressAndService				C2
CallingAddressValue	INPN_CallingAddressValue	99	0x63	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
LocationNumber	INPN_LocationNumber	13	0xd	O3
GapOnService				C2
ServiceKey	INPN_ServiceKey	3	0x3	M3
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	C2

INOP_CallGap				
Parameter	Mnemonic	Value		
		dec	hex	
Null				n/a
GapIndicators				M
Gap Duration	INPN_Gap_Duration	72	0x48	M2
GapInterval	INPN_GapInterval	73	0x49	M2
ControlType	INPN_ControlType	101	0x65	O
GapTreatment				O
InformationToSend (see InformationToSend (Sub-table) on page 96)				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	C2
Both				C2
InformationToSend (see InformationToSend (Sub-table) on page 96)				M3
ReleaseCause	INPN_ReleaseCause	96	0x60	M3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.20

ActivateServiceFiltering

INOP_ActivateServiceFiltering				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
FilteredCallTreatment				M
SFBillingCharging Characteristics	INPN_SFBillingCharging Characteristics	92	0x5c	M2
InformationToSend (see InformationToSend (Sub-table) on page 96)				O2
MaximumNumberOf Counters	INPN_MaximumNumberOf Counters	93	0x5d	O2
ReleaseCause	INPN_ReleaseCause	96	0x60	O2
sFTariffMessage				
ChargingTariff Information	INPN_ChargingTariffInformation	932	0x3a4	O3
SFTariffMessage Ellipsis	INPN_SFTariffMessage_Ellipsis	933	0x3a5	O3
FilteringCharacteristics				M
Interval	INPN_Interval	90	0x5a	C2
NumberOfCalls	INPN_NumberOfCalls	97	0x61	C2
FilteringTimeout				M
Filtering Duration	INPN_Filtering_Duration	98	0x62	C2
StopTime	INPN_StopTime	100	0x64	C2

INOP_ActivateServiceFiltering				
Parameter	Mnemonic	Value		
		dec	hex	
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
StartTime				O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.21**ServiceFilteringResponse**

INOP_ServiceFilteringResponse				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CountersValue (SEQUENCE, size = 1 to 100)				M
CounterID	INPN_CounterID	328 to 427	0x148 to 0x1ab	M2
CounterValue	INPN_CounterValue	428 to 527	0x1ac to 0x20f	M2
FilteringCriteria				M
ServiceKey	INPN_ServiceKey	3	0x3	C2
AddressAndService				C2
CalledAddressValue	INPN_CalledAddressValue(0)	308	0x134	M3
ServiceKey	INPN_ServiceKey	3	0x3	M3
CallingAddressValue	INPN_CallingAddressValue	99	0x63	O3
LocationNumber	INPN_LocationNumber	13	0xd	O3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.22 Call Information Report

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
RequestedInformationValue				M2
CallAttemptEllapsed TimeValue	INPN_CallAttemptEllapsedTimeValue(n)	293 to 297	0x125 to 0x129	C3
CallStopTimeValue	INPN_CallStopTimeValue(n)	298 to 302	0x12a to 0x12e	C3
CallConnectedElapsedTimeValue	INPN_CallConnectedElapsedTimeValue(n)	303 to 307	0x12f to 0x133	C3
CalledAddressValue	INPN_CalledAddressValue(n)	308 to 312	0x134 to 0x138	C3
ReleaseCauseValue	INPN_ReleaseCauseValue(in	313 to 317	0x139 to 0x13d	C3
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.23 Call Information Request

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInformationReport (SEQUENCE, size = 1 to 5)				M
RequestedInformationType	INPN_RequestedInformationType	288 to 292	0x120 to 0x124	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O2

INOP_CallInformationReport				
Parameter	Mnemonic	Value		
		dec	hex	
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.24**SendChargingInformation**

INOP_SendChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
SCIBillingCharging Characteristics	INPN_SCIBillingCharging Characteristics	87	0x57	M
LegID				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
TariffMessage	INPN_TariffMessage	956	0x3bc	O
Ellipsis	INPN_Ellipsis	112	0x70	A

Tariff message should be encoded as ChargingMessageType, as defined in ETSI ES 201 296.

B.12.25**PlayAnnouncement**

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
InformationToSend (see InformationToSend (Sub-table) on page 96)				O M2
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
RequestAnnouncement Complete Default = True	INPN_RequestAnnouncement Complete	60	0x3c	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
LegID				O

INOP_PlayAnnouncement				
Parameter	Mnemonic	Value		
		dec	hex	
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.26

PromptAndCollectUserInformation

INOP_PromptAndCollectUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CollectedInfo				M
CollectedDigits				M2
MinimumNumberOfDigits Default = 1	INPN_MinimumNumberOfDigits	74	0x4a	D3
MaximumNumberOf Digits	INPN_MaximumNumberOf Digits	75	0x4b	M3
EndOfReplyDigit	INPN_EndOfReplyDigit	76	0x4c	O3
CancelDigit	INPN_CancelDigit	77	0x4d	O3
StartDigit	INPN_StartDigit	78	0x4e	O3
FirstDigitTimeOut	INPN_FirstDigitTimeOut	79	0x4f	O3
InterDigitTimeOut	INPN_InterDigitTimeOut	80	0x50	O3
ErrorTreatment Default = StfErrorAndInfo	INPN_ErrorTreatment	81	0x41	D3
InterDigitTimeOut Default = True	INPN_InterDigitTimeOut	82	0x42	D3
InterruptableAndInd Default = False	INPN_InterruptableAnnInd	83	0x43	D3
VoiceBack Default = False	INPN_VoiceBack	84	0x44	D3
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
InformationToSend (see InformationToSend (Sub-table) on page 96)				O
				M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.27 SpecializedResourceReport

INOP_SpecializedResourceReport				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LinkedID	INPN_LinkedID	2	0x2	O

B.12.28 Cancel

INOP_Cancel				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	O
CallSegmentToCancel				O
Cancel_InvokeID	INPN_Cancel_InvokeID	86	0x56	M2
CallSegmentID	INPN_CallSegmentID	320	0x140	M2

If the parameter IPN_Cancel_InvokeID is not set, then the operation will be sent with the null parameter 'All Requests' indicating all operations on that dialogue should be cancelled.

B.12.29 ActivityTest

INOP_ActivityTest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M

B.12.30 DFC_With_Argument

INOP_DFC_with_Argument				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LegOrCSID				M
LegID				C2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
CallSegmentID	INPN_CallSegmentID	320	0x140	C2

INOP_DFC_with_Argument				
Parameter	Mnemonic	Value		
		dec	hex	
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.31 ContinueWithArgument

INOP_ContinueWithArgument				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
LegOrCSID				M
LegID				C2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
CallSegmentID	INPN_CallSegmentID_Array(0)	1004	0x3ec	C2
AlertingPattern	INPN_AlertingPattern	30	0x1e	O
GenericName	INPN_GenericName	934	0x3ae	O
INServiceCompatibilityResponse				O
Agreements	INPN_Agreements	668	0x29c	C2
NetworkSpecific	INPN_NetworkSpecific	684	0x2ac	C2
ForwardGVNS	INPN_ForwardGVNS	724	0x2d4	O
BackwardGVNS	INPN_BackwardGVNS	723	0x2d3	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
ServiceInteractionIndicatorsTwo				O
ForwardServiceInteractionInd				O2
ServiceInt_Ind_Two	INPN_ServiceInt_Ind_Two	942	0x3ae	O
ConferenceTreatmentIndicator	INPN_Fw_ConferenceTreatmentInd	711	0x2c7	O3
CallDiversionTreatmentIndicator	INPN_CallDiversionTreatmentInd	712	0x2c8	O3
CallOfferingTreatmentIndicator	INPN_CallOfferingTreatmentInd	713	0x2c9	O3
CallingPartyRestrictionIndicator	INPN_CallingPartyRestrictionInd	714	0x2ca	O3
BackwardServiceInteractionInd				O2
ConferenceTreatmentIndicator	INPN_Bw_ConferenceTreatmentInd	710	0x2c6	O3
CallCompletionTreatmentIndicator	INPN_CallCompletionTreatmentInd	716	0x2cc	O3
BothwayThroughConnectionInd	INPN_BothwayThroughConnectionIndicator	111	0x6f	O2
SuspendTimer	INPN_SuspendTimer	717	0x2cd	O2
ConnectedNumberTreatment	INPN_ConnectedNumberTreatment	718	0x2ce	O2
SuppressCallDiversionNotification	INPN_SuppressCallDiverNot	719	0x2cf	O2

INOP_ ContinueWithArgument				
Parameter	Mnemonic	Value		
		dec	hex	
SupressCallTransferNotification	INPN_SuppressCallTransferNot	720	0x2d0	O2
AllowCdINNoPresentationInd	INPN_AllowCdINNoPresentInd	721	0x2d1	O2
UserDialogueDurationInd	INPN_UserDialogueDuratInd	722	0x2d2	O2
ServiceInteractionIndicatorsTwo_Ellipsis	INPN_ServIntActInd2_Ellipsis	1404	0x57c	O2
LocationNumber	INPN_LocationNumber	13	0xd	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.32 CreateCallSegmentAssociation

INOP_CreateCallSegmentAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.33 DisconnectLeg

INOP_DisconnectLeg				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Leg to be released				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.34 MergeCallSegments

INOP_MergeCallSegments				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
SourceCallSegment	INPN_SourceCallSegment(0)	1020	0x3fc	M
TargetCallSegment Default = 1 (InitialCallSegment)	INPN_TargetCallSegment	936	0x3a8	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.35 MoveCallSegment

INOP_MoveCallSegments				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
TargetCallSegment Association	INPN_TargetCallSegment Association	937	0x3a7	M
CallSegments (SEQUENCE, size = 1 to 16)				M
SourceCallSegment Default = 1 (InitialCallSegment)	INPN_SourceCallSegment(n)	1020 to 1035	0x3fc to 0x40b	D2
NewCallSegment	INPN_NewCallSegment(n)	1036 to 1051	0x40c to 0x41b	M2
Legs				M
SourceLeg	INPN_SourceLeg(n)	972 to 987	0x3cc to 0x3db	M2
NewLeg	INPN_NewLeg(n)	988 to 1003	0x3dc to 0x3eb	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.36 MoveLeg

INOP_MoveLeg				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Leg ID to be move				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
TargetCallSegment Default = 1 (InitialCallSegment)	INPN_TargetCallSegment	936	0x3a8	D
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.37 SplitLeg

INOP_SpliteLeg				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Leg ID to be split				M
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
NewCallSegment	INPN_NewCallSegment(0)	1036	0x40c	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.38 EntityReleased

INOP_EntityReleased				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CS Failure				C
CallSegmentID	INPN_CallSegmentID	320	0x140	O2
Reason	INPN_EntityReleased_Reason	943	0x3af	O2
Cause	INPN_EntityReleased_Cause	944	0x3b0	O2
Ellipsis	INPN_CSFailure_Ellipsis	945	0x3b1	A2
BCSM Failure				C
Leg ID to be split				M2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C3

INOP_EntityReleased				
Parameter	Mnemonic	Value		
		dec	hex	
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Reason	INPN_EntityReleased_Reason	943	0x3af	O2
Cause	INPN_EntityReleased_Cause	944	0x3b0	O2
Ellipsis	INPN_BCSMFailure_Ellipsis	946	0x3b2	A2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.39**ManageTriggerData**

INOP_ManageTriggerData				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ActionIndicator	INPN_ActionIndicator	947	0x3b3	M
TriggerDataIdentifier				M
TriggerID	INPN_EventTypeBCSM(0)	192	0cc0	M2
ProfileIdentifier				M2
Access	INPN_CalledPartyNumber	5	0x5	C3
FacilityGroup				C3
TrunkGroupID	INPN_TrunkGroupID	951	0x3b7	C4
PrivateFacilityID	INPN_PrivateFacilityID	952	0x3b8	C4
HuntGroup	INPN_HuntGroup	953	0x3b9	C4
RouteIndex	INPN_RouteIndex	954	0x3ba	C4
Ellipsis	INPN_TriggerDataId_Ellipsis	950	0x3b6	A2
RegistrarIdentifier	INPN_RegistrarIdentifier	949	0x3b5	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.40 RequestReportUTSI

INOP_RequestReportUTSI				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedUTSIList (SEQUENCE, size 1..16)				M
USIServiceIndicator				M2
Global	INPN_Global(n)	828 to 843	0x33c to 0x34b	C3
Local	INPN_Local(n)	844 to 859	0x34c to 35b	C3
USIMonitorMode	INPN_USIMonitorMode(n)	812 to 827	0x32c to 0x33b	M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
LegID				O2
SendingSideID	INPN_SendingSideID(0)	224	0xe0	D3
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C3
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.41 SendSTUI

INOP_SendSTUI				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
USIServiceIndicator				M
Global	INPN_Global	828	0x33c	C2
Local	INPN_Local	844	0x34c	C2
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	D2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
USIInformation	INPN_USIInformation	704	0x2c0	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.42 ReportUTSI

INOP_ReportUTSI				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
USIServiceIndicator				M
Global	INPN_Global(0)	828	0x33c	C2
Local	INPN_Local(0)	844	0x34c	C2
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	D2
USIInformation	INPN_USIInformation	704	0x2c0	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.43 PromptAndReceiveMessage

INOP_PromptAndReceiveMessage				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
DisconnectFromIP Forbidden Default = True	INPN_DisconnectFromIP Forbidden	59	0x3b	D
InformationToSend (see InformationToSend (Sub-table) on page 96)				O
				M2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
SubscriberID	INPN_SubscriberID	321	0x141	O
MailBoxID	INPN_MailBoxID	322	0x142	O
InformationToRecord				M
Record_MessageID	INPN_Record_MessageID	630		O2
MessageDeletionTime Out	INPN_MessageDeletionTime Out	625	0x271	O2
TimeToRecord	INPN_TimeToRecord	626	0x272	O2
Control Digits				O2
EndOfRecordingDigit	INPN_EndOfRecordingDigit	553	0x229	O3
CancelDigit	INPN_CancelDigit	77	0x4d	O3
ReplayDigit	INPN_ReplayDigit	554	0x22a	O3
RestartRecordingDigit	INPN_RestartRecordingDigit	555	0x22b	O3
RestartAllowed Default = False	INPN_RestartAllowed	556	0x22c	D3

INOP_PromptAndReceiveMessage				
Parameter	Mnemonic	Value		
		dec	hex	
ReplayAllowed Default = False	INPN_ReplayAllowed	557	0x22d	D3
ControlDigits_Ellipsis	INPN_ControlDigits_Ellipsis	558	0x22e	A3
InfoToRecord_Ellipsis	INPN_InfoToRecord_Ellipsis	559	0x22f	A2
Media Default = VoiceMail (0)	INPN_Media	323	0x143	D
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.44**ScriptInformation**

INOP_ScriptInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ScriptId Local Identifier	INPN_ScriptId_Local	324	0x144	C
ScriptId Global Identifier	INPN_ScriptId_Global	325	0x145	C
ScriptSpecificInfo	INPN_ScriptSpecificInfo	326	0x146	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.45**ScriptEvent**

INOP_ScriptEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ScriptId Local Identifier	INPN_ScriptId_Local	324	0x144	C
ScriptId Global Identifier	INPN_ScriptId_Global	325	0x145	C
ScriptResult	INPN_ScriptResult	327	0x146	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
LastEventIndicator	INPN_LastEventIndicator	627	0x273	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.46 ScriptRun

INOP_ScriptRun				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ScriptId Local Identifier	INPN_ScriptId_Local	324	0x144	C
ScriptId Global Identifier	INPN_ScriptId_Global	325	0x145	C
ScriptSpecificInfo	INPN_ScriptSpecificInfo	326	0x146	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
DisconnectFromIP Forbidden	INPN_DisconnectFromIP Forbidden	59	0x3b	O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.47 ScriptClose

INOP_ScriptClose				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ScriptId Local Identifier	INPN_ScriptId_Local	324	0x144	C
ScriptId Global Identifier	INPN_ScriptId_Global	325	0x145	C
ScriptSpecificInfo	INPN_ScriptSpecificInfo	326	0x146	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CallSegmentID	INPN_CallSegmentID	320	0x140	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.48 EstablishChargingRecord

INOP_EstablishChargingRecord				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
UserCredit				O
Currency				C2
CurrencyID	INPN_CurrencyID	1244	0x4dc	M3
Amount	INPN_Amount	1245	0x4dd	M3
CurrencyValue Ellipsis	INPN_CurrencyValue_Ellipsis	1246	0x4de	A3
CreditUnit	INPN_CreditUnit	1368	0x	C2
ChargingParameters				O

INOP_EstablishChargingRecord				
Parameter	Mnemonic	Value		
		dec	hex	
UnitsPerInterval	INPN_UnitsPerInterval	1247	0x4df	M2
TimePerInterval	INPN_TimePerInterval	1248	0x4e0	M2
ScalingFactor	INPN_ScalingFactor	1249	0x4e1	M2
InitialUnitIncrement	INPN_InitialUnitIncrement	1250	0x4e2	O2
UnitsPerDataInterval	INPN_UnitsPerDataInterval	1251	0x4e3	O2
SegmentsPerData Interval	INPN_SegmentsPerDataInterval	1252	0x4e4	O2
InitialTimeInterval	INPN_InitialTimeInterval	1253	0x4e4	O2
ChargingParameters Ellipsis	INPN_ChargingParameters_ Ellipsis	1254	0x4e6	O2
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
ReportExpected Default = True	INPN_ReportExpected	1278	0x4fe	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.49

HandlingInformationRequest

INOP_HandlingInformationRequest				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedType	INPN_RequestedType	1279	0x4ff	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
LocationNumber	INPN_LocationNumber	13	0xd	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
DialledDigits	INPN_DialledDigits	4	0x4	O
RedirectingPartyID	INPN_ReducingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O

INOP_HandlingInformationRequest				
Parameter	Mnemonic	Value		
		dec	hex	
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
NumberOfCallAttempts	INPN_NumberOfCallAttempts	1280	0x500	O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x19	O
BearerCapability	INPN_BearerCapability	23	0x17	O
InvokedSupplementary Service	INPN_InvokedSupplementary Service	1281	0x501	O
ActiveSupplementary Services	INPN_ActiveSupplementary Services	1282	0x502	O
CauseOfLastCallFailure	INPN_CauseOfLastCallFailure	1283	0x503	O
UserInteractionModes	INPN_UserInteractionModes	1284	0x504	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
CallingPartyBusinessGroupID	INPN_CallingPartyBusiness GroupID	7	0x7	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.50**HandlingInformationResult**

INOP_HandlingInformationResult				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RoutingAddress				O
RoutingProhibited	INPN_RoutingProhibited	1260	0x4ec	C2
DestinationRouting Address	INPN_DestinationRouting Address(0)	27	0x1b	C2
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x19	O
SupplimentaryServices	INPN_SupplimentaryServices	1277	0x4fd	O
PreferredLanguage	INPN_PREFERREDLanguage	1285	0x505	O
Carrier	INPN_Carrier	40	0x28	O

INOP_HandlingInformationResult				
Parameter	Mnemonic	Value		
		dec	hex	
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
OriginalCalledPartyID	INPN_OriginalCalledPartyID	15	0xf	O
RedirectingPartyID	INPN_RedirectingPartyID	25	0x19	O
RedirectionInformation	INPN_RedirectionInformation	26	0x1a	O
CallingPartysCategory	INPN_CallingPartysCategory	8	0x8	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.51

NetworkCapability

INOP_NetworkCapability				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BearerCapabilities (Bitstring)	INPN_Bits_BearerCapabilities	1286	0x506	O
HighLayerCompatibilities (Bitstring)	INPN_Bits_HighLayerCompatibilities	1287	0x507	O
SupplimentaryServices	INPN_SupplimentaryServices	1277	0x4fd	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2

INOP_NetworkCapability				
Parameter	Mnemonic	Value		
		dec	hex	
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.52**NotificationProvided**

INOP_NotificationProvided				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Notification	INPN_Notification			M
Notification Information				O
UserAbandon				C2
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
CallFailure				C2
FailureCause	INPN_FailureCause	94	0x5e	
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
NoReply				C2
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
CallRelease				C2
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
TimeStamp	INPN_TimeStamp	1292	0x50c	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
SSInvocation				C2
InvokableService	INPN_InvokableService	1293	0x50d	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
CreditLimitReached				C2
TimeStamp	INPN_TimeStamp	1292	0x50c	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
CallDuration				C2
TimeStamp	INPN_TimeStamp	1292	0x50c	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
CalledNumber				C2
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3

INOP_NotificationProvided				
Parameter	Mnemonic	Value		
		dec	hex	
AnsweredCall				C2
TimeStamp	INPN_TimeStamp	1292	0x50c	O3
EventSpecInfo Ellipsis	INPN_EventSpecInfo_Ellipsis	113	0x71	A3
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.53 ConfirmedNotificationProvided

As per [Section B.12.52 NotificationProvided on page 237](#).

B.12.54 ProvideUserInfo

INOP_ProvideUserInfo				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Constraints				M
MaximumNumberOf Digits	INPN_MaximumNumberOfDigits	75	0x4b	
MinimumNumberOf Digits	INPN_MinimumNumberOfDigits	74	0x4a	
TypeOfRequestedInfo Default = numericString 0	INPN_TypeOfRequestedInfo	1097	0x449	D2
NumberOfAllowedRetries Default = 0	INPN_NumberOfAllowedRetries	1098	0x44a	D2
Info to send (See InformationToSend (Sub-table) on page 96)				O
				M2
Error Info (See Error InformationToSend (Sub-table) on page 239)				O
				M2

INOP_ProvideUserInfo				
Parameter	Mnemonic	Value		
		dec	hex	
TypeOfRequestedInfo Default = numericString 0	INPN_TypeOfRequestedInfo	1097	0x449	D
NumberOfAllowedRetries Default = 0	INPN_NumberOfAllowedRetries	1098	0x44a	D
Actions	INPN_Actions	1290	0x50a	O
PreferredLanguage	INPN_PreferredLanguage	1285	0x505	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

Error InformationToSend (Sub-table)

Error InformationToSend				
Parameter	Mnemonic	Value		
		dec	hex	
InbandInfo				C
MessageID				O2
ElementaryMessageID	INPN_Error_Elementary MessageID	1258	0x4ea	C3
Text				C3
MessageContent	INPN_Error_MessageContent	1255	0x4e7	M4
Attributes	INPN_Error_Attributes	1256	0x4e8	O4
ElementaryMessageIDs	INPN_Error_Elementary MessageIDs(n)	1052 to 1067	0x41c to 0x42b	C3
VariableMessage				C3
ElementaryMessageID	INPN_Error_Variable_ MessageID	1257	0x4e9	C4
VariableParts				M4
Integer	INPN_Error_Integer(n)	1068 to 1072	0x42c to 0x430	C5

Error InformationToSend				
Parameter	Mnemonic	Value		
		dec	hex	
Number	INPN_Error_Number(n)	1073 to 1077	0x431 to 0x435	C5
Time	INPN_Error_Time(n)	1078 to 1082	0x436 to 0x43a	C5
Date	INPN_Error_Date(n)	1083 to 1087	0x43b to 0x43f	C5
Price	INPN_Error_Price(n)	1088 to 1092	0x440 to 0x444	C5
NumberOfRepetitions	INPN_Error_NumberOfRepetitions	1093	0x445	O2
Duration	INPN_Error_Duration	1094	0x446	O2
Interval	INPN_Error_Interval	1095	0x447	O2
Tone				C
ToneID	INPN_Error_ToneID	1259	0x4eb	M2
Duration	INPN_Error_Duration	1094	0x446	O2
DisplayInformation	INPN_Error_DisplayInformation	1096	0x447	C

B.12.55 ConfirmedReportChargingInformation

As per [Section B.12.56 ReportChargingInformation](#) below.

B.12.56 ReportChargingInformation

INOP_ReportChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CallRecord				O
Duration	INPN_Duration	89	0x59	M2
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	M2
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M2
CallRecord_Ellipsis	INPN_CallRecord_Ellipsis	1099	0x44b	A2
UserCredit				O
CurrencyValue				C2
CurrencyID	INPN_CurrencyID	1244	0x4dc	M3
Amount	INPN_Amount	1245	0x4dd	M3
CurrencyValue Ellipsis	INPN_CurrencyValue_Ellipsis	1246	0x4de	A3
CreditUnit	INPN_CreditUnit	1368	0x558	C2
UniqueCallID	INPN_UniqueCallID	1289	0x509	O

INOP_ReportChargingInformation				
Parameter	Mnemonic	Value		
		dec	hex	
AccountNumber	INPN_AccountNumber	1291	0x50b	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.57

RequestNotification

INOP_RequestNotification				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedNotifications (Request up to 9 notifications, n = 0 up to 8)				O
UserAbandon(n)	INPN_UserAbandon(n)	1100 to 1115	0x44c to 0x45b	C2
CallFailure(n)	INPN_CallFailure(n)	1116 to 1131	0x45c to 0x46b	C2
NoReply(n)	INPN_NoReply(n)	1132 to 1147	0x46c to 0x47b	C2
CallRelease(n)	INPN_CallRelease(n)	1148 to 1163	0x47c to 0x48b	C2
SS_Invocation(n)	INPN_SS_Invocation(n)	1164 to 1179	0x48c to 0x49b	C2
CreditLimitReached(n)	INPN_CreditLimitReached(n)	1180 to 1195	0x49c to 0x4ab	C2
CallDuration(n)	INPN_CallDuration(n)	1196 to 1211	0x4ac to 0x4bb	C2
CalledNumber(n)	INPN_CalledNumber(n)	1212 to 1227	0x4bc to 0x4cb	C2
AnsweredCall(n)	INPN_AnsweredCall(n)	1228 to 1243	0x4cc to 0x4db	C2
SecurityParameters				O

INOP_RequestNotification				
Parameter	Mnemonic	Value		
		dec	hex	
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.58**InitiateAssociation**

INOP_InitiateAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
USIServiceIndicator				O
Global	INPN_Global(0)	828	0x33c	C2
Local	INPN_Local(0)	844	0x34c	C2
USIInformation	INPN_USIInformation	704	0x2c0	O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.59 ReleaseAssociation

INOP_ReleaseAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Cause	INPN_Cause	41	0x29	M

B.12.60 RequestReportBCUSMEvent

INOP_RequestReportBCUSMEvent				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
BCUSMEvents (0..15)				M
EventType	INPN_EventTypeBCUSM(n)	728 to 743	0x2d8 to 0x2e7	M2
MonitorMode	INPN_MonitorMode(n)	208 to 223	0xd0 to 0xdf	M2
Duration	INPN_Duration	89	0x59	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
CUDPCriteria				O
LocalValue	INPN_LocalValue	702	0x2be	C2
Global	INPN_Global(0)	828	0x33c	C2
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.61 InitialAssociationDP

INOP_InitialAssociationDP				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Servicekey	INPN_Duration	89	0x59	M
CUApplicationInd				O
LocalValue	INPN_LocalValue	702	0x2be	C2
Global	INPN_Global(0)	828	0x33c	C2
MiscCallInfo				O
MessageType	INPN_MessageType	56	0x38	M2
EventTypeBCUSM	INPN_EventTypeBCUSM(0)	728	0x2d8	O
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	O
CallingPartyNumber	INPN_CallingPartyNumber	6	0x6	O
CallingPartySubAddress	INPN_CallingPartySubaddress	9	0x9	O
HighLayerCompatibility	INPN_HighLayerCompatibility	19	0x13	O
BearerCapability				O
BearerCap	INPN_BearerCapability	23	0x17	C2
Tmr	INPN_Tmr	104	0x68	C2
USIServiceIndicator				O
Global	INPN_Global(0)	828	0x33c	C2
Local	INPN_Local(0)	844	0x34c	C2
USIInformation	INPN_USIInformation	704	0x2c0	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.62 ConnectAssociation

INOP_ConnectAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
CalledPartyNumber	INPN_CalledPartyNumber	5	0x5	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.63 ContinueAssociation

INOP_ContinueAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.12.64 EventReportBCUSM

INOP_InitiateAssociation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
EventTypeBCUSM	INPN_EventTypeBCUSM(0)	728	0x2d8	O
EventSpecificInformationBCUSM				O
ComponentReceivedSpecificInfo				C2
ComponentReceivedInfo	INPN_CompRecSpecInfo	705	0x2c1	O3
AssociationReleaseRequestedSpecificInfo				C2
AssociationReleaseInfo	INPN_AssRelReqSpecInfo	706	0x2c2	O3
ReleaseCause	INPN_ReleaseCause	96	0x60	O3
MiscCallInfo				O
MessageType	INPN_Messagetype	56	0x38	M2
CUApplicationInd				O
LocalValue	INPN_LocalValue	702	0x2be	C2
Global	INPN_Global(0)	828	0x33c	C2
LegID				O
SendingSideID	INPN_SendingSideID(0)	224	0xe0	C2
ReceivingSideID	INPN_ReceivingSideID(0)	240	0xf0	C2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

B.13 AIN Operation Definitions

B.13.1 AnalyzeRoute

INOP_AnalyzeRoute				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
ChargeNumber	AINPN_ChargeNumber	6	0x6	O
CallingPartyID	AINPN_CallingPartyID	7	0x7	O
ChargePartyStationType	AINPN_ChargePartyStationType	8	0x8	O
CalledPartyID	AINPN_CalledPartyID	3	0x3	O
OutpulseNumber	AINPN_OutpulseNumber	50	0x32	O
Tcm	AINPN_Tcm	13	0xd	O
PrimaryTrunkGroup	AINPN_PrimaryTrunkGroup	51	0x33	O
AlternateTrunkGroup	AINPN_AlternateTrunkGroup	52	0x34	O
SecondAlternateTrunkGroup	AINPN_SecondAlternateTrunkGroup	53	0x35	O
PassiveLegTreatment	AINPN_PassiveLegTreatment	56	0x38	O
RedirectingPartyID	AINPN_RedirectingPartyID	548	0x224	O
PrimaryBillingIndicator	AINPN_PrimaryBillingInd	57	0x39	O
AlternateBillingIndicator	AINPN_AlternateBillingInd	58	0x3a	O
SecondAlternateBillingIndicator	AINPN_SecondAlternateBillingInd	59	0x3b	O
OverflowBillingIndicator	AINPN_OverflowBillingInd	60	0x3c	O
AMAAlternateBillingNumber	AINPN_AMAAlternateBillingNumber	61	0x3d	O
AMABusinessCustomerID	AINPN_AMABusinessCustomerID	62	0x3e	O
AMALineNumberList (SEQUENCE, size = 0 to 1)				O
AMALineNumber	AINPN_AMALineNumber	69 to 70	0x45 to 0x46	M2
AMAslpID	AINPN_AMAslpID	63	0x3f	O
AMADigitsDialedWCList (SEQUENCE, size = 0 to 4)				O
AMADigitsDialedWC	AINPN_AMADigitsDialedWC	71 to 75	0x47 to 0x4b	M2
Amp1	AINPN_Amp1	15	0xf	O
Amp2				O
AmpAINNodeID				M2
SpclD	AINPN_SpclD	32	0x20	C3
ISDNDeviceID	AINPN_ISDNDeviceID	33	0x21	C3
AmpClogSeqNo	AINPN_AmpClogSeqNo	34	0x22	O2

INOP_AnalyzeRoute				
Parameter	Mnemonic	Value		
		dec	hex	
AmpCLogRepInd	AINPN_AmpCLogRepInd	35	0x23	O2
AmpCallProgInd	AINPN_AmpCallProgInd	36	0x24	O2
AmpTestReqInd	AINPN_AmpTestReqInd	37	0x25	O2
AmpCLogName	AINPN_AmpCLogName	38	0x26	O2
AmpSvcProvID	AINPN_AmpSvcProvID	39	0x27	O2
ServiceProviderID				O
Ocn	AINPN_Ocn	553	0x229	C2
MsrID	AINPN_MsrID	554	0x22a	C2
ServiceContext	AINPN_ServiceContext	64	0x40	O
AMABillingFeature	AINPN_AMABillingFeature	65	0x41	O
AMASequenceNumber	AINPN_AMASequenceNumber	18	0x12	O
RedirectionInformation	AINPN_RedirectionInformation	549	0x225	O
CarrierUsage	AINPN_CarrierUsage	66	0x42	O
ExtensionParameter				O
GenericAddressList (SEQUENCE, size = 0 to 4)				O
GenericAddress	AINPN_GenericAddress	40 to 44	0x28 to 0x2c	M2
NetworkSpecificFacilities	AINPN_NetworkSpecificFacilities	19	0x13	O
CallingPartyBGID	AINPN_CallingPartyBGID	546	0x222	O
ForwardCallIndicators	AINPN_ForwardCallIndicators	550	226	O
AMAServiceProvider	AINPN_AMAServiceProviderID	67	0x43	O
Prefix	AINPN_Prefix	22	0x16	O
GenericDigitsList (SEQUENCE, size = 0 to 4)				O
GenericDigits	AINPN_GenericDigits	45 to 49	0x2d to 0x31	M2
ApplyRestrictions	AINPN_ApplyRestrictions	68	0x44	O
DisplayText (SEQUENCE, size = 0 to 14)				O
DisplayInformation				M2
Blank	AINPN_Blank	76 to 90	0x4c to 0x5a	C3
Skip	AINPN_Skip	91 to 105	0x5b to 0x69	C3
Continuation	AINPN_Continuation	106 to 120	0x6a to 0x78	C3
CalledAddress	AINPN_CalledAddress	121 to 135	0x79 to 0x87	C3
Cause	AINPN_Cause	136 to 150	0x88 to 0x96	C3

INOP_AnalyzeRoute				
Parameter	Mnemonic	Value		
		dec	hex	
ProgressInd	AINPN_ProgressInd	151 to 165	0x97 to 0xa5	C3
NotificationInd	AINPN_NotificationInd	166 to 180	0xa6 to 0xb4	C3
Prompt	AINPN_Prompt	181 to 195	0xb5 to 0xc3	C3
AccumulatedDigits	AINPN_AccumulatedDigits	196 to 210	0xc4 to 0xd2	C3
Status	AINPN_Status	211 to 225	0xd3 to 0xe1	C3
Inband	AINPN_Inband	226 to 240	0xe2 to 0xf0	C3
CallingAddress	AINPN_CallingAddress	241 to 255	0xf1 to 0xff	C3
Reason	AINPN_Reason	256 to 270	100 to 0x10e	C3
CallingPartyName	AINPN_CallingPartyName	271 to 285	0x10f to 0x11d	C3
CalledPartyName	AINPN_CalledPartyName	286 to 300	0x11e to x12c	C3
OriginalCalledName	AINPN_OrigCalledName	301 to 315	0x12d to 0x13b	C3
RedirectingName	AINPN_ReducingName	316 to 330	0x13c to 0x14a	C3
ConnectedName	AINPN_ConnectedName	331 to 345	0x14b to 0x159	C3
OrigRestrictions	AINPN_OrigRestrictions	346 to 360	0x15a to 0x168	C3
DateTimeOfDay	AINPN_DateTimeOfDay	361 to 375	0x169 to 0x177	C3
CallAppearanceID	AINPN_CallAppearanceID	376 to 390	0x178 to 0x186	C3
FeatureAddress	AINPN_FeatureAddress	391 to 405	0x187 to 0x195	C3
RedirectionName	AINPN_RedirectionName	406 to 420	0x196 to 0x1a4	C3

INOP_AnalyzeRoute				
Parameter	Mnemonic	Value		
		dec	hex	
RedirectionNumber	AINPN_RedirectionNumber	421 to 435	0x1a5 to 0x1b3	C3
RedirectingNumber	AINPN_RedirectingNumber	436 to 450	0x1b4 to 0x1c2	C3
OriginalCalledNumber	AINPN_OrigCalledNumber	451 to 465	0x1c3 to 0x1d1	C3
ConnectedNumber	AINPN_ConnectedNumber	466 to 480	0x1d2 to 0x1e0	C3
Text	AINPN_Text	481 to 495	0x1e1 to 0x1ef	C3
RedirectingReason	AINPN_RedirectingReason	496 to 510	0x1f0 to 0x1fe	C3
GenericName	AINPN_GenericName	551	0x227	O

B.13.2

InfoAnalyzed

INOP_InfoAnalyzed				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
UserID				M
Dn	AINPN_Dn	26	0x1a	C2
BRI				C2
Spid	AINPN_Spid	25	0x19	M3
Dn	AINPN_Dn	26	0x1a	M3
TrunkGroupID	AINPN_TrunkGroupID	27	0x1b	C2
PrivateFacilityGID	AINPN_PrivateFacilityGID	28	0x1c	C2
ADScpeID	AINPN_ADScpeID	29	0x1d	C2
Ssp	AINPN_Ssp	30	0x1e	C2
DialingPlan	AINPN_DialingPlan	31	0x1f	C2
BearerCapability	AINPN_BearerCapability	545	0x221	M
CalledPartyID	AINPN_CalledPartyID	3	0x3	O
Lata	AINPN_Lata	4	0x4	O
TriggerCriteriaType	AINPN_TriggerCritType	5	0x5	O
ChargeNumber	AINPN_ChargeNumber	6	0x6	O

INOP_InfoAnalyzed				
Parameter	Mnemonic	Value		
		dec	hex	
CallingPartyID	AINPN_CallingPartyID	7	0x7	O
CallingPartyBGID	AINPN_CallingPartyBGID	546	0x222	O
ChargePartyStationType	AINPN_ChargePartyStationType	8	0x8	O
Carrier	AINPN_Carrier	552	0x228	O
AccessCode	AINPN_AccessCode	9	0x9	O
CollectedAddressInfo	AINPN_CollectedAddressInfo	10	0xa	O
VerticalServiceCode	AINPN_VerticalServiceCode	12	0xc	O
Tcm	AINPN_Tcm	13	0xd	O
OriginalCalledPartyID	AINPN_OriginalCalledPartyID	547	0x223	O
RedirectingPartyID	AINPN_ReducingPartyID	548	0x224	O
RedirectionInformation	AINPN_RedirectionInformation	549	0x225	O
ACGEncountered	AINPN_ACGEncountered	14	0xe	O
Amp1	AINPN_Amp1	15	0xf	O
Amp2				O
AmpAINNodeID				M2
SpclD	AINPN_SpclD	32	0x20	C3
ISDNDeviceID	AINPN_ISDNDeviceID	33	0x21	C3
AmpClogSeqNo	AINPN_AmpClogSeqNo	34	0x22	O2
AmpCLogRepInd	AINPN_AmpCLogRepInd	35	0x23	O2
AmpCallProgInd	AINPN_AmpCallProgInd	36	0x24	O2
AmpTestReqInd	AINPN_AmpTestReqInd	37	0x25	O2
AmpCLogName	AINPN_AmpCLogName	38	0x26	O2
AmpSvcProvID	AINPN_AmpSvcProvID	39	0x27	O2
Sap	AINPN_Sap	16	0x10	O
STRConnection	AINPN_STRConnection	17	0x11	O
AMASequenceNumber	AINPN_AMASequenceNumber	18	0x12	O
ExtensionParameter				O
GenericAddressList (SEQUENCE, size = 0 to 4)				O
GenericAddress	AINPN_GenericAddress	40 to 44	0x28 to 0x2c	M2
NetworkSpecificFacilities	AINPN_NetworkSpecificFacilities	19	0x13	O
CTRConnection	AINPN_CTRConnection	20	0x14	O
JurisdictionInformation	AINPN_JurisdictionInformation	21	0x15	O
Prefix	AINPN_Prefix	22	0x16	O
GenericDigitsList (SEQUENCE, size = 0 to 4)				O

INOP_InfoAnalyzed				
Parameter	Mnemonic	Value		
		dec	hex	
GenericDigits	AINPN_GenericDigits	45 to 49	0x2d to 0x31	M2
CallingGeodeticLocation	AINPN_CallingGeodeticLocation	23	0x17	O
TriggerInformation	AINPN_TriggerInformation	24	0x18	O

B.13.3

InfoCollected

INOP_infoCollected				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
UserID				M
Dn	AINPN_Dn	26	0x1a	C2
BRI				C2
Spid	AINPN_Spid	25	0x19	M3
Dn	AINPN_Dn	26	0x1a	M3
TrunkGroupID	AINPN_TrunkGroupID	27	0x1b	C2
PrivateFacilityGID	AINPN_PrivateFacilityGID	28	0x1c	C2
ADSIcpelID	AINPN_ADSIcpelID	29	0x1d	C2
Ssp	AINPN_Ssp	30	0x1e	C2
DiallingPlan	AINPN_DiallingPlan	31	0x1f	C2
BearerCapability	AINPN_BearerCapability	545	0x221	M
ChargeNumber	AINPN_ChargeNumber	6	0x6	O
Lata	AINPN_Lata	4	0x4	O
TriggerCriteriaType	AINPN_TriggerCritType	5	0x5	O
CallingPartyID	AINPN_CallingPartyID	7	0x7	O
ChargePartyStationType	AINPN_ChargePartyStationType	8	0x8	O
AccessCode	AINPN_AccessCode	9	0x9	O
CollectedAddressInfo	AINPN_CollectedAddressInfo	10	0xa	O
VerticalServiceCode	AINPN_VerticalServiceCode	12	0xc	O
Tcm	AINPN_Tcm	13	0xd	O
OriginalCalledPartyID	AINPN_OriginalCalledPartyID	547	0x223	O
RedirectingPartyID	AINPN_ReducingPartyID	548	0x224	O
RedirectionInformation	AINPN_RedirectionInformation	549	0x225	O
ACGEncountered	AINPN_ACGEncountered	14	0xe	O
Amp1	AINPN_Amp1	15	0xf	O

INOP_infoCollected				
Parameter	Mnemonic	Value		
		dec	hex	
Amp2				O
AmpAINNodeID				M2
SpcID	AINPN_SpcID	32	0x20	C3
ISDNDeviceID	AINPN_ISDNDeviceID	33	0x21	C3
AmpClogSeqNo	AINPN_AmpClogSeqNo	34	0x22	O2
AmpCLogRepInd	AINPN_AmpCLogRepInd	35	0x23	O2
AmpCallProgInd	AINPN_AmpCallProgInd	36	0x24	O2
AmpTestReqInd	AINPN_AmpTestReqInd	37	0x25	O2
AmpCLogName	AINPN_AmpCLogName	38	0x26	O2
AmpSvcProvID	AINPN_AmpSvcProvID	39	0x27	O2
Sap	AINPN_Sap	16	0x10	O
GenericAddressList (SEQUENCE, size = 0 to 4)				O
GenericAddress	AINPN_GenericAddress	40 to 44	0x28 to 0x2c	M2
AMASequenceNumber	AINPN_AMASequenceNumber	18	0x12	O
ExtensionParameter				O
Prefix	AINPN_Prefix	22	0x16	O
GenericDigitsList (SEQUENCE, size = 0 to 4)				O
GenericDigits	AINPN_GenericDigits	45 to 49	0x2d to 0x31	M2
CallingGeodeticLocation	AINPN_CallingGeodeticLocation	23	0x17	O
TriggerInformation	AINPN_TriggerInformation	24	0x18	O

B.13.4 Disconnect

INOP_Disconnect				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
PrimaryBillingIndicator	AINPN_PrimaryBillingInd	57	0x39	O
AMAAlternateBillingNumber	AINPN_AMAAlternateBillingNumber	61	0x3d	O
AMABusinessCustomerID	AINPN_AMABusinessCustomerID	62	0x3e	O
AMALineNumberList (SEQUENCE, size = 0 to 1)				O
AMALineNumber	AINPN_AMALineNumber	69 to 70	0x45 to 0x46	M2
AMAspID	AINPN_AMAspID	63	0x3f	O
AMADigitsDialedWCList (SEQUENCE, size = 0 to 4)				O
AMADigitsDialedWC	AINPN_AMADigitsDialedWC	71 to 75	0x47 to 0x4b	M2
Amp1	AINPN_Amp1	15	0xf	O
Amp2				O
AmpAINNodeID				M2
SpclID	AINPN_SpclID	32	0x20	C3
ISDNDeviceID	AINPN_ISDNDeviceID	33	0x21	C3
AmpClogSeqNo	AINPN_AmpClogSeqNo	34	0x22	O2
AmpCLogReplInd	AINPN_AmpCLogReplInd	35	0x23	O2
AmpCallProgInd	AINPN_AmpCallProgInd	36	0x24	O2
AmpTestReqInd	AINPN_AmpTestReqInd	37	0x25	O2
AmpCLogName	AINPN_AmpCLogName	38	0x26	O2
AmpSvcProvID	AINPN_AmpSvcProvID	39	0x27	O2
ServiceProviderID				O
Ocn	AINPN_Ocn	553	0x229	C2
MsrID	AINPN_MsrID	554	0x22a	C2
ServiceContext	AINPN_ServiceContext	64	0x40	O
AMABillingFeature	AINPN_AMABillingFeature	65	0x41	O
AMASequenceNumber	AINPN_AMASequenceNumber	18	0x12	O
ExtensionParameter				O
AMAServiceProvider	AINPN_AMAServiceProviderID	67	0x43	O
RTPReroutingNumber	AINPN_RTPReroutingNumber	511	0x1ff	O

B.13.5 SendToResource

INOP_SendToResource				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
ResourceType	AINPN_ResourceType	515	0x203	M
StrParameterBlock				M
AnnouncementBlock				C2
UninterAnnounceBlock (SEQUENCE, size = 0 to 9)				O3
AnnounceElement	AINPN_AnnounceElement0	524 to 533	0x20c to 0x215	M4
InterAnnounceBlock (SEQUENCE, size = 0 to 9)				O3
AnnounceElement	AINPN_AnnounceElement1	534 to 543	0x216 to 0x21f	M4
AnnouncementDigitBlock				C2
MaximumDigits	AINPN_MaximumDigits	523	0x20b	M3
UninterAnnounceBlock (SEQUENCE, size = 0 to 9)				O3
AnnounceElement	AINPN_AnnounceElement0	524 to 533	0x20c to 0x215	M4
InterAnnounceBlock (SEQUENCE, size = 0 to 9)				O3
AnnounceElement	AINPN_AnnounceElement1	534 to 543	0x216 to 0x21f	M4
FlexParameterBlock	AINPN_FlexParameterBlk	522	0x20a	C2
DisconnectFlag	AINPN_DisconnectFlag	516	0x204	O
AnswerIndicator	AINPN_AnswerIndicator	517	0x205	O
PrimaryBillingIndicator	AINPN_PrimaryBillingInd	57	0x39	O
AMAAternateBillingNumber	AINPN_AMAAternateBillingNumber	61	0x3d	O
AMABusinessCustomerID	AINPN_AMABusinessCustomerID	62	0x3e	O
AMALineNumberList (SEQUENCE, size = 0 to 1)				O
AMALineNumber	AINPN_AMALineNumber	69 to 70	0x45 to 0x46	M2
AMAslpID	AINPN_AMAslpID	63	0x3f	O
AMADigitsDialedWCList (SEQUENCE, size = 0 to 4)				O
AMADigitsDialedWC	AINPN_AMADigitsDialedWC	71 to 75	0x47 to 0x4b	M2
Amp1	AINPN_Amp1	15	0xf	O
Amp2				O
AmpAINNodeID				M2
SpclD	AINPN_SpclD	32	0x20	C3
ISDNDeviceID	AINPN_ISDNDeviceID	33	0x21	C3

INOP_SendToResource				
Parameter	Mnemonic	Value		
		dec	hex	
AmpClogSeqNo	AINPN_AmpClogSeqNo	34	0x22	O2
AmpClogRepInd	AINPN_AmpClogRepInd	35	0x23	O2
AmpCallProgInd	AINPN_AmpCallProgInd	36	0x24	O2
AmpTestReqInd	AINPN_AmpTestReqInd	37	0x25	O2
AmpClogName	AINPN_AmpClogName	38	0x26	O2
AmpSvcProvID	AINPN_AmpSvcProvID	39	0x27	O2
DestinationAddress	AINPN_DestinationAddress	512	0x200	O
DPCConverter	AINPN_DPCConverter	513	0x201	O
AMAMeasure	AINPN_AMAMeasure	514	0x202	O
ServiceProviderID				O
Ocn	AINPN_Ocn	553	229	C2
MsrID	AINPN_MsrID	554	0x22a	C2
ServiceContext	AINPN_ServiceContext	64	0x40	O
AMABillingFeature	AINPN_AMABillingFeature	65	0x41	O
AMASequenceNumber	AINPN_AMASequenceNumber	18	0x12	O
ExtensionParameter				O
AMAServiceProvider	AINPN_AMAServiceProviderID	67	0x43	O
ExtendedRinging	AINPN_ExtendedRinging	518	0x206	O
Carrier	AINPN_Carrier	552	0x228	O
AlternateCarrier	AINPN_AlternateCarrier	54	0x36	O
SecondAlternateCarrier	AINPN_SecondAlternateCarrier	55	0x37	O
CarrierUsage	AINPN_CarrierUsage	66	0x42	O
ChargeNumber	AINPN_ChargeNumber	6	0x6	O
ChargePartyStationType	AINPN_ChargePartyStationType	8	0x8	O
TSTRCTimer	AINPN_TSTRCTimer	519	0x207	O
PartyID	AINPN_PartyID	520	0x208	O
PartyOnHold	AINPN_PartyOnHold	521	0x209	O
CalledPartyID	AINPN_CalledPartyID	3	0x3	O

B.13.6 Application Error

The Application Error operation is used to report errors in the other AIN operations.

INOP_ApplicationError				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	AINPN_InvokeID	1	0x1	M
ApplicationErrorString				M
ErrorCause	AINPN_ErrorCause	556	0x22c	M2
FailedMessage				O
opCode	AINPN_OperationCode	2	0x2	M2
parameter	AINPN_Parameter	555	0x22b	O2
invParams	AINPN_InvParms	557	0x22d	O2
UserID				O
Dn	AINPN_Dn	26	0x1a	C2
BRI				C2
Spid	AINPN_Spid	25	0x19	M3
Dn	AINPN_Dn	26	0x1a	M3
TrunkGroupID	AINPN_TrunkGroupID	27	0x1b	C2
PrivateFacilityGID	AINPN_PrivateFacilityGID	28	0x1c	C2
ADSIcpelD	AINPN_ADSIcpelD	29	0x1d	C2
Ssp	AINPN_Ssp	30	0x1e	C2
DiallingPlan	AINPN_DiallingPlan	31	0x1f	C2
ExtensionParameter				O

B.14 Operation Extensions

Where permitted by the specification, the user is able to include extensions to the normal operation definitions. These extensions can be sent and received using the functional API. Extensions are not used by AIN.

B.14.1 Extension Format

Extension Support				
Parameter	Mnemonic	Value		
		dec	hex	
Extensions (SEQUENCE, n = 0 to 15)				O
RequestedInformationType	INPN_Extension_Type(n) n=0 to 15	560 to 575	0x230 to 0x23f	M, C
RequestedInformationType	INPN_Extension_Type_ObjId(n) n=0 to 15	898 to 913	0x382 to 0x391	M, C
Criticality Default = ignore(0)	INPN_Extension_Criticality(n) n=0 to 15	576 to 592	0x240 to 0x24f	D
Extension_Field	INPN_Extension_Field_PrimData(n) n=0 to 15	593 to 608	0x250 to 0x25f	C,A
Extension_Field	INPN_Extension_Field_ConstData (n) n=0 to 15	609 to 624	0x260 to 0x26f	C,A

When formatting or recovering extension types, integer tags are usually used. INPN_Extension_Type_parameters should be used in those cases.

In some cases, an objectIdentifier tag may be used as an alternative to the integer tag when formatting or recovering extension types. INPN_Extension_Type_ObjId parameter should then be used.

Extension Support 2 is used exclusively by CAP V3 in the ApplyCharging operation. Apart from the parameter values, the operation is the same as Extension Support above.

Extension Support 2				
Parameter	Mnemonic	Value		
		dec	hex	
Extensions (SEQUENCE, n = 0 to 15)				O
RequestedInformationType	INPN_Extension_Type2(n) n=0 to 15	2700 to 2715	0xa8c to 0xa9b	M
Criticality Default = ignore(0)	INPN_Extension_Criticality2(n) n=0 to 15	2716 to 2731	0xa9c to 0xaab	D
Extension_Field	INPN_Extension_Field_PrimData2(n) n=0 to 15	2732 to 2747	0xaac to 0xabb	C, A
Extension_Field	INPN_Extension_Field_ConstData2 (n) n=0 to 15	2748 to 2763	0xabc to 0xacb	C, A

B.14.2 Extension Recovery

If the extension criticality parameter is not present in the message on recovery, then the default value of ignore (0) will be placed into the INPN_Extension_Criticality(n) component parameter, where n is the number of the extension.

B.14.3 Sending Extensions

To include a single primitive extension parameter, the extension type, criticality and PrimData parameters should be used. The PrimData parameter must be coded in full ASN.1 form, with an appropriately coded tag and length included. The inclusion of the tag and length allows any valid extension tags to be used without changes to the API. For example, a parameter of length one with a data value {0x99} and a context specific tag 0 – the PrimData parameter should be encoded as {0x80, 0x01, 0x99}.

To include a number of parameters inside a constructed parameter, use the extension type, criticality and ConstData parameters. The ConstData parameter must be in a correctly formatted ASN.1 form.

B.15 Supported INAP Parameter List

B.15.1 ITU-T, ETSI and CAMEL parameters

The following table alphabetically lists the parameters used in the supported operations, results, errors and rejects. These cover the ITU-T, ETSI and CAMEL specifications. The parameter names used for AIN operation are listed separately in [Appendix B.15.2 AIN parameters on page 278](#).

Parameter	Value (dec)	Notes
INPN_Abandon_Ellipsis	1408	Note 3 (see page 278)
INPN_AbandonCause	860	
INPN_AccessPtName	592	
INPN_AccountNumber	1291	
INPN_AChBillingChargingCharacteristics	52	
INPN_ActionIndicator	947	
INPN_ActionPerformed	948	
INPN_Actions	1290	
INPN_Active	636	
INPN_ActiveSupplementaryServices	1282	
INPN_AdditionalCallingPartyNumber	21	
INPN_AgeOfLocationInformation	124	
INPN_Agreements(n)	668-683	Note 2 (see page 277)
INPN_AlertingPattern	30	
INPN_AllAnnouncementsComplete	4190	
INPN_AllCallSeg_Ellipsis	1413	Note 3 (see page 278)
INPN_AllowCdINNoPresentInd	721	
INPN_Amount	1245	
INPN_AnsSpecInfo_Ellipsis	1410	Note 3 (see page 278)
INPN_AnsweredCall(n)	1228-1243	Note 2 (see page 277)
INPN_Aocrg	811	
INPN_AppendFreeFormData	637	
INPN_ApplicationContextString	49	
INPN_ApplicationTimer(n)	176-191	Note 2 (see page 277)
INPN_AssCallSeg_Ellipsis	1412	Note 3 (see page 278)
INPN_AssistingSSPIPRoutingAddress	102	
INPN_AssRelReqSpecInfo	706	
INPN_AssRelReqSpecInfo_Ellipsis	1405	Note 3 (see page 278)
INPN_AssumedIdle	134	

Parameter	Value (dec)	Notes
INPN_AttributeCertificationPath	1301	
INPN_Attributes	66	
INPN_AudibleIndicTone	4214	
INPN_AutomaticRearm(n)	4006-4020	Note 2 (see page 277)
INPN_BackwardGVNS	723	
INPN_BackwardServIntInd_Ellipsis	1403	Note 3 (see page 278)
INPN_BCSMCause	4208	
INPN_BCSMEvent_Ellipsis(n)	1335-1350	Note 2 (see page 277) Note 3 (see page 278)
INPN_BCSMEventCorrelationID	24	
INPN_BCSMEventEllipsis(n)	4021-4036	Note 2 (see page 277) Note 3 (see page 278)
INPN_BCSMFailure_Ellipsis	946	Note 3 (see page 278)
INPN_BCUSMEvent_Ellipsis(n)	1351-1366	Note 2 (see page 277) Note 3 (see page 278)
INPN_BearerCap_Ellipsis	119	Note 3 (see page 278)
INPN_BearerCapability	23	
INPN_BearerCapability2	2771	
INPN_Bits_BearerCapabilities	1286	
INPN_Bits_HighLayerCompatibilities	1287	
INPN_BorInterrogationRequested	2787	
INPN_BothwayThroughConnectionIndicator	111	
INPN_BurstEllipsis	4211	Note 3 (see page 278)
INPN_burstInterval	4194	
INPN_BurstListEllipsis	4212	Note 3 (see page 278)
INPN_BusyCause	95	
INPN_Bw_ConferenceTreatmentInd	710	
INPN_CallActive	638	
INPN_CallAttemptElapsedTimeValue(n)	293-297	Note 2 (see page 277)
INPN_CallCompletionTreatmentInd	716	
INPN_CallConnectedElapsedTimeValue(n)	303-307	Note 2 (see page 277)
INPN_CallDiversionTreatmentInd	712	
INPN_CallDuration(n)	1196-1211	Note 2 (see page 277)
INPN_CalledAddressValue(n)	308-312	Note 2 (see page 277)
INPN_CalledNumber(n)	1212-1227	Note 2 (see page 277)
INPN_CalledPartyBCDNumber	129	
INPN_CalledPartyNumber	5	

Parameter	Value (dec)	Notes
INPN_CalledPartyURL	4357	
INPN_CallFailure(n)	1116-1131	Note 2 (see page 277)
INPN_CallForwarded	639	
INPN_CallingAddressValue	99	
INPN_CallingLineID	106	
INPN_CallingPartyBuisnessGroupID	7	
INPN_CallingPartyBusinessGroupID	7	
INPN_CallingPartyNumber	6	
INPN_CallingPartyNumberSMS	4188	
INPN_CallingPartyRestrictionInd	714	
INPN_CallingPartysCategory	8	
INPN_CallingPartySubaddress	9	
INPN_CallingPartyURL	4358	
INPN_CallOfferingTreatmentInd	713	
INPN_CallRecord_Ellipsis	1099	Note 3 (see page 278)
INPN_CallReferenceNumber	131	
INPN_CallRelease(n)	1148-1163	Note 2 (see page 277)
INPN_CallReleasedAtTcpExp	640	
INPN_CallResult	55	
INPN_CallSegment	744	
INPN_CallSegmentFailure_Ellipsis	4192	Note 3 (see page 278)
INPN_CallSegmentID	320	
INPN_CallSegmentID_Array(n)	1004-1019	Note 2 (see page 277)
INPN_CallSegToCancelEllipsis	4210	Note 3 (see page 278)
INPN_CallStopTimeValue(n)	298-302	Note 2 (see page 277)
INPN_CAMEL_AOC_AfterAnswer	4220	Note 4 (see page 278)
INPN_CAMEL_AOC_BeforeAnswer	143	
INPN_CamelBusy	135	
INPN_Cancel_InvokeID	86	
INPN_CancelAllRequests	4219	
INPN_CancelDigit	77	
INPN_CancelDigitSeq(n)	2837-2852	Note 2 (see page 277)
INPN_CancelFailed_Operation	43	
INPN_CancelFailed_Problem	42	
INPN_Carrier	40	
INPN_Cause	41	

Parameter	Value (dec)	Notes
INPN_CauseOfLastCallFailure	1283	
INPN_CellGlobalId0(n)	2885-2900	Note 2 (see page 277)
INPN_CellGlobalId1(n)	2997-3012	Note 2 (see page 277)
INPN_CellGlobalId2(n)	3109-3124	Note 2 (see page 277)
INPN_CellGlobalId3(n)	3221-3236	Note 2 (see page 277)
INPN_CellGlobalId4(n)	3333-3348	Note 2 (see page 277)
INPN_CellGlobalId5(n)	3445-3460	Note 2 (see page 277)
INPN_CellGlobalId6(n)	3557-3572	Note 2 (see page 277)
INPN_CellGlobalId7(n)	3669-3684	Note 2 (see page 277)
INPN_CellGlobalId8(n)	3781-3796	Note 2 (see page 277)
INPN_CellGlobalId9(n)	3893-3908	Note 2 (see page 277)
INPN_CellIdFixedLength	122	
INPN_CertificationPath	1294	
INPN_cGEncountered	10	
INPN_CGlobal_SArea_LAI	641	
INPN_ChangeOfLocationEllipsis0(n)	2981-2996	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis1(n)	3093-3108	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis2(n)	3205-3220	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis3(n)	3317-3332	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis4(n)	3429-3444	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis5(n)	3541-3556	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis6(n)	3653-3668	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis7(n)	3765-3780	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis8(n)	3877-3892	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChangeOfLocationEllipsis9(n)	3989-4004	Note 2 (see page 277) Note 3 (see page 278)
INPN_ChargeIndicator	4182	
INPN_ChargeNumber	642	
INPN_ChargingEvent_Ellipsis(n)	1303-1318	Note 2 (see page 277) Note 3 (see page 278)

Parameter	Value (dec)	Notes
INPN_ChargingID	643	
INPN_ChargingParameters_Ellipsis	1254	Note 3 (see page 278)
INPN_ChargingTariffInformation	932	
INPN_CldAddrServ_Ellipsis	1398	Note 3 (see page 278)
INPN_ClgAddrServ_Ellipsis	1400	Note 3 (see page 278)
INPN_CollectedInfo_Ellipsis	4221	Note 3 (see page 278)
INPN_collectInformationAllowed	2785	
INPN_ComCalledAddressValue	894	
INPN_CompRecSpecInfo	705	
INPN_ComServiceKey	893	
INPN_ConnectedNumberTreatment	718	
INPN_ConnectTime	103	
INPN_ContinueWithArgumentExtensionEllipses	4209	Note 3 (see page 278)
INPN_ControlDigits_Ellipsis	558	Note 3 (see page 278)
INPN_ControlType	101	
INPN_CorrelationID	31	
INPN_CounterID(n)	328-427	Note 2 (see page 277)
INPN_CounterValue(n)	428-527	Note 2 (see page 277)
INPN_CreditLimitReached(n)	1180-1195	Note 2 (see page 277)
INPN_CreditUnit	1368	
INPN_Crgt	810	
INPN_CSAID	725	
INPN_CSFailure_Ellipsis	945	Note 3 (see page 278)
INPN_CUG_Index	644	
INPN_CUG_Interlock	645	
INPN_CUG_OutgoingAccess	646	
INPN_CurLocRetrieved	4228	
INPN_CurrencyID	1244	
INPN_CurrencyValue_Ellipsis	1246	Note 3 (see page 278)
INPN_CutAndPaste	32	
INPN_CWTreatmentInd	647	
INPN_Date(n)	543-547	Note 2 (see page 277)
INPN_DestinationAddr	648	
INPN_DestinationRoutingAddress(n)	27-29	Note 2 (see page 277)
INPN_DestinationRoutingAddressURL	4354	

Parameter	Value (dec)	Notes
INPN_DestSubscriberNumber	649	
INPN_DialledDigits	4	
INPN_DialledNumber	105	
INPN_DigitsResponse	47	
INPN_DisconnectFromIPForbidden	59	
INPN_DiscSpecInfo_Ellipsis	1409	Note 3 (see page 278)
INPN_DisplayInformation	91	
INPN_DistinguishedName	1295	
INPN_DPAAssignment	14	
INPN_DpSpecCritAltEllipsis(n)	4233-4248	Note 2 (see page 277) Note 3 (see page 278)
INPN_DTMFDigitsCompleted	4183	
INPN_DTMFDigitsTimeOut	4184	
INPN_Duration	89	
INPN_ECTTreatmentInd	709	
INPN_ElementaryMessageID	628	
INPN_ElementaryMessageIDs(n)	256-271	Note 2 (see page 277)
INPN_Ellipsis	112	Note 3 (see page 278)
INPN_EndOfRecordingDigit	553	
INPN_EndOfReplyDigit	76	
INPN_EndOfReplyDigitSeq(n)	2821-2836	Note 2 (see page 277)
INPN_EnhancedDialledServicesAllowed	2784	
INPN_EnteringCellGlobalId(n)	4053-4062	Note 2 (see page 277)
INPN_EnteringLocationAreaId(n)	4093-4102	Note 2 (see page 277)
INPN_EnteringServiceAreaId(n)	4073-4082	Note 2 (see page 277)
INPN_EntityReleased_Cause	944	
INPN_EntityReleased_Reason	943	
INPN_Error_Attributes	1256	
INPN_Error_Date(n)	1083-1087	Note 2 (see page 277)
INPN_Error_DisplayInformation	1096	
INPN_Error_Duration	1094	
INPN_Error_ElementaryMessageID	1258	
INPN_Error_ElementaryMessageIDs(n)	1052-1067	Note 2 (see page 277)
INPN_Error_InfoToSend_Ellipsis	635	Note 3 (see page 278)
INPN_Error_Integer(n)	1068-1072	Note 2 (see page 277)
INPN_Error_Interval	1095	

Parameter	Value (dec)	Notes
INPN_Error_MessageContent	1255	
INPN_Error_Number(n)	1073-1077	Note 2 (see page 277)
INPN_Error_NumberOfRepetitions	1093	
INPN_Error_Price(n)	1088-1092	Note 2 (see page 277)
INPN_Error_Time(n)	1078-1082	Note 2 (see page 277)
INPN_Error_ToneID	1259	
INPN_Error_Variable_MessageID	1257	
INPN_ErrorProtection	1302	
INPN_Errortreatment	81	
INPN_EventSpecificInformationBCUSM	727	
INPN_EventSpecificInformationCharging	58	
INPN_EventSpecificInformationTariff	707	
INPN_EventSpecInfo_Ellipsis	113	Note 3 (see page 278)
INPN_EventSpecInfoGPRS_Ellipsis	1372	Note 3 (see page 278)
INPN_EventSpecInfoSMS_Ellipsis	1371	Note 3 (see page 278)
INPN_EventTypeBCSM(n)	192-207	Note 2 (see page 277)
INPN_EventTypeBCUSM(n)	728-743	Note 2 (see page 277)
INPN_EventTypeCharging(n)	272-287	Note 2 (see page 277)
INPN_EventTypeSMS(n)	861-876	Note 2 (see page 277)
INPN_EventTypeTariff(n)	794-809	Note 2 (see page 277)
INPN_Ext_BearerServiceCode	120	
INPN_Ext_BearerServiceCode_tServChng	4180	
INPN_Ext_BearerServiceCode2	2764	
INPN_Ext_TeleserviceCode	121	
INPN_Ext_TeleserviceCode_tServChng	4181	
INPN_Ext_TeleserviceCode2	2765	
INPN_Extension_Criticality(n)	576-591	Note 2 (see page 277)
INPN_Extension_Criticality2(n)	2716-2731	Note 2 (see page 277)
INPN_Extension_Field_ConstData(n)	609-624	Note 2 (see page 277)
INPN_Extension_Field_ConstData2(n)	2748-2763	Note 2 (see page 277)
INPN_Extension_Field_PrimData(n)	593-608	Note 2 (see page 277)
INPN_Extension_Field_PrimData2(n)	2732-2747	Note 2 (see page 277)
INPN_Extension_Type(n)	560-575	Note 2 (see page 277)
INPN_Extension_Type_ObjId(n)	898-913	Note 2 (see page 277)
INPN_Extension_Type2(n)	2700-2715	Note 2 (see page 277)
INPN_ExtensionContainer	128	

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INPN_FailureCause	94	
INPN_FCIBCC	708	
INPN_FCIBCC_Ellipsis	4217	Note 3 (see page 278)
INPN_FCIBCCS	700	
INPN_FCIBCCS1	715	
INPN_FCIBCCSeq_Ellipsis	1399	Note 3 (see page 278)
INPN_FCIBillingChargingCharacteristics	54	
INPN_FCIGPRSseq_Ellipsis	1367	Note 3 (see page 278)
INPN_Filtering_Duration	98	
INPN_FirstAnnouncementStarted	4191	
INPN_FirstDigitTimeOut	79	
INPN_ForwardCallIndicators	22	
INPN_ForwardedCall	651	
INPN_ForwardGVNS	724	
INPN_ForwardingCondition	33	
INPN_forwardingDestinationNumber	4185	
INPN_ForwardingDestNumber	2776	
INPN_ForwardServIntInd_Ellipsis	1402	Note 3 (see page 278)
INPN_FreeFormData	319	
INPN_Fw_ConferenceTreatmentInd	711	
INPN_Gap_Duration	72	
INPN_GapInd_Ellipsis	1411	Note 3 (see page 278)
INPN_GapInterval	73	
INPN_GapOnServ_Ellipsis	1401	Note 3 (see page 278)
INPN_GenericName	934	
INPN_GenericNumber(n)	67-71	Note 2 (see page 277)
INPN_GeodeticInformation	4229	
INPN_GeographicalInformation	125	
INPN_GGSNAddress	652	
INPN_Global(n)	828-843	Note 2 (see page 277)
INPN_GMSCAddress	653	
INPN_GPRSCause	654	
INPN_GPRSCargingID	655	
INPN_GPRSEventType(n)	877-892	Note 2 (see page 277)
INPN_GPRSExtensionContainer	896	
INPN_GPRSGeographicalInformation	895	

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INPN_GPRSRoutingAreaID	897	
INPN_GSM_ForwardingPending	133	
INPN_GsmSCFAddress	4186	
INPN_HighLayerCompatibility	19	
INPN_HighLayerCompatibility2	2781	
INPN_HoldTreatmentInd	656	
INPN_HuntGroup	953	
INPN_IA5Information	955	
INPN_IA5Response	48	
INPN_IA5String(n)	1261-1276	Note 2 (see page 277)
INPN_IMEI	2778	
INPN_IMSI	130	
INPN_IMSSFAddress	4355	
INPN_InbandInfo_Ellipsis	1383	Note 3 (see page 278)
INPN_Include_NA_Info	138	
INPN_InfoToRecord_Ellipsis	559	Note 3 (see page 278)
INPN_InfoToSend_Ellipsis	634	Note 3 (see page 278)
INPN_Initial_CAI_E1	144	
INPN_Initial_CAI_E2	145	
INPN_Initial_CAI_E3	146	
INPN_Initial_CAI_E4	147	
INPN_Initial_CAI_E5	148	
INPN_Initial_CAI_E6	149	
INPN_Initial_CAI_E7	150	
INPN_InitialCallSegment	745	
INPN_InitialDPArgExt_Ellipsis	117	Note 3 (see page 278)
INPN_InitialTimeInterval	1253	
INPN_InitialUnitIncrement	1250	
INPN_InitiateIntegrity	657	
INPN_InitiatingEntity	942	
INPN_INServiceControlCode	701	
INPN_INServiceControlCodeHigh0(n)	1464-1479	Note 2 (see page 277)
INPN_INServiceControlCodeHigh1(n)	1544-1559	Note 2 (see page 277)
INPN_INServiceControlCodeHigh2(n)	1624-1639	Note 2 (see page 277)
INPN_INServiceControlCodeHigh3(n)	1704-1719	Note 2 (see page 277)
INPN_INServiceControlCodeLow0(n)	1448-1463	Note 2 (see page 277)

Parameter	Value (dec)	Notes
INPN_INServiceControlCodeLow1(n)	1528-1543	Note 2 (see page 277)
INPN_INServiceControlCodeLow2(n)	1608-1623	Note 2 (see page 277)
INPN_INServiceControlCodeLow3(n)	1688-1703	Note 2 (see page 277)
INPN_Integer(n)	528-532	Note 2 (see page 277)
INPN_InterDigitTimeOut	80	
INPN_InterDigitTimeout(n)	2869-2884	Note 2 (see page 277)
INPN_InterMSCHandOver(n)	4143-4152	Note 2 (see page 277)
INPN_InterMSCHandOver0(n)	2965-2980	Note 2 (see page 277)
INPN_InterMSCHandOver1(n)	3077-3092	Note 2 (see page 277)
INPN_InterMSCHandOver2(n)	3189-3204	Note 2 (see page 277)
INPN_InterMSCHandOver3(n)	3301-3316	Note 2 (see page 277)
INPN_InterMSCHandOver4(n)	3413-3428	Note 2 (see page 277)
INPN_InterMSCHandOver5(n)	3525-3540	Note 2 (see page 277)
INPN_InterMSCHandOver6(n)	3637-3652	Note 2 (see page 277)
INPN_InterMSCHandOver7(n)	3749-3764	Note 2 (see page 277)
INPN_InterMSCHandOver8(n)	3861-3876	Note 2 (see page 277)
INPN_InterMSCHandOver9(n)	3973-3988	Note 2 (see page 277)
INPN_InterPLMNHandOver(n)	4133-4142	Note 2 (see page 277)
INPN_InterPLMNHandOver0(n)	2949-2964	Note 2 (see page 277)
INPN_InterPLMNHandOver1(n)	3061-3076	Note 2 (see page 277)
INPN_InterPLMNHandOver2(n)	3173-3188	Note 2 (see page 277)
INPN_InterPLMNHandOver3(n)	3285-3300	Note 2 (see page 277)
INPN_InterPLMNHandOver4(n)	3397-3412	Note 2 (see page 277)
INPN_InterPLMNHandOver5(n)	3509-3524	Note 2 (see page 277)
INPN_InterPLMNHandOver6(n)	3621-3636	Note 2 (see page 277)
INPN_InterPLMNHandOver7(n)	3733-3748	Note 2 (see page 277)
INPN_InterPLMNHandOver8(n)	3845-3860	Note 2 (see page 277)
INPN_InterPLMNHandOver9(n)	3957-3972	Note 2 (see page 277)
INPN_InterruptableAnnInd	82	
INPN_InterSystemHandOver0(n)	2933-2948	Note 2 (see page 277)
INPN_InterSystemHandOver1(n)	3045-3060	Note 2 (see page 277)
INPN_InterSystemHandOver2(n)	3157-3172	Note 2 (see page 277)
INPN_InterSystemHandOver3(n)	3269-3284	Note 2 (see page 277)
INPN_InterSystemHandOver4(n)	3381-3396	Note 2 (see page 277)
INPN_InterSystemHandOver5(n)	3493-3508	Note 2 (see page 277)
INPN_InterSystemHandOver6(n)	3605-3620	Note 2 (see page 277)

Parameter	Value (dec)	Notes
INPN_InterSystemHandOver7(n)	3717-3732	Note 2 (see page 277)
INPN_InterSystemHandOver8(n)	3829-3844	Note 2 (see page 277)
INPN_InterSystemHandOver9(n)	3941-3956	Note 2 (see page 277)
INPN_InterSystemHandOverToGSM(n)	4123-4132	Note 2 (see page 277)
INPN_InterSystemHandOverToUMTS(n)	4113-4122	Note 2 (see page 277)
INPN_Interval	90	
INPN_InvokableService	1293	
INPN_InvokedSupplementaryService	1281	
INPN_InvokeID	1	
INPN_IPAddrCallSeg_Ellipsis	1415	Note 3 (see page 278)
INPN_IPAddrLegID_Ellipsis	1414	Note 3 (see page 278)
INPN_IPAvailable	12	
INPN_IPRoutingAddress	85	
INPN_IPSSPCapabilities	11	
INPN_ISDNAccessRelatedInformation	34	
INPN_ISDNAddressString	726	
INPN_LAIFixedLength	123	
INPN_LastEventIndicator	627	
INPN_LeavingCellGlobalId(n)	4063-4072	Note 2 (see page 277)
INPN_LeavingLocationAreaId(n)	4103-4112	Note 2 (see page 277)
INPN_LeavingServiceAreaId(n)	4083-4092	Note 2 (see page 277)
INPN_LegActive	4215	
INPN_LI_LocationNumber	127	
INPN_Linked_Op_Code	57	
INPN_LinkedID	2	
INPN_Local(n)	844-859	Note 2 (see page 277)
INPN_LocalValue	702	
INPN_LocationAreaId0(n)	2917-2932	Note 2 (see page 277)
INPN_LocationAreaId1(n)	3029-3044	Note 2 (see page 277)
INPN_LocationAreaId2(n)	3141-3156	Note 2 (see page 277)
INPN_LocationAreaId3(n)	3253-3268	Note 2 (see page 277)
INPN_LocationAreaId4(n)	3365-3380	Note 2 (see page 277)
INPN_LocationAreaId5(n)	3477-3492	Note 2 (see page 277)
INPN_LocationAreaId6(n)	3589-3604	Note 2 (see page 277)
INPN_LocationAreaId7(n)	3701-3716	Note 2 (see page 277)
INPN_LocationAreaId8(n)	3813-3828	Note 2 (see page 277)

Parameter	Value (dec)	Notes
INPN_LocationAreaId9(n)	3925-3940	Note 2 (see page 277)
INPN_LocationInfo_Ellipsis	114	Note 3 (see page 278)
INPN_LocationInfoGPRS_Ellipsis	1369	Note 3 (see page 278)
INPN_LocationInfoGPRS_SAIPresent	4232	
INPN_LocationInfoGPRS_SelLSAIdentity	4281	
INPN_LocationInfoGPRS_SGSNNumber	4231	
INPN_LocationNumber	13	
INPN_LowLayerCompatibility	2782	
INPN_LowLayerCompatibility2	2783	
INPN_MailBoxID	322	
INPN_MaxCallPeriodDuration	159	
INPN_MaxElapsedTime	658	
INPN_MaximumNumberOfCounters	93	
INPN_MaximumNumberOfDigits	75	
INPN_MaximumNumberOfDigitsSeq(n)	2805-2820	Note 2 (see page 277)
INPN_MaxTransferredVol	659	
INPN_MC_InterDigitTimeout(n)	4265-4280	Note 2 (see page 277)
INPN_Media	323	
INPN_MediaTypeInfo(n)	4359-4363	Note 2 (see page 277)
INPN_MessageContent	65	
INPN_MessageDeletionTimeOut	625	
INPN_MessageType	56	
INPN_MetDPCriterion_Ellipsis(n)	4153-4162	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallCtlInfoEllipsis(n)	4249-4264	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallCtrlSeq0_Ellipsis(n)	1432-1447	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallCtrlSeq1_Ellipsis(n)	1512-1527	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallCtrlSeq2_Ellipsis(n)	1592-1607	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallCtrlSeq3_Ellipsis(n)	1672-1687	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallInfo_Ellipsis	1406	Note 3 (see page 278)
INPN_MidCallInfoType0_Ellipsis(n)	1416-1431	Note 2 (see page 277) Note 3 (see page 278)

Parameter	Value (dec)	Notes
INPN_MidCallInfoType1_Ellipsis(n)	1496-1511	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallInfoType2_Ellipsis(n)	1576-1591	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallInfoType3_Ellipsis(n)	1656-1671	Note 2 (see page 277) Note 3 (see page 278)
INPN_MidCallReportType0(n)	1480-1495	Note 2 (see page 277)
INPN_MidCallReportType1(n)	1560-1575	Note 2 (see page 277)
INPN_MidCallReportType2(n)	1640-1655	Note 2 (see page 277)
INPN_MidCallReportType3(n)	1720-1735	Note 2 (see page 277)
INPN_MidCallSpecInfo_Ellipsis	1407	Note 3 (see page 278)
INPN_MinimumNumberOfDigits	74	
INPN_MinimumNumberOfDigitsSeq(n)	2789-2804	Note 2 (see page 277)
INPN_MiscCall_Ellipsis	1381	Note 3 (see page 278)
INPN_MonitorMode(n)	208-223	Note 2 (see page 277)
INPN_MSCAddress	132	
INPN_MSCClassMark2	2777	
INPN_MSISDN	660	
INPN_MSNetworkCapability	661	
INPN_MSRadioAccessCapability	662	
INPN_MT_SMSCause	2772	
INPN_NACarrierID	140	
INPN_NACarrierInfo_Ellipsis	116	Note 3 (see page 278)
INPN_NAChargeNumber	142	
INPN_NACICSelectionType	139	
INPN_NAInfo_Ellipsis	115	Note 3 (see page 278)
INPN_NAOliInfo	141	
INPN_NegGPRSQoSExt_Ellipsis	4207	Note 3 (see page 278)
INPN_NegLngQoSFormat	747	
INPN_NegShtQoSFormat	746	
INPN_NegSupToLongQoSFormat	4206	
INPN_NetDetNotReachable	136	
INPN_NetworkSpecific(n)	684-699	Note 2 (see page 277)
INPN_NewCallSegment(n)	1036-1051	Note 2 (see page 277)
INPN_NewCallSegmentAssociation	935	
INPN_NewLeg(n)	988-1003	Note 2 (see page 277)
INPN_NonCUGCall	663	

Parameter	Value (dec)	Notes
INPN_None	650	
INPN_NoReply(n)	1132-1147	Note 2 (see page 277)
INPN_Notification	1288	
INPN_NotProvidedFromVLR	137	
INPN_Null	0	
INPN_Number(n)	533-537	Note 2 (see page 277)
INPN_NumberingPlan	107	
INPN_NumberOfAllowedRetries	1097	
INPN_numberOfBursts	4193	
INPN_NumberOfCallAttempts	1280	
INPN_NumberOfCalls	97	
INPN_NumberOfDigits(n)	160-175	Note 2 (see page 277)
INPN_NumberOfRepetitions	88	
INPN_numberOfTonesInBurst	4195	
INPN_OCSIApplicable	110	
INPN_OfferedCamel4Functionalities	2780	
INPN_oInitiatorOfServiceCharge	4224	
INPN_oNatureOfServiceCharge	4226	
INPN_OperationCode	1300	
INPN_OrCall	664	
INPN_OriginalCalledPartyID	15	
INPN_OriginalCalledPartyURL	4353	
INPN_oServiceChargeInfo_Ellipsis	4222	Note 3 (see page 278)
INPN_PDPAddress	666	
INPN_PDPID	665	
INPN_PDPInitiationType	667	
INPN_PDPTTypeNumber	748	
INPN_PDPTTypeOrganization	749	
INPN_PREFERREDLanguage	1285	
INPN_Price(n)	548-552	Note 2 (see page 277)
INPN_PrivateFacilityID	952	
INPN_problem_code	51	
INPN_provider_error	50	
INPN_QoS_Ellipsis	1370	Note 3 (see page 278)
INPN_Random	1297	
INPN_ReceivedStatus	631	

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INPN_ReceivingSideID(n)	240-255	Note 2 (see page 277)
INPN_Record_MessageID	630	
INPN_RecordedMessageID	632	
INPN_RecordedMessageUnits	633	
INPN_RedirectingPartyID	25	
INPN_RedirectingPartyURL	4352	
INPN_RedirectionInformation	26	
INPN_RegistratorIdentifier	949	
INPN_ReleaseCause	96	
INPN_ReleaseCauseValue(n)	313-317	Note 2 (see page 277)
INPN_ReleaselfDurExceeded	750	
INPN_RelIfDurEx_Ellipsis	4179	Note 3 (see page 278)
INPN_RelIfDurExc_Ellipsis	118	Note 3 (see page 278)
INPN_RelIfDurExc_Tone	318	
INPN_ReplayAllowed	557	
INPN_ReplayDigit	554	
INPN_ReportExpected	1278	
INPN_ReqGPRSQoSExt_Ellipsis	4203	Note 3 (see page 278)
INPN_ReqInfo_Ellipsis(n)	1376-1380	Note 2 (see page 277) Note 3 (see page 278)
INPN_ReqLngQoSFormat	752	
INPN_ReqShtQoSFormat	751	
INPN_ReqSupToLongQoSFormat	4202	
INPN_RequestAnnouncementComplete	60	
INPN_RequestAnnouncementStarted	4189	
INPN_RequestedInfoError	44	
INPN_RequestedInformationType(n)	288-292	Note 2 (see page 277)
INPN_RequestedType	1279	
INPN_RequestedUTSI_Ellipsis(n)	1319-1334	Note 2 (see page 277) Note 3 (see page 278)
INPN_Response	1299	
INPN_ResponseCondition	108	
INPN_RestartAllowed	556	
INPN_RestartRecordingDigit	555	
INPN_RO_TmGPRSLastTariffSwch	757	
INPN_RO_TmGPRSNoTariffSwch	756	
INPN_RO_TmGPRSTariffSwchInt	758	

Parameter	Value (dec)	Notes
INPN_RO_VollfNoTariffSwch	761	
INPN_RO_VolLastTariffSwch	759	
INPN_RO_VolTariffSwchInt	760	
INPN_RouteIndex	954	
INPN_RouteList(n)	35-37	Note 2 (see page 277)
INPN_RouteNotPermitted	753	
INPN_RoutingAreaID	754	
INPN_RoutingAreaUpdate	755	
INPN_RoutingProhibited	1260	
INPN_RPCause	762	
INPN_SAIPresent	763	
INPN_ScalingFactor	1249	
INPN_ScflD	38	
INPN_SCIBCCAlt_Ellipsis	4218	Note 3 (see page 278)
INPN_SCIBillingChargingCharacteristics	87	
INPN_SCIGPRSBC_Ellipsis	4201	Note 3 (see page 278)
INPN_ScriptId_Global	325	
INPN_ScriptId_Local	324	
INPN_ScriptResult	327	
INPN_ScriptSpecificInfo	326	
INPN_SecondaryPDPCContext	764	
INPN_SegmentsPerDataInterval	1252	
INPN_SelectLSAIdentity	765	
INPN_SendCalculationToSCPIndication	53	
INPN_SendingSideID(n)	224-239	Note 2 (see page 277)
INPN_ServiceAreaId0(n)	2901-2916	Note 2 (see page 277)
INPN_ServiceAreaId1(n)	3013-3028	Note 2 (see page 277)
INPN_ServiceAreaId2(n)	3125-3140	Note 2 (see page 277)
INPN_ServiceAreaId3(n)	3237-3252	Note 2 (see page 277)
INPN_ServiceAreaId4(n)	3349-3364	Note 2 (see page 277)
INPN_ServiceAreaId5(n)	3461-3476	Note 2 (see page 277)
INPN_ServiceAreaId6(n)	3573-3588	Note 2 (see page 277)
INPN_ServiceAreaId7(n)	3685-3700	Note 2 (see page 277)
INPN_ServiceAreaId8(n)	3797-3812	Note 2 (see page 277)
INPN_ServiceAreaId9(n)	3909-3924	Note 2 (see page 277)
INPN_ServiceInteractionIndicators	20	

Parameter	Value (dec)	Notes
INPN_ServiceKey	3	
INPN_ServiceProfileIdentifier	16	
INPN_ServIntActInd2_Ellipsis	1404	Note 3 (see page 278)
INPN_SFBillingChargingCharacteristics	92	
INPN_SFTarrifMessage_Ellipsis	933	Note 3 (see page 278)
INPN_SGSNCapabilities	766	
INPN_SGSNNumber	767	
INPN_SipCallId	4356	
INPN_SMSCAddress	768	
INPN_SMSCause	769	
INPN_SMSReferenceNumber	770	
INPN_SourceCallSegment(n)	1020-1035	Note 2 (see page 277)
INPN_SourceLeg(n)	972-987	Note 2 (see page 277)
INPN_SrfConnection	2786	
INPN_SS_Invocation(n)	1164-1179	Note 2 (see page 277)
INPN_StartDigit	78	
INPN_StartDigitSeq(n)	2853-2868	Note 2 (see page 277)
INPN_StartTime	63	
INPN_StopTime	100	
INPN_SubGPRSQoSExt_Ellipsis	4205	Note 3 (see page 278)
INPN_SubLngQoSFormat	772	
INPN_SubscriberID	321	
INPN_Subsequent_CAI_E1	151	
INPN_Subsequent_CAI_E2	152	
INPN_Subsequent_CAI_E3	153	
INPN_Subsequent_CAI_E4	154	
INPN_Subsequent_CAI_E5	155	
INPN_Subsequent_CAI_E6	156	
INPN_Subsequent_CAI_E7	157	
INPN_SubShtQoSFormat	771	
INPN_SubSupToLongQoSFormat	4204	
INPN_SupplementaryServices	1277	
INPN_SupportedCamelPhases	2779	
INPN_SuppressCallDiverNot	719	
INPN_SuppressCallTransferNot	720	
INPN_SuppressDCSI	4198	

Parameter	Value (dec)	Notes
INPN_SuppressionOfAnnouncement	109	
INPN_SuppressNCSI	2788	
INPN_SuppressOCSI	4200	
INPN_SuppressOutgoingCallBarring	4199	
INPN_SuppressTCSI	4187	
INPN_SuspendTimer	717	
INPN_SystemFailure	45	
INPN_Target	1298	
INPN_TargetCallSegment	936	
INPN_TargetCallSegmentAssociation	937	
INPN_TariffMessage	956	
INPN_TariffSwitchInterval	158	
INPN_TaskRefused	46	
INPN_TerminalType	17	
INPN_Time(n)	538-541	Note 2 (see page 277)
INPN_TimeAndTimezone	703	
INPN_TimePerInterval	1248	
INPN_TimerID	61	
INPN_TimerValue	62	
INPN_TimeStamp	1292	
INPN_TimeToRecord	626	
INPN_tInitiatorOfServiceCharge	4225	
INPN_TmDurChar_Ellipsis	1374	Note 3 (see page 278)
INPN_TmDurCharRes_Ellipsis	1373	Note 3 (see page 278)
INPN_TmGPRSNoTariffSwch	773	
INPN_TmGPRSSinceLastTariffSwch	774	
INPN_TmGPRSTariffSwchInt	775	
INPN_TmIfNoTariffSwch	776	
INPN_Tmr	104	
INPN_TmSinceTariffSwch	777	
INPN_tNatureOfServiceCharge	4227	
INPN_Tone	778	
INPN_Tone_Ellipsis	1375	Note 3 (see page 278)
INPN_toneDuration	4196	
INPN_ToneID	64	
INPN_toneInterval	4197	

Parameter	Value (dec)	Notes
INPN_TPDataCodingScheme	779	
INPN_TPProtocolID	780	
INPN_TPShtMsgSubInfo	781	
INPN_TPValidityPeriod	782	
INPN_TravellingClassMark	39	
INPN_TriggerDataId_Ellipsis	950	Note 3 (see page 278)
INPN_TriggerType	18	
INPN_TrunkGroupID	951	
INPN_tServiceChargeInfo_Ellipsis	4223	Note 3 (see page 278)
INPN_TypeOfRequestedInfo	1098	
INPN_UniqueCallID	1289	
INPN_UnitsPerDataInterval	1251	
INPN_UnitsPerInterval	1247	
INPN_UserAbandon(n)	1100-1115	Note 2 (see page 277)
INPN_UserDialogueDuratInd	722	
INPN_UserInteractionModes	1284	
INPN_USIInformation	704	
INPN_USIMonitorMode(n)	812-827	Note 2 (see page 277)
INPN_UTCTime	1296	
INPN_UU_Ellipsis	4216	Note 3 (see page 278)
INPN_UU_ExtensionContainer	4230	
INPN_UUI	2774	
INPN_UUIndicator	2773	
INPN_uusCFInteraction	2775	
INPN_Variable_MessageID	629	
INPN_Vlr_Number	126	
INPN_VoiceBack	84	
INPN_VoiceInformation	83	
INPN_VollfNoTariffSwch	785	
INPN_VolLastTariffSwch	783	
INPN_VolTariffSwchInt	784	
INPN_warningPeriod	4213	

Note 1: Parameter is a sequence of a primitive type.

Note 2: Parameter is a primitive inside a sequence of a constructed type in at least one operation.

Note 3: Where an operation defines a sequence as ending with an ellipsis element, additional parameters may be included at the end of the sequence. The data from these additional parameters is stored in a single parameter; for example, INPN_Ellipsis. As the format and encoding of these parameters is inherently undefined in the specification, the entire parameter—including tag, length and data—is stored in the parameter as it appears in the message buffer. This allows the user to recover the largest range of additional parameter data without requiring custom changes to the API library. If more than one parameter is present in the ellipsis, the parameters are concatenated together in the order they appear in the message and stored in the same ellipsis parameter.

Note 4: INPN_CAMEL_AOC_AfterAnswer will not be formatted or decoded, it is used to determine if the AOC is after the answer for CAMEL v4. If present AOCAfterAnswer will be sent, otherwise AOCBeforeAnswer or the AOC-Extension will be sent. Used in conjunction with INPN_CAMEL_AOC_BeforeAnswer parameter.

B.15.2 AIN parameters

The following table alphabetically lists the parameters used in the supported operations, results, errors and rejects. These cover the AIN specifications. The parameter names used for ITU-T, ETSI and CAMEL specifications are listed separately in Section [B.15.1 ITU-T, ETSI and CAMEL parameters on page 259](#).

Parameter	Value (dec)	Notes
AINPN_AccessCode	9	
AINPN_AccumulatedDigits(i)	196 - 210	Note 2 (see page 281)
AINPN_ACGEncountered	14	
AINPN_ADSIcpelD	29	
AINPN_AlternateBillingInd	58	
AINPN_AlternateCarrier	54	
AINPN_AlternateTrunkGroup	52	
AINPN_AMAAlternateBillingNumber	61	
AINPN_AMABillingFeature	65	
AINPN_AMABusinessCustomerID	62	
AINPN_AMADigitsDialedWC(i)	71 - 75	Note 2 (see page 281)
AINPN_AMALineNumber(i)	69 - 70	Note 2 (see page 281)
AINPN_AMAMeasure	514	
AINPN_AMASequenceNumber	18	
AINPN_AMAServiceProviderID	67	
AINPN_AMAsIpID	63	
AINPN_Amp1	15	
AINPN_AmpCallProgInd	36	
AINPN_AmpCLogName	38	

Parameter	Value (dec)	Notes
AINPN_AmpCLogReplInd	35	
AINPN_AmpCLogSeqNo	34	
AINPN_AmpSvcProvID	39	
AINPN_AmpTestReqInd	37	
AINPN_AnnounceElement0(i)	524 - 533	Note 2 (see page 281)
AINPN_AnnounceElement1(i)	534 - 543	Note 2 (see page 281)
AINPN_AnswerIndicator	517	
AINPN_ApplyRestrictions	68	
AINPN_BearerCapability	545	
AINPN_Blank(i)	76 - 90	Note 2 (see page 281)
AINPN_CallAppearanceID(i)	376 - 390	Note 2 (see page 281)
AINPN_CalledAddress(i)	121 - 135	Note 2 (see page 281)
AINPN_CalledPartyID	3	
AINPN_CalledPartyName(i)	286 - 300	Note 2 (see page 281)
AINPN_CallingAddress(i)	241 - 255	Note 2 (see page 281)
AINPN_CallingGeodeticLocation	23	
AINPN_CallingPartyBGID	546	
AINPN_CallingPartyID	7	
AINPN_CallingPartyName(i)	271 - 285	Note 2 (see page 281)
AINPN_Carrier	552	
AINPN_CarrierUsage	66	
AINPN_Cause(i)	136 - 150	Note 2 (see page 281)
AINPN_ChargeNumber	6	
AINPN_ChargePartyStationType	8	
AINPN_CollectedAddressInfo	10	
AINPN_CollectedDigits	11	
AINPN_ConnectedName(i)	331 - 345	Note 2 (see page 281)
AINPN_ConnectedNumber(i)	466 - 480	Note 2 (see page 281)
AINPN_Continuation(i)	106 - 120	Note 2 (see page 281)
AINPN_CTRConnection	20	
AINPN_DateTimeOfDay(i)	361 - 375	Note 2 (see page 281)
AINPN_DestinationAddress	512	
AINPN_DialingPlan	31	
AINPN_DisconnectFlag	516	
AINPN_Dn	26	
AINPN_DPConverter	513	
AINPN_ErrorCause	556	

Parameter	Value (dec)	Notes
AINPN_ExtendedRinging	518	
AINPN_FeatureAddress(i)	391 - 405	Note 2 (see page 281)
AINPN_FlexParameterBlk	522	
AINPN_ForwardCallIndicators	550	
AINPN_GenericAddress(i)	40 - 44	Note 2 (see page 281)
AINPN_GenericDigits(i)	45 - 49	Note 2 (see page 281)
AINPN_GenericName	551	
AINPN_Inband(i)	226 - 240	Note 2 (see page 281)
AINPN_InvokelD	1	
AINPN_InvParms	557	Note 3 (see page 282)
AINPN_ISDNDeviceID	33	
AINPN_JurisdictionInformation	21	
AINPN_Lata	4	
AINPN_LinkedID	2	
AINPN_MaximumDigits	523	
AINPN_MsrID	554	
AINPN_NetworkSpecificFacilities	19	
AINPN_NotificationInd(i)	166 - 180	Note 2 (see page 281)
AINPN_Null	0	
AINPN_Ocn	553	
AINPN_OperationCode	558	
AINPN_OrigCalledName(i)	301 - 315	Note 2 (see page 281)
AINPN_OrigCalledNumber(i)	451 - 465	Note 2 (see page 281)
AINPN_OriginalCalledPartyID	547	
AINPN_OrigRestrictions(i)	346 -360	Note 2 (see page 281)
AINPN_OutpulseNumber	50	
AINPN_OverflowBillingInd	60	
AINPN_Parameter	555	
AINPN_PartyID	520	
AINPN_PartyOnHold	521	
AINPN_PassiveLegTreatment	56	
AINPN_Prefix	22	
AINPN_PrimaryBillingInd	57	
AINPN_PrimaryTrunkGroup	51	
AINPN_PrivateFacilityGID	28	
AINPN_ProgressInd(i)	151 - 165	Note 2 (see page 281)
AINPN_Prompt(i)	181 - 195	Note 2 (see page 281)

Parameter	Value (dec)	Notes
AINPN_Reason(i)	256 - 270	Note 2 (see page 281)
AINPN_RedirectingName(i)	316 - 330	Note 2 (see page 281)
AINPN_RedirectingNumber(i)	436 - 450	Note 2 (see page 281)
AINPN_RedirectingPartyID	548	
AINPN_RedirectingReason(i)	496 - 510	Note 2 (see page 281)
AINPN_RedirectionInformation	549	
AINPN_RedirectionName(i)	406 - 420	Note 2 (see page 281)
AINPN_RedirectionNumber(i)	421 - 435	Note 2 (see page 281)
AINPN_ResourceType	515	
AINPN_RTPReroutingNumber	511	
AINPN_Sap	16	
AINPN_SecondAlternateBillingInd	59	
AINPN_SecondAlternateCarrier	55	
AINPN_SecondAlternateTrunkGroup	53	
AINPN_ServiceContext	64	
AINPN_Skip(i)	91 - 105	Note 2 (see page 281)
AINPN_SpcID	32	
AINPN_Spid	25	
AINPN_Ssp	30	
AINPN_Status(i)	211 - 225	Note 2 (see page 281)
AINPN_STRConnection	17	
AINPN_Tcm	13	
AINPN_Text(i)	481 - 495	Note 2 (see page 281)
AINPN_TriggerCritType	5	
AINPN_TriggerInformation	24	
AINPN_TrunkGroupID	27	
AINPN_TSTRCTimer	519	
AINPN_VerticalServiceCode	12	

Note 1: Parameter is a sequence of a primitive type.

Note 2: Parameter is a primitive inside a sequence of a constructed type in at least one operation.

Note 3: Where an operation defines a sequence as ending with an ellipsis element, additional parameters may be included at the end of the sequence. The data from these additional parameters is stored in a single parameter e.g. INPN_Ellipsis. As the format and encoding of these parameters is inherently undefined in the specification, the entire parameter including tag, length and data is stored in the parameter as it appears in the message buffer. This allows the user to recover the largest range of additional parameter data without requiring custom changes to the API library. If more than one parameter is present in the ellipsis they are concatenated together in the order they appear in the message and stored in the same ellipsis parameter.

B.16 Supported INAP Operation Result

The following tables indicate those operations which have valid results and the parameters supported for those results.

Note: Not all of the protocols supported include all of these operations.

INOP_ActivateServiceFiltering				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_PromptAndCollectUserInformation				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
DigitsResponse	INPN_DigitsResponse	47	0x2f	M

INOP_ActivityTest				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_PromptAndReceiveMessage				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
ReceivedStatus	INPN_ReceivedStatus	631	0x277	M
RecordedMessageID	INPN_RecordedMessageID	632	0x278	O
RecordedMessageUnits	INPN_RecordedMessageUnits	633	0x279	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

INOP_ProvideUserInformation				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
Received Information (size = 1 to 16)				M
IA5String	INPN_IA5String(n) (n = 0 to 15)	1261 to 1276	0x4ed to 0x4fc	O2
SupplimentaryServices	INPN_SupplimentaryServices	1277	0x4fd	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCode	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

INOP_ManageTriggerData				
Parameter	Mnemonic	Value		
		dec	hex	
InvokeID	INPN_InvokeID	1	0x1	M
ActionPerformed	INPN_ActionPerformed	948	0x3b4	O
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

INOP_InitiateAssociation				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_ConfirmedNotificationProvided				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_ConfirmedReportChargingInformation				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_CreateCallSegmentAssociation				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
NewCallSegment Association	INPN_NewCallSegment Association	935	0x3a7	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

INOP_DisconnectLeg				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_MergeCallSegments				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_MoveCallSegments				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_MoveLeg				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_SplitLeg				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_NetworkCapability				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
BearerCapabilities (Bitstring)	INPN_Bits_BearerCapabilities	1286	0x506	O
HighLayerCompatibilities (Bitstring)	INPN_Bits_HighLayer Compatibilities	1287	0x507	O
SupplementaryServices	INPN_SupplementaryServices	1277	0x4fd	O
SecurityParameters				O
CertificationPath	INPN_CertificationPath	1294	0x50e	O2
DistinguishedName	INPN_DistinguishedName	1295	0x50f	O2
UTCTime	INPN_UTCTime	1296	0x510	O2
Random	INPN_Random	1297	0x511	O2
Target	INPN_Target	1298	0x512	O2
Response	INPN_Response	1299	0x513	O2
OperationCod	INPN_OperationCode	1300	0x514	O2
AttributeCertificationPath	INPN_AttributeCertificationPath	1301	0x515	O2
ErrorProtection	INPN_ErrorProtection	1302	0x516	O2
Extensions (see Appendix B.14 Operation Extensions on page 257)				O
Ellipsis	INPN_Ellipsis	112	0x70	A

INOP_ActivityTestGPRS				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_ApplyChargingReportGPRS				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_EntityReleasedGPRS				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

INOP_EventReportGPRS				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

AINOP_SendToResource				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
Extensions (see Appendix B.14 Operation Extensions on page 257)				O

B.17 Supported INAP Errors

The following errors are currently supported to provide negative results for the supported operations.

The meaning of each error is that defined in the ETSI INAP specification ETS 300 374-1 and EN 301 140-1. Not all errors are valid for all protocols.

The mnemonics identified below are defined in the `in_inc.h` header file accompanying the API suite. They are used in the "err_name" parameter of the `IN_set_error()` and `IN_get_error()` API functions.

Note: The "provider error" error indicates an error at the INAP - TCAP level. It may not be sent by the User Application. It may be received in response to any operation invoked by the user.

Error	Mnemonic	Value (dec)	Value (hex)
Cancelled	INER_Cancelled	0	0x0
CancelFailed	INER_CancelFailed	1	0x1
ETCFailed	INER_ETCFailed	3	0x2
ImproperCallerResponse	INER_ImproperCallerResponse	4	0x4
MissingCustomerRecord	INER_MissingCustomerRecord	6	0x6
MissingParameter	INER_MissingParameter	7	0x7
ParameterOutOfRange	INER_ParameterOutOfRange	8	0x8
RequestedInfoError	INER_RequestedInfoError	10	0xa
SystemFailure	INER_SystemFailure	11	0xb
TaskRefused	INER_TaskRefused	12	0xc
UnavailableResource	INER_UnavailableResource	13	0xd
UnexpectedComponent Sequence	INER_UnexpectedComponent Sequence	14	0xe
UnexpectedDataValue	INER_UnexpectedDataValue	15	0xf
UnexpectedParameter	INER_UnexpectedParameter	16	0x10
UnknownLegID	INER_UnknownLegID	17	0x11
UnknownResource	INER_UnknownResource	18	0x12
SCFReferral	INER_SCF_Referral	21	0x15
SCFTaskRefused	INER_SCF_TaskRefused	22	0x16
ChainingRefused	INER_ChainingRefused	23	0x17
UnknownPDPID	INER_UnknownPDPID	50	0x32
ProviderError	INER_provider_error	240	0xf0

B.18 Supported INAP Error Parameters

The parameters that may be placed in the component structure using the `IN_set_component_param()` function for each of the supported errors are summarized below.

The format of the contents of each error parameter is defined in the appropriate protocol specification.

The mnemonics identified below are defined in the `in_inc.h` header file accompanying the API suite. They are used in the "param_name" parameter of the `IN_set_component_param()` and `IN_get_component_param()` API functions.

INER_CancelFailed				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
CancelFailed_Problem	INPN_CancelFailed_Problem	42	0x2a	M
CancelFailed_Operation	INPN_CancelFailed_Operation	43	0x2b	M

INER_RequestedInfoError				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
RequestedInfoError	INPN_RequestedInfoError	44	0x2c	M

INER_SystemFailure				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
SystemFailure	INPN_SystemFailure	45	0x2d	M

INER_TaskRefused				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
TaskRefused	INPN_TaskRefused	46	0x2e	M

INER_provider_error ²⁷				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
Provider Error	INPN_provider_error	50	0x32	M

All other errors				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M

In the application error table below:

- ErrorCause is an enumerated type to identify the error.
- OpCode is the operation code of the failed message.
- Parameter represents the parameter, length and contents of the received message
- InvParms represents the invalid parameter, which can be any AIN parameter.

AIN Application error				
Parameter	Mnemonic	Value (dec)	Value (hex)	
InvokeID	INPN_InvokeID	1	0x1	M
ErrorCause	AINPN_ErrorCause	556	0x22c	M
FailedMessage				O
OpCode	AINPN_OperationCode	558	0x22e	M2
Parameter	AINPN_Parameter	555	0x22b	O2
InvParms	AINPN_InvParms	557	0x22d	O2
UserID				O
Dn	AINPN_Dn	26	0x1a	C2
BRI				C2
Spid	AINPN_Spid	25	0x19	M3
Dn	AINPN_Dn	26	0x1a	M3
TrunkGroupID	AINPN_TrunkGroupID	27	0x1b	C2
PrivateFacilityGID	AINPN_PrivateFacilityGID	28	0x1c	C2
ADSIcpelD	AINPN_ADSIcpelD	29	0x1d	C2

²⁷ The "Provider Error" error indicates an error in the INAP - TCAP layers. The contents of the associated Provider Error parameter are specified in [Section 3.9 INAP Service Primitive Parameters on page 29](#).

AIN Application error				
Parameter	Mnemonic	Value (dec)	Value (hex)	
Ssp	AINPN_Ssp	30	0x1e	C2
DialingPlan	AINPN_DialingPlan	31	0x1f	C2

Key

- M Mandatory The message will be discarded if the corresponding parameter is omitted
- O Optional The parameter is not essential

Appendix C. Message Type Reference

C.1 Message Type Reference

The following table lists by message type all the messages described in this manual.

Value	Mnemonic	Description
0x0003	MGT_MSG_TRACE_EV	Message used to report traced messages
0x0008	MGT_MSG_EVENT_IND	Message used to report internal management events
0x07f8	INAP_MSG_ERROR_IND	Message indicates an implementation specific software event to the local management module
0x07f9	INAP_MSG_MAINT_IND	Message used by INAP to indicate a protocol related event to the local maintenance module
0x07fa	INAP_MSG_EVENT_IND	
0x07ff	INAP_MSG_DEBUG_IND	
0x17fb		Confirmation to INAP_MSG_TRACE_MASK (0x57fb)
0x17fc		Confirmation to INAP_MSG_S_ERROR_MASK (0x57fc)
0x17fd		Confirmation to INAP_MSG_S_MAINT_MASK (0x57fd)
0x2111		Confirmation to GEN_MSG_MOD_IDENT (0x6111)
0x37f4		Confirmation to INAP_MSG_CONFIG (0x77f4)
0x37f5		Confirmation to INAP_MSG_CNF_TIM (0x77f5)
0x37f6		Confirmation to INAP_MSG_CNF_AC (0x77f6)
0x37f7		Confirmation to INAP_MSG_CNF_FE (0x77f7)
0x57fb	INAP_MSG_TRACE_MASK	INAP Trace Mask Request - Message used to configure INAP to trace messages sent or received
0x57fc	INAP_MSG_S_ERROR_MASK	INAP Software Event Mask Request Message used to configure software error event tracing
0x57fd	INAP_MSG_S_MAINT_MASK	INAP Maintenance Mask Request - Message used to configure maintenance event tracing
0x57fe	INAP_MSG_DEBUG_MASK	
0x6111	GEN_MSG_MOD_IDENT	Read Revision Request - Message used to request the module type and software revision number
0x77f4	INAP_MSG_CONFIG	INAP Configuration Request - Message used to configure the INAP module for operation
0x77f5	INAP_MSG_CNF_TIM	INAP Timer Configuration Request - Message used to set up default protocol timers for use by the INAP module
0x77f6	INAP_MSG_CNF_AC	INAP Application Context Configuration Request - Message used to set up the internal Application Context records

Value	Mnemonic	Description
0x77f7	INAP_MSG_CNF_FE	INAP Functional Entity Configuration Request - Message used to set up the internal Functional Entity records
0x77f8	INAP_MSG_NC_CONFIG	
0x87f0	-	Confirmation to INAP-SERVICE-REQ (0xc7f0)
0x87f1	INAP-SERVICE-IND	INAP Service Indication Message - Used to receive operation invokes, results or errors.
0x87f2	-	Confirmation to INAP-DIALOGUE-REQ (0xc7f2)
0x87f3	INAP-DIALOGUE-IND	INAP DialogueIndication Message - Used to receive dialogue events from the INAP module.
0xc002	TM_EXP	INAP module periodic "tick timer" message
0xc7f0	INAP-SERVICE-REQ	INAP Service Request Message - Used to send components to remote Functional Entities.
0xc7f2	INAP-DIALOGUE-REQ	INAP Dialogue Request Message - Used to issue dialogue commands to the INAP module.

Note: For more information on the MSG message structure, see Appendix A of the *Software Environment Programmer's Manual*.