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INTELLIGENT NETWORK
APPLICATION PROTOCOL
(INAP)
NATIONAL STANDARDS

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INTELLIGENT NETWORK
APPLICATION PROTOCOL
(INAP)
NATIONAL STANDARDS

HISTORY SHEET

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Annex A- VOCABULARY AND ABBEVIATIONS

Annex B- EXPANDED ASN.1 SOURCE OF THE PARAMETER

References

- (i) National Standards for CCS7 –local G/SCCS-01 latest issue
- (ii) National Standards for CCS7 - transit G/CCS-O2 latest issue
- (iii) ITU-T Recommendations Q.1211 (1993) introduction to intelligent network capability set -1 (CS-1)
- (iv) ITU-T Recommendations Q.1213 (1993) Global functional plane for intelligent network CS-I
- (v) ITU-T Recommendations Q.1214 (1993) Distributed functional plane for intelligent network CS-I
- (vi) ITU-T Recommendations 9.1215 (1993) Physical plane for intelligent network
- (vii) ITU-T Recommendations Q.1218 (1993) Interface recommendation for intelligent network CS-I
- (viii) ITU-T Recommendations Q.771 (1993) Signalling System No.7 – Functional description of transaction capabilities
- (ix) Intelligent Network (IN) , Intelligent Network capability set -1 (CS-1) , core intelligent Network Application Protocol map)
- (x) intelligent Network(IN), (Intelligent Network capability set-2 (CS-2)

Part 1 - Protocol specifications No. ETS 300 374- 1 September 1994

CHAPTER 1

2. INTRODUCTION

(a) This document gives the interface specifications for Intelligent Networks Application Protocol (INAP). IN service specifications are as per the Generic Requirements No. G/INS-O 1 .

(b) The INAP specified here shall support Capability Set 1 (CS1) & capability set 2 (CS2) as per ITU-T recommendation Q.1211& Q.1228. The INAP supports interaction between Service Switching Function (SSF) , Service Control Function (SCF) and Specialized Resource Function (SRF) defined in ITU-T recommendation Q 1203. The ITU-T recommendations and core INAP standards have several National options and these are addressed in this document This will facilitate multi-vendor working for IN in Indian Telecom Network.

(c) This specification is based on ITU-T recommendations Q.1211, Q.1213, Q.1214, Q.1215, Q.1218, Q.1224, Q.1228 and the documents mentioned in the reference section.

(d) Expanded ASN.1 source of the parameters, which have been defined as OCTET STRINGS and not defined in Core INAP CS-I&CS2 ,are given in Annex-B

2.1 FEATURES AND FACILITIES

2.1.1 The INAP protocol shall support the mapping of various functional entities into physical entities as per ITU recommendation Q.1215 elaborated further in Generic Requirements No. G/INS-O1 . The SRF function shall be implemented as follows

a) Peripheral (IP) shall provide SRF function and shall either be integrated in Service Switching Point (SSP) or external to the SSP External IP may be shared by multics SSPs

b) One of the following mode shall be used for external IP.

i) Direct or Assist Mode

ii) Indirect or Relay Mode

c) Application context negotiation mechanism for INAP shall be supported Application Context parameter in dialog portion of the TCAP shall be supported.

2.2 TIMERS

The SSF has an application timers Tssf whose purpose is to prevent excessive call suspension and to guard the association between the SSF and the SCF

(a) The Tssf application timer shall be 4 seconds.

(b) This timer Value shall be modifiable through man machine commands in SSP, but only my privileged users.

2.3 TCAP PRIMITIVES

The purpose Of these Primitives is to request Or indicate facilities of the underlying (sub)- layer, in relation with message transmission or dialogue handling. According to ITU-T recommendations Q.771, there are 3 Scenarios for a TC-user to end a dialogue:

- (a) **Prearranged end:** In this method, the TC-users decide by prior arrangement when to end the dialogue. The effect of TC-END is local and so TC-END indication is not used. Consequently the remote TC-user does not receive any TC-END indication
- (b) **Basic end :** In this method, the TC-END Indication is sent to the remote TC-user with pending components if any.
- (c) **Abort by the To-user** - This is sent in the error cases.

The option (b) shall be used.

2.4 ABORT REASONS

The ABORT procedure is used to stop the dialogue in case of an error and depending upon the nature of error. For this purpose the TCAP primitive TC-U-ABORT is used. The error procedures used for ABORT shall be as per Core INAP CS-1. The ABORT codes (reasons) are not defined in TCAP. They are left for User of TCAP to define. Hence the codes to be used in TC-U-ABORT and the scenarios under which these codes should be used are described below :

- (a) Tssf Application timer expired (Value 1) : This will be used when Tssf application timer expires while Service Switching Function (SSF) is waiting for a response from Service Control Point (SCP) and it is in the Waiting For Instruction state
- (b) Multiple Charge Controlling dialogues (Value 2) - At a time, only one dialogue out of many dialogues for a call can be controlling the charge. Hence if charging message is received in more than one dialogues associated with a call, then dialogue will be aborted with the above cause value.
- (c) Error indication (Value 3) : This will be used when SSP/SCP an error Indication (TC-U-ERROR) from SCP/SSP respectively
- (d) Remote reject indication (Value 4) : This will be used when SSP/SCP is aborting to dialogue because of remote reject indication (TC-R-REJECT) from SCP/SSP respectively
- (e) User Reject indication (Value 5) This will be used when SSP/SCP is aborting the dialogue because of a fatal User reject indication (TC-U-EJECT) from SCP/SSP respectively.
- (f) Calling Party Abandon (Value 6) : This will be used when SSP is waiting for a response from SCP and calling party disconnect before getting response from SCP. In this case SSP aborts the dialogue here it gets the first response from SCP using TC-U-ABORT using the above error code.
- (g) Internal Error (Value 7) This will be used when dialogue is being aborted from either SSP or SCP because of some Internal error in the node.
- (h) Dialogue Does not exist (Value 8) : This will be used when dialogue ID being exchanged between two nodes actually does not exist.
- (i) Unexpected TCAP Primitive (Value 9) This will be used when either SSP or SCP receives unexpected TCAP primitive (dialogue handling or component handling).
- (j) Protocol Error (Value 10) : This will be used when there is protocol error in the message received (e.g. unrecognized operation code in TC_INVOKE_IND).

1.4 Meaning of Key words used in this document is given below:-

CHOICE -Choice indicates that only one of the parameters specified shall be present. Flexibility shall be available in the system to suppress sending of the parameters mentioned as choice.

SEQUENCE - Sequence indicates a structure of parameters

sequence size OF - Sequence Size Of indicates an array of size as specified .

Integer4 - Integer indicates that the parameter is of type integer and its range is 0.. 214743647.

ENUMERATED - Enumerated indicates that the Ammeter may take a value from any one of 14 specified values.

CHAPTER 2

3. TCAP OPERATIONS FOR INAP MESSAGES

The following (2.1 to 2.36) Core INAP CS-1 & CSQ messages shall be supported with TCAP class of operations mentioned along with it

MESSAGE	TCAP CLASS OF OPERATION	REMARKS
2.1. Activate Service Filtering	Class 1	
2.2 Activity Test	Class 3	
2.3 Apply Charging	Class 2	Mandatory for services like pre-paid credit card calling.
2.4. Apply Charging Report	Class 2	
2.5 Call Gapping	Class 4	
2.6 Call Information Request	Class 2	
2.7 Call Information Report	Class 4	
2.8 Cancel	Class 2	
2.9 Collect Information	Class 2	It must be preceded by a request Report BCSM arming DP2 and telling how many digit to collect. This message shall be catered to till do;; (Analyse information since after this Detection Point (did *11 the digit would have come, either dialled by subscriber or went by Service Control Point (SCP)
2.10 Connect	Class 2	
2.11 Connect To Resource	Class 2	
2.12. Continue	Class 4	
2.13 Disconnect Forward Connection	Class 2	
2.15 Furnish Charging Information	Class 2	
2.16 Initial DP	Class 2	
2.17 Release Call	Class 4	
2.18 Request Report BCSM Event	Class 2	

MESSAGE	TCAP CLASS OF OPERATION	REMARKS
2.19 Reset timer	Class 2	It is used by SCF to refresh the Tssf application timer at SSF . SCF can send this operation to avoid Tssf time-out at Service Switching Function (SSF) during long duration of Play Announcement, Prompt and Collect User Information or when SCF is sharing several Service Data Functions (SDF). The time interval at which this message should be and is dependent on the Tssf time. It should be less than Tssf timer Since this message is used to refresh Tssf timer
2.20 Send Charging Information	Class 2	
2.21. Service Filtering Response	Class 4	
2.22. Play Announcement	Class 2	
2.23. Prompt And Collect User Information	Class 1	
2.24 Specialized Resource report	Class 4	It is used as response to a Play Announcement operation with the parameter 'Request Announcement Complete' set to TRUE.
2.25. Assist Request Instruction	Class 2	Supported in case of Direct mode
2.26 Establish Temporary Connection	Class 2	Supported in case of Direct mode
2.27. Event Notification Charging	Class 4	Optional
2.28. Initiate Call Attempt		It is not being supported since its use is envisaged in services like wake up calls etc., which are already available in the switching network without any additional hardware
2.29 Request Notification Charging	Class 2	Optional
2.30 Continue with argument	Class 2	
2.31 Disconnect leg	Class 1	
2.32 Entity Released	Class 4	
2.33 Merge Call Segment	Class 1	
2.34 Move leg	Class 1	
2.35 reconnect	Class 2	
2.36 Split leg	Class 1	

CHAPTER 3

4. TIMERS FOR INAP MESSAGES

This chapter lists the messages that shall be supported for Class 1, Class 2, Class operation and their operation timers and the value range for each timer.

ii) The following timer shall be modifiable through man-machine commands at SSP; Tacr, Tidp,

iii) The following timer shall be modifiable through man-machine commands at SCP or SMP;

Tat, Tac, Tcirq, Tcan, Tci, Tcon, Tctr, Tdfc, Tfci, Trrb, Trt, Tsci, Tpa, Tpc,

MESSAGE	OPERATION	RANGE TIMER NOMINAL VALUE	REMARKS
3.1. Activate Service Filtering	Tasf-30 seconds	1- 60 seconds	Purpose of Activate Service filtering timer will be that SSP should be able to process Activate service Filtering message and if successful, then must send an error indication within Tasf
3. 2 Activity test	Tat-3 seconds	1- 10 seconds	ActivityTest should be sent periodically for the dialogues corresponding to the calls in conversation phase-. Time Interval between two consecutive activity test message - Default 30 minute.
3.3. Apply Charging	Tac-3seconds	1- 10 seconds	
3.4 Apply Charging Report	Tacr-3 seconds	1- 10 seconds	
3.5. Call Information Request	Tcirq – 3 seconds	1- 10 seconds	
3.6. Cancel	Tcan – 10 seconds	1- 10 seconds	
3.7. Collect Information		1- 60 seconds	
3.8 Connect	Tcon – 3 seconds	1- 10 seconds	
3.9. Connect To Resource	Tctr – 3 Seconds	1- 10 seconds	This timer value is as for configuration when IP is integrate within SSP
3.10 Disconnect Forward CONNECTION	Tdfc - 3 Seconds	1- 10 seconds	This timer value is again for configuration where IP is integrate within SSP

MESSAGE	OPERATION	RANGE TIMER NOMINAL VALUE	REMARKS
3.11Furnish Charging Information	Tcfi - 3 Seconds	1- 10 seconds	
3.12 Intial DP	Tidp - 3 Seconds	1- 10 seconds	
3.13 Request Report BCSM Event	Trrb - 3 Seconds	1- 10 seconds	
3.14 Reset timer	Trt - 3 Seconds	1- 10 seconds	
3.15Send Charging Information	Tsci - 3 Seconds	1- 10 seconds	
3.16 Play Announcement	Tpa - 3 Seconds	1sec -30 min	This timer value is for the case of internal IP, this timer value can be modified for external IP through Man Machine Command
3.17 Prompt And Collect User Information	Tpc - 2 min	1sec -30 min	This timer value is for the case of internal IP, this timer value can be modified for external IP through Man Machine Command
3.18ASSIST Request Instruction	Tari - 3 Seconds	1- 10 seconds	
3.19 Establish Temporary connection	Tetc - 3 Seconds	1- 10 seconds	
3.20 Event notification charging	Tenc - 3 Seconds	1- 10 seconds	
3.21 Request notification charging	Trnc - 3 Seconds	1- 10 seconds	
3.22isconnect Leg	Tdl - 3 Seconds	1- 10 seconds	
3.23 Entity Released	Ter - 3 Seconds	1- 10 seconds	
3.24 merge call segment	Tmcs - 3 Seconds	1- 10 seconds	
3.25 move leg	Tml - 3 Seconds	1- 10 seconds	
3.26 split leg	Tsl - 3 Seconds	1- 10 seconds	

CHAPTER 4

5. GENERAL PARAMETERS DESCRIPTION

This section deals with the description of the parameters which are used in more than one message and the description of these parameters is irrespective of the message in which they are present.

- 4.1 LocationNumber ::= as per national standards for ISUP
- 4.2 Digits ::= as per national standards for ISUP
- 4.3 ServiceKey ::= INTEGER4

4.4 Date And time	::= OCTET STRING (SIZE (6))	DATE AND TIME octet string is coded in the format YYMMDDHHMMSS THE SOFTWARE shall not pose any problem due to change in date and time caused by event such as change over of leap in the normal functioning of the system
4.5 Duration	::= INTEGER(-2..86400)	
4.6 Information to send	::= CHOICE	
In band info	[0]	
tone	[1]	
}		
4.7 Cause	::= as per national standards for ISUP	
4.8 Invoke ID	::=	
4.9 Leg ID	::= CHOICE	
{		
Sending Side ID	[0]	Leg type
Receiving side ID	[1]	Leg type
}		
_ indicates a reference to a specific party in call		
_OPTIONAL denotes network operator specific use		
_with a choice of unilateral ID assignment or bilateral assignment		
OPTIONAL for Leg ID also denotes the following :		
- when only one party exists in the call this parameter is not needed (as no ambiguity exists)		
_1, legID is present and indicates which party is concerned		
_2. LegID is not present and a default value is assumed. (eg. calling party in the case		

Apply Charging operation)

Choice between these two alternatives is kept a network operator option

4.10. Leg Type ::= CKTET STRING (SIZE (1))

Leg1 leg Type ::= '01'H

Leg2 leg Type ::= '02'H

4.11 Cause ::= OCTET STRING (SIZE (min cause length..bound&max cause length))
indicate the cause for interface related information

--refer to the ITU-T Recommendation Q-763

Cause parameter for encoding

--for the use of cause and location values

refer to ITU-T Recommendation Q-850

4.12 Reason ::= OCTET STRING

(bound. & min Reason length. Bound& max Reason length)

4.13 Call segment ID ::= INTEGER

(l.bound.&numofCSs)

4.14 Altering Pattern ::= OCTET STRING

(size (3)) --Indicate a specific pattern that is used to alert a subscriber (eg. distinctive ringing, tones, etc.) .

--Only applies if SSF is the terminating local exchange for the subscriber. Refer to I Q-931--

--signal parameter for encoding

CHAPTER 5

6. MESSAGE AND THEIR PARAMETERS

This section describes the parameters of the message in which are supported in National Standards.

The values of the parameter and their information element is as per Core INAP CS-1 unless otherwise specified .

For each parameter the tag value is enclosed in []

5.1 Activate Servicing Filtering

Local Value	42
Errors	As per core INAP CS-1
Message Types	SEQUENCE
Return Result Type	Empty Return Result

Parameter Name	Tag values	type
5.1.1 Filtered call treatment	[0]	Filtered call treatment
5.1.1.1 Filtered call treatment::=	SEQUENCE	
{		
SF Billing Characteristics	(0)	
Information to send	[1]	
Maximum Number of counters	(2)	
SF Billing charging characteristics::=	OCTET STRING	

This parameter determines the charging to be applied for service filtering. Note that this parameter is defined as octet string in Core (INAP CS- 1. This octet string consists of the following parameter

initialcharge [0] integer(1..255) (Optional)

This parameter indicates the charge units to be used for charging the party.

The party to be charged shall always be the calling party.

InformationToSends as described in General parameter description in Chapter 4

MaximumNumber of counters ::= INTEGER (1..100)

5.1.2 Filtering characteristics ::= (1) Filteringcharacteristics

5.1.2.1 Filtering characteristics ::= CHOICE

{

interval [0] INTEGER (-1..32000)

number of calls [1] INTEGER4

}

5.1.3 Filtering-Timeout [2] Filtering-Timeout

5.1.3.1 Filtering TimeOut ::= CHOICE

{

Duration [0] Duration

stopTime [1] Date and time
}

Duration ::= Refer to General Parameters Description section

Date and time::= Refer to General Parameters Description section

5.1.4 filtering criteria [3] Filtering criteria

5.1.4.1 Filtering criteria ::= CHOICE

```
{
Service Key [2] Service Key
Address and service [30] SEQUENCE{
Called Address value [0] digits
Service Key [1] Service Key
Calling Address value [2] Digits (Optional)
Location Number [3] Location Number (Optional)
}
}
```

5.1.5 start time [4] DateAndTime (Optional)

5.1.6 extensions [5] (Not Supported)

The extensions parameter is not required in IN-CS1

5.2 Activity Test

Local value :55

Message type : no parameter

Return result type : empty return result

Message Parameters

Parameter	Tag value	type
none		

5.3 **Apply charging**

Local value : 35

Errors: As per core INAP CS-1

Message type SEQUENCE MESSAGE PARAMETER

Parameter NAME	Tag value	type
----------------	-----------	------

5.3.1 achBillingcharateristics (0) AchBillingchargingcharateristics

5.3.1.1 AchBillingchargingcharacteristics ::= OCTECT STRING

This parameter specifies the charging related information and the conditions on which this information has to be reported back by SSF to SCF in the Apply charging report operation .Note that this parameter is defined as octet string in Core INAP CS-1. This octet string consists of structure which is a sequence of the following parameters:

5.3.1.1.1 charge info [0] charge info

This parameter indicates the charging information to be provided by SSF.

ChargeInfo ::= CHOICE

```
{
callTime (0) CallTime
bulkcntr (1) Charge Information
}
```

Cost [2] Cost

}

CallTIME ::= ENUMERATED

{

Timestamps(0)

Durations(1)

}

This parameter indicates whether the duration of the call or the timestamps (i.e. answer time and disconnect time) is to be reported back to SCF.

Charge Information ::= CHOICE

{

unitsInformation [0] UnitsInformation

band Information [1] Integer(0...255) as per Nat.standard for ISUP charging

This parameter provides the information required for applying charging. The band Information provides the band number which will be used to get the charging is terms of periodicity , initial charge and charge per unit,

UnitsInformation ::= SEQUENCE

{

Chargeperiodicity [0] Integer(1..65535) (Optional)

chargeunit (1) Integer(1..255) (Optional)

initialcharge (2) integers(1.. 255) (Optional)

This parameter indicates the charging information in terms of initial charge, chargeperiodicity (in hundreds of mlli seconds) and charge units to be used for charging the call.

Cost ::=SEQUENCE

{

(bulkcntr (0) ChargeInformation

Rateperunit [1] Integers 4

This parameter indicates that the cost has to be reported back to SCF. It provides the Information required for applying charging and calculating the total cost.

5.3.1.1.2 reporting condition [1] Reportingcondition

This parameter indicates the conditions on which the charge related information all to ie read back to SCF. It may be any one of the following - threshold value reached, timer expiry or end of connection

Reporting condition ::= CHOICE

{

endofconnection (0) NULL

threshold counter value[1]Integer4

Duration [2] Integer4(in seconds)

5.3.1.1.3 chargedNumber [2] Digits (Optional)

This parameter specifies the number of the pH. to be charged.

5.3,2 Sendcalulationto[1] Boolean (Default FALSE)

SCP indication

SendcalculationToSCP Indication parameter shall always be set to TRUE.

5.3.3 Party to charge (2) LegID (Optional)

5.3.4 extensions [3] (Not Supported)

5.4 Apply charging Report

Local Value=36

Errors = as per core INAP CS-1.

Message type: OCTET STRING tag “4”

Parameter	Tag value	type
-----------	-----------	------

5.4.1 call Result OCTECT STRING

manage ohmmeters 36

as per cod INAP CS-I

ammeter Name

tag Value

This parameter provides the SCF with the charging related information previously requested using the Apply Charging operation.

Note – callResult parameter is defined as octet string in Core INAP CS-1

This octet string consists of structure which is of type SEQUENCE.

CallResult ::= SEQUENCE

```
{
  Chargedparty[0] charged party
  Reporting condition type (1) Reportingcondition type
  Charge Infovalue [2] Charge Infovalue )
}
Charged party ::= CHOICE
{
  legId          [0]          legld
  charged number (1)          Digits
}
```

This parameter indicates the party to be charged. This is as received if the related Apply charging operation.

Reportingcondition Type ::= ENUMERATED

```
{
  l endofconnectionl(0) thresholdcounter duration(2)
```

This parameter indicates the condition on which the report is being sent to SCF . It may be any one of the following - threshold value reached , timer expiration or end of connection.

ChargeInfovalue ::= CHOICE

```
{
  time stamps [0] Timestamps
  duration (1) Integers4 ( in seconds )
  bulk|cntrvalue (2) Integers4
  costvalue (3) Integers4
}
```

This parameter provides the Information as requested by SCP in the corresponding Applycharging operation.

Note :The parameter costvalue could be Implemented later-on for dynamic calculation of cost Timestamps ::= SEQUENCE{

Ans time [0] DateandTime

discTime [1] DateandTime

This parameters indicates the time stamps when the called party answered and when the call got disconnected.

5.4.2 Apply charging Report operation may be invoked on multiple occasions depending on the reporting condition ,in Apply charging.

5.5 Call Gap

local value : 41

Errors : as per core INAP CS-I

Message Type : SEQUENCE

Message :

Parameter Name	Tag value	Type
----------------	-----------	------

5.5.1 Gap criteria	[0]	Gap criteria
--------------------	-----	--------------

5.5.1.1 Gap Criteria ::= CHOICE{

Called Address value	[0]	Digits
----------------------	-----	--------

Gap on service	[2]	Gap on service
----------------	-----	----------------

Called AddressAnd service	[29]	SEQUENCE
---------------------------	------	----------

{

Called Address value	[0]	Digits
----------------------	-----	--------

Service Key	[1]	Service Key
-------------	-----	-------------

}

Calling Address value	[30]	SEQUENCE
-----------------------	------	----------

{

Calling Address value	[0]	DIGITS
-----------------------	-----	--------

Service Key	[1]	Service Key
-------------	-----	-------------

locationNumber	[2]	Location Number (Optional)
----------------	-----	----------------------------

}

}

Gap on service ::=SEQUENCE

{

Service Key	[0]	Service Key
-------------	-----	-------------

}

5. 5.2 1 Gap Indicators ::= SEQUENCE

{

Duration	[0]	Duration
----------	-----	----------

Gap Interval	[1]	Interval
--------------	------	----------

}

5.5 3 controlType	[2]	ControlType
-------------------	-----	-------------

5.5.3.1 control Type::= ENUMERATED

```
{
SCP scpoverloaded (0)
manuallyInitiated (1)
}
```

5.5.4 gapTreatment::= CHOICE

```
{
Information To send      [0]    Information To send
Release cause            [1]    cause
}
}
```

5.5.5 extensions [4] (Not Supported)

5.6 Call Information Report

Local Value:44

Message type:sequence

Message Parameters:

Parameter Name	tag value	TYPE
----------------	-----------	------

5.7 CALL INFORMATION REQUEST

Local Value:45

Message type: sequence

Message Parameters

Parameter Name	tag value	TYPE
----------------	-----------	------

5.7.1 requestedInformation typelist (0)

5.7.2 extensions (2) (Not Supported)

5.8 Cancel

Local Value 53

Errors as per Core INAP CS-I

Message type CHOICE

Message Parameters

Parameter Name	Tag Value	Type
----------------	-----------	------

5.8.1 invokeId	[0]	InvokeID
----------------	-----	----------

InvokeID - as defined in Chapter 4 . General Parameters Description

5.8.2 allrequests	(1)	NULL
-------------------	-----	------

5.9 Collect Information

Local Value : 27
 Errors : as per Core INAP CS-I
 Message type :SEQUENCE
 Message Parameters

Parameter Name	Tag Value	Type
Extensions	[4]	optional

5.10 Connect

Local Value : 20
 Errors : as per Core INAP CS-I
 Message type :SEQUENCE
 Message Parameters

Parameter Name	Tag Value	Type
5.10.1 destinationRouting address	[0]	Called party Number as per national SS7 transit standards
5.10.2 alerting pattern	[1]	(Not Supported)

Note -

alerting pattern parameter indicates what type of alerting tone shall be given to the calling party
 This is not feasible in the present scenario for analog subscribers. Hence this is not supported

5.10.3 correlation ID	[2]	(Not Supported)
-----------------------	-----	-----------------

Note -

Since the hand-off-procedure is not being supported, correlation ID parameter is not required.

5.10.4 cutAndpaste	[3]	(Optional)
forwardingcondition	(4)	Forwarding Condition OPTIONAL
isdn AccessRelatedInformation	[5]	OPTIONAL
5.10.5 original called party ID	(6)	as per national SS7 standards (Optional)
5.10.6 routeList	[7]	RouteList (Optional)

RouteList parameter specifies which trunk group or route code to select for the given service

Note – route list Fit parameter may be used in future for high priority routes.

5.10.6.1 RouteList ::= SEQUENCE SIZE(1..3) OF OCTET STRING

This octet string consists of structure which is a CHOICE of following parameters

5.10.6.1.1

Trunk Group [0] Trunk Group(Optional)

TrunkGroup ::= Integer(1... 65535)

5.10.6.1.2 Route code [1] Route code(Optional)

Route code ::= Digits

ScfID [8] (Not Supported)

Note -

Since handoff procedure is not being planned,ScfID is not required

Travelling class Mark [9] Travelling class Mark (bounds)
OPTIONAL

5.10.8

Extensions carrier [10] (Not Supported)

Carrier [11] Carrier Optional,

5.10.9 service interaction indicator (26) (Not Supported)

Note -

In present configuration SSP is being planned at transit level. So even if the mterworking of IN service with network based services is defined, there is no was in which service interaction indicators can be conveyed to the terminating local exchange aid hence this parameter is not being supported currently.

5.10.10 calling party number [27] as per national ss7 transit standards (Optional)

5.10.11 calling party number [28] as per national ss7 transit standards (Optional)

5.10.12 redirecting party id [29] as per national ss7 transit standards (Optional)

5.10.13 redirection information[30] as per national ss7 transit standards (Optional)

5.10.14 display information[12] Display Information {bound}
(Optional)

5.10.15 forward call Indicators [13] forward call Indicators
(Optional)

5.10.16 Generic numbers [14] Generic numbers{bound}
(Optional)

5.10.17 service Interaction Indicators Two [15] service Interaction Indicators Two
OPTIONAL,

5.10.18 INservice compatibility |Response (16) INservice compatibility Response
OPTIONAL,

5.10.19 forwardGVNS (17) forward GVNS{ bound}
OPTIONAL,

5.10.20backwardforwardGVNS (17) backward GVNS{ bound}
OPTIONAL,

5.10.21charge number (19)21charge number{ bound}OPTIONAL,

5.10.22 call segment ID (20) call segment ID{ bound}
 OPTIONAL,
 5.10.23 leg To Be created (21) leg ID
 OPTIONAL,
 ...
 }

5.11. ConnectToResource

Local Value : 19
 Errors : as per Core INAP CS-I
 Message type : SEQUENCE
 Message Parameters:

Parameter Name	Tag Value	Type
5.11.1 resource address	choice	

5.11.1.1 iP Routing Address [0] (Supported)

Note -

Ip Routing Address is required only in case of External IP. It shall be supported when external IP is supported

5.11.1.2 none (3)

Note - This parameter shall be set to NULL in case of Internal IP.

5.11.2 service Interaction Indicators (30) (Not supported) .

5.11.1.2 Continue

Local Value : 31
 Errors : as per Core INAP CS-I
 Message type : SEQUENCE
 Message Parameters:

Parameter Name	Tag Value	Type
None		

5.13 Disconnect Forward Connection

Local Value : 31
 Errors : as per Core INAP CS-I
 Message type : SEQUENCE
 Message Parameters:

Parameter Name	Tag Value	Type
None		

5.14 Event Report BCSM

Local Value : 24
 Errors : as per Core INAP CS-I
 Message type :SEQUENCE
 Message Parameters:

Parameter Name	Tag Value	Type
----------------	-----------	------

5.14 1 event type BCSM [0]

Note -

Event type BCSM is an enumeration containing a set of possible values. All the values except the following are being supported:

O_ Abandon, O_midcall, T_Abandon, T_Midcall

Rest all values will remain same.

BcsmEvent correlation	(1)	Correlation ID (bound) optional
5.14.2 event specific Information BcsM	(2)	(Optional)

Note -

The cause values to be used in this field shall be a subset of those beained for ISUP This subset consist of the following values

' Class 000 and 001 - normal event

no route to specified transit network 2

no route to destination 3

misdialled trunk prefix 5

normal call clearing 16

user busy 17

no user responding 18

no answer from user 19

destination out of order 27

normal unspecified 31

Class 010 - resource unavailable

no circuit available 34

network out of order 38

switching equipment congestion 42

requested channel not available 44

resource unavailable - unspecified 47

Class 101 - invalid message

invalid transit network selection 91

invalid message 95

Class 110 - protocol error

protocol error - unspecified [1]

5.14.3 legID (3) OPTIONAL

5.14.4 miss call info (4)

5.14.5 extensions (5) not supported

5.15 Furnish Charging Information

Local Value : 34

Errors: as per core INAP CS-I

Message type: octet

Message parameter:

Parameter Name	Tag Value	Type
----------------	-----------	------

5.15.1 FCI billing charging characteristics	FCI billing charging characteristics	
---	--------------------------------------	--

5.15.1.1.1 FCI billing charging characteristics::= OCTECT STRING		
--	--	--

This octet string consists of structure which is of type CHOICE of following parameter

Charge Record ::= SEQUENCE

This parameter indicates billing or charging characteristics to generate or register a call record at SSP.

Note – FCI Billing charging characteristics parameter is deemed as octet string in Core INAP CS-1.

This octet string consists of structure which is of the type CHOICE of following parameter

5.15.1.1 .1 charge record	(0)	ChargeRecord
---------------------------	-----	--------------

This parameter provides SSF with the information of the charge record to be generated at SSP It contains the number of the party which is being charged, total charge units and the rate or link charge to generate the billing record.

Charge record ::= SEQUENCE

{		
Charge Number	(0)	Digits
Total charge unit	(1)	Integer4
Rate per unit	[2]	Integer4(IN terms of Rs/unit(Optional)

}

5.15.1.1.2 charge scenario	(1)	Charge scenario
----------------------------	-----	-----------------

This parameter determines the charging to be applied.It specifies the number of the to be charged and the charging Information in terms of initial charge, periodicity and charge units for charging the call

Charge scenario::= SEQUENCE

{		
Charge number [0]		Digits
Charge Information	(1)	Charge Information
Rate per unit	(2)	Integers4(Optional)

Charge Information ::= As defined in 5.3.1 .1.1

5.16 initial DP

Local Value: 0

Errors : as per core INAP CS-1

Message type : SEQUENCE

Message Parameter

Parameter Name	Tag Value	Type
5.16. 1 service Key	(0)	Service Key

Note –

Service key – refer to General Parameters Description in Chapter 4

Dialed digits [1] called party number { bound}

OPTIONAL

5.16.2 Called party Number [2] as per national SS7 transit (Optional)

Standards

NOTE:

i) nature of Address Indicator shall be SUBSCRIBER NUMBER in case SSP is generating Nature of Address Indicator. In all other cases SSP shall send whatever is received from the previous exchange.

ii) Numbering Plan : ISDN NUMBERING PLAN

iii) Internal Network Routing Indication NOT ALLOWED

5.16.3 calling party Number [3] as per national SS7 transit standards (Optional)

5.16.4 calling party category [5] as per national SS7 transit (optional)

Calling party SUB ADDRESS (6) Calling party SUBADDRESS

OPTIONAL

5.16.5 cG-Encountered [8] (Not Supported)

Note '

Since the configuration which is being planned does not support the external IP, the parameter Ipssp capabilities is not required for IP interated within SSP. this parameters contains the information of what all IP resources are being supported. this can be decided initially at time of interlocking of SSP and SCP.

5.16.6 IpSSP capabilities [8] (Not Supported)

Note

Reason same as 5.16.6

5.16.8 location Number [10] as per national SS7 transit standards

Mis call Info [11] Mis call Info
(Optional)

5.16.9 ORIGINAL CALLED PARTY id [12] as per national SS7 transit
standards

Service profile identifier [13] optional,

Terminal type [14] Terminal type

5.16.10 extensions [15] not supported

Trigger type [16] trigger type

Optional

5.6.11 b high layer compatability [23] as per national ISDN standards
(Optional)

(Optional)

5.16.12 service Interaction Indicators [24] (Not Supported)

5.16.13 additional calling party Number (Not Supported)

Note - additional calling party Number is not supported since this is applicable for ISDN where calling party has more than one numbers which is not envisaged currently.

5.16.14 forward call indicators [26] as per national standards for ISDN (Optional)

5.16.15 bearer capability [27] as per national standards for ISDN (Optional)

5.16.16 event type BCSM [28]

5.16.17 redirecting party Id [29] as per national SS7 transit standards
(Optional)

5.16.18 redirection information [30] as per national SS7 transit standards
(Optional)

5.16.19 cause [17] cause {bound} optional

5.16.20 component [19] component optional

5.16.22 component correlation ID [20] component correlation ID optional

5.16.23 ISDN Access Related Information [21] ISDN Access Related Information
(Optional)

5.16.24 iNservice compatibility Indication (22) iNservice compatibility Indication (bound)

5.16.25 generic Numbers (31) Generic Numbers (bound) optional,

5.16.26 service Interaction IndicatorsTwo (32) Service Interaction IndicatorsTwo OPTIONAL

5.16.27 forward GVNS [33] forward GVNS (bound)

5.16.28 created call Segment Association (34) CSAID (bound) OPTIONAL

5.16.29 uSI service Indicator [35] uSI service Indicator (bound) OPTIONAL

5.16.30 uSI Information [36] uSI Information (bound) OPTIONAL

}

Parameter Name	Tag Value	Type
5.17.1 information to send	[0]	1 information to send
5.17.2 disconnect from IP forbidden	[1]	Boolean (default true)
5.17.3 request Annoucement Complete	[2]	Boolean (default true)
5.17.4 extensions	[3]	not supported

5.18PROMPT AND COLLECT USER INFORMATION

Local Value:48

Errors:as per Core INAP CS-I

Message type:SEQUENCE

Return Result type: RECEIVED INFORMATION arg.

Message Parameter :

Parameter Name	Tag Value	Type
5.18.1 collected Info	[0]	collected Info
5.18.2disconnect from IP forbidden	[1]	Boolean (default true)
5.18.3 information to send	[2]	information to send (optional)

5.18.4extensions [3] not supported

5.19 Release call

Local Value:22

Message type:SEQUENCE

Message Parameter :

Parameter Name	Tag Value	Type
5.19.1 cause (0) as per National Standards for ISUP		
Associated call segment (1)	SEQUENCE {	
Callsegment (0)	INTEGER (2....bound &num of CSs),	
Release cause (1)	Cause (bound)	
	}	
All call segment [2]	SEQUENCE{	
Release cause (0)	Cause (bound)	
	OPTIONAL	
	}	
	}	

5.20Request Report BCSM Event

Local Value :23

Errors: as per Core INAP CS-I

manage type: SEQUENCE

Message parameters :

Parameter Name	Tag Value	Type
----------------	-----------	------

5.20.1 bcsMEvents	[0]	SEQUENCE size (1... no. of bcsM Events)
-------------------	-----	--

Note -

No Of BcsM Events = 8 (this is maximum of no. of originating Dps or terminating Dps) . This value may be changed to 10 to support CS2 services.

5 20.1 1 eventTypeBcsM	[0]	
------------------------	-----	--

Note -

The following Dps values shall not be supported -
O_Abandon, O_Midcall, T_Abandon, T-Midcall

5 20.1 .2 monitorMode	(1)	
-----------------------	-----	--

5.20.1 .3 leg ID	(2)	(Optional)
------------------	-----	------------

Note -

legID parameter is mandatory for O_ Disconnect and T_ Disconnect.

5.20 1.4 dP specific Criteria	(30)	(Optional)
-------------------------------	------	------------

Note -

ne Application Timer parameter indP specific Criteria shall be 30 seconds since the Ringing timer in the network is 60 seconds. Priority is being given to originating services , hence if NO Answer is encountered then NO Answer shall not be encountered.

BcsMEvent Correlation ID (bound) OPTIONAL

5.20 2 extensions	(2)	(Not Supported)
-------------------	-----	-----------------

5.21 Reset timer

Local Value:33

ERRORS: as per Core INAP CS-I

Message type: SEQUENCE

Message Parameters:

Parameter Name	Tag Value	Type
----------------	-----------	------

5.21.1 timer ID	[0]	ENUMERATED
-----------------	-----	------------

{

Tssf(0)

}

5.21.2 timervalue	[1]	timer value
-------------------	-----	-------------

Timervalue ::= INTEGER4

5.21.3 extensions	[2]	not supported
-------------------	-----	---------------

5.22 Send charging Information

Local Value: 46

Errors: as per Core INAP CS-I

Message Type: SEQUENCE

Message Parameters:

Parameter Name	Tag Value	Type
----------------	-----------	------

5.22.1 SCIBilling charging characteristics (0)	SCI Billing Charging characteristics	
--	--------------------------------------	--

5.22.1.1 SCIBilling charging characteristics ::= OCTET STRING

This parameter indicates the charging information to be sent by the SSF. It could either be charge pulse or signaling towards the local exchange or internal if SSF is located in the local exchange.

Note -

SCIBilling charging characteristics parameter is an octet string in Core INAP CS-1. This octet string is having a structure which is a CHOICE of following parameters :

5.22.1.1.1 chargepulses[0] integer4.

This parameter indicates the charge pulses that need to be driven towards the party to a charged.

5.22.1.1.2 chargeMessage [1] ChargeMessage .

This parameter sites the charging information to be sent towards the party to be charged.

Charge Message ::= CHOICE

{

Charge unit [0] refer to description of CRG-CHU message in Nat.standards for ISUP

Charge Band [1] refer to description of CRG-CHB message in Nat.standards for ISUP

Charge Explicit [2] refer to description of CRG_exp message in Nat.standards for ISUP

}

5.22.2. leg ID [1] leg ID

5.22.3 extensions [2] (Not supported)

5.23 service Filtering response

Local Value : 43

Message type:SEQUENCE

Message Parameters

Parameter Name	Tag Value	Type
----------------	-----------	------

5.23.1 counters value [0] counters value

5.23.2 counters value- as defined in Core INAP CS-I

Filtering criteria (1)1 Filtering criteria

Note -

Filtering criteria - as defined in description of Activate service Filtering message

5.23.3 Extensions [2] (Not Supported)

5.24Specialised Resource Report

Local value : 49

Message type:

Message Parameters :

Parameter Name	Tag Value	Type
NULL		

5.25.1 correlation ID [0] correlation ID

5.25.2 Ip Available [1] Ip Available OPTIONAL

5.25.3iPSSPCapabilities [2] iP SSP Capabilities OPTIONAL :

5.25.4 extensions [3] (Not Supported)

5.26EstablishTemporaryconnection

Local Value: 17

Errors: As per Core INAP CS-I

Message Type: SEQUENCE

Parameter Name	Tag Value	Type
----------------	-----------	------

5.26.1 assisting SCP IP Routing Address [0] assisting SCP IP Routing Address OPTIONAL

5.26.2 correlation ID [1] correlation ID

5.26.3 sCFID [3] sCFIDas per ITU Q.713(3.4)

5 26.4 serviceInteraction indicator [30]

5.26.5 extensions [4] OPTIONAL

5.27Continue With Argument

Local Value:88

Errors:.. 'Asper core INAP CS 1

Message Type:SEQUENCE

Return Result Type:False

Message Parameters

Parameter Name	Tag Value	Type
5.27.1 LEG ID	[0] LEGID DEFAULT	
5.27.22 alertING pattern	[1] alertING pattern	OPTIONAL
5.27.3 generiC Name	[2] GENERIC NAME (BOUND)	OPTIONAL
5. 27. 3.1 Generic Name::=	OCTET STRING (SIZE ((bound & min GENERIC Name l- ength..bound& max generic name length))	
5.27.44 iNservice compabilityResponse	[3] IN compabilityResponse	OPTIONAL
IN compabilityResponse::=	ENTRY	
5. 27.4.1 Entry ::=choice(		
Agreement	[0] OBJECT IDENTIFIER	
Networkspecific	[1] integer4	
5.27.5 forwardGvNs	(4) Forward GVNS bound	OPTIONAL
5 27.5.1 Forward GVNS:=OCTET STRING (SIZE (bound & min forward GvNs length....		
Bound.&max forward GVNS Length))}		
Indicates the GVNS Forward information	refer to Q-735 ?6 FOR ENCODING.	
5.27.6 backwardness (5) backwardness (bound)		OPTIONAL
5.27 6.1 BaCkward GVNS :octet STRING (SIZE (bound &GVNS Length ... bound.& max		
backward GVNS Length))		
5.27.7 extensions (6) SEQUENCE SIZE		
(1.. .bound. &num of extension) of extension field (bound)		OPTIONAL
5.27.8 service Interaction Indlcatrors Two (7) Service Interaction Indicators Two		OPTIONAL
5.27.8 service Interaction Indicators Two ::= SEQUENCE{		
Forward service interaction ind	[0] Forward service interaction ind	OPTIONAL
applicable to operations IDP,CON,ICA		
backward service Interaction Ind (1) Backward service Interaction Ind		OPTIONAL
applicable to operationsIDP,CON,CTR,ETC		
bothway through connection ind (1) bothway through connection Ind		OPTIONAL
applicable to operations CTR,ETC		
suspend Timer (3)suspend Timer		OPTIONAL
applicable to operations CON, ICA		
conneted number treatment ind (4) conneted number treatment ind		OPTIONAL
applicable to operations,CON,CTR,ETC		
suppress call diversion notfication (5) BOOLEAN		OPTIONAL
applicable toCON ICA		

Suppress cal;l transfer notification [6] Boolean optional

Applicable to CON,ICA

Allow Cd IN No Presentation Ind [7] Boolean optional

Applicable to CON,ICA

Indicates whether the number Presentation not allowed indicator of the ISUP

CALLED in number shall be set to presentation allowed (TRUE) or

Presentation not allowed (FALSE)

User Dialogue Duration Ind [8] Boolean default true

Applicable when interaction with the user is required ,if the interaction

True means the user interaction may last longer than 90 seconds . otherwise the

Indicator should be set to false –used for delaying ISUP t9 timer...},

Indicators which are exchanged between SSP and SCP to resolve interaction between IN based services---

And network based services , respectively between different IN based services.

5.27.8.1 forward service interaction ::= SEQUENCE{

Conference treatment indicator [1] octet string size (1) optional

Call diversion allowed' xxxx xx01 'B

Call diversion NOT allowed ' xxxx xx01 'B

Network default is call diversion allowed

Call offering treatment indicator [3] octet string size (1) optional

Call offering NOT allowed' xxxx xx01 'B

Call offering allowed 'xxxx xx01 'B

Network default is call offering not allowed

Call party restriction indicator [4] octet string size (1) optional

Not IN impact' xxxx xx01 'B

Presentation restricted 'xxxx xx01 'B

Network default is not IN IMPACT

5.27.8.2 BACKWARD SERVICE INTERACTION ind ::=SEQUENCE{

Conference treatment indicator [2] octet string size (1) optional

accept Conference request xxxx xx01 'B

reject Conference request xxxx xx01 'B

Network default is accept Conference request

Call completion treatment indicator [2] octet string size (1) optional

acceptCall completion service request xxxx xx01 'B

rejectCall completion service request xxxx xx01 'B

Network default is accept call completion service request.....}

5.27.8.3 bothway through connection ind ::= enumerated

Both way path required(0)

Both way path not required(1)}

5.27.8.4 suspend timer ::= integer 9-1....120)

Values in seconds

The default is as specified in EN 301 070 -1

The value -1 indicate the network specific suspend timer (T6) is to be used.

5.27.8.5 connected number treatment ind ::= enumerated{

not IN IMPACT(0)

Presentation restricted (1)

Present called IN number (2)

Present called IN number restricted(3)

}

The default is as specified in EN 301070-1

5.27.9 Location number [51] location number (bound)OPTIONAL

5.27.9.1 Location number ::= octet STRING (SIZE

bound & min location number length..bound& max maxlocation number length)

Indicates location number for the calling party

Refer to ITU-T recommendation Q-763(White book)for encoding

5.28 Disconnect leg

Local Value:90

Errors: . 'Asper core INAP CS 1

Message Type: SEQUENCE

Return Result Type: true

Message Parameters

Direction: SCF ? SSF, Timer t di

This operation is issued by the SCF to release a specific leg associated with a call and retain any other legs not specified in the Disconnect leg . Any leg may be disconnected

Including the controlling leg, without releasing all legs

Refer to clause 18 for a description of the procedures associated with this operation

Parameter Name	Tag Value	Type
----------------	-----------	------

5.28.1 leg To Be Released [0] LEGid

5.28.2 release cause (1) Cause (bound) OPTIONAL

5.28.3 extensions (2) SEQUENCE SIZE

(1.BOUND& NUM OF extensions) of extension field

5.29 Entity released

Local Value:96

Message Type: CHOICE

Return Result Type: FALSE

Message Parameters

Direction SSF ? SCF, Timer ; Ter

Parameter Name	Tag Value	Type
----------------	-----------	------

5.29.1 CSF Failure (0) SEQUENCE

Call segment ID[0] Call segment ID (bound),

Reason [1] Reason (bound) OPTIONAL

Cause [2] Cause(bound) OPTIONAL
 5.29.2 BCSMF [1] SEQUENCE
 {leg ID [0] leg ID
 REASON [1] Reason (bound) OPTIONAL
 Cause [2] Cause(bound) OPTIONAL

5.30. Merge call segment

Local Value:91

Errors: . 'Asper core INAP CS 2

Message Type: SEQUENCE

Return Result Type: TRUE

Message Parameters

Direction SSF ? SCF, Timer ; Tmc

this operation is issued by SCF to merge two associated CSs with a single controlling leg into one CS with that controlling leg. -For additional information on, refer to Q-1224

Parameter Name	Tag Value	Type
5.30.1 source call segment	[0]	call segment ID (bound)
5.30.2 target call segment	[1]	call segment ID (bound) DEFAULT
5.30.3 extensions (2)	SEQUENCE SIZE	
(1. bound & num of extension)	of extension field {bound}	OPTIONAL

5.31 MoveLeg

Local Value:93

Errors: . 'Asper core INAP CS 2

Message Type: SEQUENCE

Return Result Type: TRUE

Message Parameters

Direction SSF ? SCF, Timer ; Tml

this operation is issued by SCF to move a leg one Cs to another with which it is associated

Parameter Name	Tag Value	Type
5.31.1 leg ID To Move	[0]	leg ID
5.31.2 target call segment (1)	call segment (bound)	DEFAULT
5.31.3 extensions (2)	SEQUENCE SIZE (1.	
Bound & num of EXTENSION)	Of Extension field {bound}	OPTIONAL,...)

For the OPTIONAL parameters refer to clause 17 for the trigger detection point processing rules to specify when these parameters are included in the message

5.32.Reconnect

Local Value:94

Errors: . 'Asper core INAP CS 2

Message Type: SEQUENCE

Return Result Type: FALSE

Message Parameters:

Parameter Name	Tag Value	Type
----------------	-----------	------

5.32.1 notification Duration (0) ApplicationTimer OPTIONAL

5.32 1 1. Application Timer :=integer (0..2047)

Used by the SCF to set a timer in the SSF. The timer is in seconds

5.32.2 alertingpattern [1] alerting pattern OPTIONAL

5.32 3 Display Information [2] Display Information {bound} OPTIONAL

5.32 3.1.Display information{PARAMETERS-BOUND :bound: =(A5String (SIZE Bound&minDisplay Information Length, bound. &max display information length) Indicates the display information,

Delivery Of Display Information parameter to Pnvate Networks cannot be pointed due to signalling

(1 .bound.&num extensions field (bound) OPTIONAL

5.33 Split leg:

Local Value:95

Errors: . 'Asper core INAP CS 2

Message Type: SEQUENCE

Return Result Type: TRUE

Message Parameters

Parameter Name	Tag Value	Type
----------------	-----------	------

5.33.1. leg To Be split [0] LegID

5.33.2. new call segment (1)integer (2.bound& num of CSs)

5.33.3. extensions (2)SEQUENCE size

(1 .bound.&num extensions field (bound) OPTIONAL

VOCABULARY AND ABBREVIATION

VOCABULARY

(i) handoff procedure: - This procedure allows one SSP to use the external IP connected to the other SSP. In this configuration, where one SSP uses the resources of IP connected to other SSP, there are different set of messages defined for this type of interaction.

(ii) Online Charging - In this case information during the call instance has to be calculated in real time i.e. the charge pulses or signaling information (charge messages) is offered at the user /network interface .

(iii) (off line Charging - In this case, the charge information of the call is recorded in the network. the calculation of the charge for that call and the billing is performed in an off –line process.

(iv) privilege user - User authorized to change system related data .

LIST OF DP'S

DP 1	Origination Attempt Authorised.
DP2	Collected Info
DP3	AnalyzedInfo
DP4	Route select failure
DP5	OCalled Party Busy
DP6	O no Answer
DP7	O Answer
DP8	Omid call
DP9	O DISCONNECT
DP10	O A bandon
DP11	Reserved
Dp12	Terminating Attempt Authorised
DP13	T called party busy
DP14	T NO answer
DP15	TAnswer
DP16	TMid call
DP17	TDisconnect
DP18	TAbandon

Aberrations

In the descriptions given in the document the following abbreviations have been used

BCSM	Basic Call State Model
CS-I	Capability Set I
ETSI	European Telecommunication standards Institute
INAP	Intelligent Network Application protocol
IP	Intelligent peripheral
ISDN	Integrated Service Digital Network
ISUP	Integrated Service User Part
ITU-T	International Telecommunication Union - Telecommunication
Rs	Rupees
SCF	Service Control Function
SCP	Service Control Point
SDF	Service Data Function
SMP	Service management Point
SSF	Service Switching Function
SSN	Sub System Number
SSP	Service Switching Point
SS7	Signaling System 7
TC	Transaction Capabilities
TCAP	Transaction Capabilities Application Part
Tssf	Timer- Service Switching Function
Tasf	Timer-Active Service Filtering
Tat	Time-Activity Test
Tac	Timer Apply Charge
Tacr	Timer-Apply Charging Report
Tcirq	Timer-call Information Request
Tcan	Timer-cancel

Tci	Timer Collect Infortmation
Tcon	Timer connect
Tctr	Timer connect to resource
Tdfc	Timer Disconnect Forward Connection
Tfci	Timer Furnish Charging Information
Tidp	Timer-initial DP
Trrb	Timer-Request Report BCSM Event
Trt	Timer-Reset Timer
Tsci	Timer-send Charging Information
Tpa	Timer-play Announcement
Tpc	Timer-prompt And Collect User Information
Tari	Timer Assist Request instruction
Tetc	Timer Establish temporary Connection
Tenc	Timer event Notification Charging
Tdl	Timer-Disconnect Leg
Ter	Timer Entity RELEASED
Tmcs	Timer Merge Call Segments
Tml	Timer move leg
Tsl	Timer split leg

EXPANDED ASN.1 SOURCE OF THE PARAMETERS

Expanded ASN.1 source of the parameters which have been defined as OCTET strings and have not been deemed in Core (NAP CS-I -

1. SF |Billing charging characteristics

This parameter SFBillingcharging characteristics would be encoded as an OCTET STRING however the contents held of the OCTET STRING would contain the encoding of the following ASN.1 notation.

SEQUENCE {

Initial charge (0) IMPLICIT INTEGER (1..255) }

2. ACH Billing Charging characteristics

This parameter AchBilling charging characteristics would be encoded as an OCTET STRING, however the contents held of the OCTET STRING would contain the encoding of the following ASN.1 notation.

SEQUENCE {

Chargers Info (0) CHOICE {

callTime (0) IMPLICIT ENUMERATED

timestamps(0),

duration(1),

bulk cnt (1) CHOICE {

units Information [0] IMPLICIT SEQUENCE

chargeperiodicity (0) IMPLICIT INTEGER (1..65535) OPTIONAL,

chargeunits (1) IMPLICIT INTEGER (1..255) OPTIONAL

initial charge (2) IMPLICIT INTEGER (1..255) OPTIONAL)

band Information [1] IMPLICIT integer size (4) }

reporting condition [1] choice {

end of connection {0} implicit null,

threshold counter value [1] implicit integer (size (4))

charge number [2] IMPLICIT OCTET STRING OPTIONAL }

3. CALL RESULT

THE member call result would be encoded as an OCTET STRING however the content field of the OCTET STRING would contain the encoding of the following ASN.1 notation

SEQUENCE {

Charged party [0] CHOICE {

legId [0] CHOICE

sending side ID [0] IMPLICIT OCTET STRING (SIZE(1))

receiving side ID [1] IMPLICIT OCTET STRING (SIZE(1)) OPTIONAL),

charged number [1] IMPLICIT OCTET STRING }
 reporting condition type [1] IMPLICIT ENUMERATED {
 end of connection (0)
 threshold counter (1)
 duration (2)
 charge info value [2] choice
 time stamps [0]] IMPLICIT SEQUENCE
 ans time [0] IMPLICIT OCTET STRING (SIZE(6)).
 Disc time [1] IMPLICIT OCTET STRING (SIZE(6)).
 Duration [1]) IMPLICIT INTEGER (SIZE(4))

4. FCI Billing characteristics

The member FCI Billing Charging characteristics would be encoded as an OCTET STRING however the content field of the OCTET STRING would contain the encoding of the following ASN.1 notation.

```

CHOICE{
  ChargeRecord (0) implicit SEQUENCE{
    ChargeNumber (0) IMPLICIT OCTET STRING
    Totalchargeunits (1) IMPLICIT INTEGER (SIZE(4)),
    RATE per unit (2) IMPLICIT INTEGER (SIZE(4)) ),
    Chargescenario [1] IMPLICIT SEQUENCE
      chargeNumber (0) IMPLICIT OCTET STRING,
      charge Information (1) CHOICE {
        units information (0) IMPLICIT SEQUENCE {
          charge periodicity (0) IMPLICIT INTEGER (1..65535) OPTIONAL,
          chargeunits[1] IMPLICIT INTEGER (1..255) OPTIONAL
          initialcharge (2) IMPLICIT INTEGER (1..255) OPTIONAL
          bandInformation (1) implicit INTEGER (0..255) }
        , rateperunit (2) IMPLICIT INTEGER (SIZE(4)) ) )
  }
}
  
```

5. RouteList

each member of Routelist would be encoded as an OCTET STRING however the contents field of the OCTET STRING would contain the encoding of the following ASN.1 notation.

```

CHOICE{
  * trunk group (0) IMPLICIT INTEGER (1..65535),
  Route code (1) IMPLICIT OCTET STRING }
  
```

6. SCI Billing charging characteristics

The member SCI Billingcharging characteristics would be encoded as an OCTET STRING however the content field of the OCTET STRING would contain the encoding of the following ASCII notation.

```

CHOICE{
  chargepulses (0) IMPLICIT INTEGER (SIZE(4)),
  charge Message (1) CHOICE{
  
```

charge unit (0) IMPLICIT OCTET STRING (SIZE (2..9))
charge band (1) IMPLICIT OCTET STRING (SIZE (2..6)),
chargeExplicit(2) IMPLICIT OCTET STRING SIZE (2..23)}}}