
MAPS™ INAP Protocol Emulator

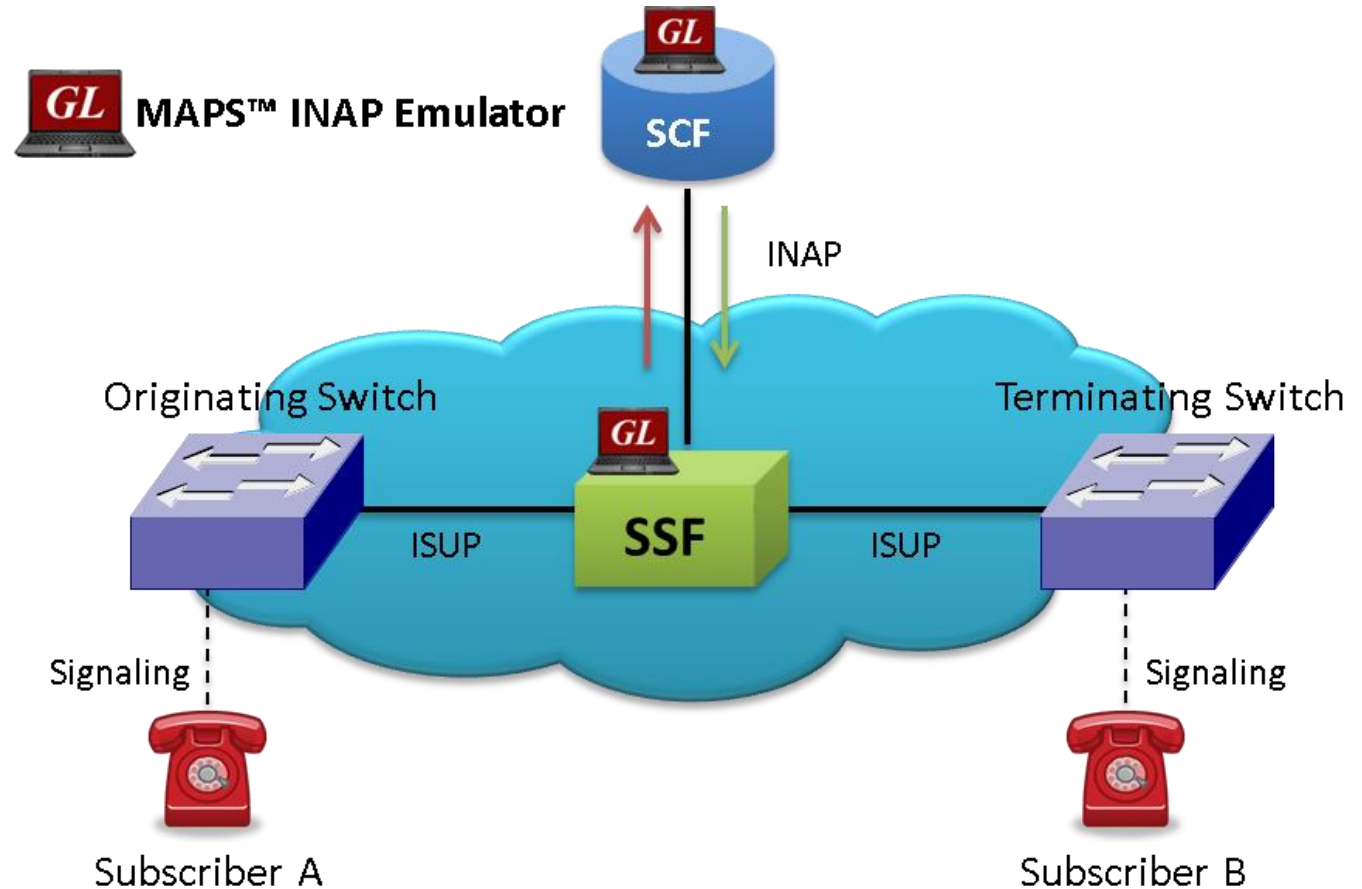
Intelligent Network Application Part (INAP) Emulation over IP, TDM and ATM



818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878
Phone: (301) 670-4784 Fax: (301) 670-9187 Email: info@gl.com
Website: <https://www.gl.com>

MAPS™ INAP (Intelligent Network Application Part)

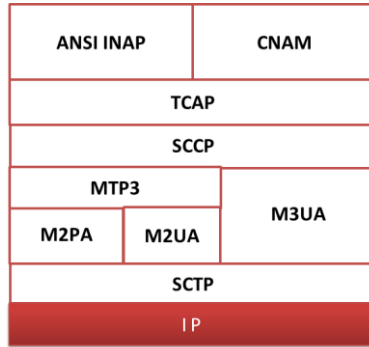
- Simulation of INAP (Intelligent Network Application Part) services
- Supports testing network elements gsmSCF and gsmSSF
- As per ANSI specifications, the supported services are CNAM (Calling Name Delivery), LNP (Local Number Portability), and Toll-free 800 Number
- Prepaid Voice Call Service, Toll Free Voice Call Service, Low Balance Voice Call Service, and Initiate Call Attempt (ICA) Service over IP as per ITU-T specifications
- ITU and ANSI variants of SS7 implemented over M3UA, M2PA, M2UA, MTP3



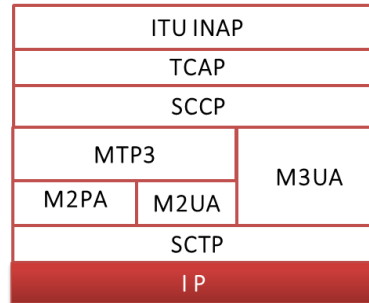
Applications

- Multi-protocol, Multi-interface Simulation
- Provides fault insertion, and erroneous call flows testing capability
- Performance testing, Load Testing, Functional testing, Regression testing and Conformance testing of network elements
- Ready scripts make testing procedure simpler, less time consuming and hence time to market products
- Test response of network against protocol message modification, or corruption
- Inter-operability testing of networks

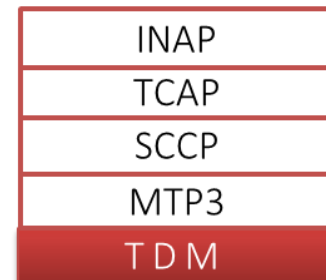
Supported Protocol Standards (over IP)



ANSI INAP IP Protocol Stack



ITU INAP IP Protocol Stack



INAP TDM Protocol Stack

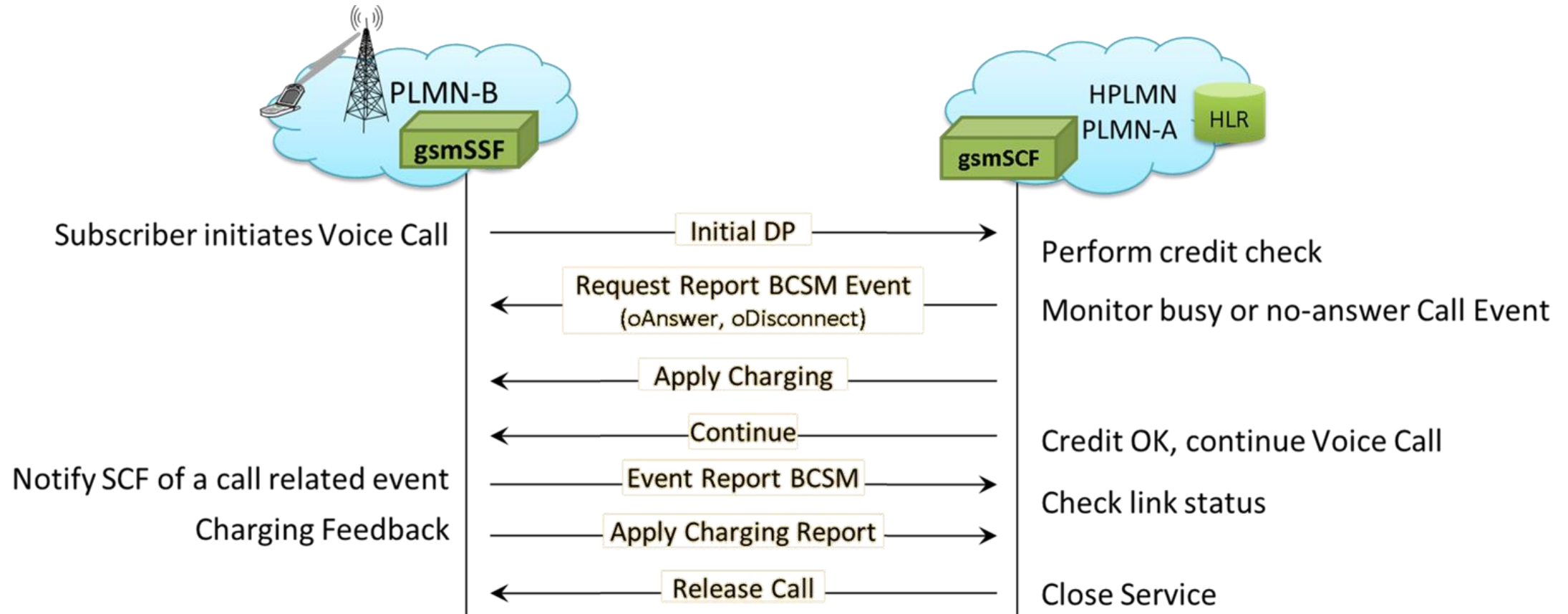
Supported Protocols	Standard / Specification Used
CNAM	GR-118-CORE
LNP	GR 1299 CORE
TCAP	ANSI T1.114-1996
SCCP	ANSI T1.112-1996
MTP	ANSI T1.111-1996
SCTP	RFC 4960

Supported Protocols	Standard / Specification Used
ITU INAP CS2	Q.1228
TCAP	ANSI T1.114-1996
SCCP	Q.713, CCITT (ITU-T) Blue Book
M3UA	RFC 3332
M2PA	RFC 4165

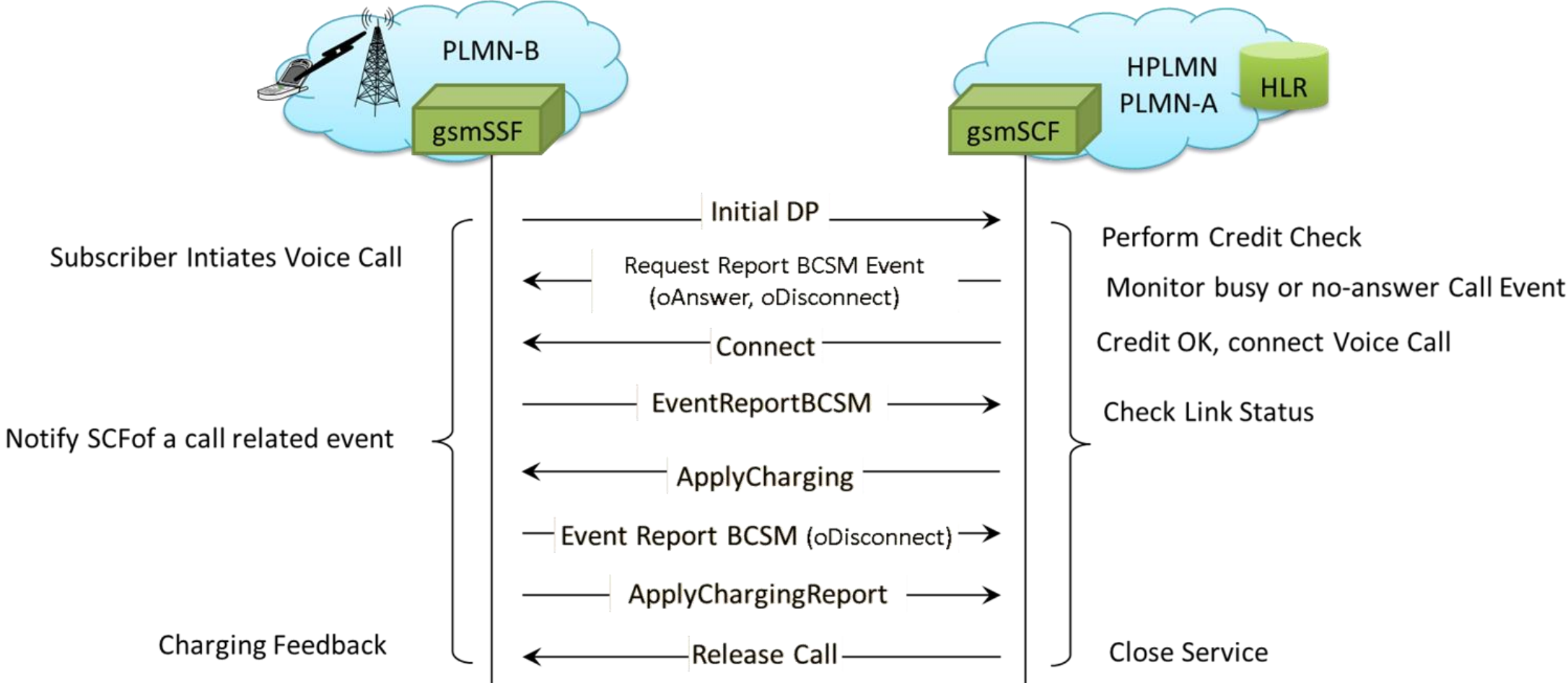
Supported Protocols	Standard / Specification Used
ITU INAP CS2	EN 301 140-1 V1.3.4 (1999-06)
TCAP	ANSI T1.114-1996
SCCP	Q.713, CCITT (ITU-T) Blue Book
MTP	Q.703, ITU-T Blue Book

Call Procedures

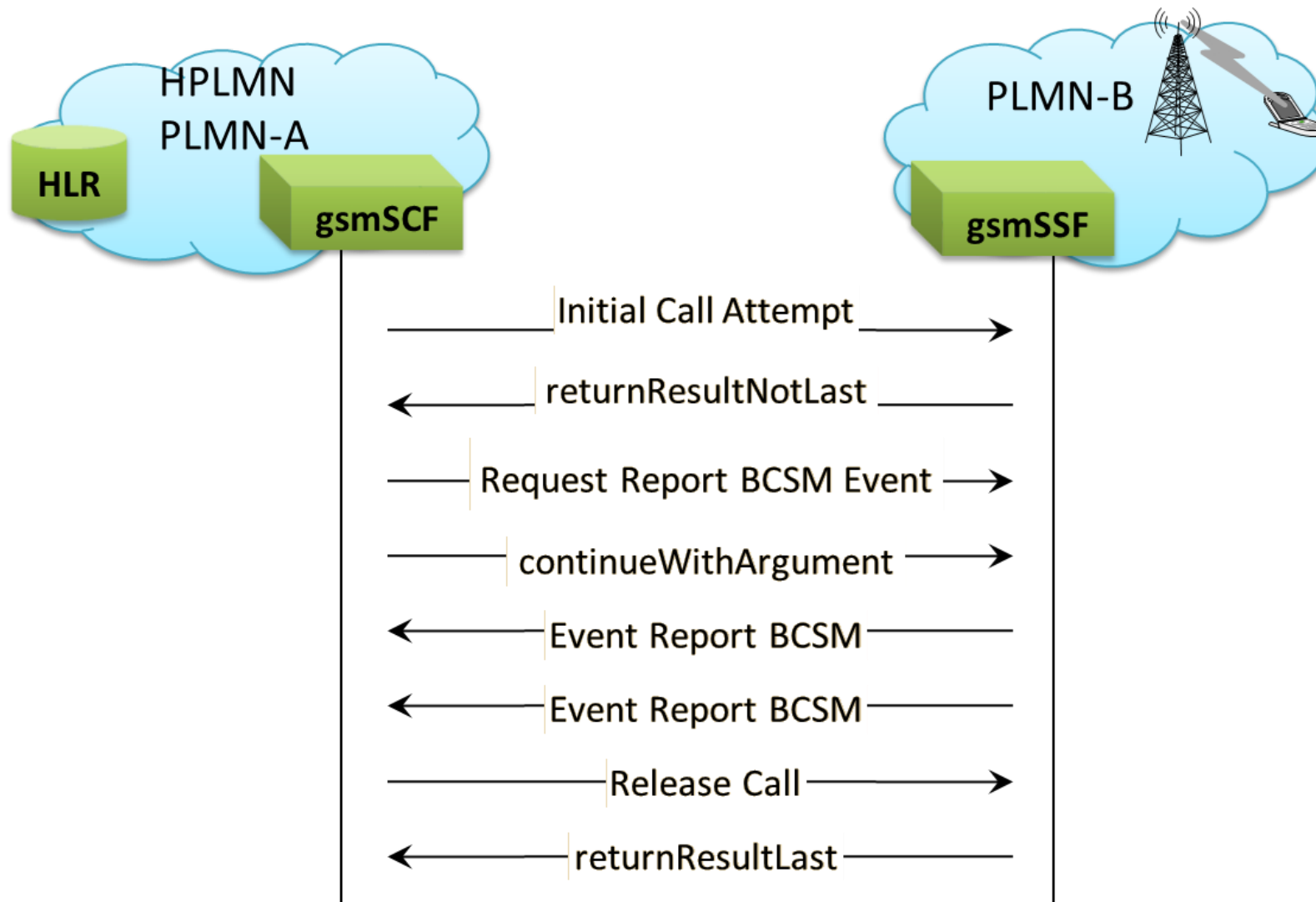
Prepaid Voice Call Service



Toll Free Voice Call Service

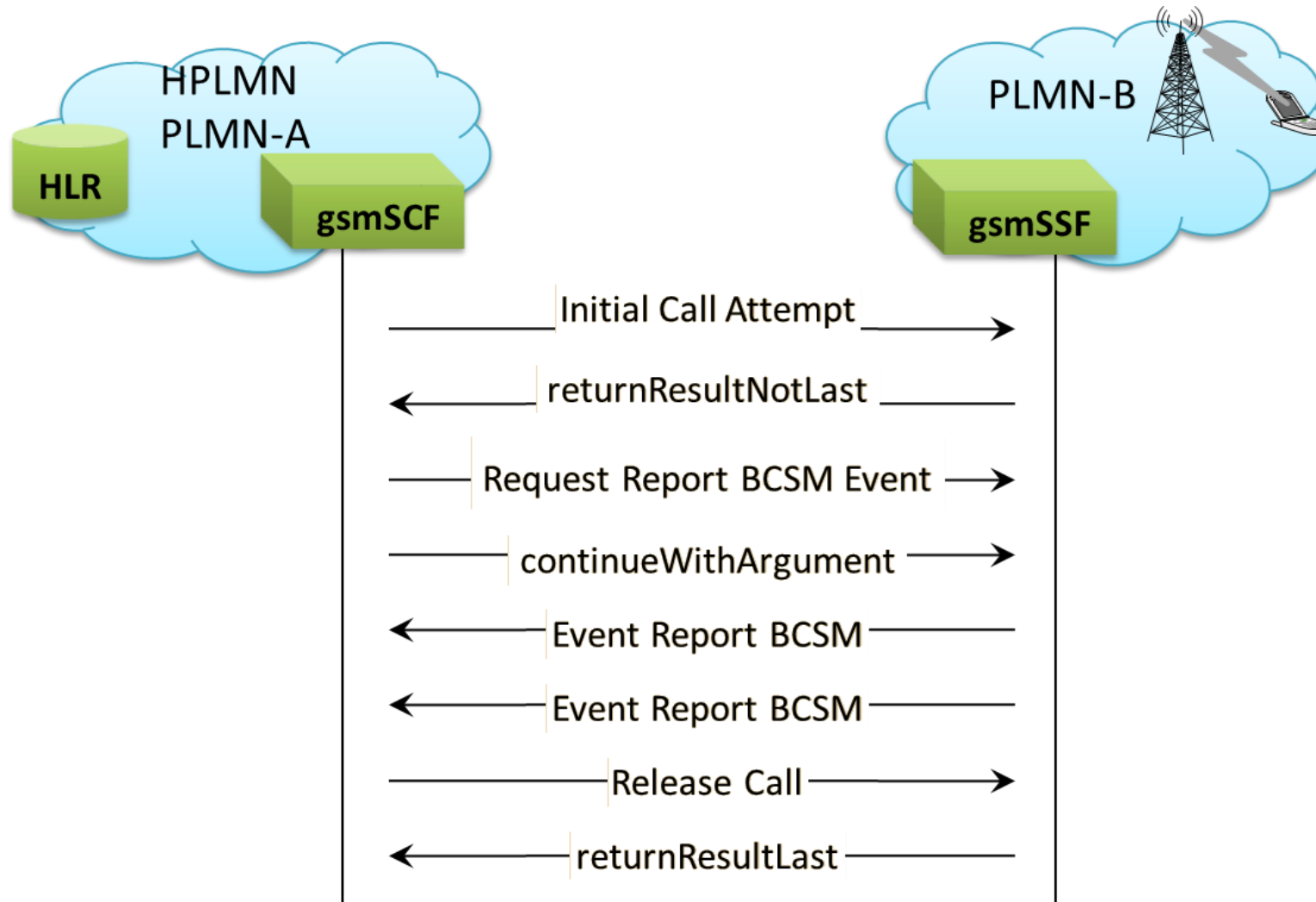


Initial Call Attempt (ICA) Service



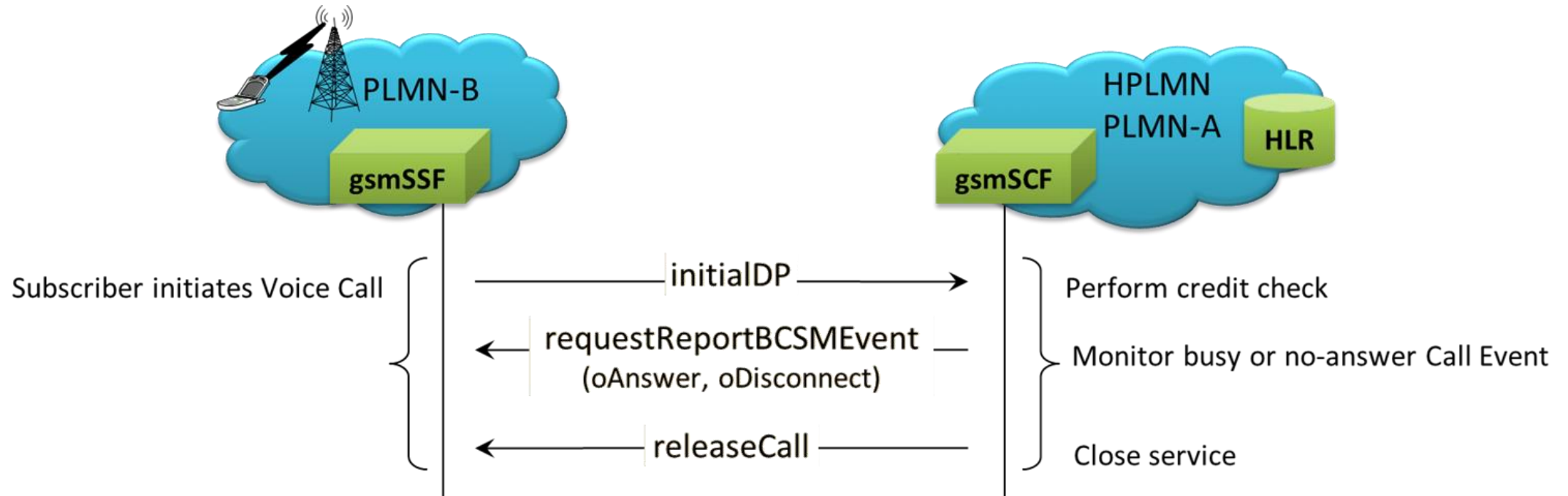
Low Balance Voice Call Service

(Release on Low Balance)

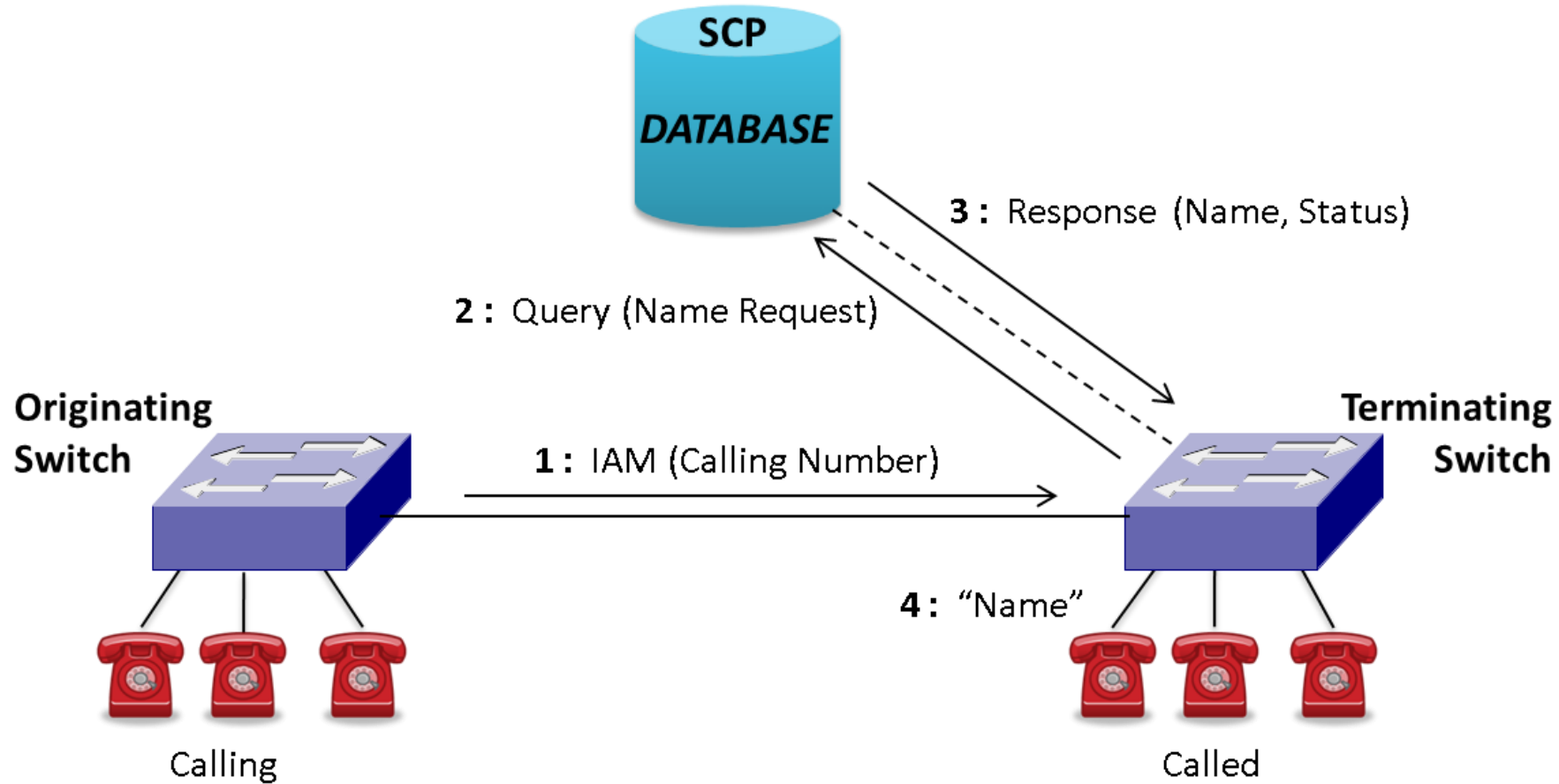


Low Balance Voice Call Service (Contd.)

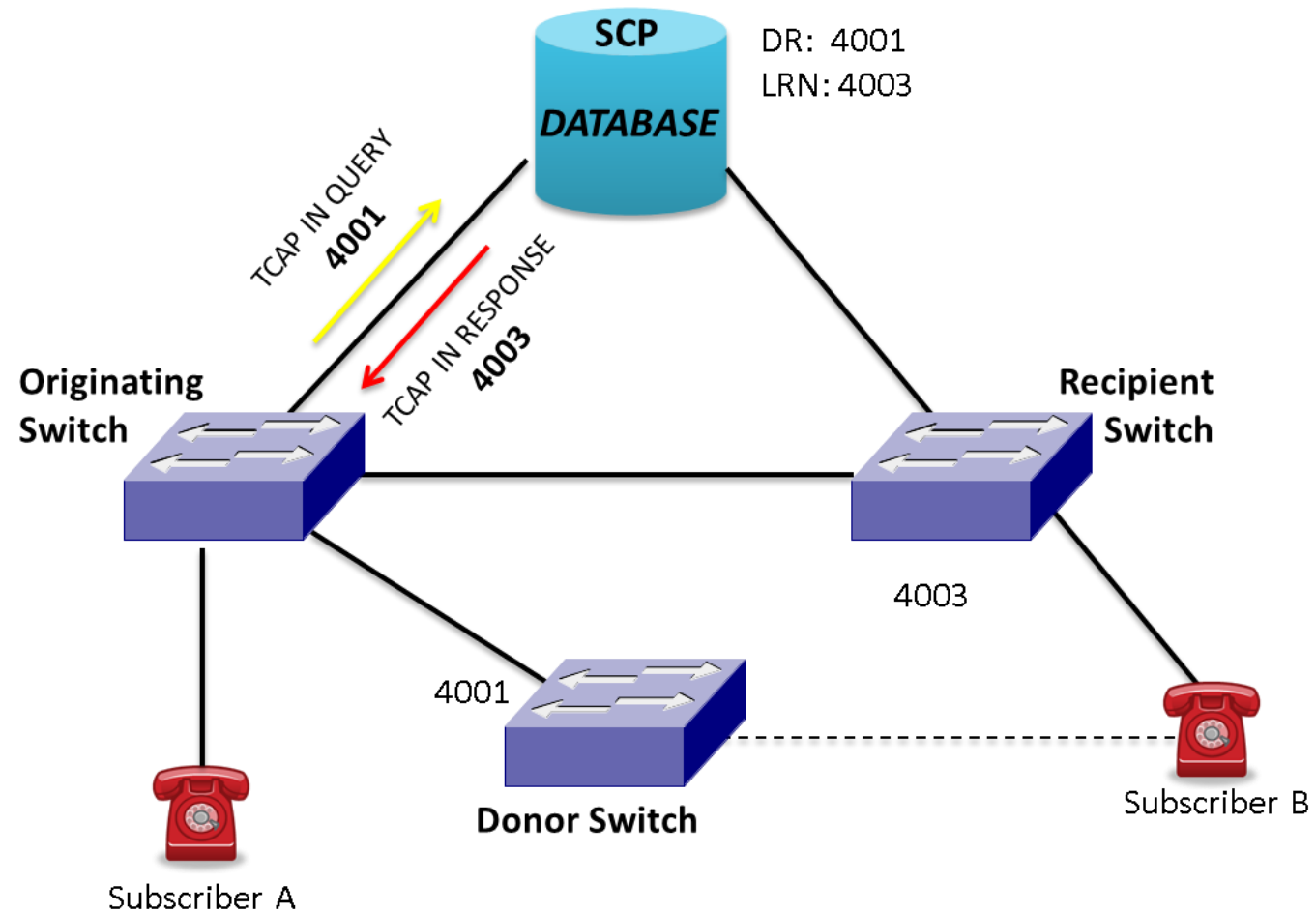
(Play Announcement on Low Balance)



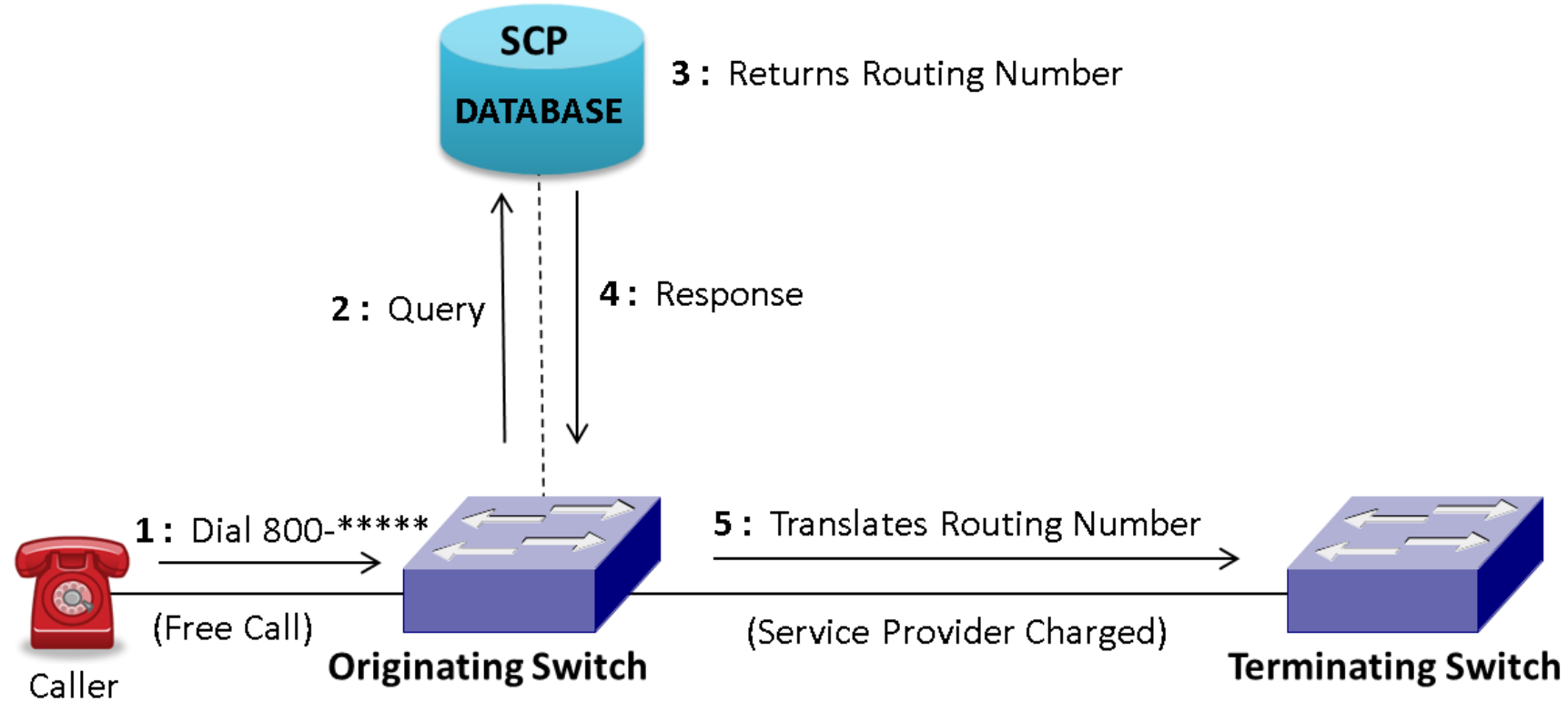
Calling Name Delivery (CNAM) Service



Local Number Portability (LNP) Service



Toll-free 800 Number Service



INAP IP Testbed Setup

MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA) - [Testbed Setup - TestBedDefault]

Config Value

Config	Value
SCF Interfaces	
SCF	1
SCF 1	
SCF IP Address	192.168.1.36
SCF Port	2906
SCF Point Code	3.3.3
SCCP Routing Indicator	Route on SSN
SCCP Point Code Indicator	Absent
SCF Subsystem Number	INAP - 12
SCF Global Title Address	12345658578
SCF Address Indicator	National
Nature Of SCF Address Indicator	Unknown
Connected Destination Nodes	1
Connected Destination Nodes 1	
Node Type	SSF
Source SCTP Mode	Client
Destination IP Address	192.168.1.36
Destination Port	2905
Destination Point Code	2.2.2
Source M3UA Termination Type	IPSP
Network Indicator	National
Signaling Link Selection	1
M3UA Routing Context Indicator	Present
M3UA Routing Context	1
Destination SCCP Routing Indicator	Route on SSN
Destination SCCP Point Code Indicator	Absent
Destination Subsystem Number	INAP - 12
Destination Global Title Address	54321574578
Destination Address Indicator	National
Nature Of Destination Address Indicator	Unknown
End User Configuration	MS_Profiles.xml

SourceIPAddress
Enter IP Address
192 . 168 . 1 . 36

Start Edit

Initialisation Errors Error Events Captured Errors Link Status Up=0 Down=0

INAP TDM Testbed Setup

MAPS (Message Automation Protocol Simulation) gsmSCF (INAP 3GPP) - [Testbed Setup - gsmSCF]

Configurations Emulator Reports Editor Windows Help

Config Value

Config	Value
SCF Interfaces	
SCF	1
SCF 1	
MTP Signalling Configuration	
E1 Port Number	1
Timeslot	31
Network Indicator	National
Signaling Link Selection	1
SCF Point Code	3.3.3
SCF Subsystem Number	INAP - 12
SCF Global Title Address	12345658578
SCF Address Indicator	National
Nature Of SCF Address Indicator	Unknown
Destination Node Parameters	
Node Type	SSF
Destination Point Code	2.2.2
Destination Subsystem Number	INAP - 12
Destination Global Title Address	54321574578
Destination Address Indicator	National
Nature Of Destination Address Indicator	Unknown
Adjacent Point Code	2.2.2
End User Configuration	MS_Profiles.xml

SignalingPortNumber

Enter Integer

1

Start Edit

Error Events Captured Errors Link Status Up=0 Down=0

INAP ATM Testbed Setup

Config	Value
SCF Interfaces	
SCF	1
SCF 1	
SCF Point Code	3.3.3
SCCP Routing Indicator	Route on GT
SCCP Point Code Indicator	Absent
SCF Subsystem Number	INAP - 12
SCF Global Title Address	12345658578
SCF Address Indicator	National
Nature Of SCF Address Indicator	Unknown
Connected Destination Nodes	1
Connected Destination Nodes 1	
Node Type	SSF
MTP Links	1
MTP Links 1	
T1 E1 Port Number	1
Signaling VPI	105
Signalling VCI	106
Network Indicator	National
Signaling Link Selection	0
Destination Point Code	2.2.2
Destination SCCP Routing Indicator	Route on GT
Destination SCCP Point Code Indicator	Absent
Destination Subsystem Number	INAP - 12
Destination Global Title Address	54321574578
Destination Address Indicator	National
Nature Of Destination Address Indicator	Unknown
Adjacent Point Code	2.2.2
End User Configuration	MS_Profiles.xml

Profile Editor

The screenshot shows the Profile Editor window for MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA). The window title is "MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA) - [Profile Editor - MS_Profiles]". The menu bar includes "Configurations", "Emulator", "Reports", "Editor", "Debug Tools", "Windows", and "Help". The toolbar contains various icons for file operations and simulation control.

The main interface is divided into several sections:

- Profiles List:** A table with columns "#", "Profiles (Edit-F2)", and "Value". The first profile, MSProfile001, is selected.
- Config Table:** A tree view showing the configuration for MSProfile001. The selected item is "Low balance call flow" with the value "Play Announcement and Release".
- LowbalanceSimulationSequence Panel:** A panel on the right with a "Select Option" dropdown menu set to "Play Announcement and Release". Below it are "Add", "Insert", and "Delete" buttons, and a "Properties" button.
- Status Bar:** Shows "Initialisation Errors", "Error Events", "Captured Errors", and "Link Status Up=0 Down=0".

#	Profiles (Edit-F2)	Value
1	MSProfile001	
2	MSProfile002	
3	MSProfile003	
4	MSProfile004	
5	MSProfile005	
6	MSProfile006	
7	MSProfile007	
8	MSProfile008	
9	MSProfile009	
10	MSProfile010	
11	MSProfile011	
12	MSProfile012	

Config	Value
MSProfile001	
Connection Identifier	1
Subscriber Information	
MSISDN	9176553423
Called Party Number Toll Free	18003487900
Assisting SSP IP Routing Address	919998756291
Max No Of Digits To Be Collected	5
Toll Free Call Parameters	
Destination Routing Address	918764563271
Charging Call Duration Parameters	
Maximum Call Period Duration in sec	30
Subscriber Call Period in sec	100
Low balance call flow	Play Announcement and Release

Script Editor

The screenshot shows the Script Editor application window. The title bar reads "ScriptEditor - [C:\Program Files\GL Communications Inc\Usb E1 Analyzer\MAPS\INAP\3GPP\gsmSCF\Scripts\INAP_VoiceCall_Service_SCF.gls]". The menu bar includes "File", "View", "Edit", "Shortcuts", "Tools", and "Help". The toolbar contains icons for file operations and settings. On the left, a "Command Window" pane lists various actions and functions, including "Send", "Recv", "Decode", "Bind", "Unbind", "Load Profile", "Start Timer", "Stop Timer", "Stop Retransmit Timer", "Conditional & Flow Control", "Variable", "Maps CLI", "Logs / Comment", "Init", "Child Script", "DataBase", "Send Report", "Resume", "Return", "Include", "Exit", "Utility Functions", and "Traffic Commands". The main editor area displays a script for "INAP_VoiceCall_Service_SCF" with the following code:

```
1
2  /// Initialization ///
3
4  gsmSCFOID=$_gsmSCFOID++;
5  RCause=16;
6  invokeId=1;
7  State = "Null";
8  ReportEvent (INAPScript = "Running");
9  KeyIdentifier: gsmSCFOID;
10 MsgHandler : "INAPMsgHandler";
11 ReleaseIfCallDurationExceeded=0;
12 IsReception=1;
13 //waitForApplychargingReport=1;
14 MsgSeqCount=0;
15
16 wait;
17
18 "INAPMsgHandler":
19     Message = $MessageType;
20     MsgDirection = "<-";
21     goto "GetMsgSequence":MessageType,MsgDirection;
22     goto MessageType : "Default";
23
24     /// Message Handling ///
25
26 "Initial DP":
27     decode "SCCP","InitialDPExport" ;
28     goto "Identify Connection";
```

The status bar at the bottom shows "Ready" on the left and "Line Count - 424 | Line : 1 Col : 1" on the right, along with a "NUM" button.

Message Editor

The screenshot shows the 'Message Editor - ApplyCharging' application window. The interface includes a menu bar (File, View, Direction, Tools, Help), a toolbar with icons for file operations, and a tree view on the left. The tree view shows the following structure:

- MTP3b
 - Service Indicator
 - Sub-service field
 - DPC
 - OPC
 - Signaling Link Code
- SCCP
 - Message Type
 - Mandatory Fixed Parameters

The main area displays a detailed list of parameters and their values:

```
===== MTP3b Layer =====  
0000 Service Indicator = ....0011 SCCP  
0000 Sub-service field = 0001.... Spare (for international use only)  
0001 DPC = 2.2.2(00010010 ..010000)  
0002 OPC = 1.1.1(01..... 00000010 ....0010)  
0004 Signaling Link Code = 0001.... (1)  
Pdu = x0900030C17091300000C00120067880B1300000C001100578875091C651A  
===== SCCP Layer =====  
0005 Message Type = 00001001 UDT unidata  
Mandatory Fixed Parameters =  
Protocol Class Parameter =  
0006 Class = ....0000 Class 0  
0006 Message Handling (Class 0 and 1 only) = 0000.... No Special Options  
0007 Pointer to Mandatory Parameter = Parm0 offset x03 (3)  
0008 Pointer to Mandatory Parameter = Parm1 offset x0C (12)  
0009 Pointer to Mandatory Parameter = Parm2 offset x17 (23)  
Mandatory Variable Length Parameters = -----  
Called Party Address = mandatory parameter  
000A Parameter length = 9  
Address Indicators =  
000B Point Code Indicators = .....1 Address contains signalling point code  
000B SSN Indicators = .....1. Address contains subsystem number  
000B Global Title Indicators = ..0100.. Global title includes translation type, numbering plan  
000B Routing Indicators = .0..... Route on GT.
```

The status bar at the bottom shows 'Ready' and a 'NUM' button.

Incoming Call Handler Configuration

Incoming Call Handlers Configuration - default

Message Name	Script Name
Initial DP	INAP_VoiceCall_Service_SCF.gls
ASP Up	M3UA.gls
ASP Down	M3UA.gls
ASP Active	M3UA.gls
ASP Inactive	M3UA.gls
SST subsystem-status-test	SCMG.gls
SOR subsystem-out-of-service-request	SCMG.gls

Scripts

- INAP_VoiceCall_Service_SCF...

Sequence
 Random

Up
Down

Add Delete Clear Add Delete

INAP IP Call Generation

Active Calls Call Status Call Events

Loading Scripts and Profiles

The screenshot displays the MAPS software interface for gsmSSF (INAP IP) call generation. The main window shows a table of call execution results:

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Ev...	Result	Total Iterations	Completed Iteratio...
1	INAP_VoiceCall_Service_SSF.gls	MSPProfile001	0x00000002	Start	Call Released from both side	None		Pass	1	1
2	INAP_VoiceCall_Service_SSF.gls	MSPProfile002	0x00000003	Start	Call Released from both side	None		Pass	1	1
3	INAP_VoiceCall_Service_SSF.gls	MSPProfile003	0x00000004	Start	Call Released from both side	None		Pass	1	1

Below the table, the 'Message Sequence' view shows a sequence of messages between SSF and SCF. The 'Connect' message is highlighted in orange. The sequence includes:

- Initial DP (SSF to SCF) at 12:55:06.234000
- Request Report BCSM Event (SCF to SSF) at 12:55:06.253000
- Request Report BCSM Event (SCF to SSF) at 12:55:06.253000
- Apply Charging (SCF to SSF) at 12:55:06.256000
- Connect (SCF to SSF) at 12:55:06.293000
- Event Report BCSM (SSF to SCF) at 12:55:06.311000
- Event Report BCSM (SSF to SCF) at 12:55:20.231000
- Apply Charging Report (SSF to SCF) at 12:55:20.232000
- Release Call (SCF to SSF) at 12:55:20.249000

To the right of the message sequence, the 'Decode Message' view shows the raw message data for the 'Connect' message:

```

===== MTP3 User Adaptation Layer =====
0000 Version = 00000001 Release 1.0
0002 Message Class = 00000001 Transfer
0003 Transfer Message Type = 00000001 Payload Data
0004 Message Length = 124 (x0000007C)
      Protocol Data =
0008 Tag = x0210 Transfer Protocol Data
000A Length = 108 (x006C)
      Originating Point Code =
000E Point Code = 3.3.3(..011000 00011011)
      Destination Point Code =
0012 Point Code = 2.2.2(..010000 00010010)
0014 Service Indicator = ....0011 SCCP
0015 Network Indicator = .....10 National Network
0016 Message Priority = .....00 Priority Code 0
0017 Signalling Link Selection = 1 (x01)
      Pdu = x090003101D0D9312100C001100452351477508(
      Routing Context =
0074 Tag = x0006 Routing Context
0076 Length = 8 (x0008)
0078 Routing Context Value = 1 (x00000001)
===== SCCP Layer =====
0018 Message Type = 00001001 UDT unidata
      Mandatory Fixed Parameters =
      Protocol Class Parameter =
    
```

Message Sequence

Decode Message

INAP IP Call Reception

MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA) - [Call Reception]

Configurations Emulator Reports Editor Debug Tools Windows Help

Sr No	Script Name	Call Info	Script Execution	Status	Events	Even...	Results
1	Check_SCTP_Status.gls		Stop		None		Unknown
2	M3UA.gls	1	Stop	ASP Active	Send-Heartbeat		Pass
3	SCMG.gls	1	Stop	Subsystem-Allowed	Initiate SST		Pass
4	INAP_VoiceCall_Service_SCF.gls	0x00000002	Completed	Call Released	None		Pass
5	INAP_VoiceCall_Service_SCF.gls	0x00000003	Completed	Call Released	None		Pass
6	INAP_VoiceCall_Service_SCF.gls	0x00000004	Completed	Call Released	None		Pass

Stop Stop All Abort Abort All Show Records Select Active Call Auto Trash Trash

Save Column Width Show Latest

SSF SCF

```

Initial DP → 12:55:06.243000
Request Report BCSM Event ← 12:55:06.245000
Request Report BCSM Event ← 12:55:06.246000
Apply Charging → 12:55:06.247000
Connect ← 12:55:06.284000
Event Report BCSM → 12:55:06.320000
Event Report BCSM → 12:55:20.238000
Apply Charging Report → 12:55:20.238000
Release Call ← 12:55:20.240000
                    
```

=====
MTP3 User Adaptation Layer
=====

```

0000 Version = 00000001 Release 1.0
0002 Message Class = 00000001 Transfer
0003 Transfer Message Type = 00000001 Payload Data
0004 Message Length = 124 (x0000007C)
Protocol Data =
0008 Tag = x0210 Transfer Protocol Data
000A Length = 108 (x006C)
Originating Point Code =
000E Point Code = 3.3.3(..011000 00011011)
Destination Point Code =
0012 Point Code = 2.2.2(..010000 00010010)
0014 Service Indicator = ....0011 SCCP
0015 Network Indicator = .....10 National Network
0016 Message Priority = .....00 Priority Code 0
0017 Signalling Link Selection = 1 (x01)
Pdu = x090003101D0D9312100C00110045235147750
Routing Context =
0074 Tag = x0006 Routing Context
0076 Length = 8 (x0008)
0078 Routing Context Value = 1 (x00000001)
===== SCCP Layer =====
0018 Message Time = 00001001 TMT unidata
                    
```

Scripts **Message Sequence** Event Config Script Flow

● Initialisation Errors ● Error Events ● Captured Errors ● Link Status Up=1 Down=0

Call Results

Message Sequence

Decode Message

INAP IP Event Log

Events				
Event Log				
Date/Time	Captured Events	Call Trace Id	Script Name	Script Id
2016-7-19 11:20:28.235000	SCTP Up On ConnectionId = 1001		Check_SCTP_Status.gls	ProtScriptId_3_460027652-7247-2496
2016-7-19 11:20:28.236000	ASP UP Sent	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.247000	ASP Up Received	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.248000	ASP Acknowledged	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.249000	AS Status Notified	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.251000	ASP Acknowledged	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.252000	AS Status Notified	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.264000	ASP Active Received	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.265000	AS Status Notified	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.266000	AS Status Notified	1001	M3UA.gls	ProtScriptId_4_460028456-7248-2496
2016-7-19 11:20:28.266000	M3UA Up on ConnectionId = 1001		Check_SCTP_Status.gls	ProtScriptId_3_460027652-7247-2496
2016-7-19 11:20:28.269000	Subsystem-Status-Test	1001	SCMG.gls	ProtScriptId_5_460028488-7249-2496
2016-7-19 11:20:28.272000	Subsystem-Allowed	1001	SCMG.gls	ProtScriptId_5_460028488-7249-2496
2016-7-19 11:20:28.288000	Subsystem-Allowed	1001	SCMG.gls	ProtScriptId_5_460028488-7249-2496
2016-7-19 11:25:40.535000	IN Services Invoked	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:25:40.621000	Request Report for oAns and oDis	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:25:40.622000	Request Report for oAns and oDis	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:25:40.642000	Called party answered	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:26:00.663000	Call Charging Report Sent	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:26:20.702000	Call Charging Report Sent	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:26:40.741000	Call Charging Report Sent	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:27:00.782000	Call Charging Report Sent	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:27:05.662000	Call Disconnected	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:27:05.663000	Call Charging Report Sent	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260
2016-7-19 11:27:05.688000	Call Released	0x00000002	INAP_VoiceCall_Service_SSF.gls	CGProtScriptId_0_460340683-7250-4260

Save Events

Capture Events to file ...

ANSI INAP IP Incoming Call Handler Configuration

Incoming Call Handlers Configuration - default

Message Name	Script Name
ASP Up	M3UA.gls
ASP Down	M3UA.gls
ASP Active	M3UA.gls
ASP Inactive	M3UA.gls
SST subsystem-status-test	SCMG.gls
SOR subsystem-out-of-service-request	SCMG.gls
Start	Recv800Query.gls
Provide Instructions	RecvCNAMQuery.gls
Info_Analyzed	RecvLNPQuery.gls

Scripts

- RecvCNAMQuery.gls

Sequence
 Random

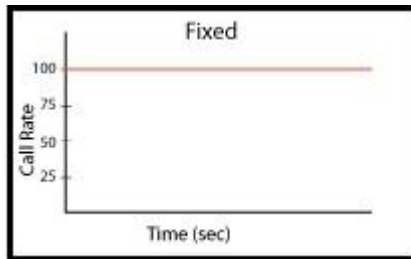
Up
Down

Add Delete Clear Add Delete

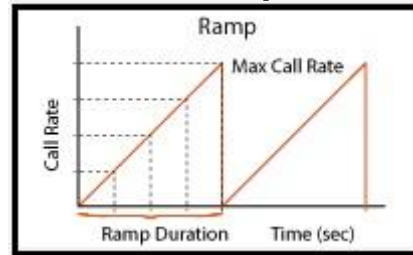
Load Generation

- Stability/Stress and Performance testing using Load Generation
- Different types of Load patterns to distribute load
- User can load multiple patterns for selected script
- User configurable Test Duration, CPS, Maximum and Minimum Call Rate etc

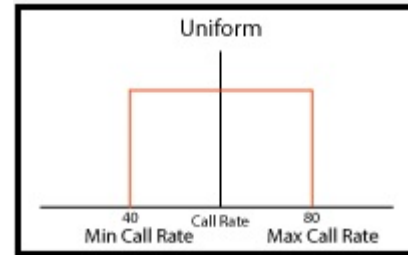
Fixed



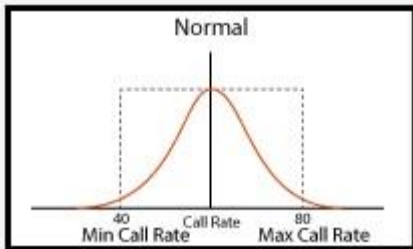
Ramp



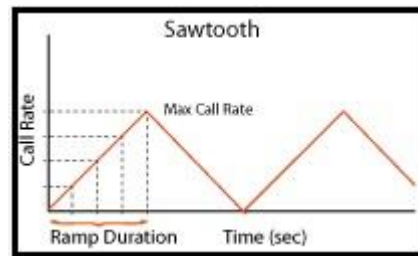
Uniform



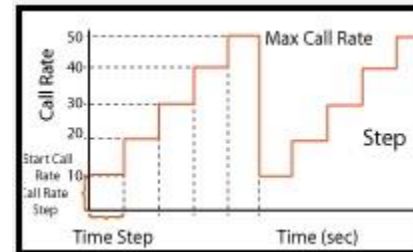
Normal



Saw-tooth



Step



The screenshot shows the 'Load Generation - LoadGendefault' software interface. It includes a title bar, a toolbar, and several configuration sections. The 'Total Calls To Generate' field is set to '*' (no limit), and 'Max Active Calls' is set to 30. The 'Unique Distributions Per Script' checkbox is unchecked. The 'Multi Distributions' checkbox is checked, and a table lists three distributions: 'Uniform' (MinCR=40, MaxCR=80, Duration=10), 'Fixed' (Call Rate=200, Duration=10), and 'Normal' (MinCR=40, MaxCR=80, Duration=10). The 'Scripts' section shows a list of scripts, and the 'Profile' section shows a list of profiles. The 'Stop Time' section has a checkbox that is unchecked, and the 'Start Time' and 'End Time' fields are set to 00:00:00.000.

Distributions	Description	Add
Uniform	MinCR=40, MaxCR=80, Duration=10	Remove
Fixed	Call Rate=200, Duration=10	Remove All
Normal	MinCR=40, MaxCR=80, Duration=10	Edit

Scripts	Profile
Placecall	Card1TS01
	Card1TS02
	Card1TS03
	Card1TS04
	Card1TS05
	Card1TS06
	Card1TS07
	Card1TS08
	Card1TS09
	Card1TS10
	Card1TS11
	Card1TS12
	Card1TS13

INAP IP Bulk Call Generation

The screenshot shows the MAPS (Message Automation Protocol Simulation) gsmSSF (INAPIP ITU M3UA) - [Call Generation] window. The window title bar includes the GL logo and the text "MAPS (Message Automation Protocol Simulation) gsmSSF (INAPIP ITU M3UA) - [Call Generation]". The menu bar contains "Configurations", "Emulator", "Reports", "Editor", "Debug Tools", "Windows", and "Help". The toolbar includes icons for file operations, execution, and help.

Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Ev...	Result	Total Iterations	Completed Iteratio...
1	INAP_VoiceCall_Service_SSF.gls	MSPProfile001		Start		None		Unknown	10	0
2	INAP_VoiceCall_Service_SSF.gls	MSPProfile002		Start		None		Unknown	10	0
3	INAP_VoiceCall_Service_SSF.gls	MSPProfile003		Start		None		Unknown	10	0
4	INAP_VoiceCall_Service_SSF.gls	MSPProfile004		Start		None		Unknown	10	0
5	INAP_VoiceCall_Service_SSF.gls	MSPProfile005		Start		None		Unknown	10	0
6	INAP_VoiceCall_Service_SSF.gls	MSPProfile006		Start		None		Unknown	10	0
7	INAP_VoiceCall_Service_SSF.gls	MSPProfile007		Start		None		Unknown	10	0
8	INAP_VoiceCall_Service_SSF.gls	MSPProfile008		Start		None		Unknown	10	0
9	INAP_VoiceCall_Service_SSF.gls	MSPProfile009		Start		None		Unknown	10	0
10	INAP_VoiceCall_Service_SSF.gls	MSPProfile010		Start		None		Unknown	10	0

Below the table, there are buttons: Add, Delete, Insert, Refresh, Start, Start All, Stop, Stop All, Abort, Abort All. A checkbox labeled "View Executing Line" is present. The script editor shows the following code:

```
Script Contents
resume;

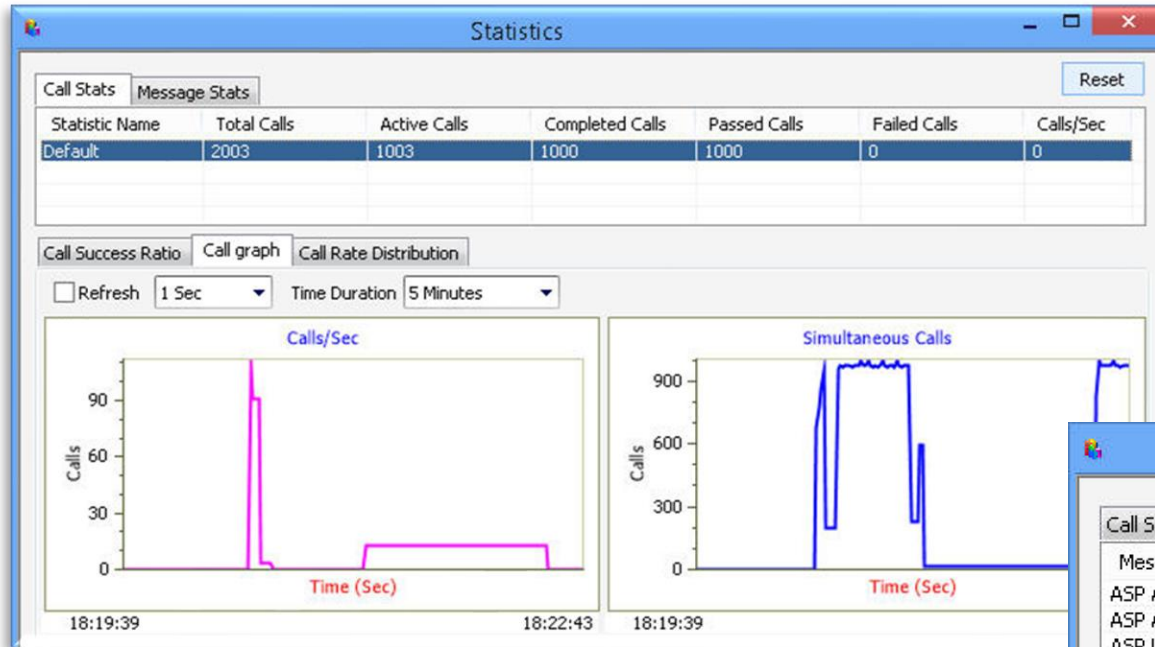
"Connect":
  stoptimer ResponseTimer;
  decode "SCCP","ConnectExport" ;
  if (IdpVoice==2)
    ActiveUserEvent:"Report Event oAnswer","Report Event oBusy","Report Event oNoAnswer";
  else
    ActiveUserEvent:"Report Event tAnswer","Report Event tBusy","Report Event tNoAnswer";
  endif
  starttimer AnswerEventTimer _AnswerEventTimeOut msec;
  resume;

"Apply Charging":
  -----
```

The bottom of the window shows a status bar with "Scripts" selected, and indicators for "Initialisation Errors", "Error Events", "Captured Errors", and "Link Status Up=1 Down=0".

Bulk Call Statistics and Graph

Call Stats and Graph



Message Stats

Statistics window showing Message Stats table:

Message Type	Tx Count	Rx Count	Retransmit Count
ASP Active	1	0	0
ASP Active Acknowledgement	0	1	0
ASP Up	1	0	0
ASP Up Acknowledgement	0	1	0
Apply Charging	0	4000	0
Event Report BCSM	1000	0	0
Initial DP	1000	0	0
Notify	0	2	0
Request Report BCSM Event	0	2000	0
SSA subsystem-allowed	1	1	0
SST subsystem-status-test	1	1	0
continue	0	1000	0
Apply Charging Report	3000	0	0

Thank you