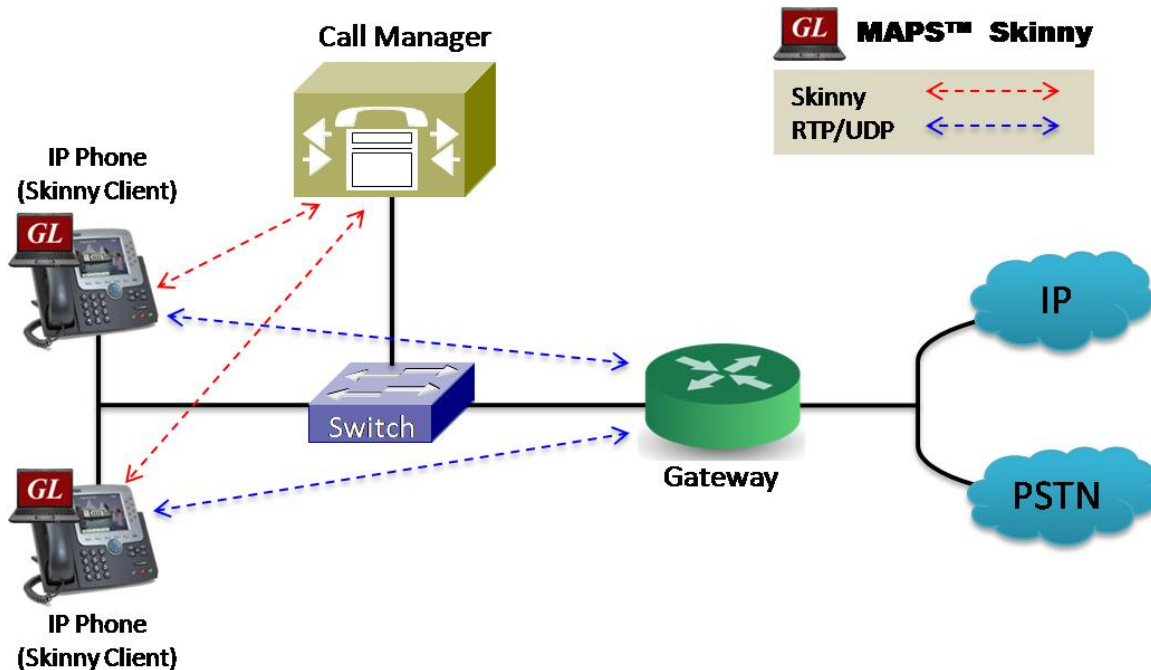


MAPS™ Skinny Protocol Emulator

(Scripted Skinny Call Control Protocol (SCCP) Emulation)



Overview

GL's **Message Automation & Protocol Simulation (MAPS™)** is an advanced and versatile protocol simulator/tester that can simulate a variety of protocols encountered in the telecom space. Currently, MAPS™ is enhanced to support SCCP (Skinny Call Control Protocol), Cisco Systems proprietary signaling and control protocol.

GL's **MAPS™ Skinny** can be used to emulate Skinny Client (IP Phones) in VoIP environment. Supported call control functionalities include registration, call control (setup, teardown, and statistics), and media (audio) stream control. Simulation of Skinny Call Manager endpoint will be supported in future.

In addition to call simulation in VoIP environment, it also supports, error tracking, regression testing, conformance testing, load testing, and message generation. It can run pre-defined test scenarios against test objects in a controlled & deterministic manner.

MAPS™ Skinny emulator supports powerful utilities like Message Editor, Script Editor, and Profile Editor which allow new scenarios to be created or existing scenarios to be modified.

MAPS™ for Skinny interfaces can support transmission and detection of various [RTP traffic](#) such as, digits, voice file, single tone, and dual tones over IP networks, with additional RTP traffic licensing.

Also, available is an independent GUI based [PacketScan™ Analyzer](#) for online capture and decode of the signaling in real-time both during tests and as a stand-alone tracer for live systems.

For more information, please visit [MAPS™ Skinny Protocol Emulator](#) webpage.



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Main Features

- Emulates Skinny Call Control Protocol (SCCP) clients (IP Phones).
- User-friendly GUI for configuring the SCCP signaling links over IP.
- Ready scripts for registration, call control (setup, teardown, and statistics) procedures.
- Logging of all messages in real-time.
- Supports customization of placing and answering calls using Profile and Message editors.
- Provides protocol trace with full message decoding of the call control messages.
- Script based & protocol independent software architecture.
- Provides call reports with associated captured events and error events during call simulation.
- Script based and protocol independent MAPS architecture supports all common framework features.

Test Bed Setup Configuration

Test Bed Setup provides option to establish communication between MAPS™ Skinny (IP Phone) and the DUT (Call Manager). It includes Skinny configuration parameters such as Phone IP address, CCM IP address, Port and TCP transaction type.

Also includes default profile, which is used to configure MAPS™ Skinny with end terminal parameters.

Once the testbed setup is configured properly, inbound and outbound calls between the IP Phone (Skinny Client) and the Call Manager can be established.

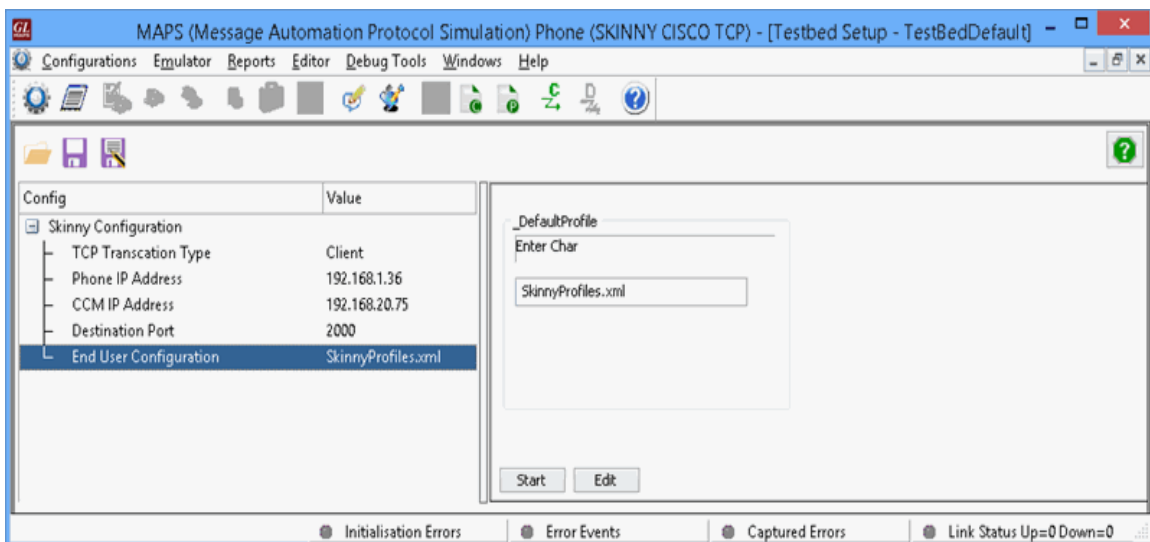


Figure: Testbed Setup Configuration

Pre-processing Tools

Profile Editor

The profile editor feature allows to edit the values of the variables in the profile, replacing the original value of the variables in the message template.

An XML file defines a set of multiple profiles with varying parameter values that allow users to configure call instances in call generation and to receive calls.

Users can configure the traffic options for Auto / User-defined traffic simulation. Supported traffic configuration includes Send/Receive file, DTMF/MF digits, and Single/Dual tones.

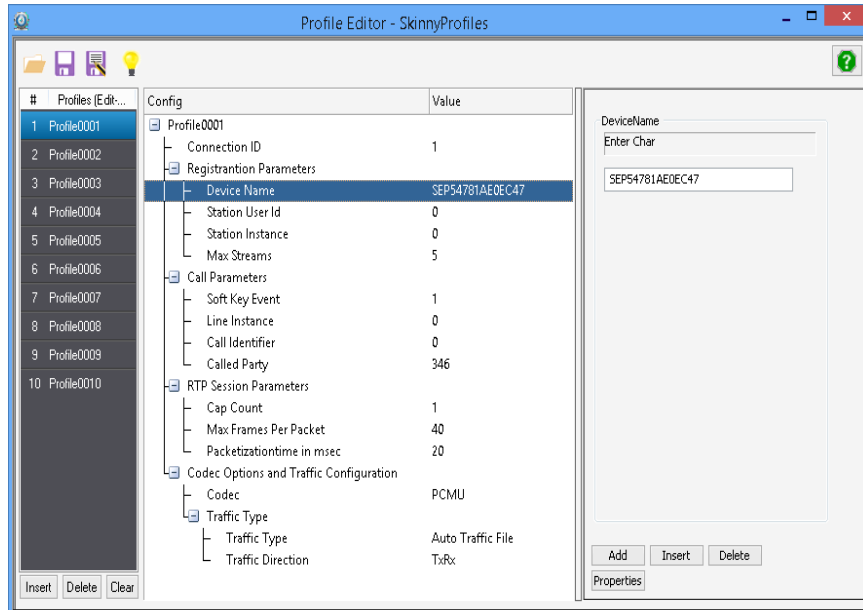


Figure: Profile Editor

Script Editor

The script editor allows the user to create / edit scripts and access protocol fields as variables for the message template parameters. The script uses pre-defined message templates to perform send and receive actions.

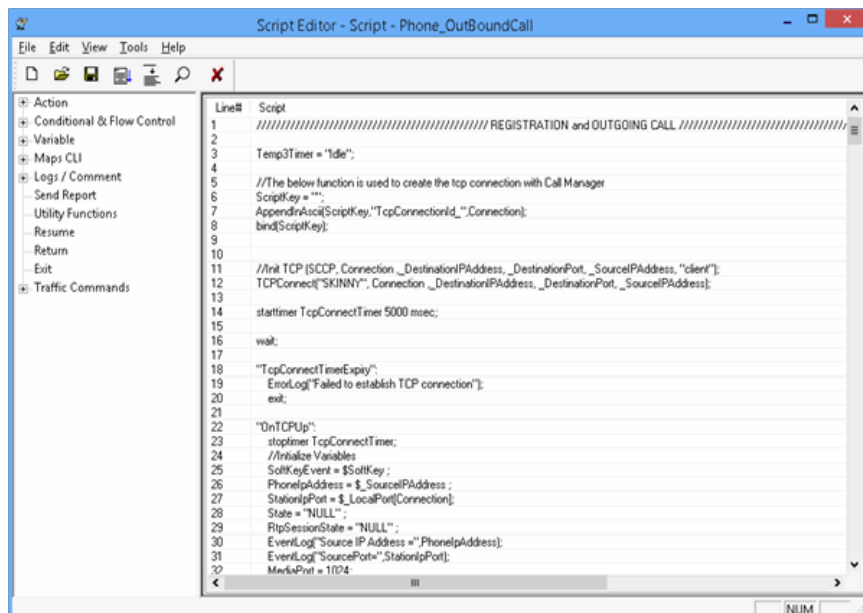


Figure: Script Editor

Pre-processing Tools (Contd.)

Message Editor

With message editor, users can build a template for each protocol message type. The value for each field may be changed in the message template prior to testing. The protocol fields comprises of mandatory fixed parameters, mandatory variable parameters, and optional variable parameters.

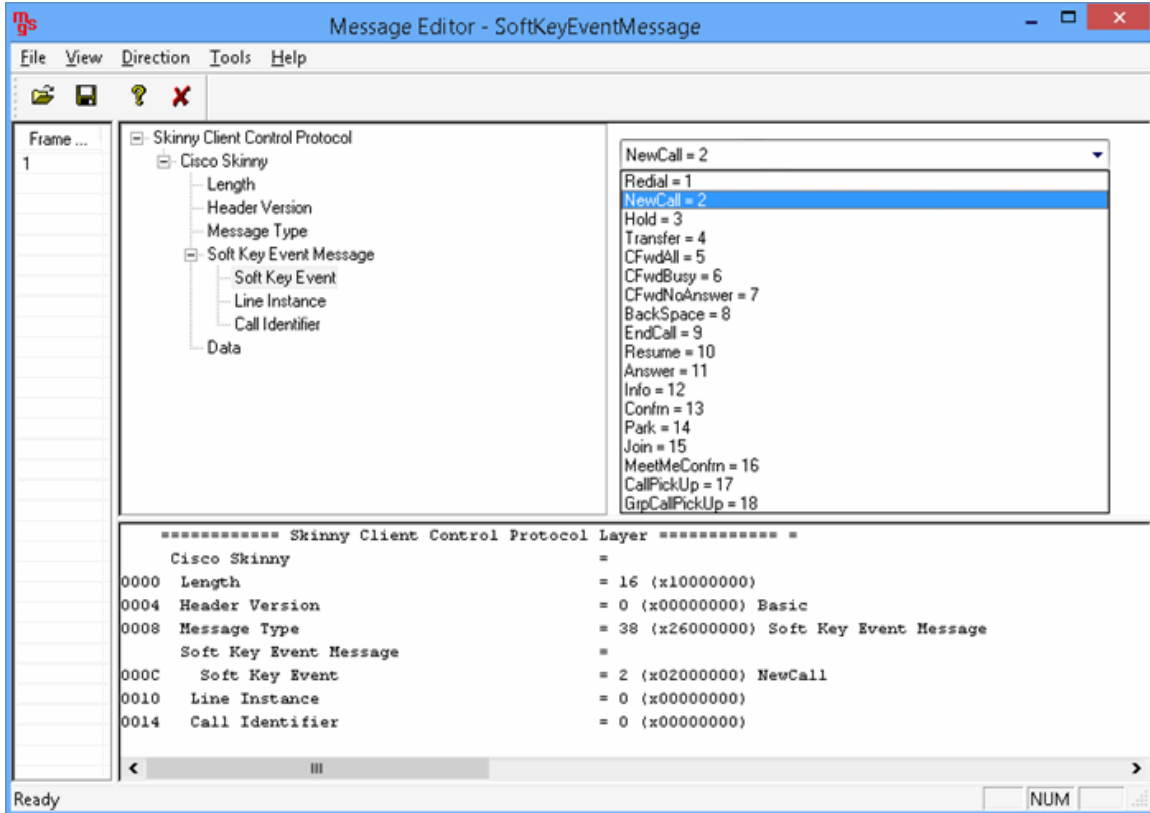


Figure: Message Editor

Call Generation and Call Reception

In call generation, MAPS™ is configured for the out going messages, while in call receive mode, it is configured to respond to incoming messages. Tests can be configured to run once, multiple iterations and continuously. Also, allows users to create multiple entries using quick configuration feature.

The editor allows to run the added scripts sequentially (order in which the scripts are added in the window) or randomly (any script from the list of added script as per the call flow requirements).

The test scripts may be started manually or they can be automatically triggered by incoming messages.

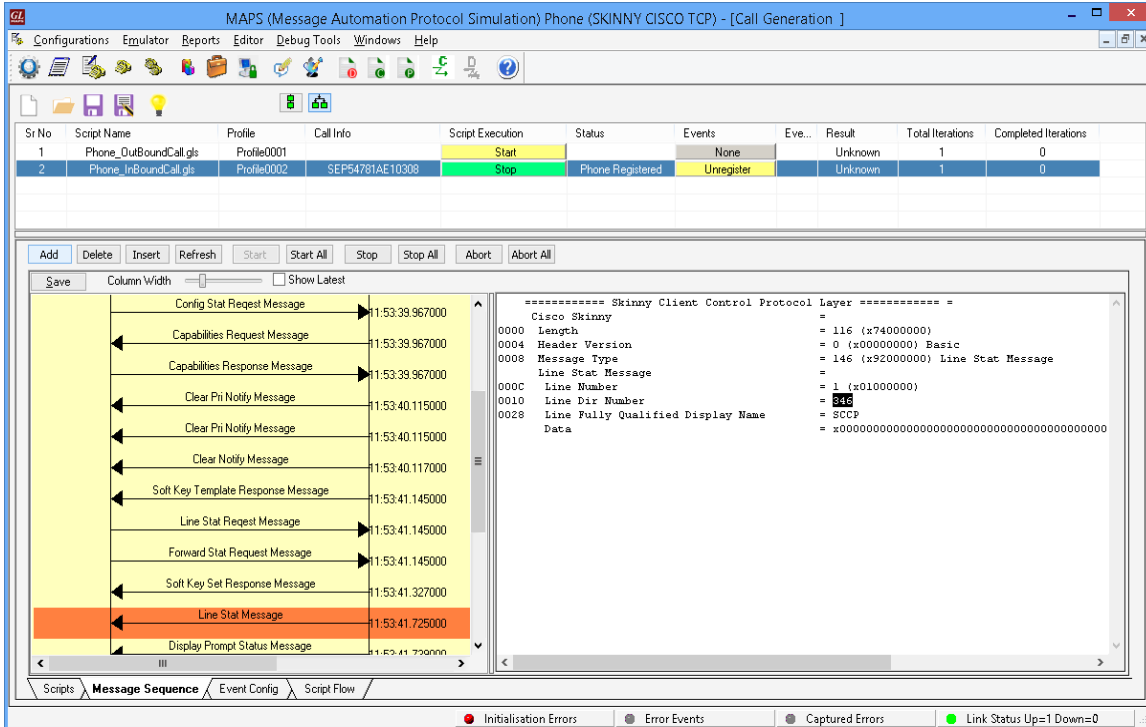


Figure: Outbound Call Simulation

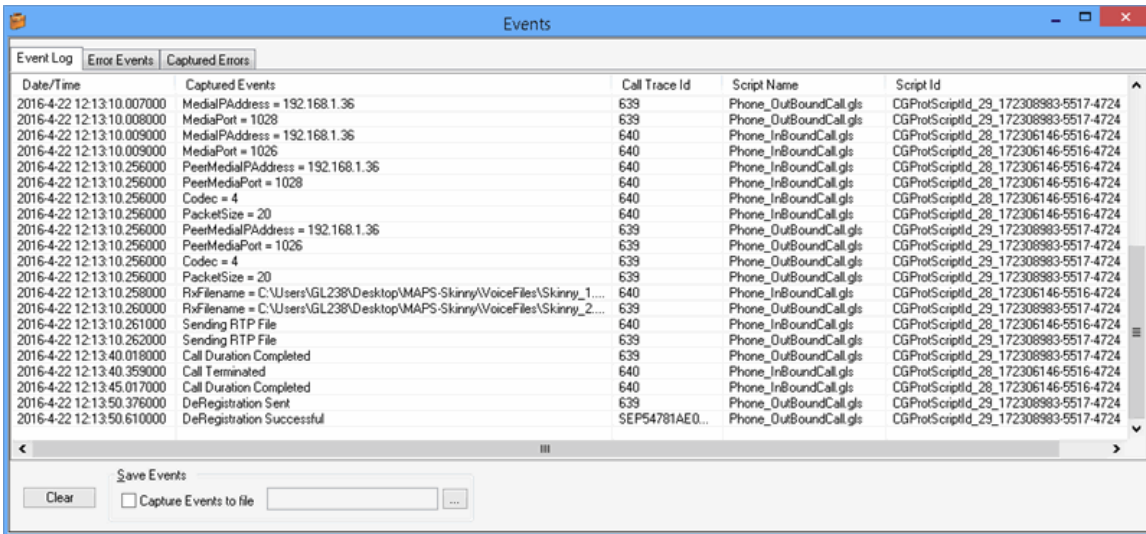


Figure: Event Log

Skinny Call Control Protocol - SCCP Call Flow

MAPS™ Skinny supports client control procedures -

- Registration
 - IP Phone registers its IP, type, & name with the CCM, and provides its "Capabilities" (voice/video codec supported) to CCM.
- Call Control (setup, teardown, and statistics)
 - Phone periodically sends "KeepAlive" messages to the CCM
 - Offhook (place call) - CCM instructs with the lamp on/off, through the prompt, key settings, and the dialtone messages.
 - Onhook (end call) – CCM instructs the phone to stop transmitting, close the channels, set the call status to disconnect, and send the default user prompt.
- Media (audio) Stream Control
 - Media Transmission includes Conference ID, Pass through Party ID, Remote IP & Port Address, Packet, Payload Capability, Max Frames per Packet details.

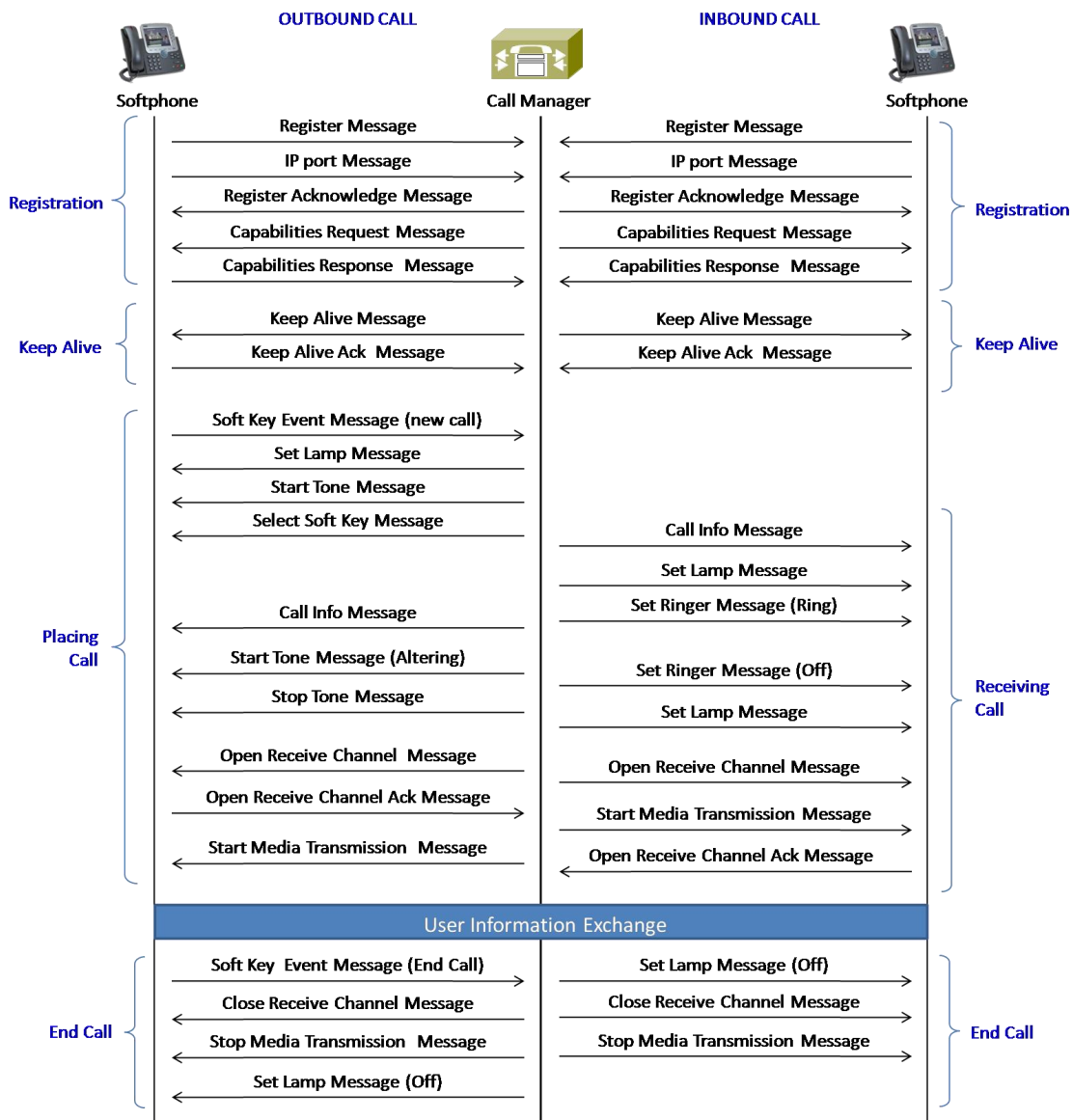


Figure: IP Phone to Call Manager Call Flow

Buyer's Guide

Item No	Product Description
PKS149	MAPS™ Skinny Protocol Emulator

Item No	Related Software
PKS102	RTP Soft Core for RTP Traffic Generation
PKS103	RTP IuUP Softcore
PKS107	RTP EUROCAE ED137
PKS108	RTP Voice Quality Measurements
PKS200	RTP Pass Through Fax Emulation
PKS136	MAPS™ INAP over IP Emulator
PKS132	MAPS™ MAP IP Emulator
PKS135	MAPS™ ISDN SIGTRAN (ISDN over IP)
XX656	MAPS™ INAP over TDM Emulator (Requires T1 or E1 Hardware and Software)
XX649	MAPS™ ISUP Emulator
XX694	MAPS™ MAP Emulation (B,C,D, E, F, G, and H interfaces)
XX696	MAPS™ SS7 CAP Emulation (CAMEL App Part)
XX695	MAPS™ SS7 BICC Emulation
XX648	MAPS™ ISDN Emulator
XX100	ISDN Analyzer Software
XX120	SS7 Analysis Software
PKS152	MAPS™ SIGTRAN ANSI MAP Emulator
PKS130	MAPS™ SIGTRAN (SS7 over IP)
PKV105	SIGTRAN Analyzer (requires PKV100)
PKS140	MAPS™ LTE - S1 Interface
PKS142	MAPS™ LTE eGTP (S11, S5/S8) Interfaces
PKS164	MAPS™ UMTS – IuPS Interface Emulation
PKS160	MAPS™ UMTS – IuCS and Iuh Interface Emulation
XX165	T1 or E1 UMTS Protocol Analyzer
PKV107	LTE Protocol Analyzer



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Buyer's Guide (Contd.)

Item No	Related Software
PKS120	MAPS™ SIP
PKS121	MAPS™ SIP Conformance Test Suite (Test Scripts)
PKS122	MAPS™ MEGACO
PKS123	MAPS™ MEGACO Conformance Test Suite (Test Scripts)
PKS124	MAPS™ – MGCP Protocol Emulation with Conformance Test Suite
PKB100	RTP Toolbox™
PKS100	PacketGen™
PKV100	PacketScan™ (Online and Offline)

For more information, please visit [Signaling and Traffic Simulator](#) webpage.



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