

Simulates Media Gateways & Media Gateway Controllers

Conformance & Functionality Testing

Customization of Call Flow & Messages

Supports Add, Subtract, Notify, Modify, Move, ServiceChange, AuditValue, & AuditCapabilities

Registers Gateways, & Manages Servicechange Requests

Provides Fault Insertion, & Erroneous Call Flow Testing

Message Automation & Protocol Simulation (MAPS)

MAPS - MEGACO (ETSI TS 102 374-2)



Overview

Message Automation & Protocol Simulation (MAPS) Megaco application is capable of testing Media Gateways (MG) and Media Gateway Controllers (MGC). The test library includes scripts to perform functional testing of an MGC by scripting a variety of call flows and customizing MEGACO messages.

The application is available as -

- MAPS - MEGACO Protocol Test Tool (Item # PKS122)
- MAPS - MEGACO Conformance Test Suite (Item # PKS123)

The MAPS - MEGACO Conformance Suite is designed with 250+ test cases, as per specification of ETSI TS 102 374-2 (2004-11) standard. The test suite includes in-built scripts to process MEGACO valid and in-valid behaviors.

For more details refer to <http://www.gl.com/mapsmegaco.html>

Main Features

- Simulates Media Gateways (MG) and Media gateway Controller (MGC)
- Generates and processes MEGACO valid messages
- Supports complete customization of call flow and messages
- Supports Add, Subtract, Notify, Modify, Move, ServiceChange, AuditValue, and AuditCapabilities commands
- Supports call generation using scripts (only signaling)
- Commands in the script supports conditional branching loops and user-defined variables
- Support end-to-end gateway testing
- Supported on Windows XP/2000 Operating System
- In-built scripts makes testing procedure simpler, less time consuming and hence time to market the products
- Provides fault insertion, and erroneous call flows testing capability

Terminologies

- **MGC (Media Gateway Controller)** is a part of softswitch, which controls the parts of the call state that pertains to connection control of media channels in a MG. It is configured with physical terminations present in the trunk group in MG that MGC operates on.
- **MG (Media Gateway)** converts media provided in one type of network to the format required in another type of network.
- **Device Under Test (DUT)** is the device being tested and can either be a Media Gateway or a MGC. DUT is configured with IP Address and Port on which it listens to incoming Megaco messages



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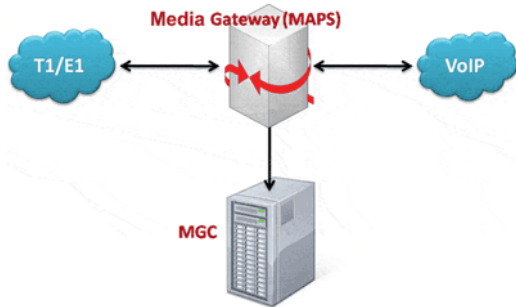
Web Page Address: <http://www.gl.com/> • E-Mail Address: info@gl.com

Configurations

The configuration window consists of entities configured to act as MGC / MG, and Device Under Test (MG or MGC). MAPS MEGACO can be configured as MGC / MG to test other entity and vice versa.

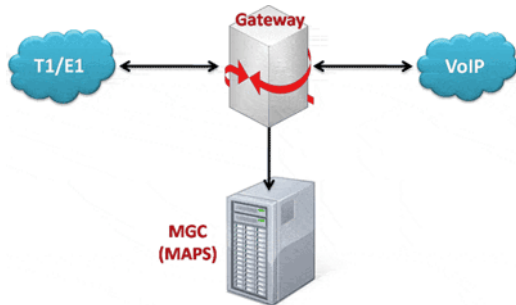
Scenario 1: MAPS acting as MG for MGC Conformance Testing

MAPS can be configured to act as MG, so that entire MGC testing can be automated.



Scenario 2: MAPS acting as MGC for MG Conformance Testing

MAPS can be configured to act as MGC, so that entire MG (Media Gateway) testing can be automated.



Scenario 3: Testing ATAs and Gateways

MAPS MEGACO Conformance test tool is an ideal tool to evaluate Gateway / ATA product features such as call connectivity, call signaling, traffic generation, voice quality testing, codec, and hundreds of other features.

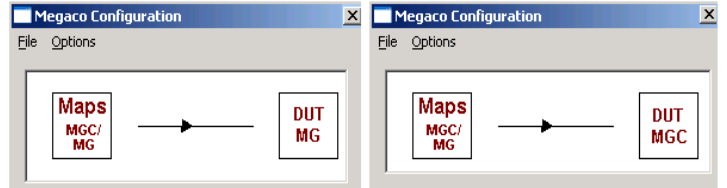
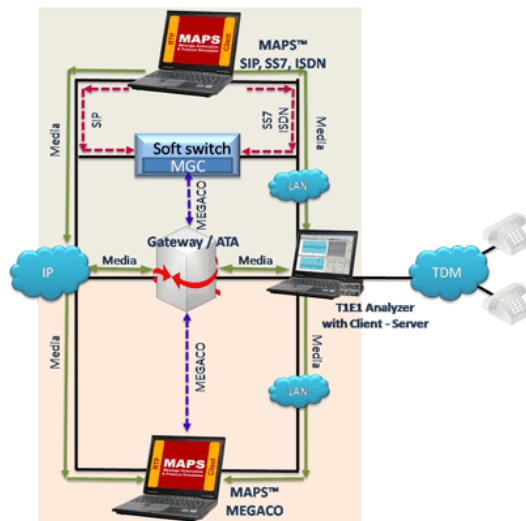
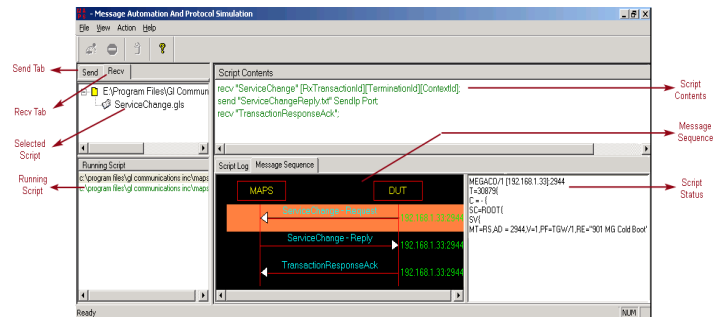


Figure: Megaco Configuration Window

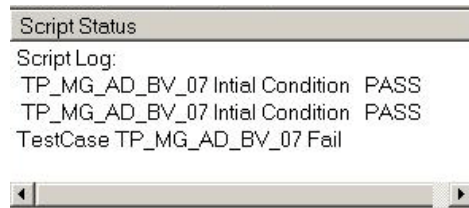
Megaco Interface

Send Tab - includes inbuilt **MG** and **MGC** Conformance scripts (*.gls) that allow MAPS to send messages to other entities (MG / MGC). These scripts are used for MG and MGC conformance testing. Users can edit these scripts according to test requirements.

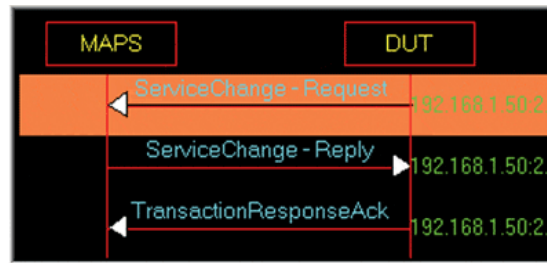
Recv Tab - includes inbuilt **MG** and **MGC** Conformance scripts (*.gls) scripts that allow MAPS to receive messages from other entities (MG / MGC). These scripts are used for MG and MGC conformance testing. Users can edit these scripts according to test requirements.



Script Log gives the status of the script after the execution of the selected script.



Message Sequence displays the pictorial view of the **Registration** and **Reply** messages flowing between the DUT/MG and MAPS. The message sequence is displayed for the scripts being executed. In case of MGC, MAPS extracts the Templates and generates **Reply** for the request.



MAPS acting as MGC

MAPS includes inbuilt Media Gateway Conformance scripts (*.gls) that allow the application to act as MGC. These scripts are used for Media Gateway conformance testing.

Execute Scripts under Recv Tab

The MGC (MAPS) receives signaling information from the Media Gateway during for Media Gateway conformance testing. MGC uses MEGACO protocol signaling to instruct MG.

The following screen displays **TP_MG_AM_BV_01.gls** script of **Administration and Maintenance** conformance suite, where the script confirms the registration from MG.

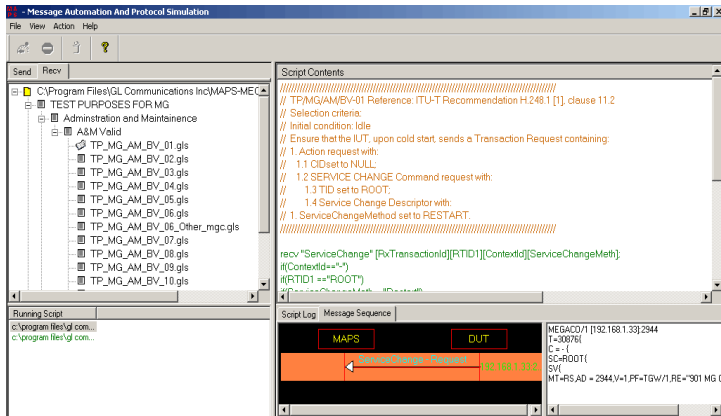


Figure- MGC (Recv) Conformance Script Execution

Execute Scripts under Send Tab

MGC (MAPS) starts execution of conformance scripts from the Send tab immediately after sending the first instruction. The first active instruction is “send instruction”.

The following figure displays execution of **TP_MG_AD_BV_01.gls** conformance scripts from MG Send tab. This Script associates the terminations to create a context using Add command and confirms the creation of context.

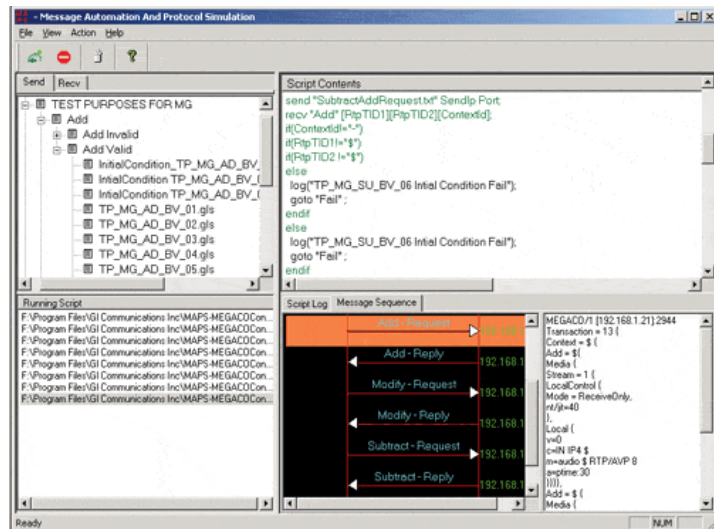


Figure- MGC (Send) Conformance Script Execution

MAPS acting as MG

MAPS includes inbuilt Media Gateway Controller conformance scripts (*.gls) that allow the application to act as MG. These scripts are used for Media Gateway Controller conformance testing.

Execute Scripts under Send Tab

The following screen displays execution of the **TP_MGC_AM_BV_01.gls** script of **Administration and Maintenance** conformance suite, where MGC confirms the registration of a connected Service MG (MAPS), on receipt of a TransAction Request.

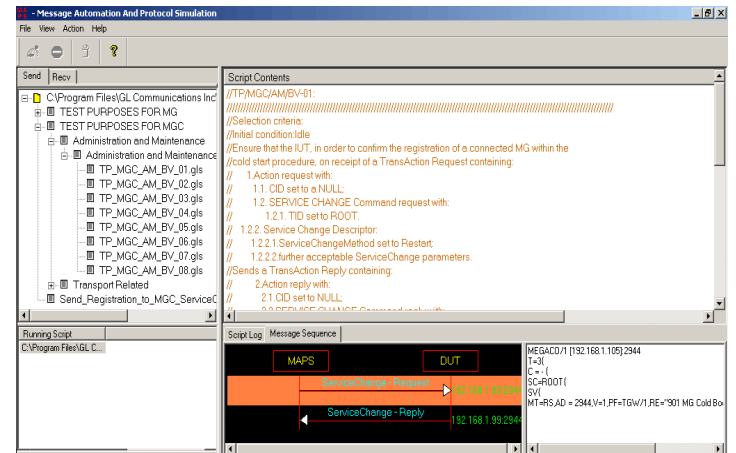


Figure- MG (Send) Conformance Script Execution

Execute Scripts under Recv Tab

MGC starts execution of conformance scripts from the Recv tab immediately after receiving the first message from MG (MAPS). The first active instruction is “recv instruction”.

The **TP_MGC_MD_BV_01.gls** script executed as shown in the screen below ensures that the MGC modifies the two existing Terminations (TID1 and TID2).

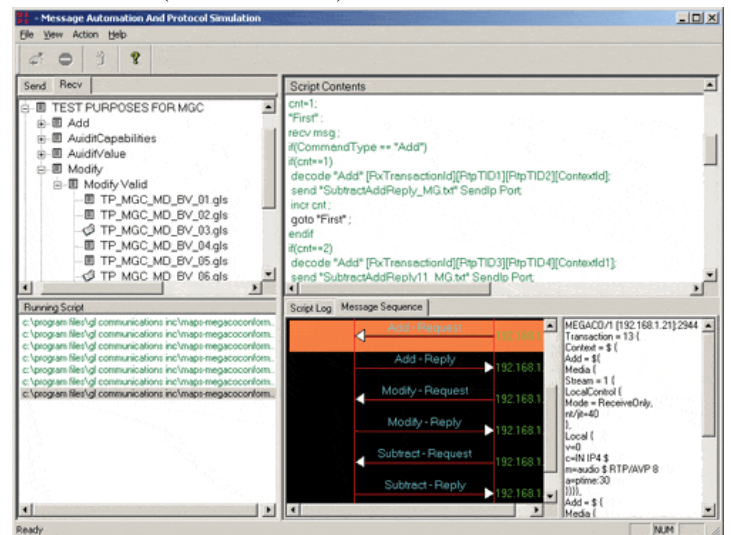


Figure- MG (Recv) Conformance Script Execution

Megaco Conformance

Sequences Tested

- **Test Purposes For Media Gateway (MG)**
 - Add command (AD) -**
Valid– Supports 7 (of 7) Test cases
Invalid– Supports 9 (of 9) Test Cases
 - Modify command (MD) -**
Valid– Supports 7 (of 7) Test cases
Invalid - Supports 9 (of 9) Test Cases
 - Subtract command (SU) -**
Valid– Supports 6 (of 6) Test cases
Invalid - Supports 12 (of 12) Test Cases
 - Move command (MO) -**
Valid– Supports 4 (of 4) Test cases
Invalid - Supports 12 (of 12) Test Cases
 - Audit Value command (AV) -**
Valid– Supports 8 (of 8) Test cases
Invalid - Supports 8 (of 8) Test Cases
 - Audit Capabilities command (AC) -**
Valid– Supports 8 (of 8) Test cases
Invalid - Supports 8 (of 8) Test Cases
 - Notify command (NO) -**
Valid– Supports 3 (of 3) Test cases
 - Service Change command (SC) –**
Valid– Supports 14 (of 14) test cases
 - Administration and Maintenance procedures (AM) -**
Valid– Supports 13 (of 13) Test cases
 - Transport related procedures (TR) –**
Valid– Supports 6 (of 6) Test cases

- **Test Purposes For Media Gateway Controller (MGC)**
 - Add command (AD) -**
Valid– Supports 7 (of 7) test cases
 - Modify command (MD) -**
Valid– Supports 7 (of 7) test cases
 - Subtract command (SU) -**
Valid– Supports 5 (of 5) test cases
 - Move command (MO) -**
Valid– Supports 4 (of 4) test cases
 - Audit Value command (AV) -**
Valid– Supports 8 (of 8) test cases
 - Audit Capabilities command (AC) -**
Valid– Supports 8 (of 8) test cases
 - Notify command (NO) -**
Valid– Supports 3 (of 3) test cases
Invalid - Supports 14 (of 14) test cases
 - Service Change command (SC) –**
Valid– Supports 13 (of 15) test cases
Invalid - Supports 13 (of 13) test cases
 - Administration and Maintenance procedures (AM) -**
Valid– Supports 8 (of 8) test cases
 - Transport related procedures (TR) -**
Valid– Supports 3 (of 5) test cases

Buyer's Guide:

[PKS122](#) - MAPS for MEGACO

[PKS123](#) - MAPS - MEGACO Conformance Suite

Related Software

[PKS120](#) - MAPS for SIP

[PKS121](#) - MAPS - SIP Conformance Suite

[PKS100](#) - PacketGen™

[PKV100](#) - PacketScan™ (Online and Offline)

[PKV101](#) - PacketScan™ - Offline

[PKV105](#) - SIGTRAN

[IPN010](#) - IPNetSim™ - 100Mbps of through bandwidth

[IPN100](#) - IPNetSim™ - 1Gbps of through bandwidth

[IPN400](#) - IPNetSim™ - 1Gbps w/ 4 links through bandwidth

[VQT004](#) - VQT with PESQ, PAMS and PSQM

[VQT002](#) - VQT with PESQ only

[XX062](#) - Echo Path Delay/Loss Simulation Software