

Deployment of Products with Multiple Features & Protocols

Customized Signaling for Each Channel

Provides Fault Insertion, & Erroneous Call Flow Testing

Remote Access to T1/E1 Analyzers Systems

E1 MFC-R2 (All Variants)

T1 Loop Start, Groundstart, Winkstart

Custom Configured CAS Protocol

Digital R1 Winkstart, EUC

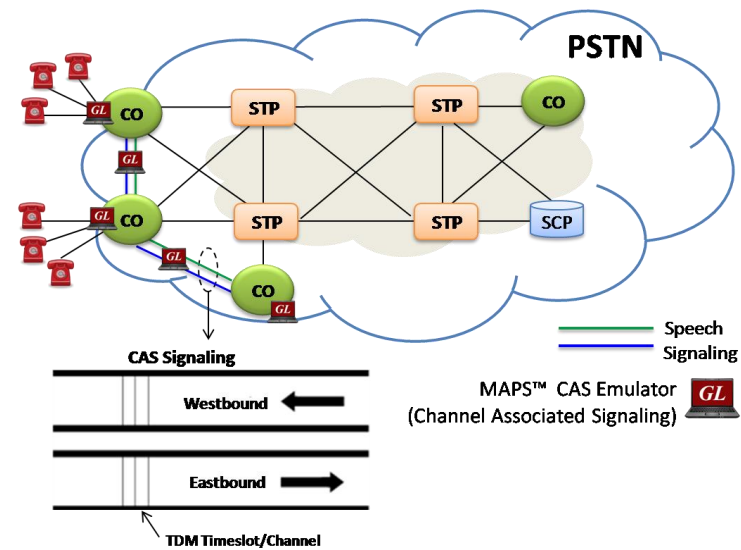
Multiple T1/E1 Interfaces

Easy-to-Use Call Control Scripts

Ready Scripts for Simpler & Less Time Consuming Tests

Supports Script Editor and Profile Editor Utilities

MAPS™ CAS Emulator (Scripted Channel Associated Signaling Emulation)



Overview

Channel Associated Signaling (CAS) is a method of signaling in telephone networks where each channel or timeslot carrying speech also carries with it the signaling and addressing to set up and tear down that same channel. This is commonly referred to as "in-band" signaling as opposed to "out-of-band" signaling, such as ISDN or SS7. Signaling bits associated with each voice channel carry "on-hook" and "off-hook" status and addressing information in the form of dual tone digits to direct the call to its destination. CAS signaling types include Loopstart, Groundstart, Feature Group D (FGD), Winkstart, MFC-R2 and others.

GL's Message Automation and Protocol Simulation (MAPS™) is an advanced protocol simulator/ tester for CAS signaling simulation over TDM (T1 E1). MAPS™ CAS automates the testing procedure allowing the users to place calls on a single or on all timeslots. Calls are established, once the signaling information such as signaling bits, DTMF/MF digits, or Tones are sent/ detected. Also, MAPS™ CAS Emulator is designed to support TDM traffic across CAS network.

MAPS™ CAS Emulator is a client-side application that works along with GL's T1/E1 Analyzer Cards and Windows Client/Server software. It is an optional application that simulates any user-defined CAS protocol.

This test tool provides a complete solution for testing, troubleshooting, and maintaining devices and networks implementing CAS. MAPS™ CAS Emulator supports powerful utilities like Script Editor and Profile Editor which allow new scenarios to be created or existing scenarios to be modified.

For more details, refer to <http://www.gl.com/maps-cas-emulator.html> webpage.

Main Features

- MAPS™ CAS Simulator supports the following protocols:
 - E1 MFC-R2 (All variants, full / semi compelled)
 - T1/E1 Winkstart (R1 wink)
 - T1 Loopstart and T1 Groundstart
 - E1 European Digital CAS (EUC).
 - Any User-Defined CAS Protocol
- Supports transmission and detection of TDM traffic - digits, voice file, single /dual tones
- Accesses the T1 (or E1) analyzer remotely
- Supports ANI and DID identification
- Customized signaling for each channel through scripts



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Working Principle

- **Script Editor** –
 - Creates a script for scenario based testing (call flow)
 - Access protocol fields as variables using import/export files
- **Profile Editor** – Creates or edit profiles containing values assigned to the variables replacing the original values.
- **Event Profile Editor** – Allows you to create Event Profiles for user-defined events in a script. The values of the variables in the user-events can be changed during script execution.

Pre-processing Tools

Script Editor

GL's MAPS™ CAS script editor is based on a self-describable language that can define the behavior of CAS Signaling procedure. Functions such as inbound, outbound, signaling digits detection and transmission are all defined within the script. Additionally, more advanced script may also be defined in the script editor. Definitions for Tx traffic such as Tx File, Tx Tones, Tx digits, call duration, stop traffic are user-definable within each script.

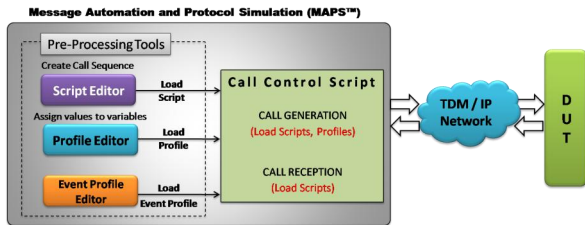
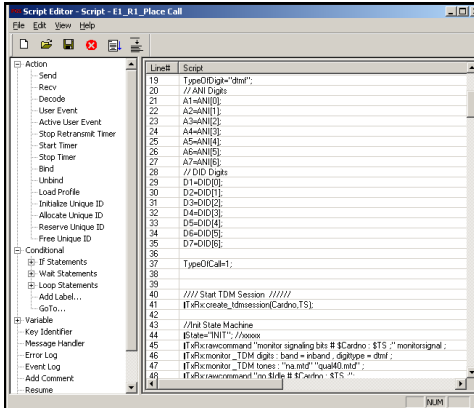


Figure: MAPS™ application Working Principle

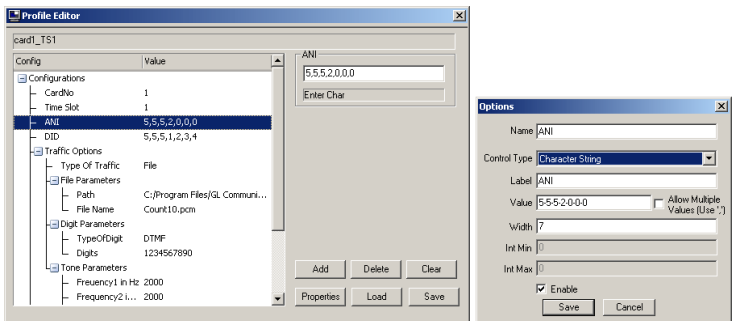


Testbed Setup Configuration

Test Bed setup is provided to establish communication between MAPS™ CAS and the DUT. It includes parameters for configuring T1/E1 (GL) server, R1 Digit Parameters and other parameter settings to transmit and receive CAS Signaling over T1 E1.



Profile Editor - This feature allows loading profile to edit the values of the variables using GUI, replacing the original value of the variables defined in the scripts.



Outbound and Inbound CAS Signaling

MAPS™ is configured for the out going signaling and to respond to incoming signals. Tests can be configured to run once, multiple iterations and continuously. Also, allows users to create multiple entries using quick configuration feature. The loaded test scripts for placing or answering calls are manually started. MAPS™ Reports GUI logs all the captured events including placing call, incoming call, call connection, TxRx Traffic, digit detections, and tone detections, generated by each timeslot of each trunk.

Buyer's Guide

- [XX651](#) - MAPS™ CAS Emulator
- [XX600](#) - Basic Client/Server Scripted Control Software
- [xx600, xx610, xx620](#) - TDM Traffic Options

Related Software

- [XX648](#) - MAPS™ ISDN Emulator
- [XX649](#) - MAPS™ SS7
- [XX647](#) - MAPS™ SS7 Conformance Test Suite (Test Scripts)
- [XX693](#) - MAPS™ GSM-Abis Emulator
- [XX692](#) - MAPS™ GSM-A Interface Emulator

Related Hardware

- [HTE001](#) - Universal HD T1 or E1 PCI Cards
- [UTE001](#) - USB based Dual T1 or E1 Laptop Analyzer
- [PTE001](#) - tProbe™ T1 E1 Base Unit

For complete list of MAPS™ products, refer to <http://www.gl.com/maps.html> webpage.





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