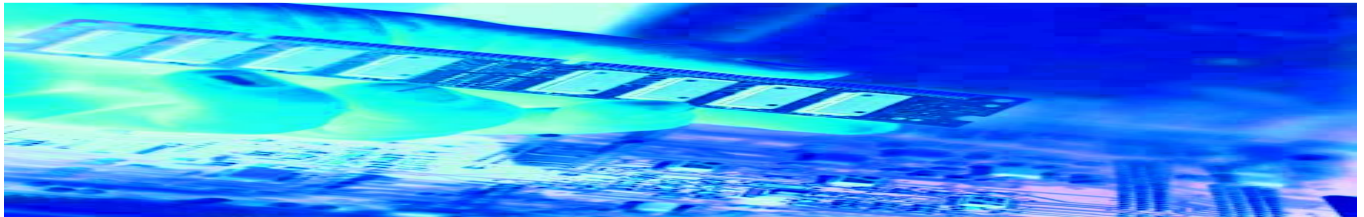
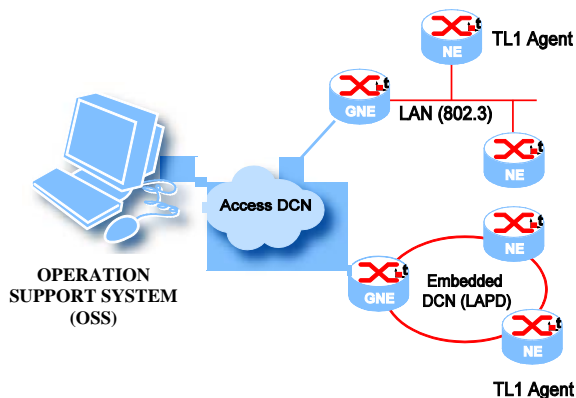


## THE NETWORK MANAGEMENT SOFTWARE SOLUTION



**OSIAM AS THE MOST LARGELY DEPLOYED SOFTWARE STACK SOLUTION FOR SONET REMAINS THE BEST GUARANTY FOR YOUR INVESTMENT.**



### PRODUCT TARGET

Bellcore (Telcordia) defined the architecture of the SONET management network in the GR-253 standard. This standard introduced the TL1 communication language bringing a simple and human readable command oriented interface operations. Most Telecommunication Network Elements (NE) in North America are managed using TL1.

In a TL1 managed SONET network, a TL1 Identifier (TID) is assigned to each node (NE, OSS, ...). The TARP protocol provides TID to Network Address (NSAP) resolution avoiding manual configuration of each element. This protocol is based on the flooding of TID resolution requests across the network.

**The OSIAM TARP / TL1 package is the perfect add-on to a standard seven layer OSI stack for providing a fully operational SONET/TL1 stack.** This package is portable to any embedded system and can be instantly added to any existing OSIAM stack.

This package can be further completed with the OSIAM TL1 tester. It is a testing tool available on UNIX workstations and able to run complex TL1 test suites. It can be also completed with a CMISE solution with all CMIP and Q3 protocols in case of the equipment is upgraded for Europe and Asia SDH market.

### KEY BENEFITS

The MARBEN OSIAM TARP/TL1 emulator fully conforms to the Bellcore standard standards, and implements a peer model.

The OSIAM offer facilitates the integration of protocol stacks in your equipment thanks to its modularity and ports on a wide range of systems (Unix, Linux, Windows, VxWorks, pSOS, VRTX,...):

- Make-before-break rerouting,
- Is specially designed to speed up the development of TL1 over OSI applications thanks to the TL1 component;
- Can be co-located with a TL1 translation device as specified by [NSIF-033-1999];
- Permits the execution of complex TL1 test suites thanks to the TL1 tester;
- Is fully portable.

### About Marben

A leading provider of key software solutions for next generation service-driven networks.

### More than 25 years of experience

Delivers interoperable, robust and efficient signaling, routing and AAA solutions to accelerate the delivery of network services.

### Marben Customers

Alcatel-Lucent, Ciena, Cisco, Ericsson, Fujitsu, HP, NEC, Nokia Siemens Networks, Tellabs, Verizon, ...

Affiliate of  
**NE Technologies, Inc.**

## TECHNICAL OVERVIEW

The MARBEN OSIAM TARP/TL1 offer consists of set of portable entities and preported components for the adaptation on a target system.

### OSIAM TARP

The OSIAM TARP is fully compliant to Bellcore GR-253 and provides the following services:

- TID to/from NSAP resolution (client + server);
- TARP Echo function (client + server);
- notification of TID/address change (client + server);
- level 1 and level 2 propagation, manual adjacencies tables, Data Cache (TDC) accepting also manual entries;
- loop Detection Buffer (LDB) with Flush Timer functionality;
- TARP Storm avoidance;
- dynamic and individual enabling/ disabling of functional units;
- table size and timer dynamically configurable;
- support for multiple concurrent user requests.

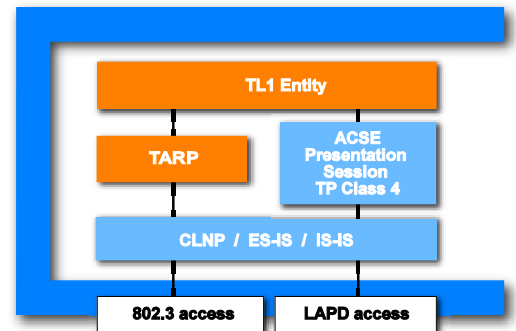
### OSIAM TL1

With the OSIAM TL1 layer, using TARP and OSI has never been as simple.

The OSIAM TL1 layer:

- relieves the application from the burden of TARP resolution by processing automatically all necessary TARP requests,
- is 100% compatible with GR-253 compliant NEs,
- provides a very simple service interface (connect, send and receive TL1 commands, disconnect),
- supports multiple concurrent connections.

**OSIAM TL1 is the indispensable layer to simplify and speed up the development of TL1 applications on both client and server side.**

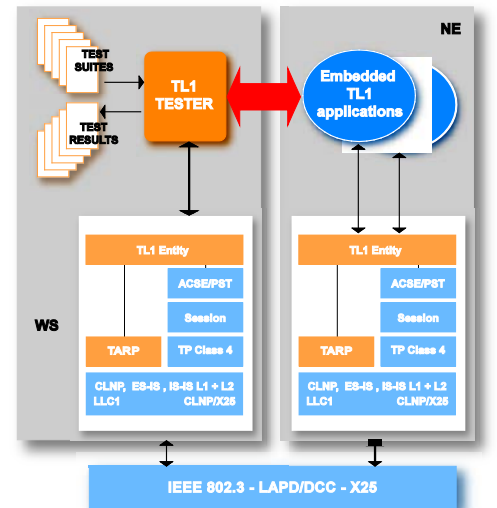


### OSIAM NETWORK EMULATOR

The OSIAM Network Emulator is based on a UNIX and allows users to test remote (embedded) TL1 applications by simulating one or several TL1 clients or servers.

The OSIAM TL1 Tester offers the following features:

- relies on and includes the complete SONET protocol stack;
- provides an interactive interface with on-line help;
- TL1 test commands can be saved for easy automatic replay;
- provides synchronization commands for complex test suites;
- offers powerful filter feature and conditional execution of individual lines from command files;
- is able to simulate multiple concurrent TL1 servers and clients capabilities;
- offers log management facility.



## CONTACTS

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## CONFORMANCE

### Architecture

GR - 253 - CORE - Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria, Issue 2, Dec 1995, BELLCORE

ANSI-T1.245 - Directory Service for TMN and SONET, 1995

ITU-T G.7713.2 (UNI/E-NNI)

### RELATED OFFERS

MARBEN T-TD and FT-TD, MARBEN OSIAM; Consulting, training and custom services

### SIF

SIF - GEN - 9608 - 061 - SIF Implementation Agreements for SONET Operation Communications

SIF - 019 - 1998 Additional Interoperability requirements