



MACH7-SIGTRAN

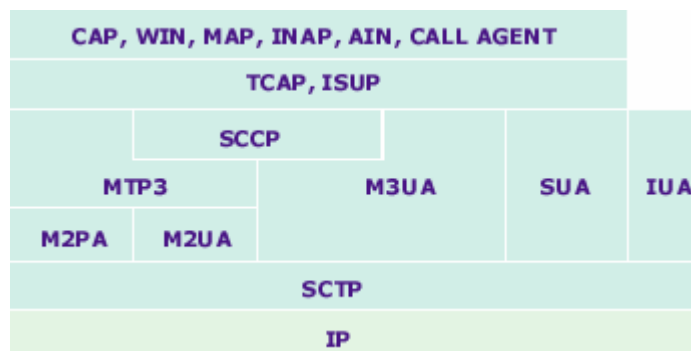
“IP Connectivity for Signaling Protocols”

Overview

The MACH7-SIGTRAN Stack allows Network Equipment Providers (NEPs), Original Equipment Manufacturers (OEMs) and Service Providers to cost effectively migrate Signaling System # 7 (SS7) end-point applications to next generation IP-based networks. The MACH7-SIGTRAN Stack facilitates the deployment of Public Land-Mobile Networks (PLMN) applications, efficiently leveraging the flexibility of the Internet Protocol (IP) networks, while maintaining the integrity of the existing Switching, Mobility, Location, Payment and Messaging services.

The MACH7-SIGTRAN Stack, hosted on Solaris and Linux operating environment, provides SS7 Application Programming Interfaces (APIs) for applications using services from higher SS7 layers (includes MAP, INAP, AIN, CAMEL, WIN, TCAP, ISUP, SCCP) and transport layers based on Internet Engineering Task Force (IETF) standards for SIGTRAN layers over SCTP. Applications can be deployed over an IP network with assurance that Quality of service (QoS) and latency requirements inherent in SS7 network will be met.

New and existing telephony network-based applications can easily be converged to Next Generation and Voice over Internet Protocol (VoIP) networks using the MACH7-SIGTRAN Stack, reducing complexity and improving time to market. Applications include Soft-Switch, Toll Free Services, Local number Portability, Voice Mail System, Prepaid Calling Card, Intelligent Peripherals, Short Messaging Services (SMS), Unified Messaging, etc.



SIGTRAN Protocol Layers

SCTP:

- Conforms to IETF RFC 2960.
- Support of multiple IP addresses to steer the traffic to alternate IP address to protect against potential network failure.
- Validation and Acknowledgement mechanism.
- Path selection and monitoring.
- Automatic re-transmission timer adjustment.
- Support for multiple data chunks within a packet.

M2UA

- Conformance to IETF RFC 3331.
- Support for Dynamic Registration Procedures.
- Support for Congestion Control.

M2PA

- Conformance to IETF RFC 4165.
- Error monitoring and re-transmission.
- Sequence number control.
- Congestion control.

M3UA

- Conforms to IETF RFC 3332.
- Support for ITU-T, ANSI, Chinese and ETSI variants.
- Support for Dynamic Routing Key Registration Process.
- Support for multiple network appearances.

SUA

- Conforms to IETF RFC 3868.
- Support for ITU-T, ANSI standards.
- Transparent support for SCCP protocol services.
- Support for GTT capabilities as per ITU-T and ANSI standards.

IUA

- Conforms to IETF RFC 3057.
- Full set of services to ISDN Q.921 users.
- Exception Handling and Error recovery.
- Separate stream for D-channel.

MACH7-SIGTRAN

Key Features

- **Distributed Transport Level Processing Sub-System**

teleSys' distributed algorithm enables parallel processing of SS7 signaling traffic with load distribution across the active IP associations to the signaling gateway.

- **Reliability**

teleSys' platform independent high-available (HA) framework guarantees no Single Point of Failure and provides complete redundancy through All-Active distributed architecture with 99.9999% (6 nines) availability.

- **SS7 Features**

The upper layers of MACH7-SIGTRAN conform to functions and message protocols as described in ANSI, ITUT, ETSI along with specific country variants, and support both Point-Code-based and Global Title Translation-based routing capabilities. These layers can host multiple Point-Codes and multiple SS7 variants simultaneously.

- **IP Transport Features**

Based on IETF's SIGTRAN standards and utilizing redundant IP communication links for high availability, MACH7-SIGTRAN stack provides un-parallel IP signaling transport to Signaling Gateways and STPs. The IP transport layer conforms to latest SIGTRAN standards.

- **Capacity**

With an unprecedented scalability based on transaction processing power with or increase in processors, MACH7-SIGTRAN supports signaling requirements from small applications with low calls / transactions per second requirements to large network equipment with high breakthrough transactions per second requirements.

- **OAM&P Interfaces**

The Platform offers a comprehensive Systems Management interface, which includes: Command Line Interface, Web Browser based Graphical User Interface, SNMP Interface to the network management system. It also provides configuration APIs and Remote OAM&P interface to integrate with the customers' existing element management systems.

The teleSys Advantage

- **Open Architecture**

teleSys' MACH7 solutions provide a scalable and flexible architecture for applications that require services from SS7 or the Intelligent Network from the IP network. The teleSys MACH7-SIGTRAN stack, which runs on the Solaris and Linux host environment, provides more manageability and capabilities for cost effective and flexible growth.

- **Carrier Proven**

Broad range of MACH7 Signaling Solutions are mature, carrier proven and successfully deployed worldwide with rich feature sets.

- **Cost-efficient**

Operates on industry-standard servers taking advantage of the price, performance, and capacity improvements with the underlying hardware platform.

- **Future Proof Seamless Integration**

Comprehensive suite of C/C++ based application programming interfaces (APIs) for wireless and IN applications across multiple operating environments enables seamless integration of client applications, independent of underlying transport layer.

teleSys Software, Inc.

teleSys is the Premier Provider of solutions for the Next Generation Converged Network, delivering open systems software and hardware. The teleSys portfolio of products supports industry standards and all prevalent protocols in Next Generation telecommunication networks.