



MACH7-iSG

“The NexGen Signaling Gateway”

Overview

The teleSys MACH7-iSG addresses service providers, network equipment providers (NEPs) and OEMs requirements for open system, highly available, multi-protocol, and internetworking solutions required for the complex and changing Voice-over-IP marketplace. The MACH7-iSG moves the power of SS7 to an IP-based environment, with feature-rich signaling gateway solutions that allows easy integration of revenue generating service nodes in the carrier network with seamless transition to the Next Generation Network model.

Focus

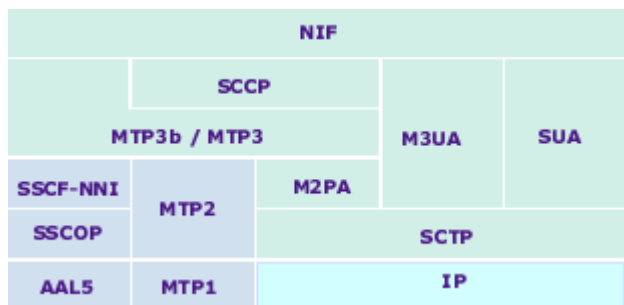
Once disparate voice and data networks are now converging and creating new challenges to deliver services across 2.5G and 3G wireless, IN and IP networks. Technologies are needed to enable seamless interoperability between traditional SS7-based signaling networks and new IP-based signaling networks. The teleSys MACH7-iSG is designed to support the signaling convergence of the PSTN and IP Networks.

Major factors which defines the technical framework for MACH7-iSG are:

- ✓ Leveraging existing investment in SS7-based applications and services while migrating to new 2.5G and 3G wireless and IP based next-generation applications and services
- ✓ Seamless interoperability between applications and services across wireline, 2.5G / 3G wireless, IN and VoIP networks.
- ✓ Carrier grade, future-proof, standards-based, and open architecture to allow enhancements in expanding new network applications and signaling protocols in next-generation networks.

The Gateway is a stand alone, cost effective SS7 signaling solution that can be effectively expanded to meet the increasing traffic demand. The Gateway can operate either as Signaling end Point (SEP) or as Signaling Transfer Point (STP) in the SS7 and IP SIGTRAN networks for SS7 signaling. It provides an upgrade path to deploy the new IP-based services while maintaining interoperability with the legacy PSTN networks.

In conformance to IETF standards it has been fully integrated with fault tolerant capabilities of SCTP over IP. The MACH7-iSG Gateway has been deployed worldwide and enables Soft-switches and Application Servers to seamlessly communicate with other network elements such as Home Location Registers (HLR) and Message Switching Centers (MSCs), Service Control Points (SCPs), Service Switching Points (SSPs), etc.



Benefits

- SS7 Link concentrator for IP nodes.
- Cost-effective replacement solution for the expensive and under-utilized long haul SS7 links.
- Signaling transport over IP.
- Signaling Transfer Solution for SS7 and SIGTRAN based IP networks.
- Preserves precious and limited SS7 Point Codes by aggregating multiple IP devices behind MACH7-iSG.
- Enables services between the PSTN and packet data networks transparently.
- Provides Geographical Redundancy to the network applications and services.

MACH7-iSG

Key Features

- **Carrier-grade Reliability**

Based on well-proven SS7 interface and all Active carrier proven highly available architecture MACH7-iSG virtually eliminates network message loss and brings more than 99.999% (5 nines) transport service availability to the network elements.

- **Scalability**

The unique distributed architecture of MACH7-iSG allows parallel processing of SS7 and SIGTRAN signaling traffic via all SS7 links and IP interfaces available on the system and provides scalability limited only by hardware capacity. With the increase in service demand and signaling capacity in the network, the transaction capacity can be increased with the incorporation of additional processors in the system. Additional SS7 signaling interface will meet the needs to address the signaling connectivity via SS7 links.

- **Multiple SS7 Variants**

The MACH7-iSG conforms to functions and message protocols as described in ANSI, ITU-T, ETSI, TTC-Japan, NTT-Japan, China and other specific country variants. It allows both Point-Code and Global Title Translation-based routing capabilities.

- **SS7 over IP Transport**

Based on IETF's SIGTRAN standards and utilizing redundant IP communication links for high availability, MACH7-iSG provides un-parallel IP signaling transport and connectivity to next-generation packet data network elements.

M3UA : Conforms to IETF RFC 3332.

SUA : Conforms to IETF RFC 3868.

M2PA : Conforms to IETF RFC 4165.

SCTP : Conforms to IETF RFC 2960.

- **Capacity**

With an unprecedented scalability, based on transaction processing power with the increase in processors, MACH7-iSG supports up to 128 SS7 Low Speed Links (56/64 Kbps bandwidth), which can be configured in all possible configurations A, B, C, D and E.

- **Multiple SS7 interface support**

MACH7-iSG supports fully channelized T1, E1, J1 interfaces for the Low Speed Links (LSL). Alongside LSL, MACH7-iSG is also available on ATM based High Speed Links (HSL).

- **OAM&P Interfaces**

The Platform offers a comprehensive Systems Management interface, which includes: Web Browser based Graphical User Interface, Command Line Interface, and also 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. This allows the required provisioning interface and fault-management capability to monitor and manage the status of every module and interface to help in detection, isolation and solution to any error condition.

- **Open Architecture**

MACH7-iSG allows convenient customized implementation of the operator's needs with regards to functionality, performance and reliability. This solution also incorporates industry-standard telecom interface to allow ease in interoperability and operations. Hosting multiple signaling interface cards it provides a scalable and flexible architecture for the signaling solution. It allows more manageable and cost effective growth.

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.