



teleSys
SOFTWARE

MACH7-iSG

“The Next Generation 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 telecom 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 services in the carrier network with seamless transition to the Next-Generation Network model.

Focus

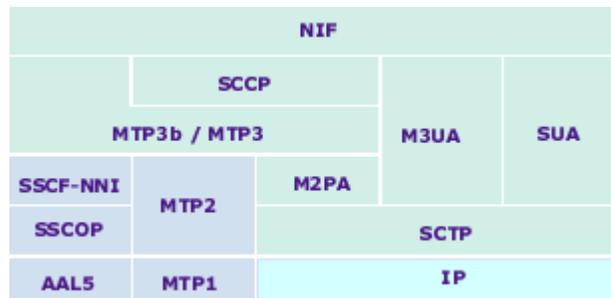
Once disparate telecom networks are now converging and creating new challenges to deliver services across 3G and 4G wireless, IN and IP networks. Technologies are needed to enable seamless interoperability between traditional SS7-based signaling networks and new IP-based signaling networks. The teleSys 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 4G wireless and IP based next-generation applications and services
- Seamless interoperability of services across wireline, wireless, and IMS networks.
- Carrier grade, future-proof, standards-based, and open architecture to allow evolutions to new network 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 has been designed to provide seamless inter-working between the PSTN SS7 and IP SIGTRAN networks. 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 for the expensive and under-utilized long haul SS7 links.
- Signaling transport over IP.
- Preserves 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 computing elements.

• MULTIPLE SS7 VARIANTS

The MACH7-iSG conforms to functions and message protocols as described in ANSI, ITU-T, 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 4666

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 of 60,000 messages per second per computing element, MACH7-iSG supports up to 1240 SS7 Low Speed Links (56/64 Kbps bandwidth) for SS7 network connectivity.

• 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 with High Speed Links (HSL) capability.

• 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 to integrate with the customers' existing element management systems.

• 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.

teleSys Software, Inc.

teleSys is the premier provider of advanced Telecommunications solutions for the next generation LTE Signaling Networks, providing open systems hardware and software.