MACH7-*i*STP

"The Next Generation Signaling Transfer Point"

Overview

As the Global network is undergoing immense changes and the Next-Generation IP networks become a reality, it signals an evolution towards using Internet Protocol (IP) based technologies side-by-side with traditional circuit-switched infrastructure of the Public Switched Telephone Network (PSTN). New technologies, lower costs, and the ability to rapidly deploy enhanced IP-based services have sparked the need for effective means to support converged networks. Leveraging the strengths of both PSTN and IP networks, the MACH7-*i*STP will offer service providers with the benefits of greater efficiencies, lower cost, and the means to deliver enhanced and fully integrated voice, data, and multimedia services.

The teleSys MACH7-*i*STP addresses service providers, network equipment manufacturers, and OEMs requirements for open system, highly available, Signaling Transfer Solutions required for the complex and converging marketplace. The MACH7-*i*STP provides feature-rich signaling transfer solutions based on teleSys' High-Available framework, allowing an easy integration of revenue generating service nodes in the carrier network as well as a seamless transition to the Next Generation Network model.

Total Solution

The teleSys MACH7-*i*STP is designed to be a stand-alone, cost effective SS7 signaling transfer solution that can reside anywhere in the network and can be effectively expanded to meet the increasing traffic demand. Along with the signaling transfer capability, the MACH7-*i*STP also provides IP signaling transport services in real time by enabling a SIGTRAN based SS7oIP (SS7-over-IP) convergence solution while maintaining interoperability with the legacy PSTN networks.

Key Advantages

SS7 Features

- **SS7 Protocol Conformance**

The MACH7-*i*STP conforms to functions and message protocols as described in ANSI, ITU-T, ETSI, TTC-Japan, NTT-Japan, China, and other specific country variants.

- **Flexible SS7 interface support**

MACH7-*i*STP supports a wide variety of network interfaces, which include channelized T1, E1, J1 interfaces for Low Speed Links (LSL). Alongside LSL, the MACH7-*i*STP also supports ATM-based High Speed Links.

- **SS7 over IP Transport**

Based on IETF's SIGTRAN standards, MACH7-*i*STP provides unparalleled IP signaling transport between *i*STPs and also offers a fully integrated signaling gateway function providing connectivity to next-generation network elements, using M3UA, M2PA and SUA protocols over SCTP.

System Features

- **Distributed Processing**

This cutting-edge distributed algorithm uniquely defines functional units within the MACH7-*i*STP architecture, enabling parallel processing of SS7 signaling traffic across different sub-systems. This indigenous architecture provides seamless scalability and flexibility to this solution to meet high performance and capacity requirements.

- **Full Redundancy**

teleSys's state-of-the-art MACH7 high availability features keep all hardware and software components synchronized across the platform, virtually eliminates lost network messages, and brings 99.9999% (6 nines) transport service availability to the network elements. This high-available distributed architecture has been field proven and widely deployed in networks worldwide.

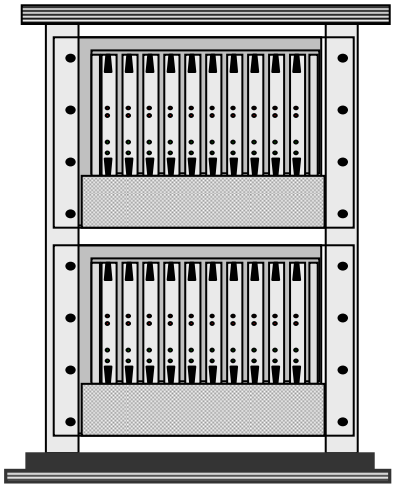
MACH7-*i*STP

- **Scalability**

The scalable architecture enables users to minimize their initial deployment costs while supporting incremental growth as demand increases. With the increase in service demand and signaling capacity in the network, the transaction capacity and throughput can be increased with the incorporation of additional modules and interfaces.

- **Throughput Performance**

The MACH7-*i*STP system provides solutions for all performance needs. Higher throughput demand is achieved with an upgrade to this high-end distributed system which can enable its breakthrough transaction speed over 50,000 MSUs/sec.



MACH7-*i*STP Platform

- **OAM&P Interfaces**

MACH7-*i*STP offers a comprehensive Systems Management interface for operation and maintenance needs via: Command Line Interface, Web Browser-based Graphical User Interface, and SNMP Interface to the network management system. Along with provisioning interfaces, it provides fault-management capability to monitor the status of every module, and interfaces to help in detection, isolation and solution to any error condition. It also provides performance and statistics data which allows for the engineering of architectural and solution requirements based on network demands.

- **Open Architecture**

The MACH7-*i*STP solution is available on a flexible, open-architecture hardware platform. It allows convenient customized implementation with regards to functionality, performance and reliability. This solution also incorporates industry standard telecom interface to allow ease in interoperability and operations. As a fully reliable solution, the MACH7-*i*STP is based on future-proof technology; making it very easy to improve existing functionality, implement new features, increase performance figures, and adapt new interfaces and standards.

Advanced Feature Sets

Equipped with standard feature sets, MACH7-*i*STP also offers best-of-breed advanced feature sets, like:

- **Point Code** and state-of-the-art **Global-Title Translation (GTT)** routing capabilities.
- Full **Gateway Screening** capabilities of MTP and SCCP MSUs using access lists.
- **Message Accounting** capabilities to generate revenue for telecom carriers by selling signaling capacity. It also helps in CDR generation, billing verification, fraud prevention and monitoring capabilities.
- Support for **Multiple Originating Point Code (MOPC).**

Integrated Network Services

In addition to top performance, highest reliability, and complete scalability, the MACH7-*i*STP is equipped with an optimal set of revenue generating and resource optimizing features which allow wireline and wireless carriers to support current and future services with a single, cost-effective solution. These include:

- **ANSI-ITU inter-working** for Roaming and Inter-network service deployments.
- **SMS Gateway** for Roaming traffic as well as enabling least-cost routing for SMS messages.
- **Fraud Control** for advanced signaling security, to mediate access to network resources.
- **Roaming Bridge** application service.
- **Number Portability** Service.
- **Calling Name (CNAM)** and **Number Translation** Service for Toll-Free, Premium Rate services etc.

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.

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