

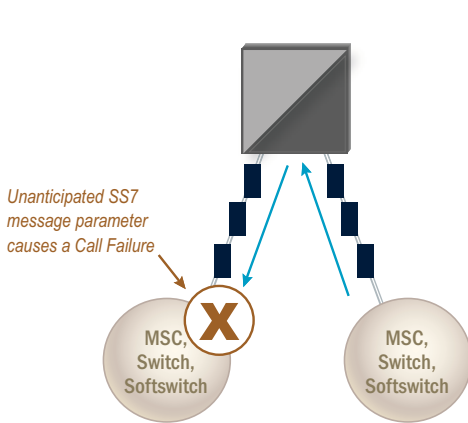
Network Mediator

THE CHALLENGE

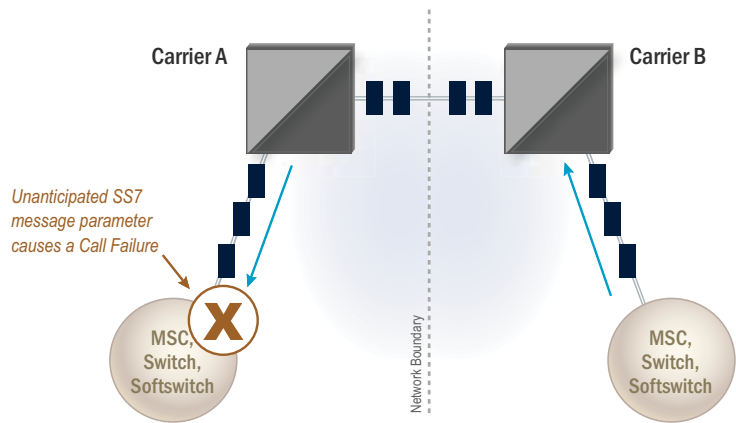
To fix call completion and network interoperability issues

As providers know all too well, call completion and network interoperability are not a given. Differences in equipment vendors, variations in protocols and unsupported parameters can all contribute to network nodes miscommunicating which can result in calls that cannot terminate, database transactions that cannot be fulfilled and messages such as SMS and MMS that are never delivered, the end result being frustrated customers, increased customer churn and lost revenue.

The following diagrams are meant to demonstrate how a variation in an SS7 message parameter can result in the destination network element not being able to process the intended call, database query or message.



Intra-Carrier Interoperability Issue



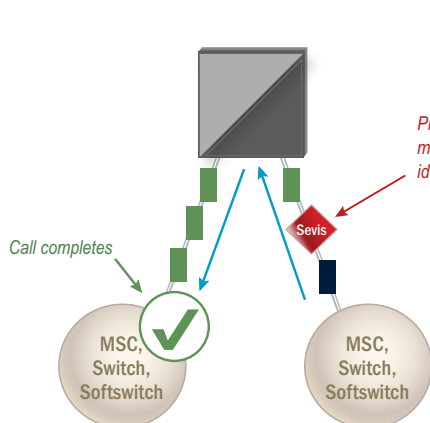
Inter-Carrier Interoperability Issue

THE SOLUTION

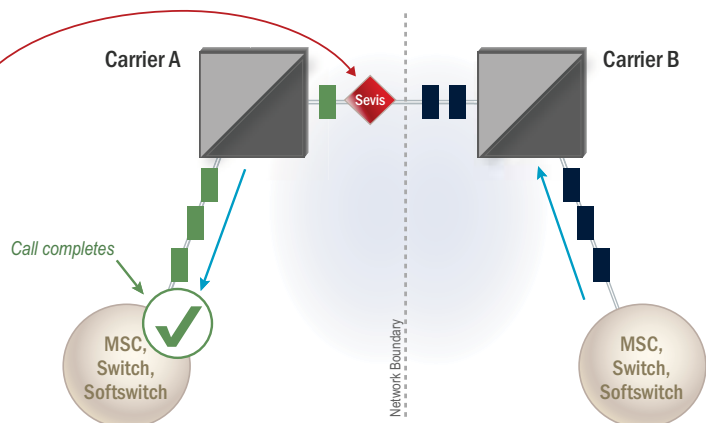
Diagnosis and remedy interoperability issues with Network Mediator

To help diagnosis and remedy call completion and network interoperability issues, Sevis offers Network Mediator, an SS7 "transparent" signaling solution (i.e. it does not require an SS7 point code) that can be deployed on both inter-carrier and intra-carrier SS7 links and that requires no SS7 network re-engineering in order to use it (i.e. SS7 routing tables do not need to be modified).

Once deployed, Network Mediator can be used in "listening" mode to help assist in identifying the interoperability problem. Once the problem has been diagnosed, Network Mediator can then be placed into "active" mode so that it can perform near-real-time modification of the problematic message parameter(s) in order to remedy the interoperability issue and ensure that revenue generating calls and messages are successfully delivered and customer satisfaction is maintained.



Intra-Carrier Interoperability Issue Resolved



Inter-Carrier Interoperability Issue Resolved



The Architecture:

One platform, no point code, many solutions

Each Sevis solution utilizes Sevis' patented **Signaling ASE[®] System**, a proven, carrier-grade system that enables both Sevis and partner-developed applications to be deployed without an SS7 point code, thus eliminating the need for operators to re-engineer their signaling network upon installation and allowing any ASE-enabled solution to operate independent of a carrier's existing vendor infrastructure.

The ASE System is comprised of the ASE Platform (the "transparent" SS7 network element) and the ASE Manager. The ASE System is the cornerstone of all of Sevis solutions, and once deployed it can be the foundation to help you address other needs in addition to resolving network interoperability issues to include improving SS7 network security and risk mitigation (*Signaling Defense*), controlling SMS spam (*SMS Defense*) and enhancing your fraud control capabilities (*Active Fraud Eliminator*).



The ASE platform and ASE architecture

Technical Specifications: Carrier-grade, high availability, flexible

Protocols

ANSI

- T1.111 MTP
- T1.113 ISUP
- T1.112 SCCP
- T1.114 TCAP
- AIN 0.1/0.2
- IN
- ANSI-41 D
- WIN

ITU/ETSI/3GPP

- Q.701 – Q.705, Q.707 MTP
- Q.761 – Q.764 ISUP
- Q.711 – Q.714 SCCP
- Q.771 – Q.774 TCAP
- Q.721 – Q.724 TUP
- INAP CS-1/CS-2
- GSM MAP
- CAMEL

Sigtran

- M3UA
- M2PA

Application

- SMPP
- SS7oIP

Platform Specifications

Chassis

- 2 U high, rack-mountable chassis
- 19" (482.6 mm) or 23" (584.2 mm) rack mount
- Packet switching backplane
- 3 trunk interface module slots
- Up to 12 T1/E1s per platform
- Up to 48 transparent low speed SS7 links per chassis
- Up to 3 transparent ATM high speed links per chassis
- Chassis clustering
- Alarm status display module
- Telco alarm interface (dry/wet contact relay)

- 5 10/100 Base-T Ethernet ports
- Hardware/software status reporting

Power Supplies and Fans

- N+1 redundancy
- Hot swappable
- DC (-48V)
- A and B DC power feed

Trunk Interface Module

- Up to four T1/E1s
- Up to 16 transparent low speed SS7 links
- Up to 1 transparent ATM high speed link
- A, B, C, D, E, F links
- Channel associated signaling
- T1/E1, RJ-48C
- Hot swappable
- 3 10/100 Base-T Ethernet ports
- Drop and insert grooming
- Automatic link protection
- LED status indicators
- Rear transition module

Regulatory Compliance

- NEBS Level III certified
- ETSI 300 019 2-1 to 2-4
- CE
- FCC Part 15, Class A (CSA)

Temperature Range

- Operating: -5°C to +55°C (23°F to 131°F)
- Storage: -40°C to +70°C (-40°F to +158°F)

Management Server

Architecture

- Centralized client/server
- Dual processor
- RAID 5
- Hot-plug hard drives
- Hot-plug redundant power supplies
- Java-based GUI client

Event Management

- Event filtering with audible event notification
- Hardware/software status reporting

Performance Management

- CPU and memory utilization monitoring
- Link status monitoring
- Detailed platform/server statistics

Security Management

- User-configurable multi-level security access
- User authentication and activity timeout
- Encrypted management interfaces

The Company: Helping carriers protect their revenue, subscribers and network

Sevis Systems helps communications service providers protect their revenue, subscribers and network through innovative signaling solutions. Founded in 1999, Sevis is an employee owned and operated company that is headquartered in Plano, Texas. Sevis' solutions have been purchased by some of the largest service providers in the world and are resold by globally-recognized equipment suppliers including Alcatel-Lucent. To find out more about Sevis and our unique solutions, please call us at **877.517.3847** or visit our website at **www.sevis.com**. We look forward to working with you.