

Mobile Communication Platform



Solutions from Synway

• Synway's SHD series, a digital media processing and signaling Platform, incorporate an array of SS7 packets (MTP1-3, ISUP, TCAP, TUP) and rich media processing capabilities, such as conferencing, fax, compression protocols, echo cancellation, and provide Mpathix with a high performance ALL-IN-ONE hardware Platform easily used for ALL-IN-ONE solutions.

• Single high-capacity digital media processes and signaling Platform can connect to 4/8/16 E1/T1 software-selectable trunks and support up to 96 SS7 signaling links. In terms of traffic profile, Mpathix can deploy application, with signaling and media processing capability up to 1920 concurrent subscribers in single solution architecture.

• All SS7 packets, including MTP1~3, ISUP, TUP and TCAP, originate from Synway's in-house development and high-performance field applications, and can be optimized for high-capacity, high performance Telco applications. Synway's maximum value customization support can deliver custom features and embed an array of special resources, such as fax and conferencing for any TEP and call center equipment providers.

• Synway offers Mpathix matchless pricing points around the world.

Challenges in front of Mpathix

- Combine On-board built-in SS7 signaling resource with media processing for converged solutions, and eliminate the need for a third-party independent SS7 server.
- Implement more robust SS7 signaling technologies to empower high-scalability, high-performance, and high-capacity mobile solutions globally.
- Use adaptive and customizable hardware components to deliver a new range of features to carriers, service providers, and mobile subscribers.
- Minimize ownership cost for service providers and carriers, so transfer higher money-for-value to

Making decision to partner with Synway

To completely resolve its existing problems, Mpathix has started to worldwide seek a value-added partner capable to support its further penetration since 2003. In terms of some stringent standards, such as brand name and technical know-how, Mpathix finalized a short list of prospective vendors, and internally achieved the consensus to integrate Synway's hardware architectures into its Platform for the following reasons.

• Scalability

Synway's design gives telecom solution providers the ability to easily add more capacity when they need it, and makes carriers pay exactly for ports required for now, and scale up more capacity for future as needed. This gives service providers full control over growth and ensures capital expenses are not tied up for non-revenue generation overcapacity. Synway's hardware can scale up to 1,920 ports (IP and/or TDM) and 96 SS7 links by simply adding components as needed. In multiple nodes, Synway's hardware can support boundless expansion.

With Synway, a developer's initial investment is protected since all configurations use the same hardware and application interfaces and expansions are built on top of the existing system. With no upfront costs for unneeded hardware or software application, the Platform grows as your traffic grows.

• Interoperability

Interoperated with an array of TDM/IP switchers and networks, Synway's product portfolios, including analog, digital and VoIP media processing and access Platforms, share the same application interface and media processing capabilities, and can be mixed together and used alone for all of highly scalable and available applications and value-added services in PSTN and(or) IP networks. All of Synway-component-based applications or services are protocol-independent (SIP or SS7) and can be migrated among all of Synway's portfolios.

Synway's media processing and signaling architectures incorporate a full suite of protocols, including SIP, SS7, ISDN, CAS, and Telco solution providers can easily depend on Synway's portfolios to deliver gateway functionality and a host of next-generation features. Sustainability and interoperability of Synway's products protect initial investment of service providers and

• Reliability

At Synway, component and architectural reliability are an integral part of design. Built for the demanding central office environment, Synway's media processing and signaling architecture exceeds stringent standards of carrier-grade solutions in complex operator network. An array of high-capability, over-million subscribers' installations worldwide have proven Synway's Telco-grade stability since 1990s.

Designed for full redundancy, Synway's hardware includes all featured reliability, such as hot swappable, redundant SS7 connection, and enables upgrade without downtime plus full redundancy and operation protection. To ensure the highest availability, Synway continues to use advanced processing technologies, such as Direct Memory Processing (DMA), best-of-breed components such as TI DSP chipsets.

• Customizability

In the hypercompetitive environment, service providers and operators must continually lower subscription cost for standard services, such as voicemail, and yet simultaneously offer subscribers more value-added functionalities, such as faxmail. Synway, with world-class technical team, can provide application developers and specially Telco solution developers with enhanced architectures to differentiate from competitors.

With an expandable suite of value-added features, Synway's integrated media and signaling product enables Telco solution providers to introduce more cost effective, innovative services and meet carriers and subscribers' today or future network needs.

On-field test Synway's SHD series

To evaluate Synway's hardware reliability, Mpathix's engineers firstly tested its SHD series card in a low capacity 240 ports environment, powered by Synway's SHD-120-CT/PCI(X), E1/T1(96 ports T1) software configurable interfaces in USA. "Within three months, Mpathix's engineers finish this migration to Synway's API, although we estimated at least 5 months is needed for this migration because of our sophisticated applications and initial coordination with a new vendor", said Mpathix's senior development engineer Steven: "it is a surprise that Synway's technical resources, professionalism, and user-friendly products deliver Mpathix positive result in our first cooperation with Chinese vendor, and we will continue to leverage add-ons resources built in Synway's architectures for other high capacity, highly available Platform for middle or large sized carriers and enterprises". The following diagram is Mpathix's MX Platform built on Synway's hardware architecture.

Synway's engineers also offered satisfactory technical support and added an array of new customized features for Mpathix. When Mpathix engineers deployed applications based on Synway's hardware in some nodes across Alaska, Synway's engineers served them responsively, and always coordinated with Mpathix to select a low traffic time slot for field evaluation, with just short-time interruption upon carrier's Platform. To cater to subscribers' needs, Synway, with Mpathix, rapidly added faxing capability to its high-capacity product line, SHD-240-CT/PCI(X), which supports 240ports 8 E1/T1 software configurable trunks. Based upon the feature-added architecture, Mpathix could deliver the new faxmail functionality to market in time.

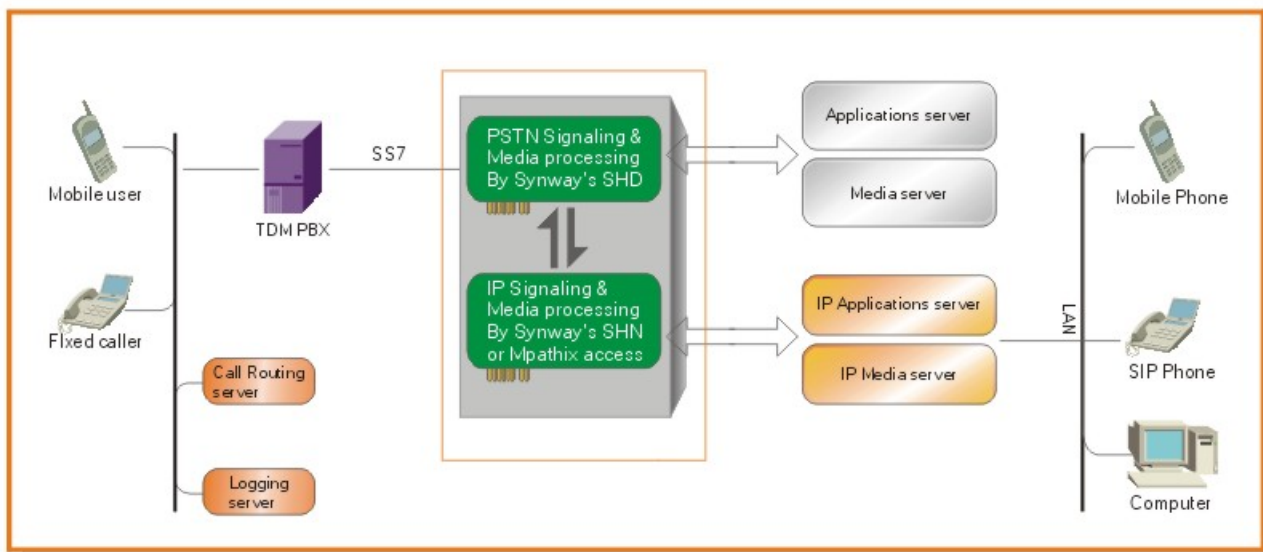


Result of complete replacement

Within a year, Mpathix has finished integrating Synway's digital media processing and signaling hardware Platforms into its applications, including messaging, gateway, faxmail, etc. Synway's SHD series, with a full range of value-added features, enables Mpathix to introduce more cost effective service to meet carriers and subscribers' today or future network needs in a single expandable Platform. Today, Synway's SHD-240-CT/PCI/FAX (240ports, E1/T1 configurable) and SHD-120-CT/PCI/FAX (120ports, E1/T1 configurable) have been widely deployed into Mpathix's Platform.

A high scalability and availability architecture, Synway's media processing and signaling hardware Platforms are Telco-proven components. Supporting a full suite of protocols, such as SS7, SIP, ISDN, CAS, Synway's offering exceeds carrier standards and ensures ultimate compatibility and interoperability with operator TDM& IP switchers and networks. It supports an array of enhanced media processing capabilities, including conferencing, fax, echo cancellation, Codecs, and standard features, such as trunking, playback, recording, DTMF, and can be used for voicemail, faxmail, auto attendant, unified messaging, multimedia server and gateway functionality and a host of next generation features.

Mpathix Platform topology



About Mpathix mpathix

With its standards-based design, Mpathix™ offers messaging solutions on industry-compliant media and application servers for both circuit switched (TDM) and IP networks. With hybrid networks a reality for years to come, Mpathix ensures service providers enjoy a single, integrated solution for all of their network needs.



About Synway SYNWAY

Synway specializes in designing hardware/software building blocks for use in Computer Telephony Integration (CTI) applications, such as IVR, Call Center, Recording, Unified Messaging and Value-Added Service (VAS) in both PSTN and IP environments. Our products feature rich media processing resources including Fax, conferencing, Codecs, echo cancellation and call control with an array of signaling capability for SIP, SS7 packets, ISDN and CAS in worldwide IP/T1/E1/Analog networks.



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Much information in this study case and its customers' experiences has been provided by Mpathix and Synway.