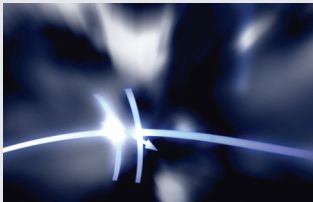


# SIP-IX

## Enabling the interworking of SIP/IMS application traffic



### Interworking redefined

As your customers adopt more sophisticated communications services, they expect the same array of services that they have enjoyed via the PSTN and the increased mobility wireless service provides. To avoid intrusive VoIP calls or IP sessions, they want to know who is communicating with them just as they do today via Caller ID. A VoIP or video message originating on one network should terminate successfully on a different network with all associated features. Customers will also insist that their own identities and personal data be protected to ensure their privacy.

At the same time, network components are moving to the “edge” of service providers’ networks, routing intelligence is less centralized, and network operation and management are increasing in complexity with each innovation and application. Sessions must be secured as they traverse networks. Accounting for exchanges between trading partners is as complex as the networks over which they are transported.

To unlock the value of new applications built on a core of SIP (session initiation protocol) technology, the global IP infrastructure — including the Internet — must provide intelligence at a higher layer than required for basic IP services. This higher layer of intelligence is needed to manage business policies and enable network-to-network voice, video, and content service peering. NeuStar’s SIP-IX enables this new global interworking.

## Deliver advanced SIP-based services end to end

- **No additional internal infrastructure to deploy and maintain:** Capitalize on existing IP network peering agreements to pursue seamless interconnectivity.
- **Support of breakthrough SIP-based applications:** Revenue acceleration of service offerings like VoIP, IMS, Multimedia Instant Messaging, video calls and content, Push-to-Talk.
- **Flexibility:** Implement multiple disparate softswitches as needed.
- **Scalability:** Establish external trading partner connections quickly, globally.

## SIP-IX — Global SIP Interworking

NeuStar's SIP-IX is designed to enable service providers to realize the benefits of direct network-to-network interworking of SIP and IMS applications. Derived from our successful commercial private ENUM infrastructure, SIP-IX has been architected as a comprehensive service that integrates NeuStar's policy-enabled shared directory services into the peering fabric of major Internet Exchange Providers (IXP) around the world.

NeuStar's industry-leading directory technology and expertise, along with our IXP partners' infrastructure creates a unique service offering with extensive reach, scalability, and overall value. Through our relationships with the providers of the global IP peering infrastructure, NeuStar allows service providers worldwide to leverage existing IP network peering facilities to originate, terminate, and share calls or sessions for mobile, fixed, and broadband communications.

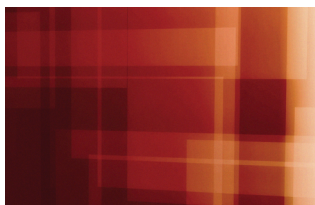
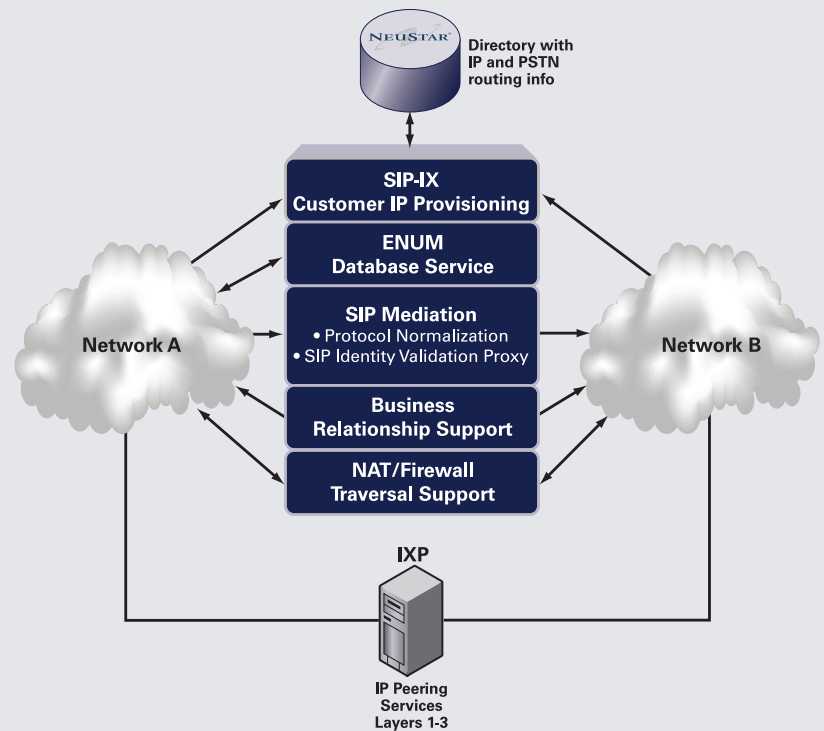
## Features and Benefits

- **Global service availability:** Our partnerships with leading Internet Exchange Providers (IXP) provide an unmatched level of service accessibility and reliability.
- **Policy-enabled, private ENUM-based shared directory services:** Efficient open-standard design allows flexible interworking and reliable, low-latency setup of calls and sessions.
- **Identity authentication services:** Improved user authentication and service security reduces application misuse and fraud-related costs.
- **End-to-end firewall and Network Address Translation (NAT) traversal support:** Ability to interconnect private-to-private or private-to-public networks ensures end-to-end "media" flow and application security.
- **Provisioning and Operational Support System (OSS) services:** Improved service differentiation and reduced time to market for new IP-based offerings.
- **Traffic accounting and settlement information:** Facilitation of current and evolving business relationships between service providers.
- **Strong partner relationships:** NeuStar works with leading product and service vendors to create additional value around SIP-IX's open standards design and interfaces. The NeuStar Alliance includes leading infrastructure and technology providers.

# Customer application: Exchanging IP-based traffic

A service provider contemplating a new video messaging service can provide more value by allowing customers to send messages to any video-enabled device regardless of the recipient's service provider or end device — e.g., a handset or PDA. To deliver on this proposition, the service provider needs to work with multiple trading partners — e.g., wireless carriers, cable operators, content providers — to define QoS agreements, business rules, and settlement policies.

SIP-IX can enable the service provider to discover routing instructions to intra- and inter-network IP end point addresses for cross-network service reach, while ensuring end-to-end video flow and minimizing unwanted video calls or messages to customers. In addition, the service provider can have access to the data necessary to support business trading rules associated with QoS and economic settlement.



## Connecting "IP islands" globally

With SIP-IX, NeuStar has embedded our network-to-network peering intelligence into the global IP network infrastructure. As a higher layer within this infrastructure, we are harnessing the global IP network to enable unimpeded transaction exchanges across multiple partners, multimedia delivery, and secured data transfers. In doing so, NeuStar furthers its commitment to enable our customers to deliver converged, next generation services.

## NeuStar's clearinghouse: The sum of our parts — your cost savings

NeuStar maintains standards-compliant interfaces across service providers to permit the exchange of essential operational data in a secure manner. Our clearinghouse services include:

- Local Service Request (LSR)
- Access Service Request (ASR)
- Enhanced Service Request (ESR)
- Pre-Port Validation (PPV)
- Service Order Administration (SOA)
- Wireless Number Portability (WNP)
- Line Information Database (LIDB)
- Calling Name (CNAM) database
- Enhanced 911 (E911)
- Customer Account Record Exchange (CARE)
- Trouble Administration Manager (TAM)

Without implementing multiple interfaces across trading partners, service providers can accelerate throughput, reduce costs, and eliminate rework as they move accounts from set-up to revenue generation while NeuStar manages complex and frequent industry standards upgrades. That's the value of NeuStar's clearinghouse.

## What does NeuStar do?

NeuStar is a provider of essential clearinghouse services to the North American communications industry and Internet service providers around the world. NeuStar operates directories that manage virtually all telephone area codes and numbers in North America, and enables the dynamic routing of calls among thousands of competing communications service providers. In North America, the network of every telecommunications service provider is either directly or indirectly connected to NeuStar's centralized clearinghouse, nearly every telephone call placed is routed using NeuStar's system, and every telecommunications service provider is one of NeuStar's customers. Visit NeuStar online at [www.neustar.biz](http://www.neustar.biz).

## NeuStar Worldwide

Change is a reality within communications — wherever you are. Where there is a need to mitigate dramatic change within competitive environments, our international experience and industry knowledge uniquely position NeuStar to manage the transactional exchanges that drive market growth.