

White Paper

The benefits of using SIP in customer service

By Dave Murashige, Vice President and General Manager, Nortel Multimedia Applications

SIP is all about going from a connection mindset to one of rich communication where every touch point with customers becomes an opportunity for dynamic information exchange. SIP opens a new universe of possibilities to build stronger customer relationships in more powerful ways. It's like going from four-color to 3-D and beyond. As a result, SIP is dramatically transforming the whole approach of how you measure the proficiency of your contact center.

Contact centers have traditionally focused on efficiency measures rather than on improving effectiveness. The speed of performing tasks such as answering the phone, responding to e-mails or holding web chats is useful because no one likes to wait, but it misses a critical factor in customer service — quality. Because effectiveness looks at how well you do something, from a customer's viewpoint, as well as how fast, it incorporates quality by its nature. Customers expect your business to not only answer their requests, but they want everything completed the first time as well. This expectation makes effectiveness key to increasing customer satisfaction and loyalty.

Many of today's interactions with customers start with one mode of communication, such as an enquiry by e-mail or via the telephone. Yet it often takes several contacts using different modes of communication to satisfy a customer's needs. For example, an enquiry may start with a phone call into a contact center. The customer hopes someone is available to answer the call. If the contact center is busy, the customer must listen to vanilla music-on-hold until a rep is available. The enquiry may require follow-up by sending a form to be completed via e-mail. Even if the customer understands what is required

and returns the form promptly, it may take another call to clarify some details. Clearly this process is time consuming, not very efficient and no one, especially the customer, is very happy with the length of the process.

Additionally, with the advent of unified communications, the number of ways a customer can reach an organization is multiplying rapidly. It's certain that the communications of tomorrow won't be confined to traditional telephone calls or basic e-mails. We're quickly moving to a world of real-time communications through the widespread customer adoption of multi-modal capabilities such as



instant messaging and video (on both desktop and mobile devices). Now contact centers are even more challenged to provide immediate, knowledgeable responses to their customers. This is particularly relevant with the younger generation who naturally initiate communication on the Internet, social and wireless networks rather than via more traditional ways. In some industries such as finance, enterprises are already looking to SIP to provide a first mover advantage to reach out to this audience.

SIP helps you eliminate communication barriers and shift from reactive to real-time and from talking to working together. Embedding a real-time technology like SIP in your contact center equips both your service reps and customers with a new set of capabilities to make communications both efficient and effective for delivering a new level of excellence. Plus, the potential cost savings from reducing 800 number minutes with Internet-based communications is enormous. An added benefit is that SIP launches new and innovative ways of doing business online and via video with customers.

How will customers become SIP-enabled?

To realize its full potential, both the customer and service rep must have SIP capability. There are a number of ways you can enable your customers to communicate with your organization via SIP. For example, integrate a SIP client inside your web portal like Vantis Credit Union. The web portal could be accessible anywhere from premises-based kiosks to individuals using a broadband connection. Another possibility is to provide SIP clients on Personal Digital Assistants or 3G mobile phones. Or, augment your total customer service approach using video messaging to

Vantis Credit Union, located in Winnipeg, is one company taking advantage of this opportunity. Vantis uses SIP-based communications technology to provide members with cutting-edge services using multi-modal (including video) kiosks integrating their web portal with the contact center at ATM locations and the ability to reach specialists anywhere, in the contact center or branches. The company believes that when members and service reps see each other while talking, it strengthens the bond between them.

States Michele Audette, Vantis Credit Union President and CEO, “We want to reach out to members and add new ways like video to do this — all while reducing our cost base. Our staff is really embracing these sweeping changes which transform the competitive landscape a bit to give us an edge.”

“This isn't about cutting our highly-skilled member service reps — that's not the effective way. We are focusing on profitable growth and providing superior service. It's about bringing in new tools that will improve communications with our members.”

This collaborative communication solution provides a flexible infrastructure so Vantis Credit Union can continue to creatively and effectively reach out to members in new ways for years to come.

clarify technical issues or deliver better instructions 24x7. Many public and private service providers are already offering or evaluating opportunities for SIP-based communications.

When both your customers and representatives are SIP-enabled, you'll have the potential to fundamentally change how you do business. SIP enables multiple simultaneous modes of communication such as video, application sharing, voice and instant messaging — often referred to as multi-modal communications. You possess important options for redefining

customer service when SIP presence is combined with multi-modal communications. Information exchange becomes more dynamic and valuable when you can talk and collaborate online at the same time.

Imagine the possibilities! Would customers be more loyal if they could simply add your key company and individual contact details to their friends list on their Yahoo or MSN clients? Would they be more inclined to do business with you if they could check availability and expected wait time via a friend's list? Or initiate a business request via a web

page push while on hold? What if your customers could talk, see and transact business in real-time via a video kiosk? And these are just a few ideas of all the ways you can change customer service.

For example, present your customers with the availability of service reps before a call is made. Alternatively, if all reps are busy, encourage customers via a web page push to complete a form or review relevant information on a web site. The immediate improvement is that customers now know if someone is available and can avoid being left on hold. This shift in mindset from providing real-time statistics about agent status to your supervisors and managers to publishing it externally for customers illustrates how you can redefine customer service. Another benefit of publishing presence information is that it also reduces the 1-800 time used to broadcast on-hold music and announcements to your waiting customers. At an average cost of 5 cents per minute, it doesn't take long to achieve significant costs savings in a busy contact center, plus it saves your customers the aggravation. As a "rule of thumb", just multiply your average daily hold time in minutes (x) by 5 cents to estimate potential per-day savings.

A case in point: when a call is presented to a service rep, he can now begin to review the form — a loan application, for example. If expert help is required for approval, the rep can seamlessly share the customer information with the expert and invite her to work directly with the customer and rep in the same session. All three parties can discuss the loan application using various modes of communication such as phone, instant messaging and web collaboration. The loan can be approved "on the spot" using dynamic multi-modal communications. Additionally, a window of



opportunity opens to sell additional relevant products or services to your customer.

Your organization profits by becoming more efficient and effective in responding to customer needs by reducing the number of steps and the time it takes to provide superior service. A small improvement in first-time contact resolution can result in more loyal customers, significant costs savings and increased business opportunity.

The evolution of contact center architectures

Most contact center solutions today still leverage the PBX ACD (Automatic Call Distribution) capabilities and phone sets integrated via a vendor-specific CTI link to an application server. From a voice and signaling perspective, calls are anchored and held in an ACD queue on the PBX. The PBX also hosts the ACD phone set and connects the customer call to an agent on a PBX extension when one is available.

Over time, CTI application servers have evolved to provide universal queuing capabilities that support other channels such as e-mail and web chat. Additionally, the contact center has leveraged IP line side and trunk features on the PBX to deliver "IP Contact Center" capability to agents on proprietary IP phones. By and large, most calls are still received through the public switched telephony network and converted somewhere at the edge of the enterprise network to

an IP call. This architecture has and continues to serve customers well, but it is primarily focused on delivering efficiency and cost benefits.

The momentum behind SIP and unified communications compels providers like Nortel to redefine solution architectures to offer more state-of-the-art unified communications-based contact center capabilities. This requires a fundamentally new approach to deliver leading-edge solutions that leverage the dynamic multimedia capabilities of SIP and drive the customer service 'effectiveness factor.'

What is the best way to SIP-enable your contact center?

Building a SIP-enabled contact center solution is attractive because it's both evolutionary and revolutionary. It is evolutionary because it is possible to integrate SIP with an existing PBX infrastructure alongside existing applications and introduce some new capabilities like support of SIP trunks and sets. It becomes revolutionary when you maximize the full range of features supported by SIP inside an intelligent application to deliver advanced capabilities like multi-modal communications to the contact center. It is unique because it allows the retention of existing investments in infrastructure and also provides a roadmap to an exciting, innovative feature set based on a future-facing protocol.

Broadly speaking, there are two options to SIP-enable your contact center. The first option is to leverage SIP capability in the PBX infrastructure alongside existing contact center applications. SIP trunks can be used between locations and SIP sets can be implemented on the desktop. Although this hybrid approach has some merits, it doesn't fully deliver multi-modal communications. For instance, it is likely that a customer and service rep can't seamlessly shift between different media types during one contact, so multiple interactions would still be required with the risk of you losing continuity (e.g. information about previous contacts) of each interaction.

The second option is to embed SIP support directly in your contact center application, often referred to as 'native SIP'. This is very different from supporting SIP trunks, gateways and other endpoints on the network. With native SIP, a contact center application

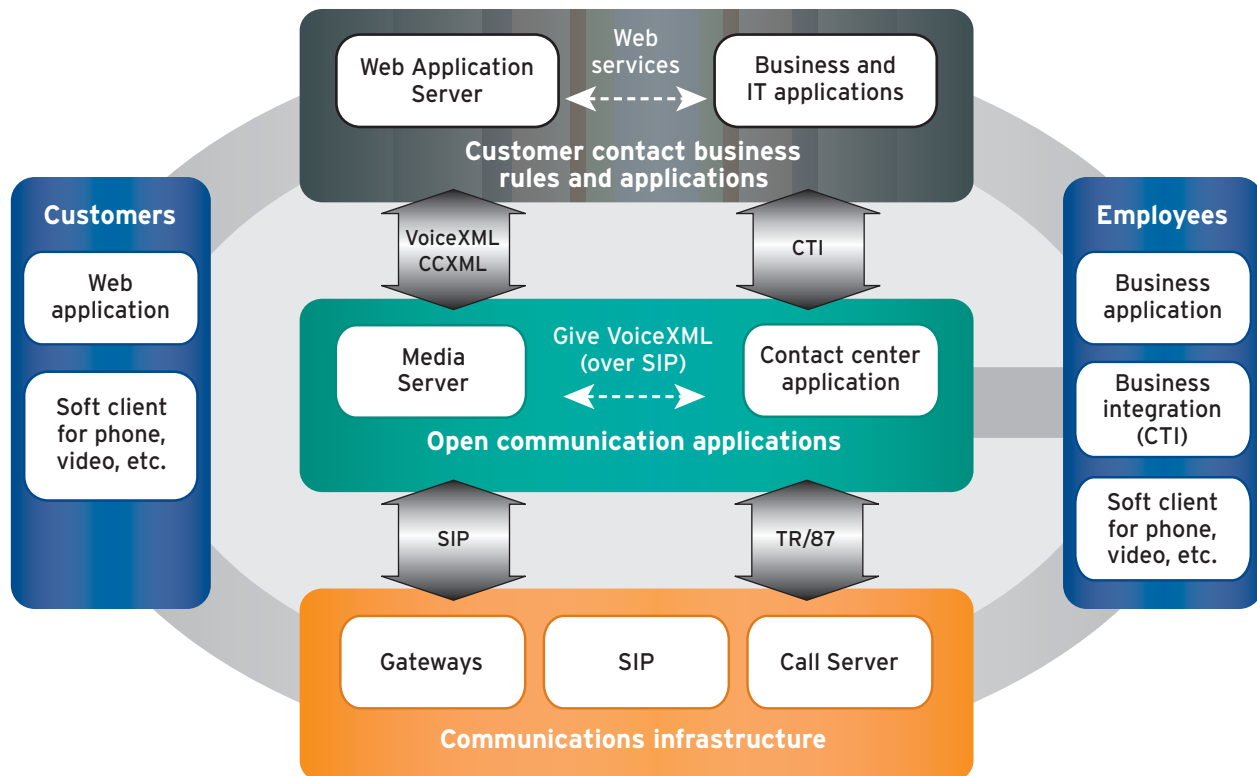
"SIP is revolutionary," said Alec Ko, executive consultant, CGI. "A customer will make the decision to buy — or not buy — a particular item based on customer service. Today's savvy buyer wants more for their money; they want a company that stands behind their offerings. What better way than to give them a quick, one-stop arena for getting the answers they need to be productive. At the end of the day, that's what they'll remember most."

evolves to become an intelligent, multi-modal real-time application, while it retains the proven call routing, reporting and business process integration capability. Of course, the full range of real-time multi-modal capabilities is available to both your customers and your reps. When an application has the capability to natively initiate and terminate SIP sessions, you'll gain the advantage of

simpler and more effective information exchange. Please refer to the figure entitled *SIP-enabled contact center architecture* to understand the building blocks needed for a complete solution.

When an entire solution is based on SIP, businesses have far greater choices for deploying their applications in a multi-vendor SIP infrastructure. As proprietary CTI links are also displaced by

Figure 1. SIP-enabled contact center architecture



SIP-based integration, businesses have the potential to standardize their contact center applications on a multi-vendor hardware infrastructure. This trend of replacing proprietary solutions with standards-based ones has already paid off for other applications like e-mail and database integration. Ultimately, companies can standardize on a single application enterprise-wide, resulting in less training, increased productivity and significant cost savings.

Nortel's Contact Center is now an open SIP adaptive application that facilitates real-time, multi-modal communication between a service rep and a customer during the same session. It fully utilizes SIP inside this application to deliver far greater capability than solutions which do protocol conversion to SIP through legacy gateways, edge devices and interfaces.

In a SIP deployment, the administrator configures key items such as service reps, customers, DN's and media routes as SIP-addressable end points in the form alphanumeric@nortel.com. This replaces the complex configuration of DN's, TN's, ACD queues and trunks on the PBX to simply set-up and day-to-day management.

Nortel Contact Center now includes the ability to initiate and terminate SIP sessions within the application and route them to SIP-addressable end points. It leverages SIP headers to determine the best skill set and customer rep to answer the call (e.g., SIP header could indicate native language = Spanish). SIP can automatically detect the multimedia capability of the customer's client or device to determine the best media type to use for on-hold treatments. For example, a customized video segment can be sent to any video-enabled device.

The application also maintains the SIP session until the end of the interaction, including any conference or transfer to

Capabilities of a native SIP implementation and the resulting benefits for customer service include:

Capabilities	Results	Benefits
<ul style="list-style-type: none"> • Configure agents, DN's, skill sets, etc. as SIP URIs 	<ul style="list-style-type: none"> • Replace ACD or DN configuration on the PBX 	<ul style="list-style-type: none"> • Easier and faster to configure and manage, saving time and reducing costs
<ul style="list-style-type: none"> • Uses native SIP and voiceXML media services 	<ul style="list-style-type: none"> • Provide standards-based, value-added capabilities like video and IM for customized on-hold treatments 	<ul style="list-style-type: none"> • Enhance hold time productivity to reduce the length of the call — pleasing customers for greater satisfaction • Shorter call duration reduces cost of 800 numbers
<ul style="list-style-type: none"> • Initiate and terminate SIP sessions 	<ul style="list-style-type: none"> • Provide multi-modal functionality including the ability to talk, collaborate and exchange information in real-time between customers, reps and experts 	<ul style="list-style-type: none"> • Increase first contact resolution, enhancing customer service to increase loyalty • Eliminate multiple interactions to lower operation costs
<ul style="list-style-type: none"> • Leverage and manipulate SIP headers 	<ul style="list-style-type: none"> • Select the best reps with skills to handle the contact 	<ul style="list-style-type: none"> • Improve rep productivity to handle more contacts with the same number of staff • Eliminate repetition of customer details in complicated menus to simplify management
<ul style="list-style-type: none"> • Media agnostic and media adaptive — seamlessly switch between different media types on the same call 	<ul style="list-style-type: none"> • Enable context-sensitive handling of different communications mediums (e.g., voice, video, form sharing, web page push, IM) "on the fly" 	<ul style="list-style-type: none"> • Open up new ways of doing business by talking and collaborating with customers; driving competitive advantage
<ul style="list-style-type: none"> • Route to a SIP-addressable end point, e.g., service@nortel.com 	<ul style="list-style-type: none"> • Provide flexible routing and device independence for agents and experts — proprietary terminals not mandated 	<ul style="list-style-type: none"> • Retain existing investment in terminals and PBX infrastructure • Gain increased flexibility across an organization
<ul style="list-style-type: none"> • Ability to use a single SIP address for people, resources and equipment 	<ul style="list-style-type: none"> • Minimize the number of ways to contact an organization or person — e.g., phone number, e-mail, cell phone number, etc. 	<ul style="list-style-type: none"> • Make it easy to reach someone right now to make decisions to solve problems • Simplify communications management to save time and reduce costs
<ul style="list-style-type: none"> • Publish presence of service reps and skill sets 	<ul style="list-style-type: none"> • Make experts and service reps more accessible to your customers this instant 	<ul style="list-style-type: none"> • Enhance customer loyalty by driving first contact resolution • Minimize customer wait time so calls are shorter and cost less
<ul style="list-style-type: none"> • Enable agents to check presence of experts and link them instantaneously via SIP 	<ul style="list-style-type: none"> • Faster, knowledgeable response accelerates the speed of effective service and eliminates multiple interactions 	<ul style="list-style-type: none"> • Create superior advocates — customers love the convenient, helpful service, enhancing loyalty
<ul style="list-style-type: none"> • Customizable SIP soft client 	<ul style="list-style-type: none"> • Streamline integration of the web portal with the contact center and other business processes 	<ul style="list-style-type: none"> • Commence new and innovative ways of doing business, creating competitive advantage • Use the Internet to reduce the cost of 800 numbers

other customer service reps, supervisors or consultations with experts. This enables the rep, customer and other experts to talk, exchange information and collaborate immediately to improve first contact resolution and enhance contact center effectiveness.

It is essential to embrace SIP natively in the contact center application so it can fully deliver the benefits of an end-to-end SIP multimedia session between a customer and an agent. By embedding SIP “natively” in the application, Nortel delivers the benefits of adept multi-modal communications, opens up new channels (e.g., IM and video) and extends traditional contact center efficiency values like routing, managing and reporting to all customer contacts across an organization. Organizations that embrace SIP in their contact center gain considerable first mover benefits and improve effectiveness to significantly reduce costs.

SIP empowers contact centers and organizations to meet their customer service and collaboration challenges head-on, thereby creating a competitive advantage. Use SIP and you'll harness

Session Initiation Protocol (SIP) is an application-layer control (signalling) protocol for creating, modifying and terminating sessions with one or more participants. These sessions include Internet telephone calls, multimedia distribution and multimedia conferences. SIP invitations are used to create sessions and carry session descriptions that allow participants to agree on a set of compatible media types. SIP makes use of elements called proxy servers to help route requests to the user's current location, authenticate and authorize users for services, implement provider call-routing policies, and provide features to users. SIP also provides a registration function that allows users to upload their current locations for use by proxy servers. SIP runs on top of several different transport protocols.

communication to simplify and optimize your customer experience. Your business will increase first contact resolution, facilitate faster decision-making and create new avenues for proactive and relevant sales and service. Effectiveness shifts your business to a customer-centric, proactive and adaptive organization that can stand out in the over-abundance of commodity offerings. Why not tap into a 3-D experience with your customers given this opportunity?

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Dave Murashige is the vice president and general manager of Nortel Multimedia Applications which includes the Contact Center, Advanced Self Service, Unified Messaging and Conferencing product portfolios. He leads business strategy, profitability and product development.

Most recently he served as vice president, strategic marketing of Nortel's Mobility and Converged Core networks. During his five years in this position, Dave led the global marketing of Nortel's wireless and carrier core network solutions.

He has been engaged in the communications industry since 1980. Prior to joining Nortel, Dave held various marketing, engineering, and sales positions with GTE, Wells Fargo Bank and Pacific Telephone/Bell.

Nortel is a recognized leader in delivering communications capabilities that enhance the human experience, ignite and power global commerce, and secure and protect the world's most critical information. Our next-generation technologies, for both service providers and enterprises, span access and core networks, support multimedia and business-critical applications, and help eliminate today's barriers to efficiency, speed and performance by simplifying networks and connecting people with information. Nortel does business in more than 150 countries. For more information, visit Nortel on the Web at www.nortel.com.

For more information, contact your Nortel representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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