

Enabling the evolution of enterprise voice and video collaboration

With IBM Sametime software



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Why talk about voice and video collaboration? Can't employees today just pick up the phone and call someone? What more is needed today? As for the future, doesn't the convergence of voice and data networks just mean that enterprises should swap out telephony systems and replace them with IP phones?

IBM believes that there is more to the story. The world is changing, and the ways we communicate and collaborate are evolving both inside and across organizations. Virtual teams in the workplace are often geographically dispersed and working outside normal business hours. Employees need to have access to real-time social collaboration so they can engage wherever they are with the devices available to them. A unified communications and collaboration environment can enable workers to more easily reach out to expert colleagues, partners and suppliers to locate and share the expertise needed to help speed business processes, improve decision-making and enhance productivity. By integrating new and existing telephony systems and video services as part of an overall unified communications (UC) strategy, companies extend the options for real-time collaboration to rich voice and video engagement.

IBM® Sametime® software, including IBM Sametime Unified Telephony software, IBM services and an array of IBM Business Partner offerings, can accelerate this evolution. Unlike other alternatives,



IBM solutions build advanced capabilities on top of your existing communications infrastructure. By eliminating the need to rip and replace, IBM helps speed time to value and keeps costs down. With the integration of audio, video and telephony into your company's UC environment, these modes of communication are available to employees within the infrastructure and technologies controlled by IT policies and governance.

This white paper will provide you with a better understanding of UC and the cost savings and productivity enhancements that can be achieved. It will also explain how Sametime offerings can help you provide the telephony and audio/video services that support your enterprise's evolution to a social business.

The goal: communications for organizational effectiveness

In today's highly competitive world, enterprises are looking for ways to drive better business results through enhanced organizational efficiency and effectiveness. Telephony managers and IT executives are challenged to support the organization's needs while also finding ways to reduce expenses, without compromising on security and compliance. This is becoming more challenging as the way the world communicates is changing.

The most-effective organizations are becoming less hierarchical and are instead becoming socially synergistic. A social business activates dynamically constructed networks, including employees, partners and customers. In today's social world, customers lead many conversations, wield unprecedented power over how brands are perceived and may be a valuable source of ideas.

More nimble interactions with customers and business partners can provide an enterprise a competitive advantage due to increased customer satisfaction. Employees who engage in real-time with the right internal or external experts, wherever they may be, have greater access to expertise and can drive tasks to completion more effectively. Partners act as virtual employees to extend the enterprise to scale up or down quickly and maximize flexibility. A social business harnesses and leverages this intellectual capital to speed business processes, improve decision-making and enhance productivity.

In parallel, smartphone use is growing dramatically. Smartphones—either corporate-liable or individual-owned mobile devices—are becoming the preferred access point for communications. The pace of innovation in mobility is high, and the trend for end users to bring their own devices and expect business services to be available on them presents new challenges for IT, including the application of security and governance policies.

UC can play a key role in supporting your enterprise's evolution to becoming a social business while also helping to reduce travel and telephony costs. An enterprise-ready UC solution provides a variety of services: Presence and location awareness information that provides visibility about who is available now; enterprise instant messaging (IM) that can be protected by security and governance policies; controlled support for mobile devices; and an easy segue to online meetings and voice and video, which provide for richer collaboration. Integrating voice and video into the real-time collaboration environment can help workers collaborate, resolve issues and serve customers, and it can do so while also helping to further reduce expenses.

See these examples of how people can take action—efficiently and effectively—by using integrated UC services to shift to the best communication vehicle as the interaction evolves.

Integrating voice and video into real-time collaboration

Consider the following scenarios, in which rich presence information—including telephony presence—and click-to-collaborate capabilities are embedded in applications to help people find the right answers at the right time.

Call centers and customer service

Call center offers businesses an opportunity to impress customers and improve their loyalty, which in turn can increase sales. In interactions with company representatives, customers shouldn't be routed and dropped or asked to wait for long. Telephony integration into real-time communications can help bring the right experts to the customers and quickly answer customer inquiries with accurate information.

An online or branch office customer representative has the opportunity to talk to a customer about a specialized banking service but may not have sufficient expertise to answer detailed questions. Performing a quick key word search of the profiles within a community of experts, she can quickly identify the right experts and, using presence awareness information, see which are available for collaboration. The customer representative can start with a simple IM session but can easily escalate to a voice call with one click. Or the representative can pull in another expert or account manager with an easy click-to-conference that is triggered from one interface—without the expense of an audio conferencing bridge. For each call, she doesn't need to waste time figuring out which device or phone number the expert is now using. The result can be quick and

seamless collaboration with the right expert at the right time to sell new services, improve customer satisfaction and save telephony costs.

Insurance agents, underwriters and claims specialists

A property and casualty insurance company could also take advantage of voice and video integration in underwriting and claims business processes. For underwriting, agents can use presence awareness to find an available underwriter. The agent can then use text chat, Voice over Internet Protocol (VoIP) chat, or click-to-call with the underwriter to ask questions or resolve issues to speed the underwriting process. For claims processing, audio and video communications from field agents to claims specialists can reduce processing time, which can contribute to both agent and customer satisfaction and to an accurate, lower settlement paid. In both cases, there may also be cost-savings from avoiding phone calls and from being able to support the same volume of business with fewer staff.

Medical professionals

In a healthcare scenario, medical professionals often need to consult with others to provide patient care. For example, someone may need to quickly consult on the results of an X-ray, magnetic resonance imaging or other radiological procedure. A radiologist could quickly initiate an ad hoc conference call by “click-to-conference” with the referring physician and a specialist. By use of unified numbers and intelligent call routing, the participants would be easily joined to the conference virtually regardless of their current location. Online users can also share computer screens in real-time, highlighting key parts of an image or report to collaborate on a diagnosis to provide patient care more efficiently.

Sales force

Voice and video communications often can provide sales representatives more information more quickly than a simple text chat with their sales and technical colleagues can deliver. A company's sales force is often on the move. But, wherever they are and whatever device they are using, they still need to be in touch and be available for collaboration with other employees, customers and partners. Having a unified telephone number could simplify how callers find and reach them. Intelligent call routing would automate the connection to the device they prefer using under different situations—for example, to voicemail during a customer call or to a cell phone while they are traveling. Softphone use could help them avoid expensive long-distance calls from hotel phones or cellular roaming fees.

Knowledge workers

Knowledge workers provide value by discovering and combining expertise and information. They want to quickly and easily reach people in their professional networks without worrying about whether they are at their desk, at home or mobile. They may also save the telephony costs associated with calls that otherwise would have ended up in voicemail. Voice and video are also helpful in increasing attentiveness in meetings and can also convey tone and emotion to help people resolve issues and come to decisions more quickly.

In all these scenarios, integrating voice or video into real-time collaboration provides strong value through increased efficiency and effectiveness as well as potential cost savings.

Flexibility and choice

UC solutions from IBM provide the software, services, hardware and strategic alliances that can help enterprises support these business scenarios. IBM Sametime software provides an integrated user interface to key functions: Rich presence information, enterprise IM, integrated VoIP and video, online meetings with audio and video conferencing, community collaboration and mobile support. It also provides a software development kit built on the open-source, standards-based Eclipse programming model, enabling developers to extend the built-in functionality and integrate with third-party applications.

IBM is a leader in its emphasis on helping enterprises leverage their existing, multivendor IT and networking environments in these deployments. IBM solutions are designed to integrate with existing environments, practically eliminating the need to migrate or replace back-end systems. Sametime software helps protect your existing technology investments by supporting multiple client and server operating systems and integrating with a variety of email platforms, directories, telephony, audio conferencing and video conferencing systems.

UC solutions from IBM offer you flexibility and choice and can help you save time and money. You can leverage the infrastructure you have invested in to build high-value unified communications and collaboration solutions that support the ways your people need to work together—now and in the future.

Telephony, audio and video within real-time collaboration

The convergence of voice, video and data on IP networks provides a way to unify communications and reduce costs in the long term. But unifying communications does not mean that the enterprise needs to do a complete migration to IP telephony and rip and replace its existing infrastructures.

Sametime software is your platform for next-generation communication services that support real-time collaboration in a social business. Audio, video and telephony functions are included in Sametime software and can be integrated with third-party systems. Sametime software includes the following integrated VoIP and video functions:

- A single UC interface—Delivers both built-in and related media capabilities in voice and video chats or in Sametime online meetings
- Voice chats with multiple participants—Makes it simple to talk without using the telephone
- Audio/video controls—Provides volume, video window size and resolution controls
- Standards-based audio and video codecs—Supports a high-quality, low-bandwidth multimedia experience
- Session Initiation Protocol (SIP)-based interoperability—Makes it easier to incorporate audio and video into third-party conferencing systems and supports desktop video calls directly to and from compatible video endpoints

- Bandwidth management tools and support for Network Address Translation (NAT) traversal—Takes the guesswork out of multimedia collaboration within and across enterprises
- Optional telephony integration—Delivers telephony status and functions through third-party plug-ins to telephony systems or with IBM Sametime Unified Telephony software, which provides a richer telephony feature set

Sametime Unified Telephony software features for users

IBM Sametime Unified Telephony software integrates telephony into real-time communications, so enterprises can support the scenarios we illustrated earlier in this paper.

The software is designed to assist both users and the IT and networking teams that support them. The client provides a unified user experience that includes an embedded softphone, integrated presence awareness, intelligent call management and call control capabilities. On the back end, the software serves as a middleware layer to simplify connecting into multiple private branch exchange (PBX) systems and audio conferencing systems.

The user capabilities trigger a paradigm shift: Instead of calling an assortment of phone numbers to track someone down, you can simply point and click to reach them. That way, you can focus on the person and the task at hand. Telephony capabilities are designed to be intuitive and easy for users to access from within the Sametime unified client.

One-number service and intelligent call management

The software provides a forwarding mechanism with intelligent call management. Think of it as “find me, follow me” support—on steroids. People have a single, unified phone number that simplifies how others reach them. Users can easily set rules and preferences for where their calls will go. The software then routes the call automatically—based on the preferred device chosen for the user’s availability and location status—to practically any device in almost any location. And users can also receive alerts for incoming calls and take a different action, such as redirecting the call to a mobile phone.

Preferred devices, including Sametime softphone

Users can choose to make or receive calls from any of their preferred devices, which may include mobile phones, desk phones, home phones and the Sametime softphone. The software also lets them easily move a call to another device anytime without interrupting the conversation. For example, a user can move a call from his softphone or desk phone to his mobile phone when he needs to leave the office. The Sametime embedded softphone allows users to initiate and manage phone calls from their computer. The softphone can be paired with a headset or USB speaker phone or device, which can provide additional voice quality and ease of use. As a standards-based SIP softphone, the Sametime softphone also allows users to make and receive calls to video conferencing systems or video conferencing endpoints right from their desktop.

Click-to-call and click-to-conference

Sametime Unified Telephony software puts everyone in your contact list on speed dial. People can easily select one or multiple names from the contact list and drag and drop them to autodial and initiate a call or audio conference. The software supports ad hoc audio conferencing—with active speaker identification—and integrates with external audio conferencing systems. For example, a user can add a conference

phone number and dial-in passcode to the software’s phone book and then simply click to join an external audio conference. Also, an IM chat can easily move to a call or audio conference. And using the embedded softphone, users can initiate a video conference call with another Sametime Unified Telephony softphone user or to a compatible video endpoint.

Availability and telephony presence

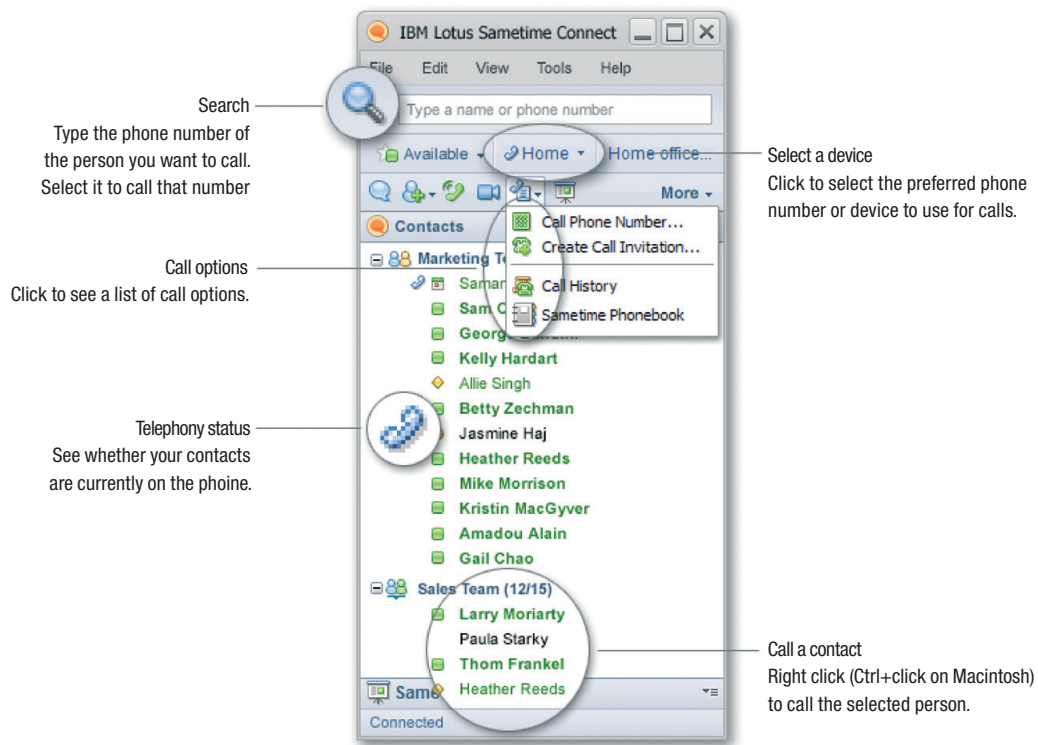
At a glance—and across systems—people can see each other’s telephony status (on the phone or off the phone) along with online presence status (available, away, in a meeting or do not disturb), making it easy to know whether now is a good time to initiate a real-time conversation via IM or a phone call.

Sametime Unified Telephony dialer on mobile devices

The Sametime instant messaging client and Sametime Unified Telephony dialer for mobile devices provide users presence and IM, text to speech, and the ability to place Sametime Unified Telephony calls and control call routing preferences and device selection while mobile. Users initiating a call with the dialer can specify the device to use for the call, which can be the mobile phone or a different phone at their location. For example, the call could be directed to a speaker phone in a conference room. This eliminates all mobile costs and takes advantages of the enterprise’s least-cost routing rules. When using the mobile phone as the preferred device, outgoing mobile charges can be avoided as Sametime Unified Telephony software will make an incoming call to the device.

Unified user experience

Through the visual call window, users can easily manage their calls through the call control capabilities for participants and moderators. The software delivers the same rich set of telephony capabilities for supported users through one client, even if those users access different telephone systems.



Sametime Unified Telephony software provides telephony status, click-to-call, an integrated softphone and one-number service.

Benefits of Sametime Unified Telephony software

Leverage your existing telephony infrastructure

UC does not equal IP. Hundreds—or even hundreds of thousands—of users may benefit from the Sametime Unified Telephony capabilities. An enterprise’s current telephony environment may include tens or even hundreds of telephone systems as a result of decentralized decisions—in divisions,

countries or branch offices, or in companies acquired (recently or in the future). These systems may be a mix of legacy time-division multiplexing (TDM) and IP telephony systems—whether delivered on premises or in the cloud). Therefore, when implementing UC systems, IT and network managers are looking for solutions that can leverage and extend these different, mixed, multivendor communications systems, rather than forcing a full migration to IP telephony.

Sametime Unified Telephony software is designed to support the mixed, multivendor telephony integration through a back-end middleware layer that provides connectivity to multiple telephone systems. This connection is via the industry-standard session initiation protocol (SIP) for IP PBXs, with support for TDM phone systems using a SIP gateway. The middleware enables companies—even if they have not completed a migration to IP telephony—to deliver the value of UC to virtually all users. This is in contrast to other offerings that require multiple clients for softphones or that provide desktop access to telephone features that work only with a specific vendor's PBX or that require a full migration to IP telephony before delivering a common set of UC capabilities to users. The enterprise can therefore more easily provide UC support with a variety of telephony systems—in a wide variety of business scenarios—while insulating the end-user experience from changes in the underlying telephony infrastructure.

Reduce voice and video operating and support costs

IT and networking managers can also use Sametime Unified Telephony software to help reduce costs in several areas:

- Save on cell phone roaming charges and international tolls by travelers' use of a softphone instead of mobile or hotel phones
- Lower telephony costs for remote and home office workers by avoiding carrier telephony charges
- Enable point-to-point video calls using desktop video to extend the utilization of existing video infrastructure without additional investment
- Reduce costs of expensive audio conferencing services for ad hoc conference calls

- Cut telephone costs by avoiding calls to colleagues who are unavailable
- Decrease telephone equipment costs with a range of low-cost IP telephones or with softphones, instead of expensive IP screen phones, for some users
- Defer—or avoid—costs of PBX installation or upgrades in new or existing remote branch offices

Add value to business processes and applications

Collaboration is more intuitive and efficient when people have access to collaboration within the context of the applications and processes they use every day. The Sametime client provides easy integration with email and productivity applications: IBM WebSphere® Portal, IBM Lotus Notes®, IBM Lotus® Quickr® and IBM Connections software, as well as Microsoft software, including Microsoft Office (including the Microsoft 2010 ribbon model), Outlook, SharePoint and Active Directory products. Because Sametime Unified Telephony software is integrated into the Sametime client, users of these applications can also have access to the telephony functions they need. This helps the organization reduce development expense and avoid extensive user training.

By providing a consistent user interface and deep integration with applications, enterprises can support people in the way they want to work—collaboratively—and the result is that business processes become faster and smarter. Communication-enabled business processes (CEBPs) embed UC services within the context of enterprise applications and processes. Think of enterprise resource planning systems, customer care applications, emergency response systems and web applications.

Integrating Sametime software within these applications can deliver full-function UC and collaboration, with telephony integration as an important component. For example, from within the context of the customer care application, a user could click to initiate an online chat or a phone call to a colleague who may provide a status update or additional information.

For developers looking to embed telephony and other UC services into applications, Sametime software provides flexibility with two integration approaches. Developers can build client-level extensions—plug-ins—to the Sametime client, so that end users don't have to learn a new interface to participate in specific business processes. There are also comprehensive software development kits, which assist developers in embedding Sametime software's real-time capabilities within applications.

IBM's rich ecosystem: video and PBX vendors and services

Because of the open, extensible platform and programming interfaces of Sametime software, IBM has a broad range of strategic relationships and partnerships with communications and software vendors. Leading equipment suppliers, device manufacturers and providers of network service and audio and video conferencing offer extensions to Sametime software that facilitate the integration and management of complex, multivendor communications environments.

In response to widespread industry support for Sametime Unified Telephony software, IBM has launched testing programs that allow third-party vendors and key IBM Business Partners to test a product's capabilities with Sametime Unified Telephony software. This testing helps ensure that customers will be able to easily implement Sametime Unified Telephony software into their existing IT environments. Participants in the Sametime Unified Telephony testing programs have included leading wireless communications provider Sprint; IP PBX providers Alcatel-Lucent, Avaya (and Nortel acquisition), Cisco (and TANDBERG acquisition), NEC, Mitel and Siemens; media gateway vendors AudioCodes, Dialogic, Mediatrix, Network Equipment Technologies and Siemens; and enhanced voice quality providers GN Netcom, NetScout, Plantronics, Polycom and RADVISION.

Because unifying communications across multiple vendor environments can be challenging, you may want to use UC services to speed your time to value. Regardless of the makeup of your existing environment or where you are in a migration to IP telephony, IBM has the skills, relationships and experience to help speed time to value, increase the reliability of communications investments and reduce risk. IBM Global Technology Services offers significant experience in telephony and a wide variety of services to help organizations plan and deploy UC solutions: Converged networks, IP telephony, unified messaging, collaboration, video communication, IP contact centers and IPTV. These services can help align applications and telephony;

deploy voice upgrades; and deploy medium to large-scale, geographically dispersed UC solutions. Through a service specifically targeted to telephony integration—IBM Converged Communications Services for Sametime Unified Telephony software—IBM has delivered customer deployments and proofs of concept involving integration with a variety of PBX systems.

IBM's leadership comes from extensive hands-on experience. IBM Global Technology Services has operations in more than 160 countries worldwide and has helped transform business communications for hundreds of enterprises. The team also planned and implemented a global UC and collaboration deployment of Sametime software within IBM. The deployment includes more than 190,000 devices running VoIP.

IBM Global Technology Services has relationships with skilled practitioners who can offer services around solutions built with the leading vendors in telephony, audio conferencing and video conferencing, including Avaya (and Nortel acquisition), Avistar, Cisco (and TANDBERG acquisition), Juniper Networks, Polycom, RADVISION and Siemens. For clients that prefer working with one vendor, IBM can be a single-source provider for IBM technology, vendor technologies and integration services.

Clients can also engage software services experts from within IBM or from a wide range of IBM Business Partners. Authorized resellers of Sametime Unified Telephony software can now also assist customers in identifying their telephony integration needs and in implementing their UC solutions. To find out more about the technical consulting, training and Software Accelerated Value Program services available from IBM to help you accelerate your Sametime deployment, visit: ibm.com/software/lotus/services

In summary, this white paper has shown that many scenarios are enhanced when a critical business communications tool, the telephone, is integrated into other real-time collaboration tools. With a UC plan and the implementation of IBM Sametime Unified Telephony software, you can support the evolution of voice and video collaboration by providing the real-time social collaboration that allows people to pivot to the best communication services as their interactions evolve so that they can take efficient and effective action across their professional networks. These integrated UC services also allow you to leverage existing telephony and video infrastructures so that you can recognize a greater return from your investments and also reduce costs while supporting your enterprise's social business.

For more information

To learn more about the IBM Sametime family of products—including Sametime Unified Telephony software—contact your IBM representative or IBM Business Partner, or visit: ibm.com/sametime

To learn more about IBM Converged Communications Services, contact your IBM representative or visit: ibm.com/services/integrated

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