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Ready or Not

VoIP-Enabled Web Conferencing Makes Headway

By Charlotte Wolter

LIKE MUCH OF COMMUNICATIONS THESE DAYS, conferencing, specifically, Web conferencing, is starting to see the impact of VoIP.

Today, Web conferencing largely is two separate simultaneous conferences — one over the Internet and one over a standard dialin audio bridge, with all the toll charges that such conferences entail. With VoIP, the entire conference — voice and data — is conducted over an Internet connection, with all the convenience and savings that can bring.

But adding VoIP to Web conferencing is not without some doubters and detractors, many of whom question the consistency of voice quality and whether or not it is ready for prime-time customers, while others are concerned VoIP will remove what has been a reliable revenue stream: the sale of voice minutes for the audio portion of a conference.

IS THE QUALITY THERE?

Quality of service always has been the main concern for those considering offering Web conferences with audio exclusively over the Internet.

The issue with VoIP in Web conferencing is not the application, but the endpoints, says Herb Pyles, IS manager of InterCall Inc., a leading conferencing service provider that is a subsidiary of West Corp. So, he says, it's a matter of the user having a multimedia PC, quality headphones and sufficient bandwidth. In a large conference, it is difficult to predict what access bandwidth each participant will have. A dialup connection from home will not perform like corporate broadband or even home broadband.

Wes Ball, marketing manager for ConferencePlus Inc., another large conferencing service provider, agrees there are quality issues with adding VoIP to Web conferencing. "You run into issues when VoIP is embedded in the Web conferencing application and it is not fully baked," he says. "It tends to be OK with small groups but tends to break down quickly when you get multiple lines." Ball tested one product that used an IP tunnel to deal with firewall issues. That worked for the voice, but Ball lost access to his files on the corporate server, a serious complication for many conferences.

"Where we really have problems is where they use softphones," says Doug Lauder, chief technology architect at Genesys Conferencing, which does offer an integrated Web and audio conferencing product using VoIP, but just for one-way streaming. A service with two-way VoIP is in beta. The biggest issue is echo, particularly when participants are using the speakers and microphone of a laptop rather than a headset, he says. "And it takes just one person doing that to ruin the call for everyone else," he says.

He adds even the whirring of a CPU fan can cause problems. "The microphone will pick it up and everyone else thinks a hurricane is happening," Lauder says.

Other issues Genesys is working to overcome include finding a way to be sure the sound card has set microphone gain correctly. Also, some standard audio codecs, such as G.711 and G.729, while they may work fine for one-on-one calls, require too much bandwidth (80kbps to 120kbps) for calls with multiple participants. That can cause noticeable latency and choppiness.

"In the enterprise conferencing space that InterCall is involved in, those are not acceptable quality-of-service issues," Pyles says.

"The state of VoIP right now still is very much an early adopters market," says Lauder. Using softphones requires some technology savvy. "The typical executive at a large company has heard of VoIP but doesn't know what it means to have a softphone on a laptop." The idea of placing a call, not by typing a number but by typing something that looks like an e-mail address — sip:executive@bigcompany.com — is very foreign to most business users. "As soon as we can make it work through a firewall and can just type a phone number; that is when I think it will start to take off," Lauder concludes.

Not everyone agrees that VoIP quality issues are too much to overcome. "VoIP capability turned a major corner in the last six-to-12 months," says Andy Nilssen, senior analyst and partner with Wainhouse Research, the leading research firm in conferencing. "Anyone with a decent Internet connection should not have major problems using VoIP with Web conferencing."

Using VoIP on a laptop without a headset still will produce sub-par results, Nilssen concedes, but good headsets are low-cost items. "If you are going to do [conferencing] seriously, get a headset. Not only will it make it easier for the technology to work, but a good headset shuts out what is going on around you so you can pay attention to the conference."

Genesys is playing both sides of the street. "We can accommodate traditional PSTN lines as well as VoIP," says Lauder, noting, those using conferencing are accessing the services from many different devices, ranging from broadband at the desk to a laptop accessing the Web using Wi-Fi.

In business scenarios, particularly where a customer wants anytime conferencing from an IP PBX, Genesys will do a connection directly from PBX to bridge. "In that scenario, the real quality-of-service issues boil down to bandwidth and making sure that users have quality of service in network and in the bridging infrastructure," says Lauder.

As for issues with softphones, Genesys is taking a route also traveled by several other conferencing providers: developing its own proprietary softphone with a codec that needs less bandwidth than standard codecs. "A large proportion of the marketplace has resigned itself to this, getting away from standard softphones to proprietary softphones that are more able to deal with spotty bandwidth and quality of service," says Lauder.



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Elluminate Inc. is another Web conferencing provider that uses its own codec, fitting voice into just 8kpbs. It also controls quality by tagging voice packets, according to Mike Mabey, CTO and cofounder. "We assign different priorities. We have a single TCP/IP channel, so one application can load-balance across different applications and decide where the priorities are, so we don't have quality-of-service issues." Mabey says the company has been doing Web conferencing with VoIP for five years, with complete integration of the two. "Audio definitely can work in this integrated environment," says Mabey. "And we usually have large numbers of people, hundreds."

Software vendors also are addressing VoIP quality in conferencing. Two such companies are Global IP Sound and SPIRIT DSP. Analyst Nilssen says Centra Software Inc., a provider of online learning, has adopted the Global IP Sound technology, and Web graphics specialist Macromedia, now a division of Adobe Systems Inc., is using SPIRIT DSP. "What that means is that any good Web conferencing technology provider can do it themselves or cut an OEM deal to get this technology," Nilssen says. "This is something that we didn't have a year ago."

A HIT TO REVENUE?

A further consideration with VoIP is both its advantage and disadvantage. VoIP dramatically cuts or eliminates altogether the charges for voice minutes. This means resellers who make money on the voice minutes in a conferencing resale may be looking at smaller returns.

"Now that Web conferencing is growing, "Some are scared that it is going to take away audio minutes and they will not make as much money."

But some say that's happening anyway: Conference Plus' Ball notes, "Voice prices have eroded to the point where we are seeing large Fortune 50 contracts going for not much above free."

Lauder concedes that companies "trying to make money on both conferencing and transport are going to be more impacted, because they are losing some of their margin." "We charge for the bridging infrastructure, not transport," he says.

Analyst Nilssen says, despite the fact that VoIP will "cut the top-line revenue and cut their margins, the nice thing about VoIP is minimal costs, so any money they do get tends to go to the bottom line."

And, there are new business opportunities afforded by VoIP.

"What we are seeing a lot of with very large users is managed bridge solutions," says Ball. "You put a bridge on a VPN, a VoIP bridge, for all the reservationless stuff and collect a management fee on it."

Unlike voice minutes "where the economics on audio have been bad for years," Ball adds, "the value is retained in Web conferencing."

Other new business opportunities with VoIP include features not available before and even customization. For resellers, "Customization is a tough word," admits Nilssen. "I think, first, there

is a business to be made reselling the basic service and all add-ons, like recording and playback."

Beyond things like putting a customer's logo on Web conferences, the big wave of new services in the next one to two years, he says, will be integration with other applications, starting with Outlook and with a corporate directory. Next will be integrating a conferencing service with a customer's instant messaging and presence, so it is possible to know when all the members of a team are available for a conference. Then another wave will be integration with corporate infrastructure and with applications.

Taking advantage of these possibilities will be a challenge for resellers, says Nilssen. "They are used to not doing much technically. They have to do some work now, will have to add value. They will have to hire technical people." Although, "integration with corporate directories starts to get tricky and particularly integration with applications gets tricky, it is very doable." The reward is, "once they add value, it allows them to get a decent margin and also locks in the customer," Nilssen says.

Unlike today, when "conferencing is a commodity, and customers wheel and deal," says Nilssen "once you get integration, at that point in time conferencing is no longer a commodity. You are providing an enhanced service. Customers cannot move on a whim."

New Ideas With VoIP

Despite the reservations of some in the business, others are embracing VoIP in Web conferencing.

Steve Carlson, a spokesman for InterCall, says, besides reduced costs, the attraction of VoIP is "enhanced and integrated services. Certain application integrations are simple using VoIP, as well as some of the enhanced service capabilities, such as dynamic routing and more flexible service development."

VoIP service providers are moving aggressively into Web conferencing. One is Junction Networks Inc., a provider of business voice services using Asterisk, an open-source hosted-VoIP and video product. Rob Wolpov, president of Junction Networks, says the flexibility of VoIP gives Junction the ability to offer resellers unique products. "We have resellers that have embedded our conferencing solution into their applications," says Wolpov. "That is a fundamental strategy that we are trying to follow.

Because the VoIP service is so flexible, because we can expose our API to embed our data and interface into another application, we are allowing others to do that."

A reseller already may have a Web collaboration tool, but may want to add voice. Rather than mounting its own VoIP servers, the reseller could provide an interface with a credential for Junction's conference bridge.

"We can allow things, like our reservation system, to be exposed to anyone who wants to embed it in their own application," says Wolpov. "That is a big winner in the VoIP conferencing space."

Links

Centra Software Inc. www.centra.com

ConferencePlus Inc. www.conferenceplus.com

Elluminate Inc. www.illuminate.com

Genesys Conferencing www.genesys.com

Global IP Sound www.globalipsound.com

InterCall Inc. www.intercall.com

Junction Networks Inc. www.junctionnetworks.com

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