B2B VIDEO

CONNECTING WITH PARTNERS, VENDORS, AND CUSTOMERS

B2B (or business-to-business) videoconferencing has been a vexing challenge ever since the first two companies owning video equipment realized they couldn't easily call each other. Intra-Company videoconferencing is now well established, with millions around the globe enjoying and experiencing the benefits daily. Users are learning that videoconferencing really isn't just about saving travel costs anymore, it's about productivity, efficiency, and gaining an edge over your competitors. With these inherent benefits of visual collaboration now proven beyond doubt by the first-hand experience of the users themselves, the demand for inter-business visual collaboration is expectedly surging and the rewards are great. Improving the ability to collaborate with partners, vendors, and customers improves both the utility and ROI of the existing base.

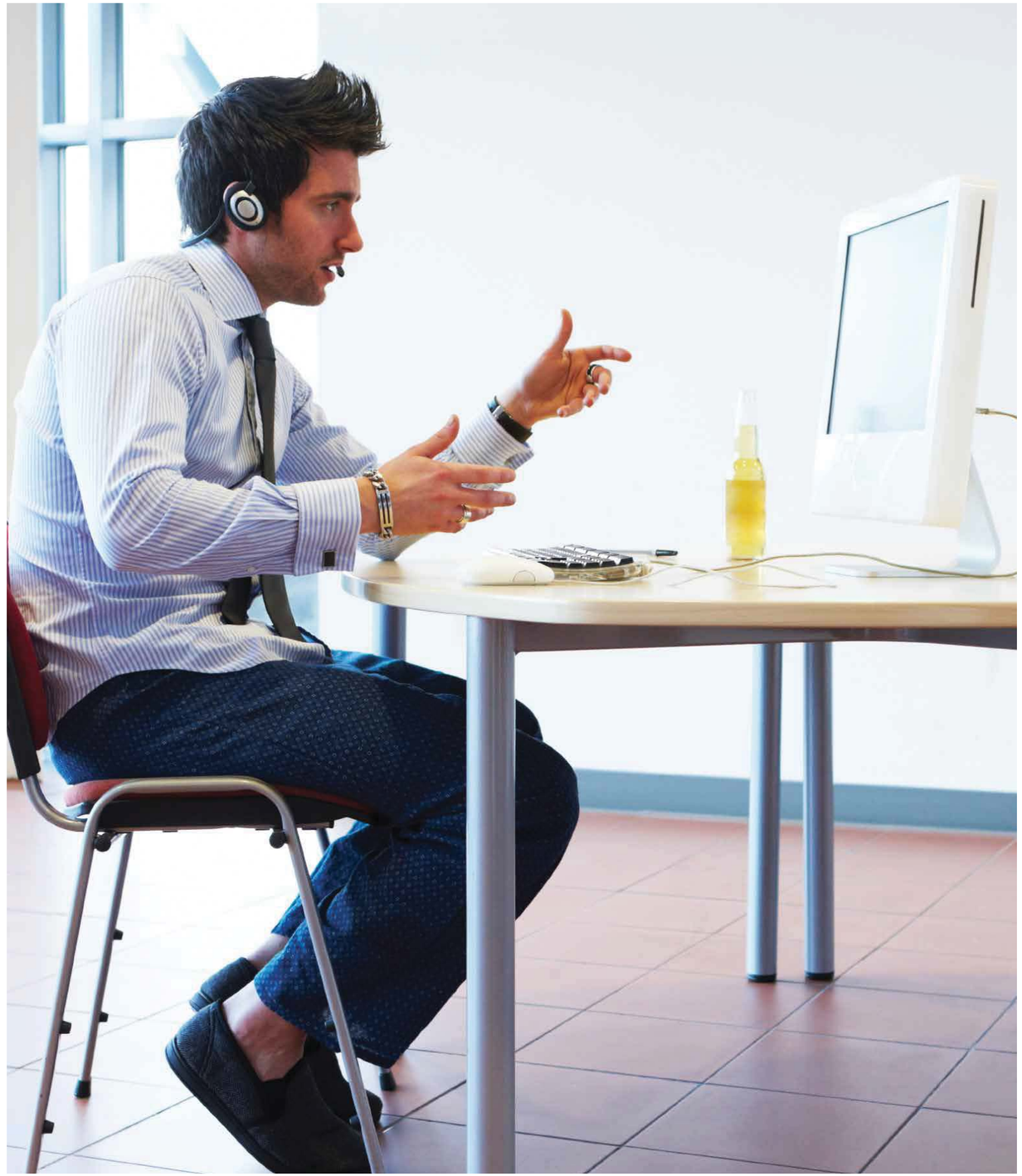
Why is inter-company videoconferencing even a problem? We figured out how to make all the telephones in the world connect easily, so we should be able to do the same thing for videoconferencing, right? Unfortunately, it's not that easy. The technology, and perhaps the industry itself, has been subject to particularly challenging hurdles. The B2B VC story contains a list of successes and failures, but in the end, it comes down to addressing four major problem areas.

Four Traditional Barriers To B2B Video

- **Interoperability:** The existing VC solutions on the market do not all connect, or connect well with each other. The situation has greatly improved in the last few years as a combined result of various approaches to the problem.
- **Dialing Plan:** How do we actually make the call? Telephones have universal numbers, video systems do not.
- **Experience/QoS:** Network issues can destroy a video call. Your IT team can protect calls inside your private network, but for B2B you need reliable, quality calls over the public Internet and/or capable private network exchanges to connect.
- **Security:** Creating massive traffic between a private business network and the public Internet is bound to create both real and imagined concerns.

VIDEOCONFERENCING INTEROPERABILITY ISSUES

In general, a solution that primarily talks to itself is an extremely tough sell. Exceptions do exist, but they have unique and compelling benefits to overcome this weakness. For example, Skype mainly talks to Skype, but its massive (600+ million) user base reduces this concern. Similarly, Facetime is an island technology, but its deep integration with the basic phone app on the iPhone allows it to be successful regardless. However, this model does not translate to the business world. There is no



B2B Video: Connecting with Partners, Vendors, and C

Most companies have a vast array of stake-holders that would benefit from inter-company video c
demand-chain partners, vendors, and customers. Here is a visualization of a small fraction of the p

Customers

onnections. These include both supply and
otential connections.

New York City
Corporate Headquarters

Connected to:
- Outside Counsel
- Public Accountancy
- Investment Bank
- Instititutional Investors & Analysts
- Advertising Agency

Rentable Publicly-Available Videoconferen
Rooms, Cloud-based Video Interoperabilit
Downloadable Software Clients

Job Interviews | **Customers** | **Partr**
Vendors | **Disaster Recovery** | **Remo Empl**

ıcing and Telepresence
y Platforms, and
ıers
ote
loyees

Los Gatos
Research & Development Lab

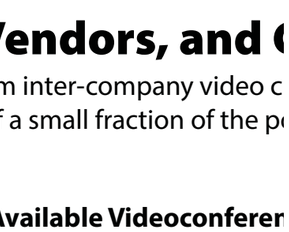
Connected to:
- R&D Partners
- R&D Suppliers
- Consultants

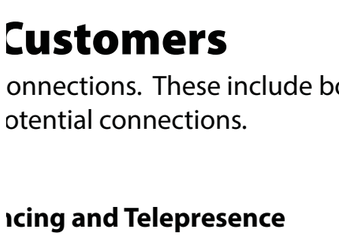
Your Comp
Collaborat

any's Visual
ion Network

Customer-Facing
Video Call Center

Video Network Ope
rations Center (VNOC





Washington D.C.
Federal Division & Government Affairs

Connected to:
- Public Relations
- Lobbyists

Singapore
Asian Pac Headquarters

Connected to:
- Asia Pacific Public Relations
- Offshore Software Development
- Offshore Manufacturing

Dallas
Manufacturing and Warehouse

Connected to:
- Manufacturing Suppliers
- Partners
- Remote Field Maintenance
- Logistics Vendors

Telepresence Options — Your Guide to Visual Collaboration

Visualizing Your B2B Video Ecosystem

business class VC product/service with the market dominance that Skype or Apple have in the consumer world. That means we need a higher level of interoperability between the existing (and competing) videoconferencing solutions.

As recently as five years ago, the interoperability situation in the business class videoconferencing industry was an embarrassment. Even solutions from different vendors that supposedly were using "standard protocols" would have trouble connecting with full functionality. Things have vastly improved in recent years, and you can reasonably expect a quality call between today's "standards-based" systems from the top vendors. But with that interoperability problem going away, new ones are arising. We no longer just want to call from one standard meeting room to another, we want to connect with an ever-increasing variety of options. For example, there is growing demand for connectivity between the high-end, multi-screen, multi-codec telepresence rooms and basic meeting rooms. Between multi-screen and multi-codec systems there are issues with interoperability to maintain eye-line and spatial audio. Or between meeting rooms and desktop PC clients, tablets and smart phones. Not only must all of these disparate devices connect, they must do so in a way that lends itself to a comfortable, productive, meeting experience. A compelling B2B program can't simply connect our meeting rooms to each other; it should be able to connect all of our workers to each other, on the device of their choosing.

VIDEOCONFERENCING'S LACK OF GLOBAL DIALING PLAN

Organizations often set up an internal videoconferencing network for their environment. This generally consists of VC endpoints in meeting rooms, mobile/desktop VC licenses for individuals, and the infrastructure required to support it all. Whether they use an outside managed service provider, or purchase their own infrastructure and hire internal support, the result is a full-service VC deployment. This provides enormous benefits, such as creating a private dialing plan (dial coworkers by name from a directory), as well as dealing with security and quality issues. However, the internal video network becomes a communication island.

In many ways, these internal VC networks are a lot like the internal phone network at many organizations, as they allow us to dial by directory, name or short extension. However, there is one key difference: the internal phone systems generally allow you to dial 9 to get an outside line. In the videoconferencing world, there is no standard equivalent to dialing 9. More importantly, there is no universal, global addressing system. Even if you could dial 9 on a VC system to "get out," it wouldn't solve the problem because there is no universal global dialing system to rely on. In other words, after hitting 9, what happens next?

VIDEOCONFERENCING'S NEED FOR QOS

Traditional videoconferencing signals were not just bandwidth hogs, but bandwidth snobs. In other words, they didn't just use a lot of bandwidth, they required a protected, QoS network. As little as one percent packet loss could ruin a videocall. Calls over the public Internet were a nightmare. Businesses had the ability to design, configure and protect their internal networks to allow for quality videoconferencing traffic, but B2B was a problem. Advances in inter-business QoS networks, the resiliency of videoconferencing protocols, and the public Internet itself have improved the situation greatly. However, it remains a concern for heavy B2B videoconference users.

VIDEOCONFERENCING SECURITY CONCERNS

Security is a primary concern for any aspect of a modern IP-based data or communications network. After all, computer networks are generally connected in one way or another to the public Internet, which has no shortage of unsavory characters. In some ways, videoconferencing does have powerful, inherent security. For example, VC traffic is generally encrypted with the 128-bit AES security protocol. Although anything is technically possible, there is no current, practical method for hacking this encryption in real time (although we still wouldn't put it past the intelligence agencies of multiple sovereign governments). Therefore, there is little reason to be concerned that an outside party will intercept your signal and be able to actually listen to your audio feed and see your video. The real vulnerabilities to your meeting security are likely to result from human failures than VC technology failures. For example, leaving your meeting room system set to auto-answer, with sensitive materials left in view of the camera, would be an obviously bad practice.

The real security concern here isn't the videoconferencing session itself; it's the rest of your network. At the risk of oversimplifying, we have "firewalls" that protect our internal networks. There are a few "ports" in the firewall that let trusted information to pass between our private network and the public Internet. In general, the firewalls allow connections generated from inside the firewall (a worker checking his email, or browsing the Internet) but will not allow people on the outside to start the connection (a hacker trying to break into your files). Traditional videoconferencing solutions worked well internally, but struggled to connect through firewalls, forcing network IT to either open extra ports, or even place the VC systems outside of the Firewall in the DMZ (demilitarized zone). Both of these solutions have obvious drawbacks. A modern B2B solution should include a drawback-free way to traverse the firewall while maintaining security.

Today's B2B Options

There are a large number of vendors and organizations working to crack the B2B puzzle. While the techniques used vary greatly, they basically fall under two major categories. Perhaps not unexpectedly, the two basic approaches somewhat follow the audio world.

AUDIO: B2B MULTIPOINT CALLS

Dial-in, or meet-me rooms, are the default solution for business audio conferencing. Users are comfortable and familiar with the workflow of simply calling into a virtual room. Meeting hosts also enjoy the administrative controls that generally accompany these solutions allowing them to lock the room, manage participants, etc.

AUDIO: B2B POINT-TO-POINT CALLS

The global, universal, phone numbering system that we all take for granted is amazingly powerful. While some users do make point-

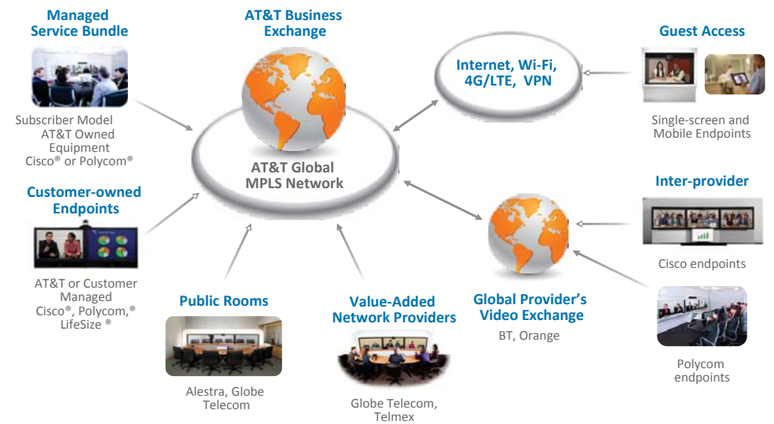
> *Cont'd from page 23*

Dialing Plan: This is an important aspect of a video exchange. Every system has a unique number and/or directory entry that works for both internal and external calls.

Experience/QoS: Exchanges often connect disparate networks using disparate QoS tags to match tags and ensure quality connection between different organizations. The exchange has listings for support personnel and both sides of the call to fix any problems that may occur.

The Right Approach For Your Environment

The success of both video exchanges and cloud-based services is testament to the fact that there is not yet a "one-size-fits-all" approach. To gain some clarity about what to consider when creating a videoconferencing environment, we spoke to a number of players in the space. The following organizations were chosen as examples of various approaches to B2B, not as a comprehensive review of all the companies in this growing space.



AT&T

When we get our phone service from AT&T, we get a unique phone number allowing anyone to call us. It makes sense that AT&T would want to offer the same power to its video customers. However, this isn't the same situation as the early days of telephony when Ma Bell was able to create a global telephone dial plan and assure the entire world would be a part of it. Recognizing this, AT&T is addressing the issue through a combination of offering its own video exchange and partnering with other exchange providers.

The AT&T business exchange includes over 130 organizations globally, representing thousands of videoconferencing systems. Recent agreements with Polycom, Tata, T-Systems, the OVCC and other industry parties serve both to expand the scope and to increase the value of AT&T's business exchange.

IPV GATEWAYS

Pat Montani, CEO of IPV Gateways, is hosting millions of minutes of videoconferencing traffic and is perhaps one of the most important companies you have never heard of. According to Pat, IPV moves half of the video traffic in North America, but it is all through partnerships with service providers and carriers. IPV is a "neutral party" that does not sell VC equipment or services directly to end users. This allows the company to sit in middle and offer an inter-exchange point for anyone looking to move video traffic. Most importantly, IPV not only hubs the signaling of the calls (i.e. establishing the initial connection) but also provides an exchange point for QoS, security, address translations and interoperability gateways. In other words, IPV partners can address all four of the barriers to B2B.

Montani strongly believes that service providers like Intercall, Providea and IVCi have a successful model for videoconferencing support and will continue to grow. Customers of these types of managed service providers generally enjoy strong adoption and ROI and report high levels of user satisfaction. These companies and dozens of other service providers and carrier networks are all connected behind the scenes via IPV. It is all hidden from the end users, who simply take it for granted that they can easily call other customers of these service providers.

TELIRIS LENTARIS

Teliris is a telepresence environment vendor and high-touch video managed service provider known for its support of multi-screen, multi-codec telepresence and meeting room environments. We spoke with Steve Gage, CTO of Teliris, who explained the company's approach to B2B. The Lentaris solution is, at its core, a cloud-based, meet-me interop room. Teliris saw early on that the "meet-me" approach solves many of the B2B barriers, as described above. It was also quick to catch on to the scalability and cost benefits of a virtualized solution. As a result, it created Lentaris, which Gage claims was the world's first cloud-based virtualized interoperability platform. Unlike commercial meet-me rooms, Lentaris is wrapped with Teliris's acclaimed managed services and is one of only a handful of providers capable of providing connectivity to higher end telepresence rooms using the TIP protocol.

VIDYOWAY

Vidyo recently made a potentially disruptive play in the space by announcing that its new VidyoWay B2B service will be free. Vidyo's groundbreaking work with H.264 SVC protocol made it arguably the first company to provide business-quality videoconferencing over the public Internet. While most industry insiders and users agreed that the Vidyo technology provided an excellent experience, and the company has enjoyed growth far beyond the industry average, it was perceived as having one weakness: Vidyo solutions can't make direct calls to traditional "standard's based" (or "legacy," as they would say) videoconferencing systems without the use of a gateway.

Vidyo developed VidyoWay to address this issue. Both legacy, and Vidyo systems can call into VidyoWay rooms. Since VidyoWay is free, this in effect means that every all Vidyo users now have inherent interoperability with traditional systems, and similarly, all traditional systems now have inherent interop with Vidyo. However, Vidyo is not merely offering VidyoWay as a means to connect Vidyo to traditional systems; it's offering it as a free B2B solution for ANY environment. For example, a business with SIP based video systems could use VidyoWay to hold B2B meetings with company using H.323 endpoints. The strategy is pretty clear: by giving it away for free, Vidyo hopes to capture a good share of B2B traffic, whether the traffic consists of their customers or not. When these new VidyoWay users wish to expand their environments to include more software-based, desktop and mobile clients, Vidyo expects to be the natural choice.

> "In the audio conferencing world as people moved to mobile devices, reservation-less meetings drove scheduling hardware ports into oblivion. Video conferencing is going the same way, and capacity needs to be available when you need it. With VidyoWay, people with mobile devices can now connect with those who are using legacy hardware-based room systems, and do it on a reservationless system and best of all do it for free!" — Marty Hollander, SVP market development at Vidyo.

THE OPEN VISUAL COMMUNICATIONS CONSORTIUM

The Open Visual Communications Consortium is an organization with a unique approach to the B2B problem. As a non-profit, the OVCC's goal is to allow the key telecommunication carriers, video managed service providers and vendors to work together on solving the B2B problem once and for all. The mission is bold, but its membership includes some big names necessary for an initiative of this level to work.

The OVCC is often mistaken as a technology standards organization, similar to the JCT-VC, which is currently working on the H.265 protocol. This is an understandable mistake, but a mistake nonetheless. The OVCC will not be publishing any protocols; its work is more about policy agreements than technology advances. These agreements are focused on making B2B videoconferencing as simple as B2B telephony.

We spoke with OVCC Vice President John Poole to get a little background on the OVCC, its current status and future roadmap. John explained that the OVCC is laying out a two-phase process involving two separate B2B strategies. Rather than choose between video exchanges or cloud services (meet-me rooms), the OVCC is going full bore with both approaches. A truly universal video exchange is the ultimate dream. Every videoconferencing system will someday have a universal number that can be dialed from any other videoconferencing system, just the way phone systems work today. OVCC members are working towards that goal and developing on policies to connect the existing exchange islands. A "video dial tone" will happen, but it will take a bit more time.

Meanwhile, OVCC has been able to move much faster on the "meet-me" front. A recent press release noted that six OVCC members (AT&T, BCS Global, Airtel, BT, Glowpoint, and Orange) developed an OVCC interconnect network to support new OVCC compliant services. John confirmed that these new services are already being offered by some OVCC members. Previous failed attempts at ubiquitous B2B may temper our enthusiasm for actually solving the problem in the foreseeable future. However, in the last few years the OVCC has made progress on the B2B front and as a result, the fruits of its efforts are actually being implemented today by some of the world's largest service providers.

Conclusion

The examples above are but a few of the options available to those wanting to connect with partners, vendors and customers. While the options may seem daunting, the fact is that B2B is lot less complicated, expensive and confusing than it was a mere few years ago. Bottom line: Today's solutions work, and they work well. We no longer have to cross our fingers and hope for the best when attempting to call outside the firewall.

There is no more excuse for settling for audio-only B2B communications. You have video collaboration at your disposal, and so do your potential business partners. Get full ROI out of these systems and use them to increase the impact and productivity business communications. **TPO**

ABOUT THE AUTHOR

David Maldow, Esq. is a visual collaboration technologist and analyst with the **Human Productivity Lab** and an associate editor at ***Telepresence Options***. David has extensive expertise in testing, evaluating, and explaining telepresence and other visual collaboration/rich-media solutions. David focuses on providing third-party independent analysis and opinion of these technologies and helping end users better understand their visual collaboration options including video call centers, video network operations centers, and B2C strategies. You can follow David on Twitter.com/LetsDoVideo.