How Will Mobility Change The Face Of Videoconferencing?

The mobility of the user is today's mantra.

By David Danto

A few years ago, we used to make fun of the idea of videoconferencing from a mobile phone. We all pictured how ridiculous it would be with everyone on a public bus holding a phone at arm's length and having conversations with people that are not present.

It turns out that our vision of this was all wrong. It isn't about the mobility of the device but, instead, it's about the mobility of the user. That's what is driving the change in conferencing and collaboration. A number of recent advances in consumer technology have conveyed the widespread belief that we can have our content anywhere we are, and on any device we happen to have with us. This breaks us out of the fixed videoconference and telepresence rooms and lets us use visual collaboration tools from our office, our home, our hotel, our client's office, the beach and. yes, that bus, too (if it's absolutely necessary). The industry has begun to call this huge increase in access to visual collaboration tools "pervasive video."

Although it is clear that this will be a game changer for videoconferencing, it isn't as simple as giving everyone a tablet and letting them do whatever they want. The ever-present questions around interoperability are now joined by new ones, such as, "How do you make video work seamlessly within an enterprise unified communications strategy?" "How do you securely manage the new mobile devices in an enterprise?" "How do you get a handle on things like costs, bandwidth utilization, multipoint scaling—and do you need MCU ports at all?"

The most obvious decision that should come from the new reality of pervasive video is that the skill set of your video partners/providers today has to be way more than the skill set of your past partners/providers. This isn't about hanging a screen and setting up hardware in a room anymore. It's about video dial-tone, networks, bandwidth, unified communication and collaboration, security and the cloud. It's a new bowl of alphabet soup with QoS, VaaS, MDM, BYOD and many more. It's not IT, it's not AV; it's truly IT/AV, and you'd better understand or find partners that understand both if you don't want to be left behind.

To get a rounded perspective on where mobility is taking visual collaboration, we asked a number of industry thought leaders and end users for their comments and ideas. Their responses many not be what you expected but, then again, I haven't seen that many people holding their iPhones at arm's length on the bus, either.

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IT/AV Report: How has the explosion of mobile video changed the game for the systems integrator?

The technology used for effective collaboration in the enterprise has already had a game-changing impact on the definition of a successful integrator. No longer can firms focus on just the hardware. Video has to be treated like an application, not a technology. The same methodologies used when rolling out an enterprise application should apply to a video rollout. There has to be a focus on the business and the user requirements.

Firms skilled in installing discrete components (a codec, a sound mixer, a projector) are unqualified to handle the tasks required to plan, implement and support a complex unified communications and collaboration ecosystem that includes mobility and cloud elements. The firms of the present and future understand not just what the discrete components are, but how they work together in the enterprise IT environment that supports them.

These elements include helping firms understand their true users' requirements and current communication culture, determining the best approach on how to create a blended strategy of unified communications components to meet those needs, how to design the video and collaboration infrastructure and how to ensure that all the required network dependent services are secure and compliant.

In addition, integrators can no longer stop at just selling and or installing the boxes. They have to be experienced and proficient guides that can help their clients manage the adoption process to drive a successful ROI and support these clients wherever they may be across the world. The support, wherever needed, should be from their own skilled staff, not with a collection of loosely affiliated partners.

Lastly, integrators have to be able to provide their clients multiple consumption models; one size does not fit all. Traditional on-premise, private cloud, public cloud or hybrid consumption models all have their benefits. Firms must be able to pick and choose which model is right for them. The bottom line is that understanding BYOD is truly more than just being able to sell a device that can support mobile video. Integrators now have to understand all parts of the ecosystem on an end-to-end basis.

IT/AV Report: How has mobility changed the face of services for the videoconferencing marketplace?

What the explosion of mobility does for videoconferencing is that it allows participants to join meetings from wherever they are. The old value proposition of videoconferencing reducing travel still holds true but now, not only does it apply to air travel, mobility allows it to extend to the hour or two in a car in traffic or the 30 or so minutes to get across town to another office. The avoided travel time can now be used to get work done.

There will always be conference rooms outfitted with videoconferencing (and that's a good thing), but the reality of mobile video lets you talk to the people who are in them when you can't be. The travel avoidance of today is not the airplane trip but, instead, is the schlep to the conference room.

The tools that allow people to take advantage of mobile video are now widely available, but more so to the consumer than the enterprise user. When IT departments don't proactively provide the tools that give employees "access," employees turn to their own personal devices for business. We've all heard the terms "BYOD" and "consumerization of IT". These ideas are leading the charge in terms of mobility as it relates to videoconferencing. So, although it may be simple to understand the value of mobility as it pertains to videoconferencing, it doesn't come without challenges. With the growing number of heterogeneous platforms, interfaces, processes and scheduling tools available, it can be a daunting task for both IT and users to find a single solution that works across the organization.

Service providers for the present and future believe that everyone is entitled to participate in a video call. Gone are the days when being an audio-only participant is enough. Because of this, we designed our solution to achieve the three core tenants required to make videoconferencing truly pervasive in the enterprise.

The first is ease-of-use. The solution must offer an intuitive, simple interface that doesn't require a handbook to operate or extensive training to use. With teams spread all over the world, requiring an IT organization to train every user how to schedule or join a video call is a daunting task and hardly scalable. If the interface feels familiar and straightforward, users will have more success using the tool and, as a result, will be less burdensome on IT.

Interoperability is the second requirement. Yes, the buzzword has come into fashion of late, but it has been an issue for as long as the videoconferencing industry has existed. Even to this day, firms announce systems and services they call "interoperable," but that still won't connect to some of the more common devices or applications. In today's global economy, it's absurd for anyone to expect that, in order to have a video meeting, everyone has to be on the same or approved platforms. Our belief is that, just like an audio conference, it shouldn't matter what phone or network users are on; they should dial a number, enter a meeting ID/passcode and achieve success. Requiring anything more of a user is setting the experience up for failure.

Our third core tenant is cost. Customers have been conditioned to believe that video is expensive and complex. By leveraging the scale and power of the cloud, video takes on new use cases. Successful video services today and in the future will be cloud-based, letting users take meetings from wherever they are and from whatever device or application they have available to them. It's a cost-effective, self-serve model that puts the power in the hands of the user and frees up capital expenses and time for IT.

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IT/AV Report: How will the proliferation of mobile collaboration devices change the balance of hardware and software visual collaboration products in the future?

The drive to enable high quality, reliable mobile videoconference products has revolutionized the entire videoconferencing industry. By successfully delivering exceptionally high quality video communications over the internet, LTE, 3G and 4G networks, software-based video systems have reduced the costs and barriers that typically existed with deploying hardware-based systems. As mobile devices become more powerful and business-critical to the enterprise ecosystem, a video communications and collaboration platform based on Adaptive Video Layering (AVL) architecture makes good sense. It can dynamically optimize the video quality and resolution for each participant's environment, whether that is in a room dedicated to video, or using a tablet on the road.

Because of this, software-based solutions are the most cost-effective, scalable, interoperable and versatile solution in the industry. Additionally, these systems can be easily expanded, upgraded and customized for individual enterprise and vertical market videoconferencing needs.

Already, one can see how this technology breakthrough is changing the industry. Firms that only produced hardware solutions a few years ago (and claimed how that was the only appropriate solution) have adopted software strategies to varying degrees. End-user firms have rapidly begun adopting software solutions because the price point and ease of implementation are very compelling factors, especially considering that the quality and adaptability for all use applications is actually better than hardware. Software-based solutions will probably completely replace hardware-based systems within the next few years.
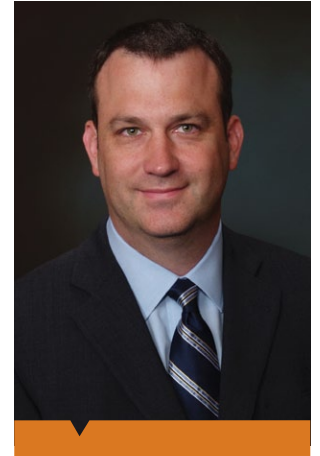
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IT/AV Report: How will the proliferation of mobile collaboration devices affect how manufacturers develop their strategy around systems and infrastructure?

With mobility playing an expanding role in today's workplace, users expect uninterrupted connectivity, a rich experience and robust security. The burden of providing tools that allow employees to work where they want, when they want, with the tools they want, overwhelms most companies. Opening corporate doors to employee-owned devices looks good on paper, but manufacturers haven't made it easy for enterprises to adopt this model.

With every mobile device capable of "collaborating," manufacturers seem to focus around point products and new devices rather than on the need to make it simple and easy for users to implement as a consistent tool set. If a product can't enhance interactions that may be originating from a multitude of different form factors, it simply misses the mark.

Devices are important in the mobility play but are only the visible tip of the iceberg. Applications, platforms and the deployment model are the new battleground for interoperability and security. Manufacturers ignoring these elements in their strategy will be relegated to a single quadrant of the market. Focusing on the technology that facilitates mobile collaboration is important, but without embracing the user experience, it will be difficult to adapt to the myriad of requirements the mobile user needs to be productive.

It is clear that the "one tool fits all" movement is over. A manufacturer's solution will be judged on the flexibility and security it brings to the organization deploying it. In simple terms, we need the ability and flexibility to light up any and all devices and have them react in a consistent and predictable manner.

Mobility has pushed the collaboration agenda considerably. No longer can we expect a world of "Standard Corporate Builds" on "Issued devices" in a BYOD world. Manufac-

turers need to bring solutions together in ways that adapt this device abstraction without adversely affecting the user experience, security, applications, platforms or deployment models. Enterprise managers will have to look to partner with manufacturers and integrators that really understand the nuances of what's below the surface if they want to successfully deploy a collaborative ecosystem that gives full, rich experiences to users of both the mobile and fixed clients.

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IT/AV Report: How will the proliferation of mobile collaboration devices change how firms plan and manage their infrastructure?

There are many challenges firms will face when preparing for mobile collaboration. Identifying the trends, selecting the best solutions, dealing with the pressure from mobile device consumerization, navigating the immature landscape of enterprise-ready solutions; all of these are crucial factors in ensuring the proper return on investment where collaboration improves productivity and increases efficiencies. Most enterprises are putting a stake in the ground based on such pressures, either by committing to supporting a BYOD initiative or adopting a Mobile Device Management platform. The reality is that firms must formulate a cross-functional mobility strategy that understands realistic user cases and uses a repeatable methodology to create a mobile-device-agnostic architecture.

Mobile collaboration adds a layer of complexity that service providers have not had to deal with and, therefore, will not have any lessons to teach enterprises. This complexity includes issues with integration (for example, Microsoft Lync and Cisco TelePresence) as well as telecommunication cost management for very mobile workers. For integration, the key is to identify the use cases and to understand the limitations, preferably leveraging mature platforms already in place. For telecommunication cost management, the complexity is usually bigger than enterprises realize. For example, some solution providers concentrate on increasing cellular subscription instead of integration with Mobile Device Management platforms.

Resolving these complexities requires a professional services organization with experience, vision and the ability to execute an enterprise mobility strategy. Firms should invest in either quickly building a mobility team, or outsourcing the planning and managing in order to avoid delay adoption and cause lost opportunities.

It is essential that firms starting to look at this space work with a team of experts in networking, security, cloud-services, unified communications/collaboration, enterprise mobility and telecommunication cost management. Our firm specializes in these areas, all using the same repeatable methodologies.

Firms have radically changed their views of enterprise mobility since the introduction of smartphones and tablets. IT managers can no longer have a "bar the door" strategy as consumer-driven demand for these products grows exponentially. Adding mobile video and collaboration to the enterprise mix will quickly uncover a poorly planned infrastructure and roadmap. Access to expert advice and support in this space is now even more important than before.

Corporate Enterprise End User

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IT/AV Report: How will the widespread introduction of mobile videoconferencing change the way corporate enterprises handle video?

When considering how mobility and mobile devices will change the landscape of enterprise videoconferencing, one must remember back to when the laptop or notebook computer untethered the PC experience. This new freedom allowed an employee to work anywhere. The same freedom is now here for enterprise videoconferencing.

Yes, you could have always used the camera with your laptop, but you couldn't put your laptop in your pocket. Your laptop isn't the first thing you check in the morning, and it's not with you everywhere you go. Smartphones and tablets are now so ubiquitous and feature rich that companies are bending to pressure to provide BYOD policies to accommodate employees' demands to access corporate applications.

We are seeing this rapid change develop presently and expect it to evolve past phones and tablets. By year-end, we anticipate employees bringing in their own laptops or "ultrabooks" to connect to their corporate resources. Enterprise IT managers will be relegated to providing infrastructure, corporate "app-stores" and secure sandboxes.

Most enterprise users don't know the difference between the camera they see in a conference room, the one on their laptop and the one on their phone—and most don't care. Their perception is that these devices all work together, and if not, they should. It's just another endpoint to them.

It is this expectation that will require IT/AV infrastructure developers to rethink their designs to accommodate the integration of "mobility" into enterprise videoconferencing. It won't be the lowly employee who will demand this functionality; it will be the high level executive who understands he's no longer tethered to the conference room or his desk and

wants to connect to his reports via video while outside the office.

To facilitate this mandate, enterprises will have to understand how to re-engineer their IT/AV infrastructure—including their network design—to accommodate devices that will use "video calling" over public airwaves (with all of its limitations) and be able to successfully handle the fixed-mobile-convergence that allows a call in progress to automatically switch to the enterprise WiFi when walking into the office. It will also have a significant impact on bandwidth, QoS, traffic patterns and other less obvious pieces of the puzzle. The melding of these disciplines will require an astute vendor that intrinsically understands both the network and the video disciplines.

So, I would suggest not waiting for that fateful call from the upset senior executive demanding the services he perceives already exist…because you know it's coming soon.

Educational Enterprise End User

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IT/AV Report: How has the increased availability of mobile video changed things for the educational market user?

A few years ago, only "technology zealots" believed that the demand for videoconferencing and unified communications would be ubiquitous. Mobility has changed the playing field and made visual and unified communications accessible to everyone. That accessibility has helped to drive innovation and choice in the educational space, as the demand for continuous mobile connectivity has grown exponentially.

However, although this may be a surprise to some, there is no one "educational market end user" classification! Our users can be varied across a broad spectrum of the community, including faculty, staff, students, alumni, parents and researchers collaborating, just to name a few. Each of these user types has different requirements, as well as ever-changing combinations of mobile devices and videoconferencing products of choice. One commonality among the users is the desire for a visual experience or personal touch to the variety of interactions.

For students, alumni and parents, the main functionality of videoconferencing is to "stay in touch." "Good enough" quality, anytime/anywhere/any device availability and ease-of-use are the primary requirements. The explosion of inexpensive mobile video options has taken this use from the fringes to the mainstream.

For faculty and staff engaged in collaboration with other professionals, reliability, interoperability, usability and accessibility are the primary requirements. The ability to record sessions for future use and to annotate the sessions further, become progressively more important as the collaboration becomes more formal. New and inexpensive options have had less impact in this space.

When faculty and students are working together, reliability, interoperability, accessibility and usability become more important, especially as these features refer to the ability to communicate globally. Recording and sharing of sessions, as well as the ability to access the repository anytime/anywhere/anyplace on any device, also increases in importance directly in proportion to the nature and assessment of the work. In other words, if grading or peer review is involved, then the repository features are more desirable and, in some cases, required.

In addition, educational institutions are focusing their marketing and communications on videos and interactive and social content. This modern focus requires support for a variety of educational end-user videoconferencing choices. Students, faculty and alumni often opt for the latest and greatest applications and devices, while staff, parents and collaborators often prefer a tried and true solution.

As the usage continues to increase, it would be remiss not to mention the increasing costs associated with higher bandwidth applications such as videoconferencing. Mobile carriers are increasing the costs of their data plans or limiting the amounts of data access contained in a particular plan, requiring a higher level plan to gain access to more bandwidth intensive functionality. Because the costs of higher education are subject to increasing scrutiny at a variety of regulatory levels, the enhanced reliance on video and visual-based communications as an integral part of the educational experiences may prove to be yet another cost and accessibility challenge. ITAV

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