Mobile Video Conferencing has Arrived:
Extending the Reach of Rich Collaboration Anytime, Anywhere
Mobility is becoming the norm in everyday life and business. As one of the biggest disruptors of this decade, it has fundamentally altered the communications landscape. Just like the heydays of the Internet, mobile devices and apps have proliferated at a fast pace, changing the way we work and live—and they have done so rather quickly.

- Mobile device shipments have clearly surpassed laptop and PC sales, leading to a growing number of users that treat smartphones and tablets as their primary means of communications, rather than complementary devices.

- iPhone cumulative shipments reached 10 million units in just two years after its introduction (compare that to iPod, which hit 10 million shipments in three years).

- iPad left its Apple siblings in the dust, breaking 10 million in shipments in just three quarters after its introduction.

- There were 51 million iPhones sold in Q1 2014—an all-time quarterly record. iPad sales reached a record quarterly high as well, at 26 million.

- Android phone adoption has ramped even faster—four times that of iPhone.

As a result of this sea change, business use of mobile devices has accelerated at an incredible rate. Consumerization of IT and evolving bring your own device (BYOD) policies increasingly enable end users, not the corporate mandate, to determine the devices and apps that will be used by businesses.

**MOBILITY OPENS UP UBIQUITOUS VIDEO CONFERENCING CAPABILITIES**

A major development in the new generation of smartphones and tablets is the availability of larger and higher-resolution displays, along with front- and rear-facing cameras, which offer face-to-face and “see what I see” video options. These features, combined with Wi-Fi and 3G/4G/LTE networks, have virtually turned every mobile user into a video-enabled user. The emergence of smartphones and tablets is also redefining video conferencing endpoint economics. In the past, expensive room-based systems and hard-to-implement desktop solutions restricted the reach of video conferencing to a handful of users. Today, widespread adoption of smartphones and tablets empowers every mobile user with video conferencing capabilities.

The key drivers for implementing mobile video conferencing are maturing. The broadening footprint of 4G/LTE mobile networks, increasing availability of enterprise Wi-Fi networks, and ever-more robust consumer hotspots provide mobile users the bandwidth required to support high-quality video connections. Growing consumer openness toward visual communications is resulting in burgeoning demand for video at the workplace, removing cultural inhibitors that existed in the past. While “millennials” are already multimedia savvy, wide-scale exposure to consumer solutions such as Facetime and Skype is helping older users become more receptive to video. Moreover, users have a greater level of comfort with their mobile devices, compared to other technology modes, which is leading to greater willingness to use mobile video.

A recent Frost & Sullivan survey of C-level executives in North America found that 66% of CXOs consider mobile extensions of commonly used enterprise communications applications to be critical for their daily operations. Among these applications, it is expected that video will continue to see tremendous growth. Video conferencing is becoming an increasingly critical element for real-time information-sharing among geographically
dispersed teams for faster decision-making. IT departments are enabling video conferencing for workers at branch, remote or home offices to facilitate rich collaboration and foster closer working relationships with their colleagues, customers and partners.

EMERGING USE CASES PERPETUATE THE BENEFIT OF VIDEO EVERYWHERE

A growing number of users are implementing mobile video conferencing to not only increase productivity, but also enable new and more effective means to share rich and contextual information in real time.

- In healthcare, mobile video conferencing is allowing impromptu video meetings for physicians and clinicians that are commonly on the go, rather than restricted to offices or conference rooms. Real-time HD video conferencing over tablets permits physicians to immediately attend to medical situations when they can’t be physically present. Mobile video conferencing can enhance physician-to-nurse interactions or communications with first responders that are out in the field. Additionally, a host of healthcare applications and hardware integration with medical devices, such as radiology systems, allows physicians to visually communicate and share complex information, such as test results, scans and other critical data, no matter where each party is located.

- In the education field, video, mobility, and social media are converging to become key aspects of on-campus class work, distance learning and online education. mLearning (mobile learning) is being driven by the BYOD trend, with students asking for rich content that can be consumed anytime, anywhere. Mobile devices and multimedia applications are changing the way teaching and learning takes place.

- Extending mobile video to military personnel in the US Department of Defense, state government agencies, and first responders will increasingly become prevalent, including use of mobile video conferencing by field police, hotline/crisis line personnel, fire and rescue, child protective services, and others.

- Mobile video conferencing can support a wide variety of solutions in many other industries. For example, retail, insurance, hospitality and banking are all benefiting from the reduced latency in the decision-making time. Use cases are also emerging in industries like manufacturing and construction for areas such as visual verification of product design, ordering parts, and problem identification and resolution to cut back on inefficiencies in the supply chain.

CHALLENGES IN IMPLEMENTING MOBILE VIDEO CONFERENCING

As valuable as mobile video conferencing is, companies must pay close attention to how they implement the technology for maximum effectiveness and return on investment (ROI). Deploying a mobile video conferencing solution requires careful evaluation of several variables on the part of IT. The overall consumerization trend has already brought to the forefront several challenges related to liability, security and compliance. With video, the considerations go beyond these and extend to impact on network, bandwidth and management. IT stakeholders will need to build strategies to address these challenges.

The growth of mobile devices as individual video endpoints means there will be more demand for multipoint conferences. Traditional video conferencing deployments commonly rely on hardware multipoint control units (MCUs) or bridges to interconnect one video endpoint with another and allow multiple users to join a video call. However, the MCUs of today are not scalable technically or economically, and can face severe performance issues over lossy wireless networks.
IT managers should consider the use of next-generation architectures, including software-based virtualized solutions for video conferencing infrastructure, making it more affordable. Virtualized infrastructure that is optimized for mobile devices can offer support for BYOD environments in a scalable and affordable way, while also providing hooks into existing room-based video conferencing solutions. Moreover, new and emerging video compression technologies can significantly boost performance and cost-efficiencies across non-QoS (quality of service) wireless networks to ensure that video conferencing can be extended to all employees, regardless of the device they use. Dynamic video compression ensures an optimal experience for mobile device users that typically have limitations related to bandwidth, processing and battery power.

CLOUD VIDEO CONFERENCING CHANGES THE EQUATION

The dramatic shift toward BYOD and consumerization has changed the way people want to access information. In several cases, anytime, anywhere access is taking precedence and compelling IT to move the video experience outside of the traditional confines of the four walls of a conference room. Emerging cloud-based video conferencing solutions have been particularly instrumental in extending the reach of video to desktop and mobile users, and even conference rooms.

Cloud-based solutions ease several challenges that have hindered video conferencing deployments in the past. By taking all the heavy lifting and putting it in the cloud, where the video mixing and compression takes place, cloud services take the burden of delivering reliable on-demand video conferencing away from IT. The cloud-based app can run either in the public cloud or reside in a customer’s private cloud; for example, on the intranet of a large financial services firm.

The power of the cloud is becoming very evident as the focus moves to effective and scalable video conferencing that allows mobile users to connect to business meetings from wherever they are, while still ensuring secure communications. Cloud services are enabling B2B communications over any device or network, maximizing the ROI. Most importantly, cloud deployments address the traditional operational and CapEx challenges, opening up video communications for small and mid-sized firms. The benefits are particularly attractive to organizations without the internal resources or willingness to own and maintain the video conferencing equipment. By offering low-cost alternatives to the significant upfront capital expenditure of on-premises solutions as well as simplified deployment and management, cloud services are addressing IT’s reluctance to open up video for all.

CONCLUSION

Video conferencing is becoming a must-have for businesses that want to improve collaboration and speed decision-making, while reducing the cost and disruption of travel. High-priced video conferencing endpoints and hardware-based infrastructure have remained out of reach and difficult to implement for many organizations. Mobile video conferencing is addressing these challenges to help make video conferencing a reality for all.

While mobile video is nascent, the momentum is growing. We expect to see rapid proliferation of innovative applications over mobile devices. Going forward, mobile capabilities will be an instrumental part of the business communications tool set for most organizations. Tomorrow’s world will thrive on rich communications that are much more than voice-only experiences. The expectation will be to have seamless access to video communications such as live video-sharing, video chat and multiparty video conferencing from within commonly used apps, Web services, e-commerce and online content that can be accessed over any device. Organizations that embrace mobile video collaboration today will have a unique competitive edge and a solid foundation to grow that advantage in the future.
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