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Making Pervasive Video a Reality with the

CISCO MEETING SERVER

WHITE PAPER

Prepared by
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ABOUT THE AUTHOR

Zeus Kerravala is the founder and principal analyst with ZK Research. Kerravala provides tactical advice and strategic guidance to help his clients in both the current business climate and the long term. He delivers research and insight to the following constituents: end-user IT and network managers; vendors of IT hardware, software and services; and members of the financial community looking to invest in the companies that he covers.

INTRODUCTION: PERVASIVE VIDEO CREATES COMPETITIVE ADVANTAGE IN THE DIGITAL WORLD

Digital advancements are creating new product and services opportunities, transforming business operations and enabling organizations to generate more revenue while reducing costs and achieving a higher level of efficiency.

In the digital era, sustained market leadership will no longer be based on which company has the lowest costs, best products or best people. Rather, leaders will be determined by a company’s ability to recognize shifts in the market landscape and adapt to changes faster than their competition. This means being able to make the best decision as quickly as possible while involving the right people, regardless of their location.

A digital organization must be an agile one where teams can quickly come together, make a decision or complete a task and then move on to the next initiative. As companies become more extended and global, the composition of well-networked organizations includes internal workers as well as suppliers, partners, vendors and customers. The best companies are dynamic and agile, and they are designed to move rapidly in the face of competitive pressures.

To accomplish this, the collaboration tools organizations use must extend outside of the enterprise—from employees to suppliers to customers. To enable workers to collaborate and communicate more effectively, IT organizations have deployed a wide variety of applications ([Exhibit 1](#)). Most companies have yet to realize the full potential of collaboration. This is because legacy

Exhibit 1: The Communication Needs of the Extended Enterprise



ZK Research, 2016

As companies have become comfortable with video, its value proposition has moved past cost savings to productivity improvement and ultimately to agility and competitive advantage.

communications and collaboration tools are independently deployed and managed, leaving the bulk of integration management to the user.

Unified communications and collaboration (UCC) improves the effectiveness of real-time collaboration, allowing agile organizations to be more effective by making the entire organization more agile and responsive. UCC brings all of a worker's collaboration tools together, enabling the user to seamlessly switch between various modes of communication based on his or her preference. Decision-making processes and communications must be as distributed and dynamic as the workforce. To be effective, this kind of collaboration will require a new medium: pervasive video.

In conjunction with this shift in workstyle, UCC has evolved over the past several years, and it sits on the precipice of another major shift that will transform it from being technology centric to being more people centric. The key to this shift is the pervasive use of corporate video. Video can provide a greatly enhanced experience, and over time, it will overtake voice as the primary communications medium for business workers. As the workforce becomes more dispersed and organizations look to streamline business processes, video will be an increasingly critical component of any collaboration strategy. Companies that want to evolve into digital organizations and leapfrog their competition should understand how video will empower agile teams and become a pervasive technology.

SECTION II: THE INCREASING BENEFITS OF PERVASIVE VIDEO

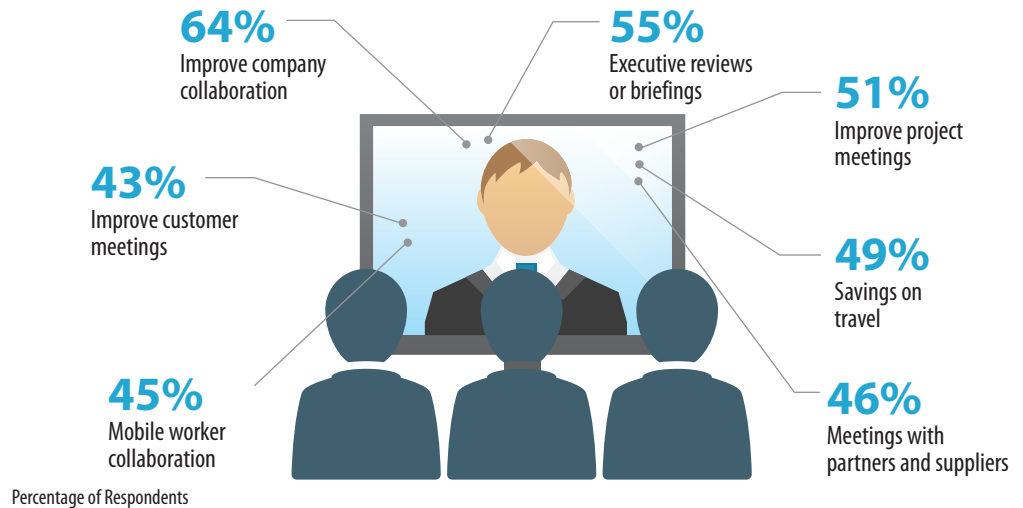
Enterprise video was introduced largely as a replacement for travel. However, as companies have become comfortable with video, its value proposition has moved past cost savings to productivity improvement ([Exhibit 2](#)) and ultimately to agility and competitive advantage by improving the collaborative process. For example, live video increases the level of engagement and participation. Anyone can use video meetings to spend less time away from the office, and sales teams can increase their amount of face time with key customers or prospects. In addition, video enables communication to extend past audio and print, including allowing both spoken and unspoken information to be conveyed to participants. Traditionally, video applications were perceived as high-end, high-priced tools suitable for executives only. However, their price points and ease of use make them ideal for all employees.

Several verticals are creating video-enabled business processes (VEBPs). Examples include retail customer engagement, medical consultation, on-demand technical experts, distance learning, remote training and security. As video becomes more pervasive, these use cases will give rise to an increasingly large number of VEBPs. Organizations that embrace visual communications and rebuild processes around video will find new ways to compete with and beat their competition. Those that do not will risk falling behind and suffering rapid customer and employee loss.

Compared to a voice-only collaborative session, video enables people to make better-informed decisions based on visual cues. Critical decisions can be made faster and action taken immediately. Meeting participants now have the ability to read body language and facial expressions and can adjust their responses immediately to address any resistance or confusion. Event participants are much more engaged and feel a higher level of loyalty and trust.

Exhibit 2: Travel Savings Is No Longer the Top Driver of Video Conferencing

WHAT ARE THE PRIMARY DRIVERS OF GROWTH IN THE USAGE OF VIDEO CONFERENCING IN YOUR ORGANIZATION?



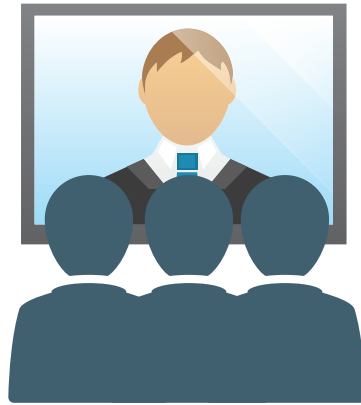
ZK Research 2016 Unified Communications Survey

There are many vertical-specific use cases for video. For example, video-enabled e-learning uses video to quickly train students or workers in multiple locations at a fraction of the cost of on-site classroom training. Even more important is the fact that people retain more knowledge when information is presented visually. Based on one-on-one interviews with users who participate in video sessions regularly, ZK Research estimates that, in general, retention rates are 28% higher with video than with voice alone ([Exhibit 3](#)).

Video has seen steady growth over the past few years. The ZK Research 2016 Unified Communications Survey found that 90% of companies reported increased video usage over the past 12 months. Of these organizations, 89% predicted that their video usage will continue to increase over the next year.

The growth in video is being driven by a number of factors including the evolution of room systems. Older room systems were difficult to use and typically had a high price tag associated with them. Based on interviews with audio/visual administrators, ZK Research estimates that video calls typically took 10 to 15 minutes to set up, wasting valuable meeting time. Today's systems are significantly more affordable and have intuitive interfaces, ensuring meetings can start on time and are more productive.

Video has become widely available to individual users through a number of different options. Dedicated desktop units offer a flawless, high-quality experience, but recently their price has dropped to the point where they are only nominally more than a high-end IP phone. Also, the interfaces on many of the dedicated systems are driven from easy-to-use touchscreens, requiring no

Exhibit 3: The Business Benefits of Video

200%
Percentage of attendees
who learn more with video
than voice only

BENEFITS OF VIDEO

- Improved learning
RESULT Attendees **learn 200% more** with video than with voice only
- Increased content retention
RESULT Participants in a video session **retain 28% more information** than with audio conferencing only
- Faster decision making
RESULT Meetings that use video **finish on time 73% more** often than with audio/web only
- Faster absorption of information
RESULT Video attendees **absorb information 40% faster** than with traditional voice calls
- Improved persuasiveness
RESULT Users of video report that the power of **persuasion is improved by 43%** over audio or print communication
- High-impact communications
RESULT Video communication **increases the impact of communications by 67%**

ZK Research 2016 Unified Communications Survey

IT support. Other options include software clients on desktops and laptops as well as mobile apps for tablets and smartphones. The ZK Research 2016 Unified Communications Survey shows that personal systems such as dedicated units and mobile clients are the most commonly used systems today ([Exhibit 4](#)).

The transformation of the workplace has been another driver of new systems. Digital workplaces are built on the concept of highly flexible workspaces to enable workers to be more agile. This has created a significant rise in the number of smaller huddle rooms that need to be video enabled.

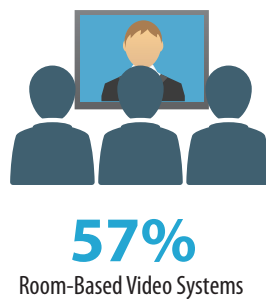
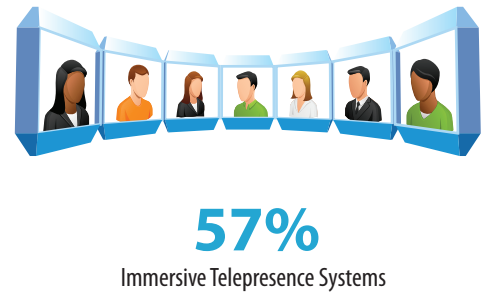
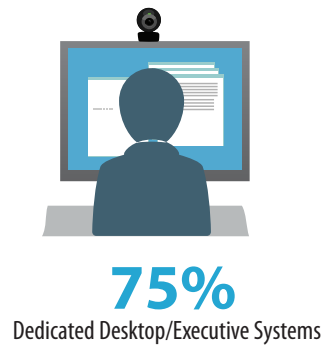
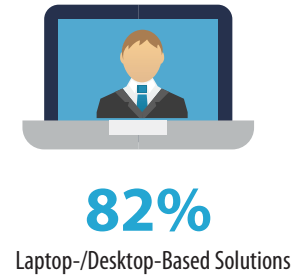
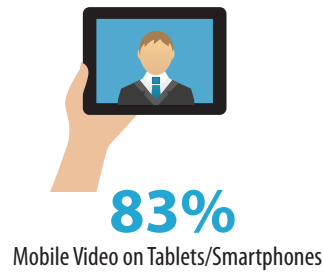
However, despite the strong value proposition, video is still not pervasive. To become pervasive, it must evolve in the following ways:

Systems must be intuitive and easy to use. Great strides have been made regarding the user interfaces on video systems. Vendors must continue to focus on improving the ease of use so any user, regardless of their technical skill level, can use one.

Meeting tools need to have integrated voice, video and web. Most organizations have several meeting tools—such as audio, web and video conferencing—deployed in independent silos. This arrangement can be highly inefficient, as meetings can't start until all the systems are up. Also, users who can only access one tool can have a degraded experience compared to those who can access multiple tools. A user who has access to video, web and audio will have a much greater meeting experience than one that has voice only.

Exhibit 4: Personal Video Systems Have High Utilization Rates

HOW OFTEN ARE THE FOLLOWING TYPES OF VIDEO USED WITHIN YOUR ORGANIZATION?



Video solutions used 1+ times per day. (Base = have/use each video solution.)

ZK Research 2016 Unified Communications Survey

Systems must be able to scale on demand. The rise of mobile and personal endpoints will potentially add many more video endpoints than that of a company outfitted with just room-based systems. This means the underlying infrastructure must be able to scale on demand to support hundreds or even thousands of connected video devices.

Interoperability with other systems is necessary. One challenge that video has had over the years is the fact that products from different video vendors did not interoperate with each other. This significantly limited the value of video, as users could only collaborate with users

ZK Research
believes that
Cisco's Meeting
Server can enable
the widespread
adoption of video.

who were using similar systems. Pervasive video requires interoperability with all the leading vendors including Cisco, Microsoft and Polycom.

The user experience should be flawless. Interfaces on traditional systems are very complicated and can often intimidate users. The user experience needs to be intuitive and simple enough that any worker can use it. Users should be able to connect with others with the simple click of a mouse or tap of a screen rather than having to input a long string of numbers such as an IP address or an ISDN circuit ID.

Video systems need to enable connectivity outside the organization. Historically, business video systems were effective in connecting workers to other people inside the same organization. However, more and more individuals outside the organization need to become part of the collaborative organization. This can include remote workers, consultants, customers, suppliers and business partners.

“Any to any” connectivity must become a reality. There are a number of highly proprietary video systems that can only connect to similar devices. For example, historically, immersive systems could only connect to immersive video. One criterion for pervasive video is that any user can connect to a video session over any device. Mobile, desktop, room or immersive systems all need the capability to join a single session.

Customers need a choice of deployment model. Legacy systems were typically powered by on-premises infrastructure. Recently, there has been an increase in the number of solutions enabled via the cloud, while some customers require virtualized premises-based deployments. Customers require a choice of deployment model. Cloud, physical appliance or virtual machine should all be viable options.

SECTION III: CISCO MEETING SERVER IS A FOUNDATION FOR PERVASIVE VIDEO

The list of requirements for pervasive video is long, and it may seem like a daunting task to find a solution that satisfies all of these needs. ZK Research believes that Cisco's Meeting Server can meet these demanding requirements and enable the widespread adoption of video.

Cisco acquired UK-based Acano in 2016 to harness the company's innovations in scale and interoperability, helping to accelerate Cisco's vision of enabling a single meeting experience for anyone joining a meeting using any device. Cisco's Meeting Server is ideally suited for organizations that want to deploy infrastructure on premises today but might explore moving to the cloud in the future.

Meeting Server (Exhibit 5) was built with the vision of offering an outstanding experience that enables users to connect with any other user in the way they want to on the device of their choice for video, voice and web. Also, the product offers a high level of scalability, so every employee in the company can use it with no degradation in quality. This is critical, as legacy systems were designed to support tens or at most hundreds of systems, but now businesses are faced with scaling to hundreds of thousands of users. Lastly, Meeting Server is designed to be extensible and flexible with robust APIs, enabling video to be customized for any kind of organization or workstyle.

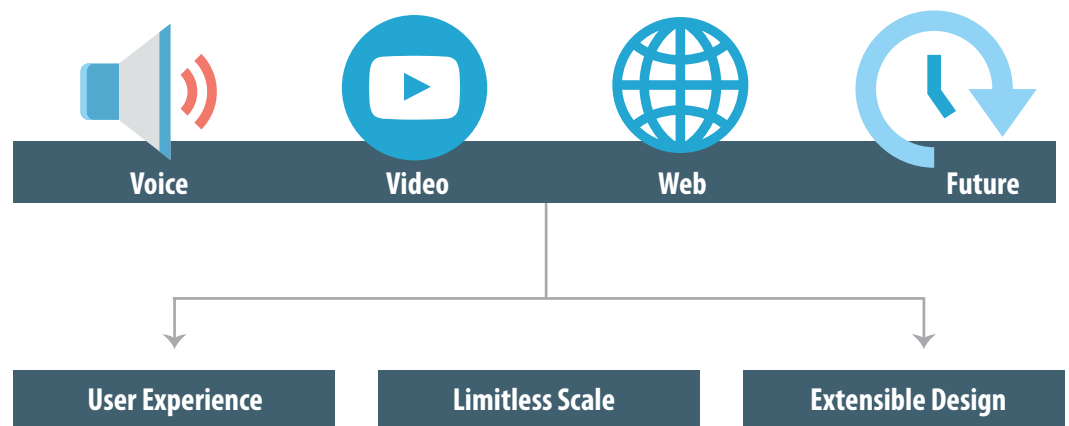
Meeting Server fulfills on this vision through the following capabilities:

Video conferencing: Meeting Server delivers high-quality video that will make users feel like they are attending a meeting in person. The superb quality reduces electronic fatigue, makes meetings more enjoyable and provides a consistent experience across room, desktop and mobile devices. The product offers flexible layouts and controls so customers can configure it to their own personal liking. While many vendors tout a great experience, Meeting Server gives users the power to easily attend a meeting from any device in any location. Now everyone in a single meeting can have the same visual experience whether they are in the office or on the go.

Audio conferencing: The solution includes audio conferencing that integrates with existing dial plans, minimizing the burden on IT.

Web conferencing: Meeting Server also includes browser-based web-conferencing capabilities that allow workers to attend meetings while they are on the move. The product supports both guest access and user login, protecting the business. Cisco also offers a product called WebEx as a cloud-based solution.

Exhibit 5: Cisco Meeting Server Addresses Current and Future Collaboration Needs



Cisco and ZK Research, 2016

Cisco Meeting App: Meeting Server software includes easy extensibility to anyone on any device via the Cisco Meeting App. The app enables all workers to experience exceptional video quality and fully participate in meetings or collaborative sessions. Users can control the meeting experience using app features such as layout control, mute/un-mute and add participants. IT support is minimized with Active Directory/Lightweight Directory Access Protocol (LDAP) integration.

Interoperability: Meeting Server supports several standards, including H.264 AVC, H.264 SVC (Lync 2013), RTVideo (Lync 2010), WebM/VP8 (WebRTC) and High Profile H.264 (Polycom). The product delivers a consistent experience over the following connectivity options:

- Standards-based video endpoint
- Smartphone or laptop with Cisco Jabber client
- Cisco Meeting App (native or with a WebRTC-compatible browser)
- Skype for Business

Scalable infrastructure: The product can achieve virtually unlimited scale by allowing meetings to extend across servers in different locations. In essence, the system aggregates capacity from all the deployed servers across the globe to create a pool of resources. Each user is connected to his or her local server, and then bandwidth is optimized across them to reduce costs. Servers can also be deployed in redundant configuration for high reliability. The result is an optimized user experience and simplified management of meetings at a lower cost because of bandwidth savings with maximum uptime.

Recording capabilities: The lifespan of a meeting does not end when the meeting is over. Workers often need to review meeting notes or provide updates to participants who were unable to attend. Meeting Server includes recording capabilities to replay the conversation after the meeting has ended. The product uses standard MPEG-4 for simplified video playback via applications such as VBrick Rev.

Customization capabilities: The product is highly customizable and enables organizations to change the look and feel to meet their business needs. A business can reinforce its brand through customization of the meeting experience and through management of host and guest roles. The user experience can be tailored through customized meeting controls, or the meeting organizer can set up guest roles.

In addition to the above capabilities, Meeting Server has flexible deployment options as a virtual machine on a Cisco Unified Computing System (UCS) Server or spec-based hardware. The product is available through several purchasing options including the following:

Personal Multiparty Plus: A named host model that is part of Cisco Unified Workspace License (UWL)

Shared Multiparty Plus: A shared user entitlement that is available à la carte or with the purchase of an endpoint

Enterprise-wide license agreement for pervasive video for all

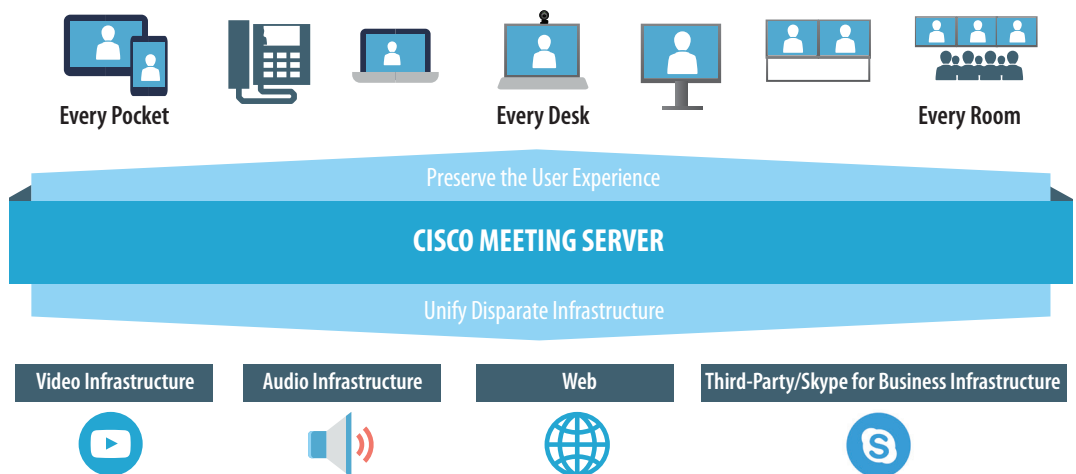
Meeting Server has a simple, three-step ordering process: Customers choose the endpoints, pick the appropriate licenses and then add the servers to support the solution.

Customers who use Meeting Server will be able to deliver a single meeting experience across all devices ([Exhibit 6](#)) for any kind of meeting—ad hoc, scheduled, small or large.

SECTION IV: CONCLUSION AND RECOMMENDATIONS

The era of video has finally arrived. After decades of being a niche, high-end business tool, video is rapidly becoming a mainstream productivity application. For the value of video to be fully realized, it needs to become as pervasive as telephony but with an experience that’s as simple as clicking a mouse or tapping a screen. Also, all collaborative tools—video, audio and web—need to be tightly integrated to deliver a seamless meeting experience without the disruption of managing systems deployed in a silo.

Exhibit 6: Cisco Meeting Server Enables a Simplified Meeting Experience Across All Mediums



Cisco and ZK Research, 2016

Cisco Meeting Server brings a new perspective to video by enabling meetings that anyone can join from any device, in any location. The product provides business-quality video from the mobile device all the way up to large boardroom systems. Meeting Server is also an interoperable, standards-based platform with dynamic scaling capabilities, so everyone can join a video meeting.

ZK Research believes that all organizations should strive to make video a pervasive business tool and therefore offers the following recommendations:

Integrate video into business processes. Competing in the digital business era requires organizations to move at unprecedented speeds. Adding video to customer- and employee-facing processes will help improve meeting effectiveness, increase information retention rates, create more engaged employees and advance customer service. The rise of video-enabled business processes will increase worker and team agility to harness the power of the entire extended enterprise.

Insist on a standards-based, customizable, open solution. Customers should not give up the power of choice. When reviewing video solutions, they should purchase open, standards-based solutions. Customers should be aware that there is a difference between being open and being standards based, and they should ensure that their chosen solution is both for maximum value.

Choose a solution provider that can make video pervasive and simplify the meeting process. The vision of pervasive video is about more than just putting a camera on every worker's desktop. Users need to connect to meetings on any device no matter where they are located and have a consistent experience. This requires an infrastructure foundation that can scale dynamically and optimize bandwidth to control costs while maintaining a superior experience. Cisco Meeting Server is an all-in-one platform offering audio, video and web that can make the vision of simplified meetings and pervasive video a reality.

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