

WHITEPAPER

Unified Communications: The Business Benefits of Desktop Video Collaboration



Advances in the quality and simplicity of affordable desktop video equipment are allowing organizations of all sizes to tap the power of unified communications and cut costs, increase efficiency, and improve business performance.

In today's changing global economy, more and more companies operate geographically dispersed offices, and deploy mobile workers in unprecedented numbers. The number of mobile employees accessing enterprise systems worldwide will top 1 billion this year, on its way to 1.2 billion by 2013, according to market research firm IDC¹. In addition, turbulent economic conditions are putting more pressure than ever on companies to attract far-flung talent and utilize their most valuable people as productively as possible.

The result is an increasingly virtual workplace that places a demonstrable premium on the ability to communicate flexibly and effectively among remote locations. Whether working in traditional offices, satellite locations, home offices, cars, airports or hotels, employees need to work together. Yet in an environment that defines success (or survival) as doing more with less, cutting travel and commuting costs and eliminating downtime is just as imperative.

¹ IDC Worldwide Mobile Worker Population 2009–2013 Forecast, Dec 2009

To gain these efficiencies without losing the richness and nuance of face-to-face communication, companies are integrating a range of familiar, yet previously discrete, communications capabilities under the umbrella of unified communications, or UC. Incorporating technologies such as voice-over-IP (VoIP), audio, video and Web conferencing, instant messaging, email, and other document-sharing applications, these powerful, affordable UC tools enhance the collaborative experience, boost productivity and improve business process flow.

"Most of the early adopters were basically saying 'we're saving all this travel [money] across the board,'" notes Mike Sapien, an enterprise telecom analyst at London-based consultancy Ovum. "That's pretty easy [to show] and pretty true." Yet as the technology quality has improved, decreased in cost and become much easier to install, configure, and use, reduced travel costs are among several key business drivers behind integrating video into unified communications.

"It's really the productivity gains from having the right people available at the right time to complete a project or make a presentation or design something together," he adds, "without the time dimension of having to meet together and fly somewhere."

» Video Comes of Age

Video conferencing technology has been around for decades. Early versions of video conference systems were pricey—some as much as \$100,000—and geared toward large organizations. They required expensive, dedicated network circuits and could be challenging to install and use.

Yet the spread of high-bandwidth, IP-based networks, combined with advancements in video compression technology—particularly at high definition—and the integration of plug-and-play video communications functions into familiar office productivity software has made desktop video conferencing both affordable and highly productive. Even some of the more sophisticated conference-room based systems, such as those from Logitech's LifeSize division, use standards-based technology that make them affordable to smaller companies.

"Video conferencing has crossed the chasm separating technological gadgets and vital enterprise enablers," according to an August 2009 Aberdeen Group study² on enterprise video collaboration. "As enterprises and small companies increasingly become both global and remote, they are seeking tools that allow for improved collaboration and optimal utilization of their most valuable employees, contractors and resources."

More than 200 million workers worldwide will run corporate-supplied video-conferencing from their desktops by 2015, up from 7 million in 2008³, according to Stamford, Conn.-based research firm Gartner, Inc.

But while such room-based systems are common in large enterprises and government installations, they remain costly and require dedicated network bandwidth and IT support. Yet the recent advent of HD webcams and the proliferation of built-in cameras in laptop PCs, combined with inexpensive VoIP services from companies such as gTalk, AviStar and Citrix, is making high-quality desktop video conferencing a reality for millions of users within organizations of all sizes.

"The demand for video conferencing from the different departments within the organization is skyrocketing," says a senior IT manager at a large non-profit organization with thousands of employees. "And we only expect it to grow even more in the future."

"We have employees who are stretched so thin that they just can't be everywhere they need to be, but they can with video

² Aberdeen Group: *Enterprise Video Collaboration: The ROI of Video in Sales, Product Development, and Project Management*, August 2009

³ Scott Morrison, Research VP, Gartner (ComputerWeekly.com, January 14, 2010)

conferencing," he adds. "Whenever you can save an employee from traveling hundreds of miles, it's not only going to be a savings to the company, but also a lot less stress on the employee."

The advent of inexpensive but powerful HD video cameras has been instrumental in making video conferencing more lifelike and more affordable. Logitech, a leading maker of webcams and audio headsets used for video communication, has no fewer than five webcam models that provide HD video resolution of 720p, ranging in price from \$49.99 to \$99.99. In addition, Logitech's soon-to-be-available B990 HD webcam features built-in H.264 video compression encoding designed to allow it to work with the thin clients in the virtual desktop environment.

Today's unified communications tools also feature plug-and-play integration of video capabilities into widely used applications such as email, instant messaging and document sharing—putting the "unified" in unified communications.

"They used to be too hard to install, too hard to configure, and the video quality was poor," notes Ovum's Sapien, who uses a desktop webcam to make presentations to clients. "The quality of the experience and the plug-and-play nature, combined, make it something that the enterprise and the end user can deal with."

»» The Business Benefit

As Ovum's Sapien observes, the most common cost justification for unified communications is the reduced travel and commuting costs gained from replacing in-person meetings with video conferences, as well as the savings from network consolidation to a single, unified IP-based network.

The Jackson-Madison County School System in Western Tennessee had no centralized communication network before replacing analog phone lines and

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SOURCE: Gartner, Inc.

PBX systems across 28 schools with a UC system based on Microsoft Office Communications Server 2007 earlier this year. Trimming the number of standard telephone lines from 250 to 40 will save a projected \$65,000, or 85 percent, in annual service costs. Jackson-Madison also plans to take advantage of the video and Web-conferencing capabilities, to reduce travel time for faculty and staff who need to attend meetings off-campus or out of the office. Another possibility for video conferencing is teacher training. The schools also hope to implement distance learning or team teaching, extending resources beyond the walls of the school building. For example, the superintendent can now deliver the annual school kick-off presentation through Web conferencing, which can save an average of 40 minutes of travel time for each of the 1,250 teachers who attend, or more than 800 person-hours. The district also hopes to save \$3,750 in mileage costs for just one meeting, and it expects to achieve similar savings on a smaller scale throughout the year by replacing an average of 25 face-to-face meetings with Web or video conferences attended by smaller groups of teachers.

»» UC Quantified

Reduced travel and network costs are not the only benefits of UC; they just tend to be the easiest to quantify. Advances in the quality and simplicity of video communications have produced

improvements in collaboration and teamwork that may be more difficult to measure, but are just as real.

A recent survey of 444 key network and telecom decision-makers by Cambridge, Mass.-based Forrester Research found "improved collaboration between dispersed teams" as the top-rated benefit from deploying UC, cited by 62 percent of respondents. "This is especially important for remote workers and frequent travelers," notes Forrester vice president and principal analyst Elizabeth Herrell in her blog post, "[Top Areas For UC Payback Identified](#)." The next most important benefit was that UC "enabled faster problem resolution," according to 46% of respondents.

"For managers who must resolve issues across multiple locations, this is a major benefit and it can be applied to virtually every type of industry," Herrell said. "Regardless of industry, most companies realize that internal delays cost money and ultimately affect customer service."

A 2009 Frost & Sullivan study also demonstrated a clear connection between the deployment and use of progressively more advanced IP-enabled collaboration technology—including video conferencing and unified communications—and improved levels of organizational performance.

"As organizations deploy and use IP-enabled, advanced collaboration tools in their operations, they are able to perform better on business-critical activities, and realize a higher return on their collaboration," the study concludes.

»» Go Green

Another benefit of UC is that it dovetails with enterprise efforts to practice "green IT." The reduction in carbon footprint from cutting back travel in favor of video conferencing is well documented. The roughly 405 million trips that U.S.

business travelers take annually produce an estimated 2 million metric tons of greenhouse gases. Replacing in-person meetings that require travel with video communication goes straight to the environmental bottom line. Gartner analysts last year predicted that high-definition based video meetings will replace 2.1 million airline seats annually, costing the travel and hospitality industry \$3.5 billion per year.

And by making telecommuters more effective in collaborating with distant colleagues, unified communication adds to its green glow. Research published by the Consumer Electronics Association (CEA)⁴ has shown that a single day of telecommuting by an office worker saves between 16 and 23-kilowatt hours of electricity or the equivalent of up to 12 hours of an average household's electricity use. One day of telework also eliminates the need for 1.4 gallons of gasoline and reduces CO2 emissions by 17 to 23 kilograms, according to the CEA.

» It's All in the Endpoint

Despite its many benefits, video conferencing was not accepted as a cost-effective replacement for face-to-face meetings for many organizations until recently, when advances in the quality of PC-based webcams and the audio performance and clarity of VoIP combined to offer truly lifelike conversations. High-definition images deliver the facial expressions and body language of an in-person meeting, while clear digital audio eliminates the latency common with early generations of video conferencing that hindered conversation.

Some dedicated, room-based systems promise an "immersive" experience that closely matches the visual and sound quality of an in-person meeting. However, they cost hundreds of thousands of dollars up-front, and require dedicated networks that can carry monthly costs in the tens of thousands, as well as IT staff

to support them. Logitech offers more affordable conference-room systems designed to provide plug-and-play HD video capability through its LifeSize division. But for many small to midsize businesses or budget-constrained larger enterprises, an HD-resolution monitor plus a webcam costing less than \$100 and an existing broadband Internet connection may be all they need for effective unified communication.

"When we tested the webcams we wanted to make sure that whatever product we chose gave us the best possible clarity and in no way compromised the face-to-face conversation," said the same large non-profit IT manager, who selected Logitech webcams and headsets for desktop conferencing. Aside from the sharpness and clarity of the image quality of the HD-resolution cameras, he praised the auto lighting features that automatically adjust the cameras to correct for changes in room lighting. Increasingly, webcams that cost less than \$100 offer high-end features such as high-resolution sensors, high-speed shutters, Carl Zeiss lenses, sophisticated autofocus and advanced zoom functions, and high low-light performance. The same is true for high-quality headsets with features like laser-tuned drivers, state-of-the-art noise cancelling and wireless Bluetooth connections.

"The experience has to [make you] feel as if you're in the same room," agrees Ziva Nissan, a senior global product marketing manager for Logitech's Business Video Products and Unified Communications. "If there's a lot of latency or if the image quality isn't there, or if there's break up, then you're not really saving in terms of cost, because you have to stop and start."

"There are some unique things that only video can do," adds Ovum's Sapien, citing training and instructive applications and customer service as examples. "If you think about it, a picture paints 1,000

words. If you just show someone how to install something, it's just so much simpler than the five-page manual."

» UC Challenges

Video-conferencing analysts and users note that there is some etiquette and protocol that should be observed to maximize the effectiveness of video communications. For example, waiting for the appropriate quorum to assemble for a meeting before launching a video session, providing meeting materials in electronically sharable formats and learning to address the camera as well as other participants in the room all take some getting used to.

"It's not as easy as just a voice call," Sapien notes.

Also, if not managed properly, desktop video, in particular, can potentially tax a company's network bandwidth. Unlike traditional room-based video conferencing systems, which are used serially and have a fairly consistent usage cycle, desktop video conferencing can occur spontaneously, and concurrent sessions can create spikes in network utilization. Networks should be properly configured to accommodate this, or in the absence of IT, guidelines and restrictions may be necessary for end users.

Despite the learning curve, Sapien expects unified communication with video to become almost as ubiquitous as PowerPoint presentations are in business today.

"In the future, the idea of having a video presentation or a video session is going to be in that same vein," Sapien says. "Not for everything, but for a lot of business communications." ■

⁴ The *Telework and the Technologies Enabling Work Outside Corporate Walls* study, Oct. 2009