



Standardization is the Key to Pervasive Video

July 2012

Prepared by:

Zeus Kerravala

Standardization is the Key to Pervasive Video

by Zeus Kerravala

July 2012

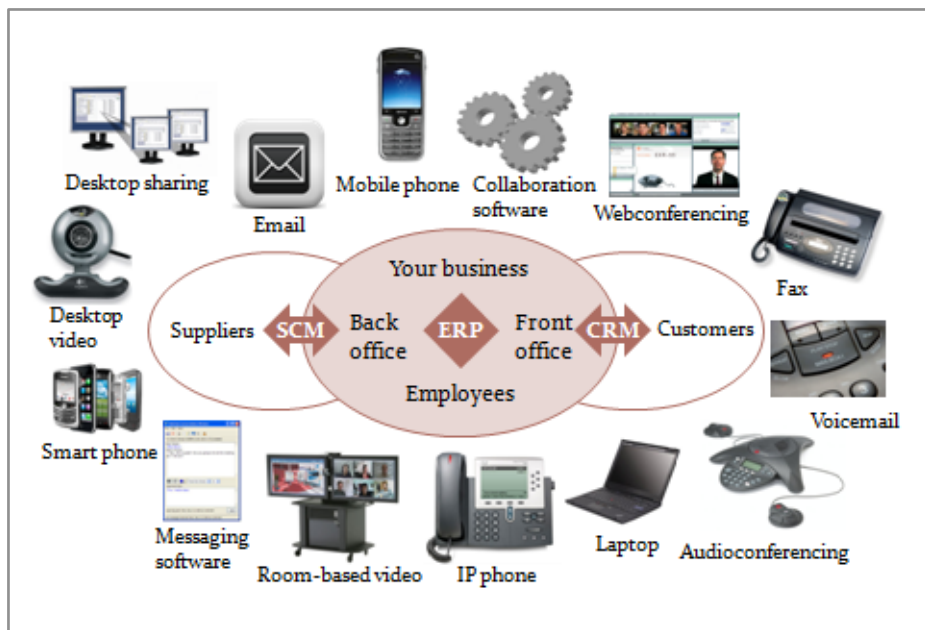
Introduction: Collaboration Creates Competitive Advantage

Many companies are becoming extended enterprises. These global, networked organizations are comprised of internal workers as well as suppliers, partners, vendors and customers. The best have a flexible structure designed to move rapidly in the face of competitive pressure and a real-time changing business environment. To maximize productivity, organizations need project teams that can quickly assemble from all parts of the company, often in multiple geographic locations, and then be disassembled and reallocated as business dictates. Decision-making processes and communications must be as distributed and dynamic as the work force. This kind of collaboration, to be effective, will require a new medium: pervasive video.

To enable workers to collaborate and communicate more effectively, IT organizations have deployed a wide variety of applications (see Exhibit 1, below). Most companies have yet to realize the full potential of collaboration. This is because legacy 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 manageability and effectiveness of real-time collaboration by making the entire organization more agile and responsive. UCC brings all of a worker's collaboration tools together under a single management interface, allowing the user to seamlessly switch between the various modes of communication based on preference.

Exhibit 1: Communications Needs of the Extended Enterprise



Source: ZK Research, 2012

ZK Research
A Division of Kerravala
Consulting

zeus@zkresearch.com

Cell: 301-775-7447
Office: 978-252-5314

*Influence and insight
through social media*

In conjunction with this shift in work style, UCC has evolved over the past several years, and sits on the precipice of another major shift.

This transition will change UCC from a technology-centric to a people-centric collaboration tool. The key to this shift is the pervasive use of corporate video. Video can provide a greatly enhanced experience and, over time, 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.

Video can provide a greatly enhanced experience and, over time, will overtake voice as the primary communications medium for business workers.

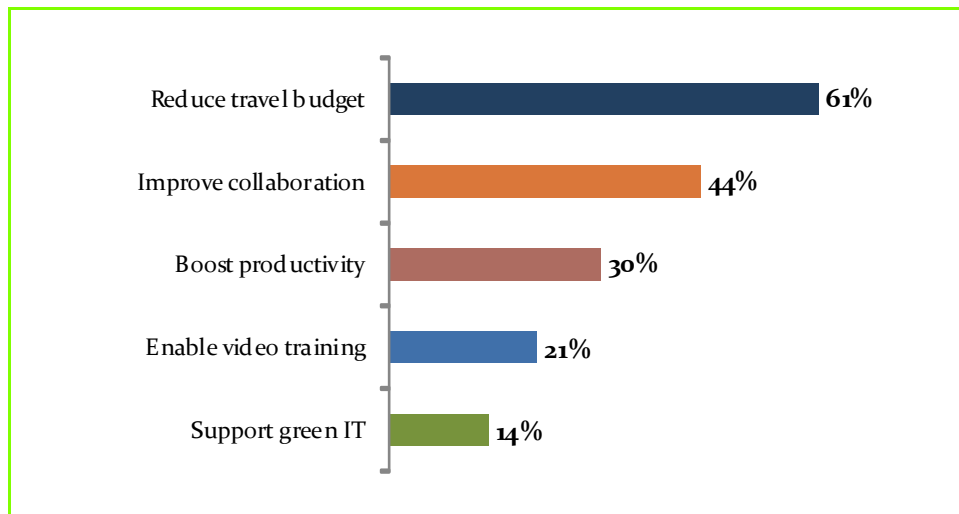
Organizations that want to leapfrog competition should understand the various use cases for video and continue to make it a pervasive technology.

Section II: The Increasing Benefits of Video

Enterprise video was introduced largely as a replacement for travel (see Exhibit 2, below). However, as companies get comfortable with video, the value proposition has moved past cost savings to productivity improvement, and ultimately to agility and competitive advantage through modification of existing processes. For example, live video events increase audience engagement and participation, critical decision-makers can use video meetings to spend less time away from the office, and sales can increase face time with key customers or prospects. Video enables communication to expand past audio and print. The visual medium allows more information to be conveyed to participants.

A number of verticals are also creating video-enabled business processes (VEBPs), which leverage the visual medium. Examples include retail customer engagement, medical consultation, on-demand technical experts, 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 process around video will find new ways to compete and leapfrog competition. Those that do not run the risk of falling behind, and suffering rapid customer and employee loss.

Exhibit 2: Top Drivers of Video Adoption



Source: ZK Research, 2012

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.

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 that participate in video sessions regularly, ZK Research estimates that, in general, retention rates are 38 percent higher with video than with voice alone (Exhibit 3).

Exhibit 3: The Business Benefits of Video

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

Source: ZK Research, 2012

Recorded video sessions can also be used for on-demand training for participants that missed a session, or want to review it because they did not understand or missed some critical points.

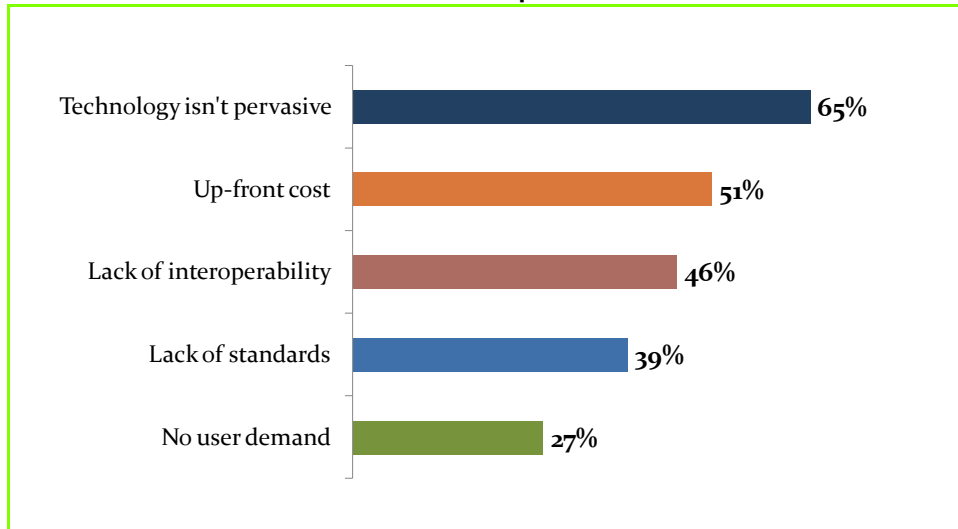
We live in the most visually-oriented society ever. Many consumer-oriented social sites such as YouTube and Facebook have made video commonplace in society and have broken down many of the historical objections to the technology. Because of improvements in processing power and network and display technologies, the number of video-enabled devices has exploded over the past few years. Today's devices have a great quality of experience, a key to driving video utilization rates.

Video has a very strong, multifaceted value proposition. Despite this, adoption struggled. Video was viewed by many as a "nice to have" technology instead of a "need to have." And video traditionally was difficult to use, requiring long lead times to set

up. ZK Research shows that, on average, a legacy video system took approximately 30 to 45 minutes of IT time to start a call. This delay frustrated users and overshadowed video's benefits.

Additionally, video communications presented a number of challenges for IT. Often, IT had to over-provision WAN links to avoid latency and jitter that degraded quality or limited resolution, and resulted in a suboptimal experience. However, the biggest barrier to pervasive adoption of video today is the lack of interoperability among video communications systems (see Exhibit 4, below).

While there are hundreds of millions of video end points and applications, many are deployed in discrete islands. They are not interoperable. For video, interoperability refers to the ability for any system to call any other regardless of manufacturer, bandwidth availability, specific device capabilities, or other factors such as the compression.

Exhibit 4: Barriers to Broader Video Adoption

Source: ZK Research, 2012

Section III: The Road to Pervasive Video

To become pervasive, video must become as easy as making a phone call. When people make phone calls, they don't worry about the type of phone on the other end or what provider the other phone uses. They simply dial a number and it works. The same thing needs to happen with video both as a corporate tool and as a consumer tool. Users should be able to connect to any other video end-point over any network, no matter the device. This benefits video in the following ways:

- **Video will become the preferred spontaneous communications tool:** Corporate video is primarily used in boardrooms or conference rooms to allow groups of individuals to communicate. These are typically prescheduled meetings conducted on a regular basis. Pervasive video would mean more use not only in room-based systems, but on laptops, tablets, smart phones and other video-enabled end points. This would enable video to be a spontaneous communications tool as workers can reach who they want, when they want without concern for interoperability.
- **The value of video will grow for everyone:** Interoperability will drive pervasive video. ZK Research estimates use of corporate systems will jump from the mid-teens to north of 70 percent, providing a better ROI for money already spent.
- **Better integration with other collaborative applications:** For years software companies have been building advanced voice features like

click-to-call into business applications. While these capabilities exist for video, the software industry is lukewarm at best to this concept. The reason is that without pervasive video, the effort required to integrate video features, such as click-to-video, wouldn't provide a high enough return because of limited use. Pervasive video will create value not just for the communications industry, but for the IT industry as well.

- **Better integration with corporate directories and presence engines:** One of the criticisms of video is that there is no directory to help users understand who has video and who doesn't. While this critique is fair, the capabilities are there to integrate with almost any directory or presence service. Pervasive video will create greater directory structures, allowing consumers and workers to quickly identify who has video calling enabled, making video calling simpler.
- **Video will go mobile:** Pervasive video means every camera-enabled mobile device can connect to corporate meetings. Users can have video capability not just in the office, but anywhere. Home office, airport or hotel — corporate workers could keep in touch using the richest possible communications tool.

The first step to enabling pervasive video is attaining basic levels of interoperability for video calling through development and implementation of standards. There are a number of standards today, such as H.264, developed by the ITU-T, and MPEG. But not all standards have been adopted by all vendors — limiting the value of the video ecosystem.

Section IV: Mandatory Standards and Vendor-Established APIs

Achieving pervasive video requires an effort from the entire technology industry. No one vendor, no matter how large their market share, can accomplish this in isolation. A primary reason this has not occurred is a misconception that standards stifle innovation and commoditize the value of products and services. Nothing could be further from the truth.

Standards-based interoperability removes much of the risk in deploying video, which in turn will drive adoption. Increased adoption will create a significantly larger install base of customers, attracting a larger ecosystem of solution providers. Software vendors, IT solution providers, and in-house developers would be attracted to the larger install base as video becomes a mainstream corporate collaboration tool.

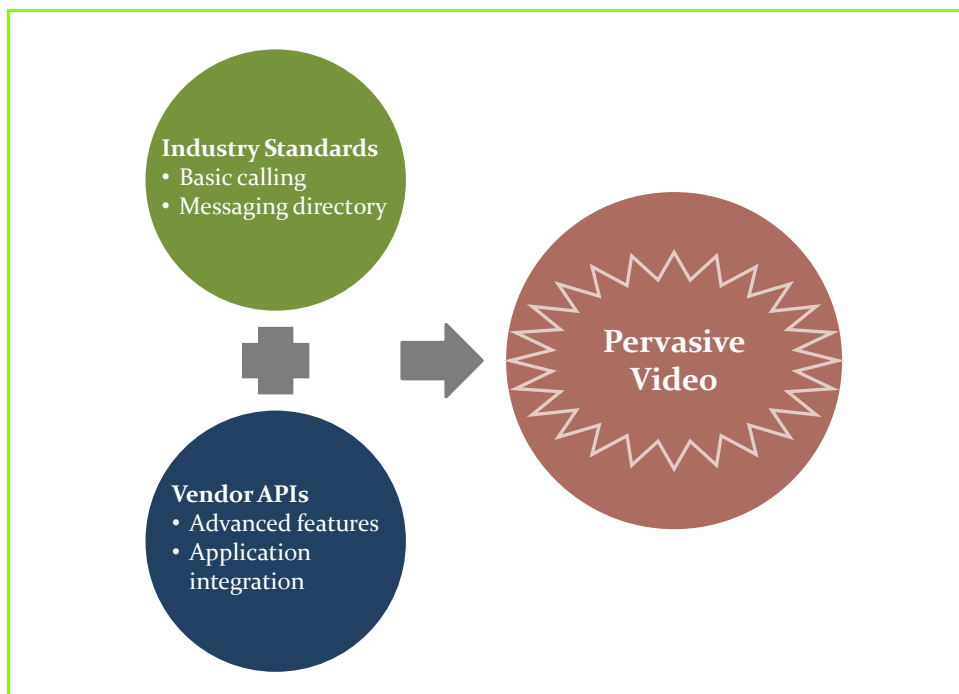
The mobile phone industry is a great example of this. Basic calling from phone to phone works seamlessly today and has created a massive market opportunity for applications vendors, mobile Web sites and other advanced functions. In fact,

innovation in mobile phones happens so fast, users typically upgrade phones as soon as their contract ends. This is because standards and interoperability raise the value of the entire ecosystem — consumers, hardware vendors, software companies and service providers all benefit.

Achieving pervasive video is more than just an interoperability issue. Interoperability enables video-enabled endpoints and applications to connect, but video also needs to become knit into the fabric and culture of the workplace. So, while industry standards developed by credible standards bodies will enable basic interoperability, there is a second component required to achieve pervasive video.

The second element needed to achieve pervasive video is vendor-established APIs. Each vendor must provide functionality above and beyond the standard. This extends functionality beyond basic interoperability and creates additional features to improve the overall user experience. This will also enable integration with third-party applications and vendor-specific features.

Exhibit 5: The Two Components of Pervasive Video



Source: ZK Research, 2012

The following explores how mandatory standards and vendor-established APIs could work.

Industry Standards Developed Through Credible Standards Bodies

This would establish a common set of features considered *basic* across the industry. In telephony world, this is the ability to call another individual, send a text message or leave a voice mail. For video, the following would be a list of what's considered basic interoperability:

- Video call set-up
- Video call termination
- Messaging services
- Handshaking, to determine optimum video resolution

Development of standards should be through a credible, independent, nonpartisan standards body, such as the Internet Engineering Task Force (IETF). This ensures the highest level of objectivity and a willingness to do what's best for the industry.

This, of course, will only be successful if the majority of vendors in the video industry agree to adopt these standards and then continue to develop them as new features are required.

Vendor-Specific Application Programming Interfaces (APIs)

Vendors should provide a rich set of open APIs to appeal to a broad set of ecosystem partners. This enables application developers, in-house programmers and other technology partners to interoperate with the video system and build value-added services that sit on top of the video platform. Using the mobile phone analogy, all mobile phone providers follow a set of standards to allow calling, but other companies build specific applications for each phone. The following functionality would be enabled through vendor APIs:

- Click-to-video applications
- Video integrated into business applications such as CRM or ERP tools

- Management software
- Enhanced functionality to add new features
- Vertical-specific applications that rely on video for a value-add
- Security features

Each vendor will have its own set of unique APIs depending on target market, historical strength, market share, etc. It's important to note that the APIs should be accompanied by a developer network that can provide technical support, testing services, and collaboration with other companies that want to leverage the ROI or understand new functionality. This is very common in the software world, and is increasingly common with communications.

The use of APIs protects the value of the differentiated capabilities of the solution provider. It can control the capabilities available via the API and, through licensing terms, who can access the APIs. This helps the vendor monetize investments made in value-added functions.

To achieve pervasive video, it's critical that video solution providers be both open and standards-based to maximize value. The terms "open" and "standards" are often used interchangeably but mean very different things:

- Being *open* means creating the ability for third-party partners, such as customers, software vendors and technology partners, to interface with the video solutions through a set of APIs.
- Being *standards-based* refers to building products on a set of protocols or technology specifications as outlined by an unbiased, neutral body. If every vendor follows the standards, interoperability is assured.

It's important to note that some vendors actually co-opt the standards process by having an "enhanced implementation" that adds proprietary extensions that actually break interoperability.

Because of the difference, it's possible to be closed and standards-based or open and proprietary. Ultimately though, video solution providers should strive to be both open and standards-based.

Section V: Conclusion and Recommendations

The era of video has finally arrived. After years of being a niche, high-end business tool, video is rapidly becoming a mainstream corporate productivity tool. For the value of video to be fully realized, the video industry needs to make a commitment to interoperability built on openness and industry standards. This will pave the way to pervasive video, raising the value exponentially for customer, vendors and other video ecosystem members.

Achieving the video utopia of having any video system able to call any other requires the industry to determine, and then implement, a set of standards through credible, nonpartisan bodies. It also means solution providers must provide a rich set of vendor-specific APIs that are open. Based on this, ZK Research makes the following industry recommendations:

- **Customers should not give up the power of choice:** When reviewing video solutions, insist on open, standards-based solutions. Be aware there is a difference between being *open* and *standards-based* and insist that your solution provider is both for maximum value.
- **Video solution providers need to commit to standards-based interoperability:** Shed conventional thinking that locking-in customers helps protect the base. Interoperability will cause the market for video to explode; and then differentiation will be based on enhanced features and third-party ecosystems, and not proprietary features.
- **The entire video ecosystem should focus on building video-enabled business processes:** It's time to raise the bar on video and make it a critical component of collaborative or customer-facing business process. Video can bring an extra layer of value, and it's time to fully leverage that.