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*50 Years of Growth, Innovation and Leadership*

# Overcoming the Challenges of Pervasive Video

## Moving Video Collaboration to the Cloud

A Frost & Sullivan  
White Paper

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## INTRODUCTION

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Few would argue that video conferencing has come a long way since its inception. Technology improvements combined with the availability of high-speed IP networks is finally allowing enterprises to get serious about adopting video as a routine communications tool. The benefits of video conferencing—from travel reduction to ubiquitous accessibility—have become irresistible for businesses of all sizes. For IT decision-makers and business leaders, video conferencing represents a tremendous opportunity to reduce costs, speed decision-making, and improve work/life balance—if it is done right.

For several years now, video conferencing has remained a challenging technology to deploy, use, and manage for large corporations. Small and mid-sized businesses that want to use video collaboration have often been restrained by lack of financial wherewithal and internal IT resources. Expensive endpoints and infrastructure, complex management, and lack of interoperability have largely made video conferencing a loosely connected technology island with adoption limited to deep-pocketed, large organizations.

Thankfully, in recent years, video conferencing solutions have evolved. The next generation of cloud-based services is addressing the complexity and cost issues. Cloud video conferencing services are enabling pervasive video by allowing people to connect with each other any time, from any place, over any video-enabled device—conference rooms, desktops or mobile devices.

This white paper discusses why businesses seeking a competitive edge should deploy video conferencing. It also considers the pain points associated with today's video conferencing deployments and how they can be resolved by moving to the cloud. Lastly, this paper discusses how the Blue Jeans cloud video conferencing service is addressing these challenges to make successful video conferencing a reality for businesses of all sizes.

## WHY VIDEO, WHY NOW

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Gone are the days when people always worked or met in physical offices and could routinely meet face to face with others in the same room. Today's business world is starkly different—with a workforce that is distributed, virtual, global, and mobile. Work teams are spread across the globe and situated in varied work environments—at offices, branch locations, homes, hotels, customer/partner sites, on the road, and in coffee shops. Despite this, the need to stay connected at all times is greater than ever before.

Face-to-face meetings, while commonly perceived as the best experience, are often impractical. Instead, conference calls and online meetings have taken over. Voice-only conferences miss out on the richness of visual communications and are therefore less productive and less effective. Frost & Sullivan research shows that “organizations that collaborate better perform better.” Better performance is directly linked to the degree and sophistication of an organization's collaboration tool set. Advanced collaboration tools, such as video conferencing and Web-based content sharing, enhance business through more effective communications, improved engagement and participation in meetings, and better information retention.

*Frost & Sullivan research shows that “organizations that collaborate better perform better.” Better performance is directly linked to the degree and sophistication of an organization’s collaboration tool set.*

*In a recent Frost & Sullivan survey of C-level executives, video conferencing ranked high among key enterprise communication applications for awareness and usage. Ninety percent of respondents indicated that they plan to either maintain or significantly increase the use of video conferencing in their organizations.*

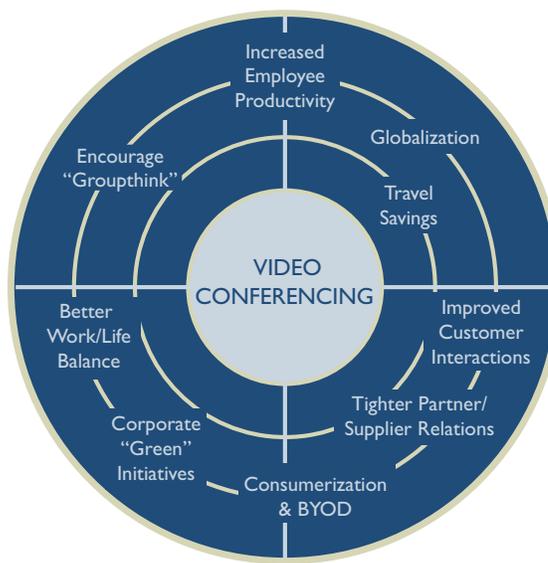
For B2B communications with customers, partners, and suppliers, the high-touch impact offered by video conferencing is particularly critical. It prevents the latency in communications typically seen with voice- and e-mail-only interactions and results in improved business processes, such as faster time to market, effective marketing campaigns, and shorter sales cycles, allowing businesses to improve the top line.

The demand for video communications is growing by leaps and bounds among businesses. According to recent Frost & Sullivan research, the market for video conferencing systems and services stands at \$3.2 billion and is forecast to almost double to \$6.3 billion by 2016. This high-growth market represents an escalating demand to use video for all aspects of business communications.

Several emerging trends are making video conferencing a more compelling business tool. Technology enhancements such as availability of video-enabled desktops, notebooks, smartphones and tablets; high-definition (HD) video; social media integration; and rich content sharing are expanding the use of video conferencing. A growing development focus on ease of use has significantly improved the user experience. In addition, the exponential increase in consumer usage of video communications is removing cultural inhibitions and resulting in a burgeoning demand for video at the workplace.

In a recent Frost & Sullivan survey of C-level executives, video conferencing ranked high among key enterprise communication applications for awareness and usage. Eighty-five percent of the respondents indicated that they are aware of the benefits of video conferencing, with 58 percent using it within their companies. Ninety percent of respondents indicated that they plan to either maintain or significantly increase the use of video conferencing in their organizations.

**Exhibit I  
Video Conferencing Radar Screen: Factors Driving Adoption**



## MOBILITY REDEFINES VIDEO CONFERENCING

Among the drivers for video conferencing, mobility is widely perceived as the biggest disruptor. Mobility now pervades our personal and business lives and continues to transform how we work, live, and communicate. A fast-growing population of video-enabled smartphones and tablets, expected to reach a billion users in 2013, is opening up new avenues for video conferencing.

The influx of mobile devices and apps in the workplace has led to the unstoppable Bring Your Own Device (BYOD) trend. A major development, with the proliferation of smartphones and tablets, is the availability of larger and higher-resolution displays along with front- and rear-facing cameras offering face-to-face and “see what I see” video options. This enhanced capability has essentially turned every smartphone and tablet user into a video-enabled user, thereby opening up floodgates for video adoption and usage. These features, combined with Wi-Fi and 4G-enabled options, can enable quality video connections for all.

While hardware-based video conferencing systems will continue to be widely used in group environments such as meeting and conference rooms, there is a growing consensus that video conferencing will move away from a set of elite conference and boardrooms to “video for everyone” over tablets and browser-based clients, and over low-cost systems targeted at smaller conference rooms. Frost & Sullivan expects that joining conferences from mobile devices in 2013 will increase two to three fold over last year.

## VIDEO CONFERENCING—COMPELLING BENEFITS, FORMIDABLE CHALLENGES

While the benefits of video conferencing are apparent, users have struggled with certain limitations.

- **High Costs** – Expensive hardware-based devices and infrastructure components have kept video conferencing deployments confined to a select few conference rooms. This has limited the access to a handful of users within an organization. Additionally, hardware-based multipoint bridges require customers to purchase fixed-capacity dedicated servers, leaving no room to flexibly “scale on demand” as user needs grow.
- **Complex to Use** – Users have often required significant IT intervention and handholding to launch calls and connect to others, especially outside the corporate firewall, resulting in less than optimal user experiences and lower utilization rates.
- **Lack of Interoperability** – Overcoming the barriers of proprietary technology employed by legacy providers has posed a serious challenge to inter-company or B2B video conferencing, especially when connecting over different types of endpoints.
- **Complex to Manage** – IT administrators have struggled to resolve the bandwidth implications and management issues associated with large-scale video conferencing deployments.

*The influx of mobile devices and apps in the workplace has led to the unstoppable Bring Your Own Device (BYOD) trend. Frost & Sullivan expects that joining conferences from mobile devices in 2013 will increase two to three fold over last year.*

Making video simple to use and manage is an imperative for any organization that is evaluating a large-scale video conferencing roll out. Cloud services offer customers the opportunity to outsource the complexity and take away the burden of delivering reliable, interoperable, and flexible on-demand video conferencing.

### **BENEFITS OF CLOUD-BASED VIDEO CONFERENCING**

For businesses looking to implement video, interoperability and interconnectivity is fast becoming a table stake. Video conferencing in any business setting must enable effortless and reliable connectivity with both the internal as well as external value chain. Mobility and BYOD has further changed the equation—users want their device of choice to connect with anyone over any network. There is a pressing need today among organizations of all sizes to implement video conferencing that is interoperable, easy to use, simple to manage, and cost-effective enough to be extended to a large number of users.

Cloud services enable B2B communications over any device or network, maximizing the Return on Investment (ROI) and making video conferencing as simple and predictable as a phone call. Moreover, they address the traditional operational and CapEx challenges faced by customers. The benefits are particularly attractive to organizations without the internal resources or willingness to own and maintain the equipment. The concept is simple and compelling—rather than invest in expensive on-premises infrastructure, such as multipoint bridges and gateways, a business can simply sign up to use video conferencing as a service hosted by an expert third-party provider.

#### **Exhibit 2**

#### **Video Conferencing: Transformation through the Cloud**

<b>BEFORE</b>	<b>AFTER</b>
“Technology Island”	Anytime, anywhere connectivity
Large upfront CapEx	OpEx-based flexible subscription pricing
High TCO (Total Cost of Ownership)	Affordable video conferencing for all
Complex management/administration	Limited/no IT involvement
Fixed-capacity systems; not scalable	Scale up or down to accommodate changing user needs
Limited user access	Ubiquitous access over varied devices and clients
Limited interoperability	Ease of intra- and inter-company communications
Shorter technology cycles means frequent and expensive upgrades	Technology always remains current
Extensive deployment and implementation time	Speedy deployment; customers up and running in a matter of days instead of months

## BLUE JEANS—A SIMPLE, FLEXIBLE AND INTEROPERABLE VIDEO CONFERENCING SERVICE

Blue Jeans offers a cloud video bridging service that tackles the complexities associated with video conferencing, making it easy to use, scalable and interoperable with a wide range of third-party hardware and software. Users get their own virtual “meeting room,” where they can schedule, host, and manage video conferences via an intuitive browser-based User Interface (UI).

Unlike other services that simply deploy legacy hardware-based bridges in the cloud, Blue Jeans has architected a multipoint solution that leverages software and off-the-shelf hardware to deliver a high-performance virtual bridge in the cloud. This flexible approach is particularly relevant for organizations that are seeing a surge in mobile and desktop users, in addition to conference rooms, and require scalable and affordable hosted services.

Blue Jeans is tackling a major market need to address the gap between high-end and often proprietary, enterprise-class video conferencing products and popular consumer video chat clients. It is unique in that it can bridge any number of different video and audio protocols, enabling a truly interoperable service that can connect users with internal and external participants for B2B and B2C communications over a wide spectrum of devices and clients.

Blue Jeans is the only service in the world that brings together diverse endpoints from Cisco, Polycom, LifeSize, Microsoft Lync, Jabber, Google, any Web browser, iOS devices, and phones into a single meeting.

A growing number of video meetings today require high-quality content sharing in addition to interactive video for effective collaboration. To that end, Blue Jeans delivers meetings with video and content sharing equality. Blue Jeans offers video and content sharing as dual HD streams. This provides simultaneous high quality for both the interactive video and shared content across all supported room, desktop, and mobile platforms. Additionally, Blue Jeans has a “slider” layout control option, which allows meeting participants to adjust on-demand the relative size and shape of the video and content windows, and to be able to zoom in or out on the content as desired.

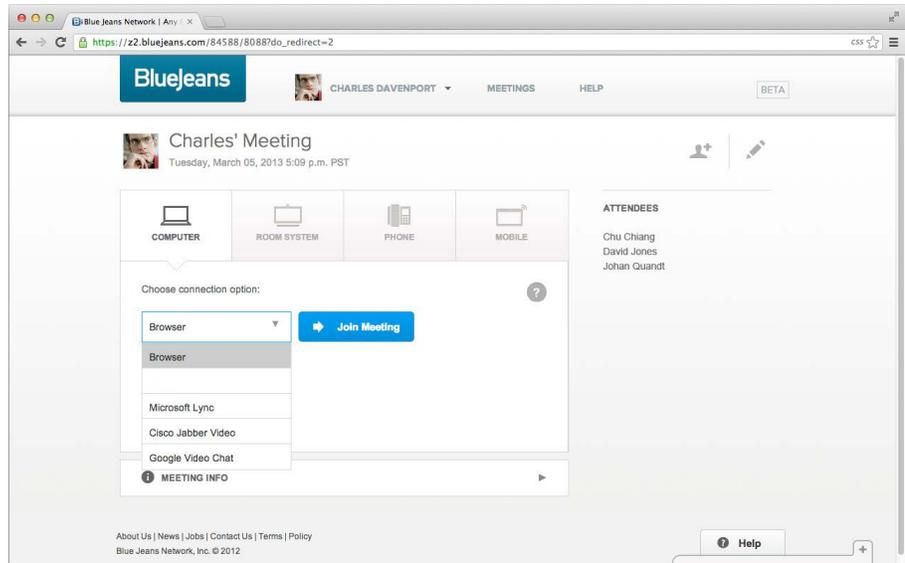
*“We have just started using Blue Jeans and already see immediate ROI. We use it for better coordination across my worldwide sales team and inclusion of customers across time zones in video-enabled collaboration sessions.*

*Blue Jeans is easy to use, and its cross platform and the mobile multi-client integration is second to none.*

*Our company is a high-growth startup. We need tools that just work and have immediate impact to our bottom line. Blue Jeans just ‘fit’!”*

**Bob Baughman**  
VP Worldwide  
Sales and Business  
Development  
Calxeda

### Exhibit 3 Blue Jeans Video Conferencing: Flexible Connection Options



### Exhibit 4 Blue Jeans Screen Sharing Slider: Dynamically Scale Video and Content to Enhance the Meeting Experience



## CONCLUSIONS

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Businesses are undergoing a fundamental change in their expectations from technology. Business leaders across all functional areas realize that advanced video collaboration is capable of game-changing business transformation. Video conferencing can reduce costs, spur revenue growth, speed decision-making, reduce time to market, and often generate newer, more effective ways of doing business.

Growing video conferencing usage with individuals outside the organization has shifted the limelight to any-to-any connectivity and ubiquity. The growth of mobile devices as individual video endpoints is further raising the demand for video conferencing, both point to point and multi-point. Traditional video conferencing deployments that rely on fixed-capacity, hardware-based, on-premise servers can't keep up with the growing demand. As a result, users are looking for more flexible and cost-effective options.

The availability of software-based solutions and cloud services, coupled with low-priced devices, is extending the reach of video conferencing to new organizations and users. There are several inherent operational efficiencies and business cost-savings to be gained from cloud video conferencing. IT managers and business leaders should consider embracing cloud video collaboration to increase business agility and develop a unique competitive edge.

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