

A POLYCOM WHITEPAPER

The Opportunity for Service Providers to Grow Business with Polycom High Profile

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Introduction

A recent technological breakthrough in video compression technology has created a tremendous opportunity for service providers who deploy Polycom solutions to dramatically increase sales and adoption rates for video conferencing and telepresence solutions.

The Polycom implementation of the H.264 High Profile video compression standard (part of the ITU-T H.26x family) for the first time effectively details how to compress video, so that it can be transmitted efficiently across real-world networks, reducing the required network bandwidth for video by up to 50 percent.

The ability to preserve video quality and dramatically reduce the required network bandwidth impacts all areas of video networking. Experts agree that the shift to High Profile is bigger and more important than the previous video technology breakthrough—the shift from H.263 to H.264 in 2003.

For the service provider this creates tremendous advantages and opportunities as outlined below.

Competitive Advantage

The High Profile revolution in video conferencing now enables service providers bidding Polycom solutions to gain a distinct advantage over their competitors. Since they can now offer a solution for video conferencing that requires up to half-as-much bandwidth as other solutions, service providers leveraging Polycom technology can either:

- Provide a significantly cheaper proposal when quoting for new business; or
- Provide an enhanced solution that effectively delivers high definition video conferencing and telepresence for the same price as a competitor's standard-definition offering; or
- Design a scalable solution that offers video conferencing services to a much enlarged group of end users than previously possible

Resolution / Frame Rate	H.264 Baseline Profile (Industry Norm Today) Call Speed in kbps	H.264 High Profile Only from Polycom Call Speed in kbps	Polycom Bandwidth Reduction
CIF30	128	64	Up to 50%!
4CIF30	256	128	
4CIF60	1024	512	
720p30	1024	512	
720p60	1512	832	
1080p30	2048	1024	

Figure 1: Bandwidth consumption for different video quality levels with Baseline and High profiles

This competitive advantage can be employed in the following opportunities:

- Creating new sales opportunities with customers who have not yet deployed video conferencing
- Creating additional sales opportunities with customers who have already deployed video conferencing

Creating New Sales Opportunities with Customers Who Have Not Yet Deployed Video Conferencing

The High Profile revolution is driving new opportunities with a whole new tier of customers who are becoming interested in deploying video conferencing for the first time. These new customers can be broken down into two groups:

- New (Greenfield) customers, being attracted for the first time by the enhanced quality of the new video conferencing capability, and the potential for implementing their video conferencing designs at significantly lower investment levels
- Previous customer opportunities where an interest was shown in video conferencing but where the submitted cost of the proposal was too high for the customer

In many cases, proposals were rejected because the network upgrade necessary to make video conferencing work was simply too high and took the project over budget.

Analyzing this further, some customers may have been designing a new network where they required both new transport links as well as the video conferencing equipment, the combined cost of which was too high.

Others may have had existing networks over which they wanted to run the video conferencing network. These customers may actually have been able to afford the new video conferencing hardware, but upon discovering that the bandwidth in their existing network was insufficient to support their existing network applications as well as the new video system, they were not able to fund either the upgrade of bandwidth in the existing network or the redesign of the network to better facilitate the video conferencing requirements alongside their existing business applications.

For both of these scenarios, High Profile dramatically lowers, if not eliminates, a key barrier to entry for visual communication, enabling broader deployment in more organizations. With the High Profile advantage, service providers are now able to immediately re-contact known customer leads, update them on the new technology and reduced cost, and close deals with a whole new group of customers for whom the dream of video communication was previously too expensive but is now unexpectedly within reach. In marketing terms, High Profile dramatically extends the total available market (TAM) open to sales opportunities.

Example: Winning Business by Overcoming Budget Restrictions

Illustrative Case Study

An international customer has an ongoing requirement for telepresence in three sites: New York, New York; London, England; and several sites within India. In previous proposals examined by the customers the cost of bandwidth required for video conferencing in London and New York were competitive and acceptable; however, the cost of the bandwidth required to connect the sites within India was itself more than the sum of all the other network connections for the entire project, making the proposal unacceptably expensive and over budget.

A recently revised proposal based upon Polycom telepresence with High Profile dramatically reduced the bandwidth requirement in the hard-to-get-to network locations within India, slashing the cost of the bandwidth required and bringing the overall project within the allowed budget, thus making the project possible.

Creating New Opportunities within Existing Video Customers

The High Profile advantage can also create additional revenue opportunities for service providers with an installed customer base of video-conferencing users. Such customers have already taken the initiative to invest in the benefits of video conferencing and many will be either already planning enhancements to existing video conferencing infrastructures, or open to invitations to explore further video conferencing capability at substantially reduced cost.

In both cases, High Profile allows CIOs to limit or avoid costly IP network upgrades when expanding visual communication deployments. IP network upgrades are a major contributor to the overall deployment cost, and relaxing the bandwidth requirements immediately reduces the number and scope of necessary upgrades to ready the IP network for video traffic. Lower upfront cost leads to shorter ROI.

Where Polycom video solutions have already been deployed by service providers, either as part of a hosted or unmanaged service, customers can often see the benefits of High Profile simply by upgrading their software.

For example, most existing Polycom® HDX® room telepresence solution users can move to High Profile simply by upgrading their HDX software and immediately enjoy better picture quality. Since most video calls today are placed at 512-768 kilobits per second, the upgrade will mean moving from standard definition to high definition video, and freeing bandwidth in the network.

Additionally, an upgrade to an existing Polycom RMX® 2000 or 4000 series enables H.264 High Profile within the hosted service provider environment, or at the customer premise for both managed service or customer-managed multipoint capability. The RMX platform enables all endpoints, both those that support High Profile as well as those that don't, to join the same conference while efficiently transcoding between speeds and resolutions to deliver the optimal experience to the end user.

For network administrators, therefore, High Profile is now a green light to roll out video to larger user groups. In larger organizations the network resource required to run 1000 video calls in the past is now sufficient to support up to 2000 video calls. Since High Profile is supported in all HDX room telepresence and immersive telepresence systems (including the HDX 6000 solution), the benefits can be enjoyed from small rooms and huddle systems all the way to the boardroom.

Customers who have invested in alternative video conferencing solutions—and who are either unhappy about the reliability of the older solutions or are concerned about investing further in technology that is no longer market-leading—may also be keen to explore opportunities for achieving higher definition and better QoE with existing bandwidth but from an alternative vendor. In this sales scenario, the advantage of swapping technology vendors can, by default, provide increased network capacity which benefits all users across the network, not just those using video conferencing: when customers switch to a Polycom video solution, their video network can use up to half-as-much bandwidth, freeing capacity for other applications and users on the network.

Enhanced Quality of Experience

High Profile offers customers the flexibility to choose from either deploying more video end points on the network, or enhancing the definition, resolution, and quality of existing video solutions by almost doubling the bandwidth at their disposal within the existing network infrastructure.

For existing customers or new customers who chose to go for better quality of experience (QoE) rather than the larger user groups, the enhanced QoE soon becomes a rapid enabler of further adoption within the organisation. As users experience better audio and video, and perhaps for the first time enjoy the additional subtleties of non-verbal communication that can now be experienced in a High definition video call, the duration of video calls becomes longer, video meetings become more effective, and the willingness of users to meet face-to-face-over-video instead of face-to-face by travelling to a distant location noticeably increases. As travel budgets decrease naturally, IT and Finance departments see enhanced demand for video conferencing capability coming from within the organization, and are able to reallocate unused travel budget for purchasing additional video conferencing services from service providers. Either way, over time, service providers stand to benefit.

Although separate from Polycom's implementation of High Profile, it should be noted that another distinct market advantage for enhancing the QoE comes from the unique patented Polycom Lost Packet Recovery™ (LPR™) algorithm, part of the "Polycom® RealPresence™ Platform"¹ that powers video conferencing infrastructure. In short, the Polycom LPR capability promotes high-picture quality, even when networks become congested and loss or delays in video data can otherwise threaten the quality of images perceived on screen. The combination of Polycom LPR and High Profile technologies enable service providers to provide video conferencing solutions with distinct bandwidth advantages while still offering superior levels of reliability and QoE unrivalled by any other vendor solution in the market place.

Changing the Rules for Network Design: Cost Savings in a Hosted-Managed Solution

For service providers, Polycom High Profile can significantly change the rules and cost of video network design, enabling a cheaper and more flexible overlay solution for management in hosted video-conferencing solutions.

For example, High Profile can relax the bandwidth requirements for connecting hosted conferencing servers to the IP network. Conferencing servers, such as the Polycom RMX 2000 and 4000 solutions, are in the core of the hosted visual communication network, and typically must therefore be connected at very high bandwidth. If the conferencing server supports 80 HD calls at 1 megabit per second each, it has to be connected in a part of the IP network that can carry 80 megabits per second. High Profile, however, relaxes this requirement and allows a similar hosted conferencing server to deliver the equivalent quality and scale over a link with just 40 megabits per second, thus saving a service provider costs, which would either have to be passed on to the customer, thus potentially making a proposal too costly, or would otherwise have to be swallowed by the Service Provider within the operational costs of the solution and hence reduce profit margins.

For hosted video conferencing solution scenarios, where upgrading the essential part of the IP network to carry additional video management traffic would otherwise be necessary but not affordable, High Profile now enables service providers to win bids which would previously be lost by making required management communication possible on the existing bandwidth provided.

The Future

Over the next few years the usage of video conferencing in society, both for business and private purposes is expected to rise dramatically. Many experts predict that we are at the tipping point of a new era of communications, where video conferencing has the potential to dramatically reshape many aspects of society. The new and increased demand for video conferencing has come about for many reasons—the H1N1 (swine) flu, SARS, volcanic eruptions and other acts of nature, the spiralling cost of fuel, global warming and the need for carbon footprint reductions, rising costs of air travel, a worldwide recession and dramatic cutbacks in travel budgets—all of which are combining in the "perfect-storm" for visual communications.

As the focus has shifted to alternatives to business travel and in finding new ways of conducting effective business meetings, new technology is revolutionizing the costs, the effectiveness, the ease-of-use, and perhaps surprisingly, the enjoyment factor of video conferencing: for the first time, perhaps, video conferencing is becoming fun.

And it is mainly service providers—those organizations that deliver and control the networks and infrastructure over which video conferencing takes place—that stand to benefit from the coming revolution in communications.

Although Polycom is world-famous for its business audio conferencing systems—almost everyone in business can identify the ubiquitous triangular-shaped conference phone they use in their board room/meeting rooms—not everyone is aware that Polycom has also been at the forefront of video technology development for many years. For example, Polycom introduced the first video systems and MCU with H.264 in 2003 and first video system with stereo surround sound in 2004.

Polycom continues this technology leadership by being the first and only provider of H.264 High Profile technology today.

With a view to the future, and with a vision of enabling visual communications for the masses through service providers, Polycom continues to invest significantly in research and development of new video conferencing solutions and new technology, including new video compression techniques (such as H.264 SVC and H.265), which will further increase a user's quality of experience at a price point more businesses and customers can afford. However, perhaps most important for service providers who need to focus on their competitive advantage and their ability to support service level agreements with customers, is Polycom's recent research and development into improving the infrastructure of video conferencing, known as the Polycom RealPresence Platform.

By focusing on the infrastructure that enables world-class video conferencing (including compression techniques, automatic failover, redundancy, adaptive resource capacity, flexible network capacity, cost-effective scalability, virtualized call management, and tight integration with major UC partners) the Polycom RealPresence Platform delivers new degrees of benefits to service providers and their customers.

Summary and Conclusion

For service providers selling video conferencing and telepresence solutions, Polycom's implementation of the H.264 High Profile video compression technology immediately offers a key market advantage which can

- Increase revenue streams from both new and existing customers
- Provide tangible cost savings, enabling service providers to compete aggressively against competitive bids
- Stimulate new awareness and interest in video conferencing solutions

Learn More

For more information on how High Profile can help service providers win more video conferencing sales, please contact your local Polycom Partner account manager.

About the Authors

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End Notes

¹ For more information on the Polycom RealPresence Platform please see http://www.polycom.eu/products/telepresence_video/conferencing_infrastructure/index.html

About Polycom

Polycom is the global leader in standards-based unified communications (UC) solutions for telepresence, video, and voice powered by the Polycom® RealPresence™ Platform. The RealPresence Platform interoperates with the broadest range of business, mobile, and social applications and devices. More than 400,000 organizations trust Polycom solutions to collaborate and meet face-to-face from any location for more productive and effective engagement with colleagues, partners, customers, and prospects. Polycom, together with its broad partner ecosystem, provides customers with the best TCO, scalability, and security—on-premises, hosted, or cloud delivered.

For more information, visit www.polycom.com, call 1-800-POLYCOM, or contact your Polycom sales representative.

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