FROST & SULLIVAN

The Benefits of High Definition Video Conferencing: The Value of 1080p

By Melanie Turek, Principal Analyst, Frost & Sullivan

In today's tough economic climate, companies are increasingly looking for ways to cut costs while expanding their reach, supporting more virtual workers, and boosting employee productivity. To achieve those goals, they need communications technologies that are easy to use, cost effective and simulate actually "being there."

Video conferencing can answer the call. But only when the technology gets out of the way—allowing participants to communicate and collaborate as clearly as they would in person, without worrying about how the system works—can it truly deliver on its promise. High definition video conferencing offers a level of audio and video quality that ensures employees and their partners and customers can communicate without boundaries, wherever they are and whenever they need to. Indeed, only high definition video conferencing ensures all employees can communicate virtually, across geographies and cultures, in a way that will make them feel as though they are all in the same room.

The good news? High definition doesn't have to mean expensive—look for systems that cost about the same as standard definition technology, but which deliver significantly higher quality and ease of use.

Today, the most advanced "high definition" video conferencing solution will deliver standards-based 1080p at 30 frames per second, and 720p at 60 frames per second; those standards will deliver the richest, most immersive video communications experience.

Here's what the numbers mean:

The key components of video quality are definition—the number of vertical and horizontal pixels displayed on the screen—and the ability to convey the motion of the transmitted image.

- *Definition* is usually described by the number of pixels that comprise the vertical dimension of an image. High definition screens will support a minimum of 720 vertical pixels and up to 1080 vertical pixels. Those pixels are typically created using a technique called progressive scan (the "p" in 1080p), in which every horizontal line of pixels is displayed on the screen one after another, from top to bottom—a method that is about twice as fast as the older interlaced mode, which alternates the lines for display, essentially refreshing the image before it can be displayed.
-
- The second important element in the quality of a viewed image is the *presentation of motion* inherent in the picture—nodding heads, raised eyebrows, and so on. Since subtle body language cues us into the real meaning behind other peoples' words, accurate picture motion is critical to any video conferencing experience. That motion, which is described in terms of frames per second, is created by displaying successive images captured by the video camera. Think flip books: the larger the number of individual images sent per second, the greater the motion resolution—and the better the appearance of the moving image overall. As a reference point, television frame rates are typically between 25 and 30 frames per second.

Of course, any high definition system should be fully interoperable with other HD and standard definition systems, to ensure organizations can leverage the new technology without losing their existing investments. Companies should also look for high definition technology that is interoperable with other forms of communications, including Microsoft Office Communications Server and other unified communications applications, to future-proof their investments.

901 S. Mopac | Building 3, | Austin, Texas 78746 USA
Tel: +1 512 347 9300 | Fax: +1 512 347 9301
Email: info@lifesize.com | www.lifesize.com

LifeSize®

© 2009 LifeSize Communications. All rights reserved. 1208