



## LifeSize Special Report

### *Why Consider High Definition over Traditional Video Conferencing?*

Traditional videoconferencing systems – those that have been available for the past 10-15 years – have provided organizations with the ability to meet face-to-face over distance. For most people the quality of the interaction has been tolerable, but not always as enjoyable or productive as meeting in person. In many cases the overall poor quality of the video, such as blurry resolution, pixelated images and low motion handling, did not make the use of the technology seamless or desirable. These were the users that opted to not use video at all or, worse, found it to be a very painful experience.

Traditional videoconferencing provides a resolution called FCIF (Full SIF) at 352 pixels x 288 lines. In order to use compression to share video, this was the maximum resolution the systems could provide on a standard display. The problem, however, is that it looked like VCR quality video or worse, and was not delivering on the promise of experiencing a meeting as if people were in the same room.

High definition video communications is a very different experience. Based on next generation technology, high definition redefines what people should expect from videoconferencing. Imagine that you have nearly 10 times the quality of VCR resolution and that you can truly see every detail of an image, whether you are half-way around the world or just across campus. Here are a few examples:

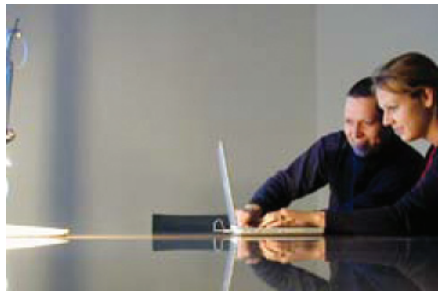
High definition video communications means that you can see many people (vs. one or two) in full 16 x 9 format on a high definition screen. You can see on the remote side if a participant's eyes are open or if they're nervously tapping their fingers; you can make out what is written on a white board or contained in presentation materials; in essence, you can truly experience the critical non-verbal cues that make a videoconference worthwhile and productive. The reason is that you will see the person in 1280 pixels x 720 lines – nearly 10X the resolution of traditional videoconferencing. Another good comparison is a digital camera. Would you want a 1.0 megapixel camera when you can buy a 4.0 megapixel camera at the same price? With traditional videoconferencing the resolution is 101,376 pixels, whereas with high definition you get 921,600 pixels!

High definition video communications makes people appear true-to-life and in the right size. People can be viewed as if they are at the end of the table and you are simply looking through a window. The concept is called visual acuity, meaning the viewing distance of a traditional videoconferencing system required you to sit 20-30 feet away from the display before your eyes could no longer see the loss in resolution. With high definition, you



can sit within 10 feet and your eyes will not discern any loss in resolution. Therefore, people are in the correct size and you can see them clearly. The result has a significant impact on the dynamics of a video collaboration as participants are more naturally engaged in two-way dialogue.

High definition video communications allows you to truly use a full high definition display. The difference here is in the aspect ratio. A standard definition television has a 4 x 3 aspect ratio and a high definition display has a 16 x 9 aspect ratio. For a traditional, non-high definition videoconferencing system to use an HD display, it will either not use the entire screen by displaying only in 4 x 3 and thus having two black bars on the left and right side of the image, or the image will be stretched across the full screen and look very unnatural. With true high definition, the video user will have up to 40% more viewing area and will leverage the full native 16 x 9 display.



Low Resolution  
4 x 3



High Definition  
16 x 9

High definition video communications will certainly be used for applications in medicine, education and other unique scenarios that absolutely demand the most in resolution. The good news is that now every business and organization can benefit and take video productivity to a completely new level by leveraging the power of next generation high definition video communications.

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