

# How to Improve Audio and Video Quality in the Meeting Room

You get summoned to the conference room and your VP of sales points to a distorted image of his best client frozen on the screen. The only information you have is that it needs to be fixed NOW.

We've all been there—dropped calls, jittery communications, or poor audio quality—during a crucial meeting. Not only are these issues annoying to deal with, but in high-stakes meetings, such as closing a sale with an important client or an executive board meeting, quality issues can be costly. The problem is that even small issues can often be difficult to pinpoint and resolve.

There are three common reasons for poor audio or visual performance and they may not be what you think. If your system isn't performing the way it should, check out these potential causes.

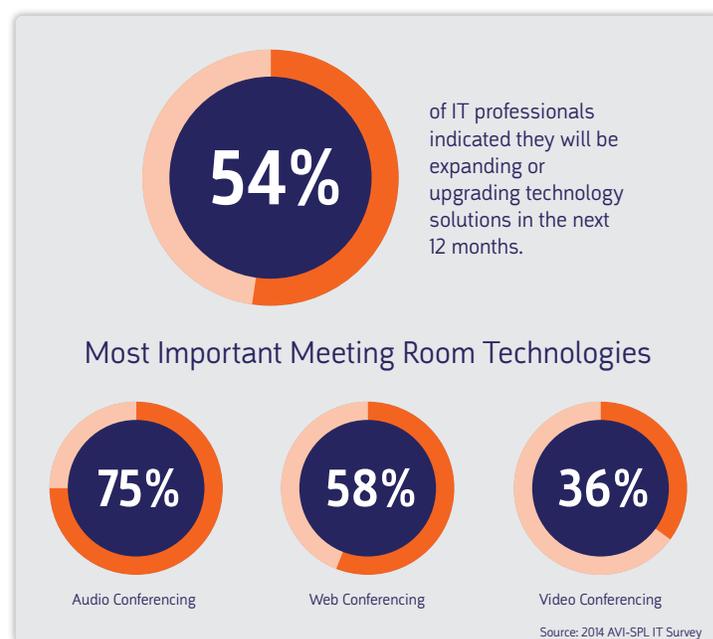
## Reason #1: Network Packet Loss

Pixelation, smearing, or image pulsing are most often blamed on low-bandwidth issues. However, most companies have sufficient bandwidth to handle the massive volumes of data traversing their networks each day. The real culprit is packet loss, which happens when the network isn't properly designed to prioritize video and audio traffic.

The trouble with voice and video traffic is that they use roughly 10 times more packets than data traffic. Because network routing elements process traffic at the packet level instead of the bit level, they develop congestion much faster when they have more packets to traffic.<sup>1</sup> When network congestion occurs, it can result in packet loss, which means that not all of the video or audio data packets arrive at their destination. Even a small amount of packet loss can noticeably affect the image quality.

To avoid network-induced quality issues, make sure your network is optimized for the demands of video conferencing.

This includes making sure you have both a high-speed network adaptor and a QoS (Quality of Service) enabled device that is configured with the right QoS tags to effectively prioritize packets. This will allow video and voice traffic to be prioritized above other traffic, such as data downloads, and enable your video conferencing system to consistently provide a high-quality collaboration experience.



## Reason #2: Interoperability Issues

Poor video or audio quality can be caused by interoperability issues. In this case, the system may work, but not without glitches. The difficulty in troubleshooting for interoperability is that a wide range of issues could be causing the problem, including call control and signaling, bandwidth management, wireless device compatibility, and legacy endpoint support, among others. Dealing with equipment from multiple vendors adds to the complexity of identifying and correcting the problem.

Keeping all software updated and troubleshooting interoperability issues can help, but it's also time-consuming. Without the proper expertise across a wide-range of vendors, it may feel like a near-impossible task, especially when your time is already strained. One solution is to engage a managed services provider to proactively monitor and manage both the maintenance and interoperability issues of your system. This may not only be a more cost-effective solution, but the most productive route to resolve issues that require expertise on multiple vendor products.

To find the right service provider, evaluate whether they are experienced in installing systems similar to yours. They should also be trained and certified in the product lines your system uses. Find one that can offer the appropriate level of service for your needs, whether that is as-needed remote help or something more robust, such as same-day onsite service.

### Reason #3: Type of Equipment

To get a high-quality experience, you need the right equipment. This starts with having a high-definition (HD) monitor and high-resolution cameras. To fully realize the power of video conferencing and create a near face-to-face experience, an HD display and camera make all the difference. When purchasing a digital display, consider a commercial-grade rather than consumer-grade display. Commercial displays are designed specifically for compatibility with PCs and have the ability to recognize PC resolutions of differing formats and refresh rates. Likewise, when considering an overhead projector purchase, make sure it has an ample lifespan and will work well with the room's ambient light conditions. All cameras should have pan, tilt and zoom (PTZ) capabilities at a minimum. For larger rooms, using multiple cameras or those with voice recognition features may provide a more optimal image.

So that you can clearly hear and be heard, your audio system should include ambient noise control or noise cancellation to minimize background noises that make it hard to understand the person speaking. For echo issues, make sure you are using echo-cancellation microphones with loudspeakers correctly positioned throughout the room. Using a consumer-grade TV's internal speakers may also create echo issues

that are caused by the audio being delayed while the image is being processed. If this is the case, consider either a high-quality table microphone or, even better, mounted ceiling microphones.

### Conclusion

To maximize the benefits of a video conference solution, all the parts must work together properly. Whether you're looking to communicate with clients or within the organization, and whether they're on the other side of the campus or across the globe, the success of the meeting will be proportional to the quality of the network, image, sound, design, and overall management of the video solution. Once all of these components have been optimized to meet your needs, you can feel confident your end-users will consistently have the high-quality experience they expect.



### About AVI-SPL

AVI-SPL is the world's leading video communications partner, one that designs, builds, and supports the systems and environments that enable communication and collaboration. AVI-SPL's Managed Services program includes remote monitoring and management of our clients' video collaboration and AV systems. It also features a Customer Care Program that provides manufacturer-authorized maintenance, tiered-support options, and access to our U.S.-based helpdesk, which is staffed by trained AV and video conferencing specialists 24/7/365.



### About Christie

Christie offers world-class displays and wireless presentation solutions for any type of content, including everyday business, education, and training applications. Christie, a global market leader in visual technologies, is committed to providing high-quality, innovative visual solutions that improve the way people collaborate and do business.