



Advisory Report

Multivendor Telepresence Interoperability a Game Changer in the Immersive Video Market



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■ Summary

Telepresence has captured the imagination of businesses seeking to transform clunky videoconferencing technology into a true replacement for at least some of the in-person meetings needed between co-workers, partners and customers. Though expensive to deploy and maintain (some systems cost \$300,000 per telepresence room), telepresence systems are being actively used to provide an immersive video experience that traditional videoconferencing systems simply cannot deliver. However, interoperability has long been an issue.

At first telepresence systems could not support traditional videoconferencing technology, meaning that enterprises with an investment in legacy video technology could not leverage it while at the same time deploying telepresence solutions. This has for the most part been remedied, at least by the major vendors in this space. However different vendors' telepresence systems are still by and large are not interoperable with one another. This situation is now beginning to change, and when full interoperability among telepresence systems is made available, the telepresence market is likely to increase dramatically.

■ Current Perspective

Multivendor interoperability has long been one of telepresence systems' largest stumbling blocks. When they were first introduced by Cisco, HP, Polycom and Tandberg, telepresence systems were by and large islands unto themselves, able to only connect to each system's own telepresence studios. With many vendors this situation remains unchanged, at least when it comes to telepresence system-to-telepresence system interoperability. But this is beginning to change.

Telepresence solutions are video communications platforms that create an immersive environment capable of simulating a conference room setting. High-definition video, life-size images, directional audio and one-touch session set-up facilitate face-to-face meetings among geographically dispersed participants and let participants in one telepresence studio feel as if

Report:

**Multivendor
Telepresence
Interoperability
a Game Changer
in the Immersive
Video Markets**

they are face to face with those in remote studios. This differs from both desktop videoconferencing with its generally lower quality images and thumbnail windows, and traditional room-based videoconferencing with its non-immersive experience.

As telepresence solution sales increase - Cisco alone claims 300 customers with 2,000 rooms deployed – businesses are demanding that their telepresence solutions interoperate with existing desktop and room-based videoconferencing products in which they've already invested. This has resulted in developers of telepresence solutions adding support for both standard- and in some cases high-definition videoconferencing systems. Though connectivity to regular videoconferencing systems detracts from the immersive experience that is the hallmark of telepresence solutions, such interoperability allows businesses to continue to derive value from the investments they have made in videoconferencing systems, since they can be used as end points in otherwise immersive telepresence sessions. For example, last year Cisco's TelePresence Systems 1000 and 3000 supported CIF resolution (352 x 288) video feeds, and this year support for high-definition video is to be added. Polycom and Tandberg's telepresence systems are likewise interoperable with both standard- and high-definition videoconferencing systems.

Interoperability between telepresence systems and traditional videoconferencing systems, however, has not meant that different vendors' telepresence solutions are interoperable with one another. A Cisco TelePresence 3000 room, for instance, is unable to connect users to a Polycom 400 system. This is due to vendors either not developing telepresence systems based on open standards like SIP and H.323, or not implementing these standards in a consistent way. However, the first steps toward telepresence interoperability are just starting to be made. Last month Tandberg announced interoperability between its telepresence solution and Polycom TPX, RPX 200 and RPX 400 telepresence systems. Made possible by verifying interoperability with the two developers' implementation of open standards, this level of interoperability allows video streams from Polycom telepresence systems to be viewed on one, two or all three screens within a Tandberg Immersive Executive Telepresence T3 conference room. The Polycom telepresence systems are not configured for use solely with Tandberg T3 systems, but rather to connect with a T3 system for one telepresence session and, after it has ended, to then participate in a telepresence session over Polycom-specific equipment. These multivendor telepresence sessions can be either intracompany, for the company that deployed a mix of Polycom and Tandberg telepresence systems within its own organization, or intercompany, where one company that has standardized on Tandberg telepresence can set up a session with a business partner that has invested solely in Polycom telepresence technology. Sessions can be established with the help of a carrier providing a managed telepresence service or directly by businesses deploying Tandberg and Polycom telepresence solutions. Tandberg T3 support for Polycom telepresence end points requires no additional hardware or software. This is a considerable step forward in the telepresence industry.

To date the interoperability between different vendors' telepresence solutions has been limited to Tandberg and HP systems. However, interoperability between Tandberg T3 and HP Halo interoperability works very different differently from Tandberg's new support for Polycom systems. A Tandberg studio can be set up as an end point off a Halo telepresence system, however in an HVEN environment the Tandberg telepresence video stream does not terminate on any of the three high-definition studio screens designed to display life-size images of Halo conference participants. Instead, the Tandberg session terminates on the small monitor otherwise used to display presentations and other documents utilized by conference participants. As a result, end users do not have the same immersive conference experience when Tandberg T3 and Halo rooms are interconnected. And using the same

Report:

**Multivendor
Telepresence
Interoperability
a Game Changer
in the Immersive
Video Markets**

Tandberg Telepresence Server that facilitates interoperability with Polycom telepresence systems, Tandberg T3 systems can support Halo end points. However unlike the Polycom interoperability, Halo end points are not supported in telepresence mode. Instead separate Halo video streams are composited and appear on a single T3 monitor. In both cases, this type of interoperability is not particularly conducive to the immersive video experience that businesses want when investing in telepresence solutions.

The Tandberg T3 system's new ability to fully interoperate with Polycom TPX and RPX systems in telepresence mode, is the exception rather than the rule when it comes to interconnectivity between disparate vendors' telepresence systems. At this point Polycom systems cannot accept sessions from Tandberg telepresence systems, nor can Cisco TelePresence systems interconnect with any other vendors' telepresence solutions. This could pose an increasing problem as businesses deploy telepresence solutions based not only on Cisco, HP, Polycom and Tandberg solutions, but also on those of LifeSize, Teliris, Magor Communications, and others. Just as communications via telephone, email and (to a lesser degree) instant messaging is not restricted to closed communities utilizing the same vendor's communications products, a widespread adoption of telepresence technology will require that telepresence solutions developers implement industry standards in such a way that facilitates openness and interoperability. Tandberg and Polycom will likely lead on this particular front, leveraging interoperability between their telepresence platforms as a competitive differentiator. It will also provide them with a means of growing their respective installed bases of telepresence solutions in the face of very aggressive marketing and sales activity on the part of Cisco.

Recommended Actions**Recommended Vendor Actions**

- Tandberg should certify interoperability with additional telepresence systems besides those of Polycom. Cisco TelePresence would be a good place to start since the company owns substantial mind share in the industry. However, Cisco TelePresence solutions are known for being particularly difficult in interoperating with in a multivendor environment.
- Polycom should allow its telepresence servers to accept Tandberg T1 and T3 systems as end points. A completely interoperable Polycom-Tandberg telepresence solution would be a strong selling point for each company as they compete against Cisco solutions.
- HP should expand telepresence interoperability to include systems beyond those of Tandberg. More importantly, it should allow multiple video feeds from Tandberg telepresence rooms be displayed on telepresence screens, not just on monitors dedicated to displaying presentations.
- Cisco should closely monitor telepresence interoperability initiatives from its competitors in the telepresence market. Multivendor interoperability could prove a significant differentiator for Tandberg and Polycom, Cisco's main rivals in this market. And as deployments of different vendors' telepresence solutions increase, Cisco customers could begin demanding interoperability, just as they required Cisco TelePresence integration with legacy videoconferencing systems.

Recommended User Actions

- Businesses deploying telepresence solutions should demand interoperability between their supplier's telepresence solution and those of other vendors. There is no technical reason

Report:

**Multivendor
Telepresence
Interoperability
a Game Changer
in the Immersive
Video Markets**

why telepresence systems need to be closed other than for the benefit of vendors wanting to dominate the market with proprietary technology.

- Businesses wanting to engage a diverse set of customers and partners via telepresence should deploy a telepresence solution that is clearly interoperable with those of other vendors. This will help ensure its telepresence studios can be used even if the partner or customer has standardized on another vendor's telepresence offering.

