MarketScope for Telepresence and Group Video Systems

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Robert F. Mason, Scott Morrison
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The market for immersive video telepresence systems continues to gain traction, which, in turn, attracts organizations seeking to gain business value from video. Here, we assess the leading video telepresence system vendors.

What You Need to Know

Vendors of multiscreen, immersive telepresence systems have successfully extended the high-definition (HD) experience to single-screen systems, broadening the definition of the market. Single-screen telepresence and “group video” systems, when used specifically to extend the reach of an investment in immersive rooms, are also considered part of the market definition for this report. Group video systems that do not interoperate natively with immersive systems without transcoding are not considered in the analysis. The core attributes for telepresence include:

- Core product featuring multiple screens of HD video and content sharing, with a minimum resolution of 720 progressive (p) at 30 frames per second (fps)
- Single-screen telepresence systems that interoperate natively with multiscreen systems
- Directional, high-quality audio using multiple microphones
- Standardized furniture designs and optional room treatment to create a consistent user experience in immersive systems in particular
- Simplified user interfaces that facilitate call production, and allow for content sharing and the management of video layouts during calls among multiple locations

Additionally, mechanisms to facilitate calling such as calendar integration for scheduling and third-party value-added services such as in-call concierge support are common — but not necessary — components of a telepresence offer. Telepresence investment remains concentrated in key vertical industries including financial, consumer products, manufacturing and professional services, with typical deployments consisting of 10 to 20 fully immersive rooms. These customers continued to extend their investment in telepresence in 2011 in several key areas. By leveraging connections to a growing number of video exchanges, enterprises are able to make more intercompany telepresence calls. While most video calling remains internally focused, more opportunities now exist to reach strategic partners on video. Enterprises also invested in more single-screen systems to extend the multiscreen footprint to branch offices and executive residences. Gartner survey data suggests that the next opportunity for growth will come from calls between telepresence systems and unified communications (UC) endpoints. This type of calling is vendor-dependent, and often relies on intermediate infrastructure, but will be important for driving additional endpoint utilization within the enterprise.

Technology innovation since the previous MarketScope has focused on standardizing codec implementations within specific vendor portfolios, continued investment in Scalable Video Coding (SVC), more progress on interoperability and moves to make immersive systems talk to the entire range of video endpoints, including soft clients — a segment of the video communications market that is growing even faster than telepresence. In addition to growing traction of Cisco’s Telepresence Interoperability Protocol (TIP), Polycom has introduced the Open Video Collaboration Consortium (OVCC), a framework for improved connectivity among Video Network Operations Center (VNOC) providers that will extend intraprovider reach via Session Initiation Protocol (SIP) trunks.

MarketScope

The market for telepresence systems is expected to grow at 25.7% per year through 2013, on a base of approximately $547 million in 2010. This growth is double the rate of growth for the overall video endpoint population, and nearly the same as the growth expected in desktop endpoints. While enterprises increasingly expect growing interoperability with UC and other legacy video systems, the initial decision for immersive telepresence remains executive-driven. The primary uses of the technology are as follows:

- Conducting senior leadership meetings aimed primarily at travel reduction and more rapid decision making
- High-value dialogs and bidders’ conferences with strategic vendors and business partners
- Enhancing specific processes, procedures and applications in organizations for business transformation such as with remote agents in banks, telemedicine applications and remote learning

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Gartner MarketScope Defined

Gartner’s MarketScope provides specific guidance for users who are deploying, or have deployed, products or services. A Gartner MarketScope rating does not imply that the vendor meets all, few or none of the evaluation criteria. The Gartner MarketScope evaluation is based on a weighted evaluation of a vendor’s products in comparison with the evaluation criteria. Consider Gartner’s criteria as they apply to your specific requirements. Contact Gartner to discuss how this evaluation may affect your specific needs.

In the below table, the various ratings are defined:

- **Strong Positive**
  - Is viewed as a provider of strategic products, services or solutions:
  - Customers: Continue with planned investments.
  - Potential customers: Consider this vendor a strong choice for strategic investments.
  - Demosntrates strength in specific areas, but execution in one or more areas may still be developing or inconsistent with other areas of

offerings. These single-screen systems are differentiated from traditional room systems on several fronts. First, they are designed with a common signaling and codec implementation to interoperate natively with multiscreen systems, simplifying integration. In addition, these single-screen systems have an integrated form factor for rapid deployment that often includes lighting and audio to facilitate more consistent quality when participating in calls with multiscreen systems.

Telepresence systems make high demands on the network, with high-quality, three-screen HD video and collaboration consuming as much as 20 Mbps of dedicated bandwidth. The bandwidth requirements for single-screen telepresence vary by solution, but range from 2 Mbps to 6 Mbps. Enterprises continue to run telepresence over dedicated Internet Protocol (IP) networks to ensure the highest possible quality, with private IP implementations far outpacing Internet-based connectivity. Organizations that standardize on network services from a provider that offers managed video services have been more willing to converge video traffic on the WAN, especially if they have transitioned to Ethernet at the customer edge.

Ratings are based primarily on interactions with vendors, clients and customers that have engaged vendors in the sales cycle and can provide insight into a range of telepresence sales practices, features, capabilities and end-user satisfaction.

We considered several important factors when rating the video telepresence vendors listed in this MarketScope:

- Vendor visibility in Gartner telepresence client interactions as represented by inquiry volume
- Product quality, especially in immersive telepresence systems
- Overall long-term viability as a company (business unit, organization, financial, strategy)
- Flexibility to offer customers a choice of in-house management or a managed service offering
- Flexibility in network transport alternatives.
- Ability to facilitate reach and interoperability, including different signaling, codecs, networks and exchanges
- The range, quality and innovation of collaboration tools available with the product

**Inclusion and Exclusion Criteria**

To be considered for this MarketScope, vendors needed to have commercial offers for both single-screen and multiscreen telepresence, the ability to provide customer references and market visibility as evidenced by Gartner inquiries specific to telepresence vendors and technology.

While having a choice of managed service and support offerings is important, managed services are not considered part of the inclusion criteria, nor are managed services considered for the ratings. Enabling the video infrastructure to support interworking, transcoding and multipoint calling is considered in the ratings, but is not part of the inclusion criteria. The ability to extend the reach of telepresence calls to desktop and UC clients is also considered in the ratings, but is not part of the inclusion criteria.

Vendors dropped from this MarketScope:

- HP Video Collaboration SBU — in the process of being acquired by Polycom

Vendors added to this MarketScope:

- Radvision
- Vidyo

Vendors considered for this MarketScope that did not meet the inclusion criteria:

- Huawei

Excluded from the 2011 analysis are providers that have made announcements regarding telepresence technology, but do not yet have referenceable customers, and providers that have the technology available, but don't have an end-to-end global distribution and support mechanism in place.

**Promising**

Shows potential in specific areas; however, execution is inconsistent:

- Customers: Consider the short- and long-term impact of possible changes in status.
- Potential customers: Plan for and be aware of issues and opportunities related to the evolution and maturity of this vendor.
MarketScope for Telepresence and Group Video Systems

**Rating for Overall Market/Market Segment**

**Overall Market Rating: Promising**

Telepresence is still a relatively small percentage of the overall room-based videoconferencing market. Gartner estimates that approximately 2,000 new multiscreen, immersive telepresence rooms are being added globally (the majority of these with Cisco), compared with over 200,000 other hardware-based endpoints. However, modular, single-screen and executive telepresence systems are driving organic growth in the market, as will the broader reach of video calling via emerging telepresence exchanges.

Although the high cost of these systems will limit broad market penetration, large organizations with a business case for telepresence, as well as the financial resources to purchase and support it, continue to make telepresence a promising enterprise market technology (see Table 1 and Figure 1).

**Evaluation Criteria**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Comment</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Business Model</td>
<td>The soundness and logic of the vendor’s underlying business proposition.</td>
<td>low</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, SLAs and more.</td>
<td>high</td>
</tr>
<tr>
<td>Market Responsiveness and Track Record</td>
<td>The ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness.</td>
<td>high</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>The clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message to influence the market, promote the brand and business, increase awareness of the products and establish a positive identification with the product/brand and organization in buyers’ minds. This mind share can be driven by a combination of publicity, promotional initiatives, thought leadership, word-of-mouth and sales activities.</td>
<td>standard</td>
</tr>
<tr>
<td>Product/Service</td>
<td>Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships, as defined in the market definition and detailed in the subcriteria.</td>
<td>high</td>
</tr>
<tr>
<td>Overall Viability (Business Unit, Financial, Strategy, Organization)</td>
<td>An assessment of the organization’s overall financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, offering the product and advancing the state of the art in the organization’s portfolio of products.</td>
<td>standard</td>
</tr>
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**Source:** Gartner (August 2011)

**Vendor Product/Service Analysis**

**Cisco**

Cisco (www.cisco.com) remains the market share leader by revenue in immersive telepresence, with the largest number of multiscreen systems deployed, as well as the most endpoints connected to video exchanges for intercompany calling. Executive sponsorship continues to help Cisco capture new telepresence customers, while deeper-endpoint integration with the Tandberg product portfolio is exposing Cisco to additional opportunities in enterprises with new or existing room system investments. Cisco continues to gain traction in single-screen telepresence, with a strong attach rate to existing multiscreen deployments.

Supporting video infrastructure also remains a strong selling point for Cisco TelePresence, with an established position in both multipoint control units (MCUs) and video switching via CTMS. This allows Cisco to satisfy pure-play telepresence deployments without the latency associated with the MCU, while retaining the ability to bridge dissimilar video endpoints and mix in legacy video systems. Cisco has also announced Cisco TelePresence Conductor, a TelePresence application aimed at simplifying ad hoc multipoint conferencing and allowing improved resource allocation, scale and resilience across globally distributed infrastructures. In
addition, Cisco has introduced limited conferencing and transcoding in its integrated services router as part of its MediaNet strategy to deliver media-aware infrastructure. Cisco has also acted to extend its reach to a broader partner ecosystem with the publication and licensing of TIP, designed to improve interchange between participating multiscreen endpoints and conferencing servers of different topologies and vendor provenance. This, in turn, will allow Cisco’s TelePresence exchange service provider partners to grow intercarrier services beyond their primarily Cisco environments.

The CTS 3010 and 3210 three-screen systems remain the flagship of Cisco’s immersive product line, expected to eventually fully displace the Tandberg T3 offering. Cisco has taken many of the lessons learned from the T3, now introducing a similar touchscreen interface to facilitate call control and moving away from a handset for call launch. The CTS systems are now complemented by modular and single-screen systems that allow immersive experiences to be extended to branch offices and home workspaces. Cisco has also moved to allow several of the Tandberg endpoints like the Profile to interoperate directly with the CTS products, and offers interoperability with Cisco’s Umi solutions for consumer video calling. The entire range — from soft client to immersive suite — can also now be controlled through Cisco Unified Call Manager.

Consider Cisco TelePresence when evaluating high-end, immersive telepresence systems for global deployments — especially for organizations with Cisco data and voice environments.

Rating: Strong Positive

LifeSize
LifeSize (www.lifesize.com), a division of Logitech, has remained focused on modular telepresence systems at price points that are significantly lower than the major vendors in the market. As a result, LifeSize has trailed only Cisco and Polycom in telepresence-related inquiry calls. The company’s full range of endpoints allows customers to deploy multiscreen “telepresence-lite” systems into conference rooms, while offering HD extensions to an existing portfolio of room and personal systems. Customer traction for LifeSize continues to be in midsize enterprises, although it is also penetrating some larger enterprises in 2011, especially in the high-tech sector.

The top-of-the-range product in the portfolio remains the LifeSize Conference 200 system, which Gartner considers a telepresence-lite offering. LifeSize sells the solution without any installation, managed service or ancillary items, such as screens (LifeSize leaves the sourcing of screens to the client or channel), but resellers could sell the solution as being completely adaptive. LifeSize Conference 200 can handle three or four screens, and is targeted at not only enterprises, but also at solution integrators that could deliver a managed service offering around the system. A range of HD endpoints works natively with the Conference 220, as well as with the LifeSize Bridge.

In addition to rounding out its infrastructure portfolio in 2011, LifeSize is now also fully qualified by Microsoft for OCS and LyncServer interoperability for customers that need to include UC endpoints. Virtualization and cloud are also strategic initiatives for the organization, with fully virtualized deployment options now available for LifeSize transit, simplifying firewall traversal. Leveraging Logitech resources, LifeSize also has announced a cloud-based approach to video calling that will allow LifeSize endpoints to self-register and autoconfigure, while delivering directory services and call facilitation.

Consider LifeSize when telepresence videoconferencing will be managed in-house, or when low capital costs are a key consideration.

Rating: Positive

Magor
Magor (www.magorcorp.com), based in Canada, is focused on adaptive telepresence systems that provide an immersive alternative for customers that extend video over best-effort networks. In addition to addressing the cost of connectivity, Magor delivers an immersive, multiscreen experience that is closer to the price points of HD videoconferencing than telepresence. The company sells primarily through value-added resellers (VARs) and has an OEM relationship with Mitel, although Magor still has fewer than 200 endpoints deployed at customer locations. Its limited global sales and support presence, and limited mind share, compared with other vendors in this analysis, are its real impediments to growth in the telepresence market. Magor will have to demonstrate its ability to overcome these issues to make substantial progress. Such a small user footprint and the use of very advanced yet proprietary technologies make Magor a riskier proposition for prospective buyers.

Magor addresses the issue of bandwidth quality through its own implementation of SVC. In addition to forward error correction, Magor’s implementation allows endpoints to react dynamically to network conditions by only consuming and updating segments of the HD image (rather than the whole image) on both a spatial and temporal basis. So, a background segment may be refreshed at a low resolution and at only 15 fps, while a participant’s face may be refreshed at high resolution and 30 fps. Because the SVC technique used by Magor leverages a standard implementation of H.264 for encoding, it can dynamically “spawn” codecs to interoperate across a range of MCUs and endpoints. Magor has also focused on a peer-to-peer design, avoiding the dependence on centralized MCUs and switches, which contribute to the total cost of a telepresence deployment and can also represent a single point of failure.

The immersive Magor telepresence product is the three-screen HD Trio, a two- or three-camera system featuring three 65-inch screens in self-contained modules, along with associated furniture for modular in-room deployment. Also available is the HD Duo, a one- or two-camera, two-screen version for video and collaboration in shared spaces, and the HD Solo, a personal telepresence offering with a single camera and screen. Desktop collaboration is through a Magor VPN implementation that allows several desktop windows to be shared across several telepresence screens to provide flexibility that is not available with basic H.239 content sharing.

Clients that use hybrid WAN connectivity, as well as low-touch telepresence prospects that are price-sensitive,
should consider Magor.

Rating: Caution

Polycom

Polycom (www.polycom.com) continues to grow its video endpoint and infrastructure business, often as a result of existing account relationships as the largest independent vendor of video solutions. While partnerships and acquisitions continue to drive video mind share for Polycom, Gartner clients continue to demonstrate greater awareness and brand preference for Cisco when making a multiscreen telepresence decision. In 2011, Polycom acquired the HP Video Collaboration Business Unit, gaining additional telepresence customers and becoming an exclusive partner of HP for certain video and UC video solutions. While the deal has upside for distribution, HP Halo is a purpose-built telepresence system that does not work natively with the Polycom endpoint portfolio. The acquisition is gives Polycom added VNOC services assets, although Polycom already private labels similar services and has channel partners on the service side.

Polycom has leveraged its Microsoft relationship to support calls between OCS/Lync environments and its room endpoints and continues to get high marks for its support of the Microsoft RTV codec. However, Polycom’s announced intent to embed Polycom’s implementation of the H.264 SVC codec standard directly into Lync will be a more strategic step, since it will help video scale in Microsoft environments without the burden of video transcoding, and improve their interoperability with non-Lync clients. The launch of Polycom CX7000 endpoint provides users with a Lync user interface, facilitating user-led video calls without scheduling. Polycom also founded Ovcc, which has defined a target architecture called Ovcc to allow service provider partners the ability to federate video calling over sip trunks, facilitating intercompany video calling. In 2011, Polycom also acquired Accordent, exerting additional control over video content management.

The current Polycom telepresence portfolio is still led by the rear-projection RPX system, a product that is different from those of most other telepresence vendors by virtue of its ability to easily support both standing and sitting participants without taking remote views when meeting participants stand up and walk around the room, in addition to the fact that cameras are embedded in the screen, which aids eye contact. More flexible configurations are available at lower price points with the OTX and ATX product families, while telepresence can be extended seamlessly to a broad range of existing Polycom room endpoints including the HDX, which use a common video codec. To extend beyond its existing investment in High Profile, Polycom will also develop its own support for SVC for both endpoints and infrastructure, and introduce mechanisms to support transcoderless deployments.

Customers that desire a deeply immersive telepresence for dedicated rooms, as well as customers with strategic investment in Microsoft UC should strongly consider Polycom.

Rating: Strong Positive

Radvision

Radvision, an Israeli-headquartered business, has a long track record of providing video infrastructure (bridges and MCUs). With its 2010 acquisition of the assets of Italian vendor Aethra, it has also entered the video endpoint market, building upon previous forays with its Scopia Desktop soft client and a jointly developed executive system with Samsung. Its Scopia XT range of endpoints consists of single-screen executive and room systems, plus multiscreen systems (made from multiple single systems, orchestrated by Radvision’s Elite MCU). All run 1080p video, and can handle multiple encoding standards. Radvision has recognized the need to integrate with multiple UC environments, offering plug-ins to allow connectivity to Cisco, Microsoft, Alcatel-Lucent and IBM UC systems. Radvision sells via OEM and to end users (directly and through channels). It took a blow when Cisco purchased Tandberg (the company had, up until that point, been an OEM partner to Cisco for video infrastructure). Its end-user revenue have been flat in a period when the market overall has seen robust expansion. While it still has good cash reserves, the business is not profitable.

Its endpoint solution set, while keenly priced, does not yet have the mind share of other price-leading rivals such as LifeSize, and while Radvision sometimes features in RFPs for video infrastructure, this is not yet the case for endpoint requests.

Clients — particularly SMBs — looking for infrastructure-only or a complete solution should consider Radvision as an alternative to other mainstream vendors.

Rating: Caution

Teliris

Teliris (www.teliris.com) is a privately held, U.S./U.K. company, which has been selling telepresence systems since 1999, having launched its sixth-generation platform in 2009. Continued innovation means the company’s immersive and adaptive product range is as broad as any other in the industry. Its adoption of the H.264 SVC allows it to extend reach to best-effort networks and to more contended environments.

Teliris VirtualLive Telepresence is a system that can support four to 20 (or more) participants and as many screens as required. Teliris Express Telepresence is a lower-cost offering that requires a less design-intensive installation process for conference rooms; it supports from two to six participants (more, if a second row is added), and one-, two- and three-screen systems. Teliris also offers a Personal Telepresence system for single users and small offices, as well as a desktop system called Teliris NanoPersonal Telepresence. Teliris has just announced several extensions to its portfolio aimed at continuing to extend the reach of high-quality video meetings. The Nano EX is a unique 2880:900 panoramic desktop appliance that mimics the multiscreen sight lines of in-room telepresence. Teliris has also introduced a home telepresence appliance targeted at remote
executives who want to participate in telepresence meetings. For specialized applications, Teliris is introducing a 3D telepresence solution that requires higher bandwidth and specialized glasses to render people and content in a stereoscopic fashion. Finally, Teliris has introduced tablet-based touchscreen control of meetings in lieu of a dedicated touch panel, and tablet-based soft clients.

All offerings support broadcast-quality HD video (1080p/720p) at 30fps/60fps. Teliris provides a fully managed service with more than a 99% service-level agreement. Most Teliris customers opt for deployment on the Teliris InfiNET network, although converged network customer configurations are also supported. The company has several VNOCs supporting its global customer base. Teliris’ InterACT collaboration toolset is more advanced than those of any of its rivals in this MarketScope, providing multitouch surface computing, presentation visualization, lectern, document camera and other customized, client-driven solutions. Such functionality, together with first-to-market capabilities such as 3D video, make it the clear leader in terms of product innovation.

The company’s go-to-market strategy is 80% direct channel, with the 20% indirect including mostly Teliris partners performing lead generation and account management, thus leaving Teliris to do all the "heavy lifting" for customers. Although Teliris does not publicly disclose sales data, it continues to have success when it reaches client shortlists. But limited market awareness, coupled with a smaller marketing budget and fewer major channels than its larger rivals mean it doesn’t get to this stage as often as others. Those partnerships which it has set up tend not to be exclusive (Global Crossing, for example, sells a Teliris-based managed service and a Cisco-based offer).

Consider Teliris when seeking a mature, multipoint telepresence solution with global requirements, or where a range of collaboration tools are required to supplement visual presence.

Rating: Positive

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Vidyo

Vidyo was founded in 2005 and has gained awareness in the personal videoconferencing market on the basis of its early introduction of a transcoderless architecture using H.264 SVC video encoding. Vidyo holds eight patents on the deployment of this technology, and first-mover advantage has allowed Vidyo to build both an end-user client base and a range of partners that OEM its software architecture. Vidyo maintains a focus on enabling HD videoconferencing over the Internet, where it has gained traction primarily with midsize enterprise customers. As more providers adopt the SVC standard, Vidyo will lose some of its differentiation, but Vidyo (and its OEM partners) currently have the only commercial implementation of SVC that avoids transcoding while still rate matching between endpoints. Prior to interoperability testing, we expect more vendors to support the Polycom implementation of the SVC standard, now that Microsoft has adopted it.

Vidyo has had room-based systems for several years — basically custom-made, shrink-wrapped PCs running the Vidyo soft client. The company has recently introduced the VidyoPanorama — a multiscreen environment which is designed to pull together HD feeds from multiple users into a matrix of between 3 and 20 HD screens. The VidyoPanorama device is not designed to compete directly with immersive telepresence environments. Each screen is fed from a separate endpoint at the far end, and each VidyoPanorama room comes equipped with only one camera (which means therefore that the bandwidth consumed in a room will be highly asynchronous — one output feed versus three to 20 input feeds). This serves a different target market than three-screen telepresence, aimed at a larger number of potential participants at a lower price point.

For the time being, the only way to interconnect a Vidyo endpoint with a regular (non-Vidyo) videoconferencing endpoint is through a gateway. This could be purchased by the enterprise or delivered by Vidyo or one of its channel partners. Its licensing model allows regular videoconferencing endpoints to connect "for free" by using a gateway. Its VidyoRouter is the only piece of dedicated hardware needed in a pure Vidyo environment. The VidyoRouter costs approximately the same as a single HD port on a competitive MCU, but can handle 100 simultaneous video streams, making the infrastructure cost of deployment much lower than a traditional MCU approach.

While the Vidyo solution certainly achieves a video connection under constrained conditions, it is not a panacea. A reasonable amount of bandwidth is still required to get a high-quality image, and the encoding/decoding demands of the SVC codec mean that quite a powerful PC is needed to run the soft client in HD resolution. Some users have also reported firewall problems in using Vidyo outside the organization, making pretesting a necessary part of the process.

Enterprises seeking widespread personal video communication that balances reach with quality should consider Vidyo.

Rating: Promising

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