Cisco TelePresence Extended Reach

Q. What is Cisco TelePresence™ Extended Reach?

A. Cisco TelePresence Extended Reach enables you to expand TelePresence deployments to remote locations where multimegabit bandwidth is unavailable or too costly. Locations include branch offices or remote offices -- even locations with remote teleworkers.

With Cisco TelePresence Extended Reach, you can get a Cisco TelePresence experience at 720p resolutions at lower bandwidths. Extended Reach provides 30-frames per second (fps) and low-latency performance -- critical to providing an immersive experience -- with minimal effect on the experience.

Q. What is the difference between Cisco TelePresence Extended Reach and the existing quality offerings?

A. Today, you can deploy Cisco TelePresence systems in your enterprise at several experience levels that support 720p and 1080p resolutions and one of three quality levels, depending on use case, with bandwidth ranges of 2 to 5 Mbps per screen. These quality levels help ensure an optimized Cisco TelePresence experience and are fully supported with installation and operate services.

With Cisco TelePresence Extended Reach capabilities, you can now get a TelePresence experience at 720p resolution using lower bandwidths or alternate access connections. Extended Reach is available for typical branch-office, retail, or teleworker applications where the return on investment (ROI) for deployment is high. In other words, the Cisco TelePresence application can run over wide-area connections as low as 1.544- to 2.048-Mbps (T1/E1) speeds at 720p picture resolution.

Premium broadband services including business-class cable or Verizon FiOS are supported to give you flexibility to operate a Cisco TelePresence system across a variety of new connections. Cisco TelePresence meetings over these non-quality of service (QoS)-enabled circuits will follow a different support model (details are given later in this document).

Q. How should I choose between deploying a Cisco TelePresence system in immersive, optimized, and extended reach modes?

A. Immersive: A Cisco TelePresence meeting is an immersive, first-class experience for business decision meetings within the company and with external parties such as customers and vendors with 1080p resolution and life-size video images. This environment is ideal for corporate campuses and regional offices for both multi- and single-screen Cisco TelePresence endpoints. We created a new market category with extraordinarily high usage rates with the Cisco TelePresence system at 1080p.

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Optimized: A Cisco TelePresence meeting maintains ease of use and a quality experience for branch offices to communicate effectively with headquarters and each other with 720p resolution and lower bandwidth requirements. Operations reviews, one-on-one meetings, and internal meetings are now possible on multi- and single-screen Cisco TelePresence endpoints at remote locations.

Extended Reach: Cisco TelePresence Extended Reach enables customer sites where Cisco TelePresence systems have had limited presence. Small offices or home offices where high-capacity bandwidth is unavailable or too costly can now be enabled with one single-screen Cisco TelePresence endpoint for subject matter experts or remote executives to join Cisco TelePresence meetings.

You should examine the use cases of Cisco TelePresence systems at your deployment location and decide how important it is to have the highest-quality video and audio. Cisco continues to improve the immersive 1080p experience -- the ultimate business-class technology. Extended reach broadens the ability for everyone, everywhere to access TelePresence as companies scale their deployments and provide access to remote offices and telecommuters. We should continue to encourage customers to aim for 1080p best quality.

Q. What kinds of circuits are supported?

A. Two categories of circuits are supported:

- **QoS-enabled circuits:** Supported QoS-enabled circuits already include Multiprotocol Label Switching (MPLS), DS-3, and other high-capacity networks. We are now announcing support for QoS-enabled T1/E1s and QoS-enabled bonded T1/E1s.
- **Premium broadband (Internet):** You can also deploy Cisco TelePresence endpoints over premium broadband (Internet) such as business-class cable, Verizon FiOS, or E1 over the top. In other words, you can operate Cisco TelePresence systems across a variety of new connections.

Note: Without a QoS-enabled circuit, the Cisco TelePresence experience over broadband services will be different. For example, high levels of traffic from neighboring users may cause calls to drop, and, in fact, dropping of calls is expected behavior. If you require a higher level of service, you should deploy over a QoS-enabled circuit.

The variable bandwidth options for Cisco TelePresence meetings (network-adaptive bandwidth usage) allow proliferation for many more locations, users, and companies. Now with Extended Reach, Cisco TelePresence usage can be everywhere, for everyone.

Q. Where can I find scenarios comparing immersive, optimized, and extended reach to help my customer make deployment decisions?

A. Refer to Table 1.

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Table 1. Cisco TelePresence Experience and Resolution

Parameter	Extended Reach	Optimized	Immersive
Meeting type	• Working sessions • Extension of immersive and optimized meetings to remote executives	• Operations reviews • One-on-one meetings • Internal meetings	• Business decisions • Interviews • External "first-impression" meetings
Location	• Home office • Small Office	• Branch offices	• Corporate campus • Regional offices
Endpoint	• Single screen	• Multiscreen • Single screen	• Multiscreen • Single screen
Network types	• T1/E1 with QoS • Premium broadband (FIOS, or cable) with separate support model – best effort	• MPLS • DS-3 • High-capacity networks • Bonded T1/E1	• MPLS, • DS-3 • High-capacity networks
Quality	• 720p Lite • 720p Good	• 720p Good, Better, and Best	• 1080p Good, Better, and Best

Q. How can I purchase Cisco TelePresence Extended Reach?

A. You need to upgrade your Cisco TelePresence software to the version released in the second half of 2009. You can order endpoints that are designated for extended reach deployments starting July 1, 2009.

Q. Is a software upgrade required for Cisco TelePresence Extended Reach?

A. Yes, a software upgrade is required to support Cisco TelePresence Extended Reach. Cisco TelePresence calls will not connect if endpoints are on earlier software versions.

Most customers will want to upgrade anyway to take advantage of the many new features in this release.

Q. When will Cisco TelePresence Extended Reach be available?

A. It will be available in the second half of 2009, and orderable July 1. At this time, Cisco will add the support of Cisco TelePresence meetings over QoS-enabled T1/E1, QoS-enabled bonded T1/E1, and premium broadband.

Q. How much does Cisco TelePresence Extended Reach cost?

A. There is no additional cost for Cisco TelePresence Extended Reach beyond the usual requirements of a Cisco TelePresence deployment (Cisco® Unified Communications Manager, endpoints, Cisco TelePresence Multipoint Switch, and Cisco TelePresence Manager if applicable).

Q. How does Cisco maintain the Cisco TelePresence experience on lower bandwidth?

A. Cisco has designed several technologies that protect the experience, including offering innovative compression techniques and making the system more tolerant of packet loss, thereby protecting the critical components of latency and frame rate.

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