

## How Cisco Supports Virtual Meetings with Customers

Cisco TelePresence enhances customer relationships, reduces travel expenses, and increases productivity.

**Cisco IT Case Study / Cisco TelePresence / TelePresence Virtual Meetings:** This case study describes Cisco IT's internal deployment of <product or solution or service> within the Cisco network, a leading-edge enterprise environment that is one of the largest and most complex in the world. Cisco customers can draw on Cisco IT's real-world experience in this area to help support similar enterprise needs.

“We are changing how we interact with our customers because of the video quality and simplicity of the Cisco TelePresence Meeting solution. It is much easier for our customers to meet with our executives and technical experts when time and distance are no longer barriers.”

– Rami Mazid, Director, Emerging Technology, Cisco IT

### CHALLENGE

Cisco® often invites customers to an executive briefing center (EBC) for individualized presentations and discussions with Cisco executives and technical experts. These meetings are time-consuming, both to coordinate the availability of Cisco and customer personnel, and for travel to one of the briefing center locations.

In the past, the small number of EBCs limited the number of customer meetings, which lengthened the sales cycle. Travel also presented a significant barrier to efficiency and customer interactions. The time spent by Cisco employees on travel

hampered their productivity and ability to work on other business activities. And when a customer requested an in-person meeting, Cisco typically sent only a single technical employee to represent the company. With a better option for remote meetings, more Cisco employees could participate, which would accelerate the sales process, provide better support to a customer, and address problems quickly and comprehensively.

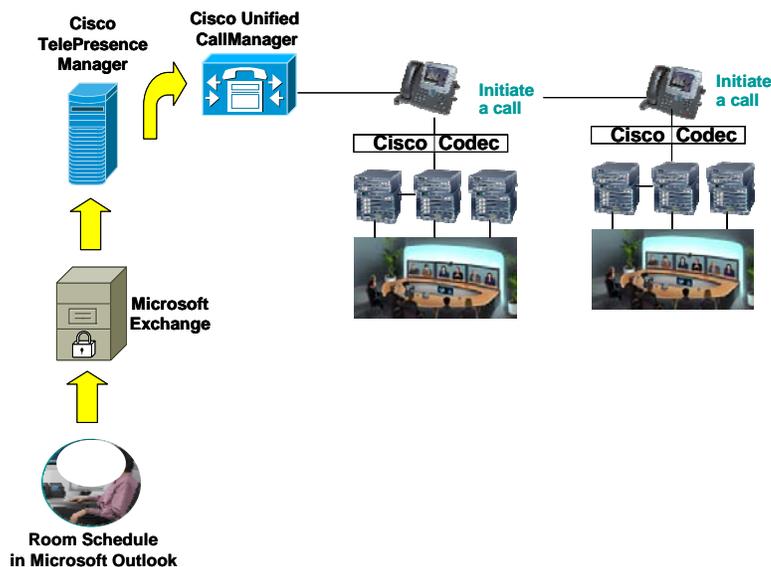
General business goals for Cisco also motivated the search for effective tools to replace in-person meetings. One corporate goal was to reduce travel expenses by 20 percent while creating a new way of work that increases employee interactions with customers, partners, and colleagues. Cisco also wanted another option for effective communications during a disaster, travel restrictions, or other events that could disrupt business continuity.

### SOLUTION

The Cisco TelePresence Meeting solution provides significant capabilities for addressing these challenges. By mid-2007, Cisco IT plans to deploy 110 Cisco TelePresence 3000 endpoints in selected Cisco offices worldwide. Each endpoint includes 65-inch plasma screens, microphones, cameras, high-definition codecs, and other elements necessary for a virtual meeting that supports the “same room” experience. The advanced audio and video technologies of the Cisco TelePresence Meeting solution show all participants in life-size and speaking at a normal voice level, for a sense of meeting “in person.”

The Cisco TelePresence 3000 endpoint integrates with the Cisco Unified CallManager system for that location. Initiating a meeting is simple; the user simply the meeting on the Cisco Unified IP Phone display in the TelePresence room. The call signal is sent to the codec in that room, which dials the IP phone in the other TelePresence room to activate the other codec. Users do not need to know which number to dial or use a remote control for the system. (see Figure 1).

**Figure 1.** The Cisco TelePresence Manager application tracks user room requests and automatically transfers the call information to the Cisco TelePresence 3000 systems at the scheduled meeting time.



Employees can schedule the TelePresence rooms by entering a meeting request in their Microsoft Outlook/Exchange calendar. The Cisco TelePresence Manager application receives the request, automatically schedules the requested rooms if available, and sends a notice to the Cisco TelePresence systems involved in the call. The application automatically declines the request if the TelePresence rooms are not available, or in response to user errors such as requesting only a single TelePresence room. When necessary, a Cisco employee who works as the TelePresence coordinator prioritizes room requests according to the company's entitlement policy.

The Cisco TelePresence Meeting solution is an integral component within the company's Service Oriented Network Architecture (SONA), and is implemented on Cisco IT's converged network. This design eliminates the need for the separate, dedicated network required by other telepresence systems in order to achieve acceptable bandwidth and quality of service (QoS) levels.

From a network perspective, the Cisco TelePresence Meeting solution is no different than any other corporate communications option, such as data applications, e-mail, IP-based telephones, or desktop video. The equipment is monitored and managed by Cisco IT administrators using Cisco IT's internal network management systems. The administrators can access the TelePresence endpoints for remote troubleshooting and upgrades as needed.

### Helping Ensure Adequate WAN Bandwidth

As part of the deployment planning, Cisco network staff measured latency and jitter among all sites to determine whether the WAN connections would deliver the high levels of QoS, throughput, and jitter protection required by video traffic. The objective was to produce an exceptionally high-quality video image and user experience.

The initial tests indicated that bandwidth of 8–10 Mbps would be required for 1080p (ultra high-definition) video. Cisco chose to implement 1080p resolution in all sites, although the Cisco TelePresence 3000 endpoint can automatically switch to 720p if that is the highest resolution supported by the connecting system.

Network latency can be a concern for any video call. However, employees using the Cisco TelePresence system for remote meetings have not experienced the delays or quality loss associated with latency, even over the very long circuit distance between New York and Bangalore, India. This latency tolerance is part of the superior video codec design in the Cisco TelePresence solution.

Although the Cisco TelePresence solution operates on the company's existing network infrastructure, upgrades to WAN circuit bandwidth will be required in some locations. In most cases, this upgrade will be from a DS-3 circuit to an

OC-3 circuit. In some cases, bandwidth will be upgraded from multiple T1 circuits to a DS-3 or E3 circuit. In Europe, the circuits are carried over a Multiprotocol Label Switching (MPLS) network. In addition, QoS policies are defined to prioritize bandwidth allocations appropriately during a TelePresence session. Cisco has reallocated funds budgeted for employee travel to cover the cost of these circuit upgrades.

## Project Management

Cisco IT activities during the deployment project include the following:

- Complete a global travel analysis to identify the 50 pairs of cities around the world where Cisco employees travel most frequently. This analysis, and consultation with company executives, determines which sites will receive the TelePresence capability, and the site's priority on the deployment schedule.
- Establish a cross-functional deployment team with members from Cisco IT and the product development business units, as well as Cisco groups for customer advocacy, workplace resources, sales, marketing, Internet business solutions, channel partners, and rich media communications.
- Complete a room and WAN assessment for the TelePresence sites, establish a standard QoS policy, order circuits for sites that require upgrades, and reconfigure the Cisco Unified CallManager system as necessary.
- Integrate the room-scheduling application with Microsoft Exchange and Microsoft Outlook.
- Resolve logistics, shipping, and customs issues for the TelePresence equipment and room furnishings.
- Deploy, test, validate, and approve the equipment and circuit installations.
- Produce materials for user awareness, send e-mail announcements to users, and post information about the TelePresence rooms. Distribute monthly communications about usage metrics and how the TelePresence solution is meeting goals for use and return on investment.
- Develop procedures for the Cisco Technical Assistance Center, which provides user support.
- "This plan has allowed the Cisco IT team to deploy the TelePresence systems at an accelerating pace, starting at 18 systems in the first quarter of deployment activity and eventually reaching 40 systems globally per quarter," says Rami Mazid, director of emerging technology for Cisco IT.

## RESULTS

The Cisco TelePresence solution is suitable for a variety of meeting types, including product demonstrations, customer presentations by Cisco executives and technical experts, and internal team discussions. Initial data from the first few months of deployment indicates high usage and positive results for the TelePresence rooms:

- 675 total customer meetings were held, involving 456 unique customers.
- 219 of these meetings allowed employees to avoid travel, for a cost avoidance estimated at US\$197,000.
- The average weekly utilization rate was 40 percent, which is in line with the target required for Cisco to fully realize the value on investment and achieve US\$220 million in productivity improvements in a three-year period after deployment.

"This high number of virtual meetings to connect people would have been impossible if travel had been involved because of the time required," says Mazid. "And we would not be able to achieve this higher level of customer interaction without the Cisco TelePresence solution."

The purposes listed for these meetings closely tracked the corporate objectives for use of the TelePresence rooms. The primary use of the Cisco TelePresence rooms was for customer meetings and demonstrations (see Table 1).

**Table 1.** Purpose of Cisco TelePresence Meetings

| Meeting Purpose                         | % of Meetings |
|---|---------------|
| Customer demonstration                  | 52%           |
| Cisco internal meeting                  | 20%           |
| Cisco executives meeting with customers | 9%            |
| Other purposes                          | 8%            |
| Partner demonstrations                  | 7%            |
| Internal executive meetings             | 4%            |

For Cisco as a company, the Cisco TelePresence Meeting solution is expected to deliver several benefits.

**Enhanced customer relationships.** The ability to invite more customers to participate in virtual meetings with experts provides better information and interaction. “We are changing how we interact with our customers because of the video quality and simplicity of the Cisco TelePresence Meeting solution,” says Mazid. “It is much easier for our customers to meet with our executives and technical experts when time and distance are no longer barriers.” Mazid estimates that by eliminating travel with TelePresence, customers will be able to schedule meetings with Cisco technical experts more quickly, and Cisco employees will be able to meet with more customers.

**Accelerated sales cycles.** “We know that the EBC presentations increase our ability to close sales deals,” says Mazid. “By delivering more of these presentations to more customers, we expect our sales closing rate to increase by two percent, which will yield approximately US\$50 million annually in new revenues.”

**Increased employee productivity.** By avoiding travel, key employees can increase their availability and productivity for other customer meetings or work assignments.

**Cost savings from reduced employee travel.** The high-quality meetings delivered by the Cisco TelePresence solution connect more participants in more locations, overcoming the schedule delays and travel requirements of on-site presentations. Reduced travel will yield direct cost savings estimated at US\$20 million annually and will make a significant contribution to the corporate goal of reducing travel expenses by 20 percent.

**New option for emergency response.** The TelePresence systems provide a high-value option for Cisco executives and managers to communicate for disaster recovery or other issues related to business continuity.

## LESSONS LEARNED

“Successful deployment of TelePresence has five critical dependencies: bandwidth availability, Cisco Unified CallManager configurations, proper facilities in the room, integration of the scheduling application, and equipment logistics,” says Mazid. “All of these dependencies must be met before we successfully activate the Cisco TelePresence system in a particular location.” During the planning and early implementation phases, the Cisco IT project team gained several insights about these dependencies and other deployment issues for the Cisco TelePresence Meeting solution.

**Network readiness.** Before implementation, determine whether capacity and utilization in the WAN circuits and LAN switches can support TelePresence traffic. Measure latency and jitter among all sites, and enable QoS to help ensure that users will receive a high-quality experience during a TelePresence session. Finally, verify that the Cisco Unified CallManager system has the software version and configurations required to support TelePresence.

**Room readiness.** Within a facility, identify the best location for the TelePresence room, and help ensure that it meets the requirements for space, lighting, power, audio, furnishings, and network connections. At Cisco, the TelePresence rooms are identified by a code in the Microsoft Outlook Calendar to help employees when entering reservation requests.

**Quality of Service policy.** “One of the biggest deployment challenges that we face is adding TelePresence traffic to the high volumes of video traffic already on our network,” says Mazid. “The Cisco project team defined a standard QoS policy and a standard for Call Admission Control on local routers to help ensure that TelePresence traffic receives the second highest priority after voice traffic on the Cisco network.” This means TelePresence traffic receives higher priority than other video traffic, which comes from the nearly 1200 existing video conference rooms and nearly 30,000 Cisco Unified Video Advantage cameras used by employees. The higher priority is necessary to deliver the real-time experience of TelePresence.

**Equipment ordering and logistics.** Coordinate room readiness with equipment arrival and installation, addressing customs, regulatory, and equipment certification issues as necessary.

**Entitlement process.** The entitlement process defines priorities for the TelePresence scheduling coordinator if multiple employees request the same TelePresence rooms for the same time. Together, these survey metrics and the entitlement process can help a company obtain maximum value from the Cisco TelePresence solution by matching room usage to business priorities.

**Simplicity for users.** Simple activation of TelePresence meetings by users means no user training was required. Users learn about the TelePresence room availability through announcements on the Cisco IT Website, which also explains the entitlement process and reservation procedures. Although lower levels of user support are required compared to video conferencing systems, a separate IP phone in the TelePresence room allows users to contact the internal technical support team for assistance as needed during a meeting.

## NEXT STEPS

The initial Cisco TelePresence deployments supported only point-to-point meetings. Cisco IT is adding support for multipoint meetings that simultaneously connect more than 30 active sessions.

Multipoint meetings will offer even more options for efficient communications with customers and among internal teams. For example, Cisco is building six new commercial briefing centers around the world. These centers and support for multipoint meetings will allow Cisco presenters to reach numerous customers with a simultaneous broadcast from a Cisco TelePresence system.

For additional information about the Cisco TelePresence solutions, visit [www.cisco.com/go/TelePresence](http://www.cisco.com/go/TelePresence). The “Meet Virtual Margaret” case study describes how Cisco employees have created another innovative use of Cisco TelePresence solutions:

[http://www.cisco.com/en/US/prod/collateral/ps7060/ps8329/ps8330/ps7073/prod\\_case\\_study0900aecd8054c81b.pdf](http://www.cisco.com/en/US/prod/collateral/ps7060/ps8329/ps8330/ps7073/prod_case_study0900aecd8054c81b.pdf)

## FOR MORE INFORMATION

To read the entire case study or for additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT [www.cisco.com/go/ciscoit](http://www.cisco.com/go/ciscoit)

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