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Better Virtual Meetings

With Pricey Cameras, Plasma Screens, 'Telepresence' Replaces Video-Conferencing

By William M. Bulkeley

A **NEW GENERATION** of high-end video-conference systems is facilitating virtual meetings that users say are almost like being there—especially compared with conventional systems plagued by jerky video and speech that isn't synchronized with lip movements.

The high-end systems with broadcast-quality cameras and a row of 50- inch plasma screens cost as much as $1 million for a two-location system ($500,000 more for each additional one), plus as much as $18,000 a month for high-speed phone lines. That is as much as 50 times the cost of older, less sophisticated systems.

Sir Peter Walters persuaded fellow directors at **GlaxoSmithKline** PLC., to install equipment made by **Teliris** Inc., in 2002 after terrorist threats disrupted air travel between London and Philadelphia. Sir Peter, the retired chairman of **BP** PLC, says when he was first shown the system by Martyn Lewis, a former BBC news anchor who is chairman of Teliris, "I was absolutely astonished, having seen only ordinary video-conferencing before." Teliris is a closely held firm with dual headquarters in New York and London.

Sir Peter says when he first sat down in a videoconference room at investment bank **Lazard** Ltd. in London and talked to people in a similar room in New York, "they were almost life-size. It was perfect vision, perfect voice. You almost wanted to reach out and shake their hands." He says Glaxo found the systems so useful, it has installed systems in 15 locations. They are used by scientists, researchers and top executives for collaboration. Other customers for Teliris's $150,000 rooms include Finnish cellphone giant **Nokia** Corp. and Whitehouse Station, N.J., drug maker Merck & Co.

The so-called telepresence market is now attracting some major players. In December, **Hewlett-Packard** Co., Palo Alto, Calif., began selling a system called Halo, with each outfitted room now priced at $425,000. The system was jointly developed with **DreamWorks Animation SKG** Inc., the Glendale, Calif., cartoon maker, which wanted a way to links teams of animators in northern and southern California. H-P has installed 63 systems and is adding 10 a month; customers include **PepsiCo** Inc., Purchase, N.Y., and **Advanced Micro Devices** Inc., of Sunnyvale, Calif. **Cisco** Corp. Chairman John Chambers announced in the spring that the giant San Jose, Calif., networking company plans to enter the market this year.

New 'telepresence' videoconferencing rooms made by Teliris feature **rows of plasma** *television screens, as well as broadcast-quality cameras.*

Polycom Corp., a Pleasanton, Calif., speakerphone maker that is the market leader in conventional videoconferencing, combined its technology with designs from an early developer of telepresence systems and is now stepping up sales efforts for systems that cost $250,000 to $500,000 a room. In contrast, Polycom's standard systems sell for $5,000 to $80,000 a room. The No. 2 videoconference firm, **Tandberg** ASA in Oslo, Norway, plans to introduce a telepresence system in January, says chief technologist Hakon Dahle. Both Polycom and Tandberg base their telepresence systems on technology standards already used in videoconferencing, which they say makes it easier to link in traditional systems than it is with the proprietary systems sold by H-P and Teliris.

Roopam Jain, who follows videoconferencing for market researcher Frost & Sullivan, says the high-end systems may make videoconferencing more a part of the culture at many companies. "A good quality telepresence will catch the attention of C-level executives. Even if it saves a few C-level trips it can have significant impact on return- on-investment," she notes. Ms. Jain says the world-wide videoconferencing market amounted to $1.15 billion last year and forecasts it will increase 22% a year through 2010. Still, she says, while videoconference rooms have been installed in many big companies "usability is still an issue. It hasn't been widely adopted yet."

Telepresence makers and users say the experience is so much better in the high-end rooms that employees clamor to reserve space. Ken Crangle, general manager of H-P's Halo division, says H-P already had many videoconference rooms installed, but their poor quality meant they averaged only seven hours of use a month. Halo rooms average 160 hours of

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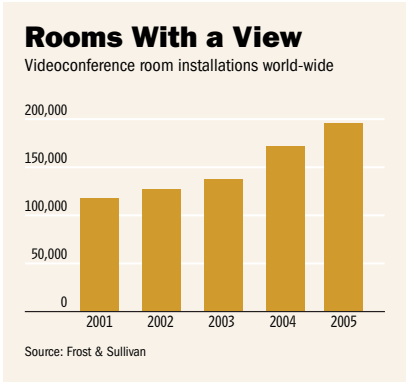

use a month. He says once the systems are installed for executives and directors, other managers quickly move to book the rooms at other times. "Then you get the peasants-with-pitchforks problem," when lower level employees get upset about being bumped out of a room by the CEO, Mark Hurd, Mr. Crangle says.

He says most customers find they can justify the costs of the Halo systems in about six months by the savings from avoided travel. He says time savings with the systems are even more important. H-P manufacturing managers credited their Halo systems in the U.S. and Asia for cutting in half, to six months, the time taken to move an inkjet cartridge manufacturing line to a plant in Singapore from one in Corvallis, Ore. The managers said they avoided 45 trans-Pacific trips.

Telepresence engineers employ a variety of techniques for making virtual meetings more lifelike. Rather than having a single large monitor at one end of a conference room, they place a row of four to six 50-inch plasma screens along one side of a room, with live participants on the other side of the room along a conference table. In some systems, high-quality videocameras are placed just above the screens. Polycom says it has achieved a more-lifelike effect by placing cameras behind the screens, so live participants are shown staring directly into the eyes of the remote person.

The increased cost of telepresence systems in part reflects the huge bandwidth they require compared with regular videoconference systems that run at as slow as 384 kilobits a second. Telepresence requires dedicated lines running at two megabits a second or more. That provides high-definition video and audio, and allows one speaker to interrupt another without muting the other party. Using expensive land lines rather than satellite links virtually eliminates latency delays between speaker and listener.

Marc Trachtenberg, president of Teliris, says his company's systems are designed to make sure that sounds are synchronized with the picture, so that words come out only when speakers' lips are moving. Seven speakers along the wall ensure that words are spoken from the direction of the speaker.

Despite the optimism of telepresence systems makers, Andrew Davis, managing partner of Wainhouse Research LLC, a Brookline, Mass., market research firm, says he thinks much of the talk is hype. "It's a lot of publicity over stuff I don't believe will be that important. But it will drive interest in videoconferencing." He says that like car buyers visiting showrooms to look at Corvettes but buying Malibus, corporate customers may look at telepresence systems and then buy new high-definition videoconference systems that are "almost as good for one-10th the price."

Justine Kanter, development manager of Pearson PLC, the big London publisher of magazines and textbooks, says Teliris's telepresence system, which Pearson uses in London and New York, provides a much better experience than videoconference systems she has seen. "In meetings, you can pick up real subtlety of expressions," she says. "People are much more honest."