



# VIRTUAL OFFICE KEEPS YOU IN TOUCH

Immersive teleconferencing shrinks the world to a boardroom with surround sound, **Ian Grayson** reports



YOU watch your boss's face closely as you outline the new marketing campaign. Deftly answering his questions from across the boardroom table, you can tell you're hitting the mark.

With a raised eyebrow and wry smile, he declares the proposal "brilliant", giving you a thumbs up before bringing the meeting to a close. It's easy to forget he's more than 6000km away.

Welcome to the world of immersive teleconferencing.

Decked out with wraparound, flatpanel screens, high-definition cameras and surround sound systems, the meeting room of the future has arrived.

These state-of-the-art videoconferencing systems bear as much resemblance to early desktop versions as Microsoft's Vista does to Windows 3.1. If they live up to their promise, they'll cause big changes to the way long-distance business is conducted.

The first thing you notice about the new-generation videoconferencing systems is their size. Rather than participants gathering around a television monitor and camera at the end of the boardroom table, they walk into a purpose-built room, complete with customised furniture, lighting and decoration.

The single monitor has been replaced by multiple, high-definition screens that provide a window into a room on the other side of the world.

Scratchy audio has given way to CD-quality, multi-directional sound systems.

Participants in other locations appear life-sized and

the high-definition images allow subtle expressions and gestures to be clearly seen.

It's not quite the holodeck aboard Star Trek's Starship Enterprise, but it's heading in that direction.

There's already a range of companies offering high-definition, immersive videoconferencing products, with each taking a slightly different approach to the challenge.

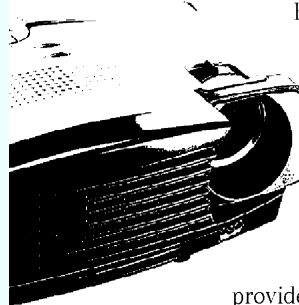
Computing giant Hewlett-Packard recently took the wraps off its new Halo offering, a product it developed in conjunction with Hollywood studio DreamWorks.

Organisations wanting to use Halo must invest in dedicated rooms, installed at each location where the service will be used. Costing about \$US425,000 (\$513,000) to set up, each room contains three large high-definition plasma screens, HD cameras and an audio system.

Every Halo room is fitted with similarly styled conference room furniture and decorated in exactly the same colours.

These touches enhance the feeling that everyone is sitting in one room when conversing by way of video links.

As well as the rooms, HP provides a fully managed, dedicated international network through which all





Halo rooms are connected. Monthly network fees range from \$US18,000 to \$US25,000 per room.

For that money, each location is guaranteed a 45Mbps connection, which is sufficient to provide HD video and audio links as well as behind-the-scenes management traffic. Meeting participants set up links using a simple onscreen interface.

Halo chief scientist Mark Gorzynski says a lot of work has gone into making the service as easy as possible to use. "We've tried to make it a distraction-free experience," he says. "Once you have the connection set up you can pretty much forget about it."

When using the service, participants sit on one side of a boardroom table. Because the same furniture exists in all rooms, when remote participants appear on the screens they seem to be sitting at the same table.

The result is a surprisingly realistic meeting room. After a brief interlude, it's actually quite easy to forget that everyone is not in the same room.

Clever positioning of the cameras allows remote participants to shift their gaze and appear to be speaking directly to individuals in the room.

After years of development, videoconferencing seems to be living up to its promise at last.

Gorzynski says the high-definition images and sound are made possible by a range of technologies that keep network latency low.

Latency is the delay between when you say something and the person at the other end of the connection hears it.

"We try to stay below 250 milliseconds latency to anywhere on the planet," he says. This is possible because of the dedicated global fibre network that HP has constructed.

With leased fibre links from a range of telecoms providers, HP has sufficient capacity to guarantee such service to all its Halo customers.

Also keen to grab a slice of what it sees as a very lucrative market, networking company Cisco has launched a similar service, called Cisco TelePresence Meeting.

With specially constructed rooms, users can conduct virtual face-to-face meetings anywhere in the world.

Each room is equipped with three 65in high-definition 1080i plasma screens and a spatial audio system, and is designed to seat six people.

Meetings can be between two locations or expanded to include others when required.

Cisco president and chief executive John Chambers says the system works particularly well for business meetings because you can see people's intent as well as hearing what they are saying.

"This will be game-changing for many industries," he said via TelePresence link from California. "It represents the next wave of productivity and the way we live

our lives."

Chambers says he expects the system will immediately shave some \$US100 million (about 14 per cent) from his company's travel costs.

He wants to see this amount rise to 20 per cent within 12 months.

Rather than adopting HP's approach of constructing a managed global network for its meeting product, Cisco has designed its rooms so they can be hooked into an organisation's existing internet protocol infrastructure.

Cisco engineers have designed compression codecs that allow all video and audio traffic from each room to use between 6Mbps and 8Mbps of bandwidth.

"On the significance scale, this is a 10 for us," Chambers says. "This changes Cisco's relevance and our role in the industry as a whole."

Meanwhile, videoconferencing specialist Polycom has also joined the immersive conferencing race, announcing an offering called Real Presence Experience.

Polycom Australia manager Michael Chetner says the product, which also uses custom-equipped rooms, is designed to complement existing teleconferencing equipment.

"This is really the future of videoconferencing," he says. "Customers may already have a comprehensive videoconferencing network in place and this augments it."

As well as conducting meetings between the rooms, participants using desktop videoconferencing devices can also be included. Chetner sees this as a key point of difference for his company's product.

"We're standards-based," he says. "Halo is proprietary and can only talk with other Halo rooms."

The dedicated meeting rooms require network links of between 4Mbps and 10Mbps to deliver the high-definition images and audio, but users linking in from smaller units can get away with slower connections.

As well as the obvious benefits for company productivity, Chetner says, such new-generation videoconferencing facilities can help the corporate world in other ways.

"Another thing driving this, in socially and environmentally responsible companies, is a desire to tackle things like greenhouse gasses by cutting down on corporate travel," he says. "We're finding that non-financial factors such as this are becoming more important."

At the end of the day, the appeal of immersive videoconferencing facilities simply comes down to human nature.

In both business and social communication a vast amount of information is conveyed in non-verbal ways.

Systems that allow humans to communicate non-verbally without needing to be in the same physical location are bound to make a difference.





## LIGHTENING THE LOAD

**EXT-GENERATION** videoconferencing systems might reduce the need for travel, but there's still a need for face-to-face meetings in business.

This doesn't mean technology has no role. Thanks to advances in video projectors, keeping meeting participants awake and informed has never been easier.

Rather than hoping their destination meeting room is equipped with a suitable video projector to display that gripping new PowerPoint presentation, growing numbers of business people are choosing to take their own.

In days gone by, the thought of slinging a laptop computer over one shoulder and a video projector over the other would

have brought tears of pain to the eyes of even the most buffed gym-bunny road warrior. But now, a range of small, light models make the prospect more appealing. One example of the new breed of portable business projectors is the InFocus LP70+. Tipping the scales at just 1.1kg, this little device is lighter than many laptops.

Using DLP projector technology, it is equipped with a 1500 ANSI lumen globe capable of producing wall-filling colour images. With a 2000:1 contrast ratio it's just as happy projecting PowerPoint slides as a DVD of the corporate Christmas party.

Another example is the PJ358 portable projector from ViewSonic, which weighs 1.8kg and uses 3LCD projection tech-

nology. Pumping out some 2200 ANSI lumens of brightness it will command attention from even the most jaded meeting participants.

This projector helps road warriors lighten their load by not requiring a PC or laptop to make a presentation. Rather, a USB drive containing the slides or video material can be inserted.

Such projectors are changing the way modern business meetings are conducted. The days of scribbling on a whiteboard or scratching out a business plan on sheets of butcher's paper are over. Business communication has gone digital.

**Ian Grayson**



**Face to face:** Technology can't completely eliminate meetings