

**Keri Allan** investigates the potential of telepresence, an entirely immersive technology that allows users to meet and feel as if they are in the same room, when they are actually thousands of miles apart



# turning on a meeting

IMAGINE A TECHNOLOGY that allowed a business to virtually eliminate the need for travel, reducing its carbon footprint, improving the work/life balance of jaded executives, and boosting productivity across the workforce.

Such are the claims for telepresence, a much vaunted new conference system. Unlike with tele- and video conferencing, telepresence enables users to maintain eye contact, read body language and interact in a real-time environment.

Although many issues have

stood in its way in the past, the technology of telepresence is now a viable business option.

Advances in video hardware have led to the increased capability to process more demanding algorithms for both video and audio. They have also increased the amount of bandwidth a video platform can utilise which means that, with systems being able to offer high definition (HD) video and audio quality, user experience is now better than ever before.

"High-performance IP networks are enabling new

technological advancements in speed, quality and ease of use in the conferencing arena to become a reality," explains John Short, senior product manager at BT Conferencing. "Therefore videoconferencing and telepresence are becoming more accessible. As technology enhancements continue to evolve, these 'dedicated rooms with sophisticated equipment' are now being turned into HD or immersive telepresence suites, which can transform the conferencing experience. The improved visual impact of HD

and immersive suites can make participants feel like they are actually in the same room with their fellow attendees. In a rapidly globalising world, we need to meet other people from across the planet to do business and build networks. And, as most people in business know, it often works best to do that face-to-face."

The reality is that the costs of large plasma and LCD displays have reduced sufficiently, and they are now a viable alternative to using projectors in telepresence solutions.

"Using large format plasma/LCD means that individual participants can be viewed as life size and therefore add a more natural feel to the telepresence meeting," notes Barry Cross, founder and managing director, ReView Video.

The capability for face-to-face business interactions without the need for global travel can offer considerable benefits: reduced travel expenses, and better relationships among employees, customers and partners.

"Collaboration features available with Cisco telepresence,

'With globalisation, more enterprises are moving into emerging markets, and need to establish rapidly a solid base for operations to make this viable'

Mike Robinson, Dimension Data



such as Web conferencing and a document camera, allow users to work together on documents and presentations or provide feedback on prototype products, helping organisations accelerate time to market," notes Macus Gallo, European marketing manager, Unified Communications, Cisco. "Why travel to speak in person if you can communicate just as effectively through telepresence? People no longer have to fly to meetings. They can simply turn them on."

Telepresence can also play a strong role in recruitment, when time is of the essence and recruits live far away, even overseas.

#### UNIVERSAL BENEFITS

The benefits of telepresence are universal, and technology companies may find they can garner even more advantages from it.

"Information technology firms use telepresence to provide logistical support for customers in numerous areas around the world and to monitor and ensure the flawless operation of critical network infrastructure. Research and development teams use the collaborative aspects of telepresence to conceptualise data, evaluate prototypes, and interact with systems half a world away, without ever having to leave the laboratory.

"Medical telepresence, which makes use of advanced communication technologies, such as high-speed networks, HD video and audio, and large, high-resolution displays to produce realistic, interactive experiences, has great potential as a tool for remote diagnosis, training and surgery. Many hospitals already use telepresent robotic surgical instruments for remote and microscopic surgeries, and even more medical facilities use telepresence for training and continuity of care," highlights Mark Barounos, CEO of Hemisphere, organisers of the Telepresence World conference.

Telepresence is particularly relevant right now as there is increasing pressure for companies to reduce their carbon emissions, and the reduction in

travel thanks to telepresence improves the quality of life and productivity of executives. Some clients reported to Teliris that telepresence can reduce the need for business travel by up to 80 per cent. This then translates into an excellent ROI as massive savings are made on travel expenses like flights and hotel rooms.

But telepresence has even more positive implications for modern business. Take the technology sector in emerging markets, for example.

"With ongoing globalisation, more enterprises are moving into emerging markets, and need to establish rapidly a solid base for operations to make this viable," comments Mike Robinson, director, Converged Comms, Dimension Data. "Telepresence systems make the process of moving into these often hard-to-reach areas – sometimes with unreliable or non-existent IT infrastructure – easier and less costly."

Overall, telepresence, once integrated into a larger number of businesses, could have a huge impact on work. Regular red-eye flights could become things of the past for boardroom members, and organisations will find that they will be able to move forward with projects much quicker as they'll be more responsive, productive and be able to communicate and collaborate more effectively.

#### FACE TO FACE

"HD conferencing is set to change the face of video conferencing because it offers twice the resolution of standard definition – meaning none of the important business aspects associated with face-to-face meetings are lost. It is one of the most significant technological advances in video conferencing for over a decade. HD can bring videoconferencing to a much wider audience, it also significantly raises the standards for business video conferencing services," notes Short.

"IM and presence applications will combine with audio, Web and video conferencing to provide real-time collaboration tools for people to use," he continues. "So we're getting closer to replicating the face-to-face experience,

i.e. you can see whether someone is present, start talking by instant messaging, then convert to a Web or video conference of two or more people within minutes. Decisions can be made at first contact."

"Senior decision makers can collaborate more often, because simply walking into a boardroom to meet face-to-face in a virtual environment is much quicker and cheaper than flying across the Atlantic," adds Tony Hurtado, global head of marketing, Masergy. "Therefore, decision makers will meet more regularly and decisions will be made more quickly, cutting out a lot of red tape and allowing for service and product development to have a much faster turnover, ultimately adding to productivity and profits and increasing the bottom line."

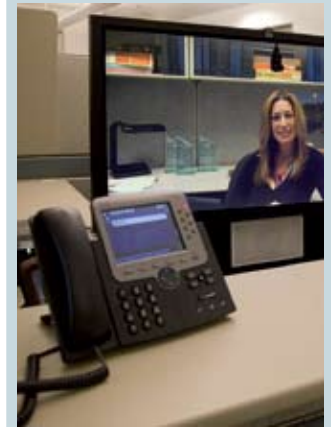
Telepresence systems today are primarily niche market solutions for the larger, experienced videoconferencing users, but this market will continue to grow in the coming years, and with it, technology will continue to progress.

"Telepresence is the basis for a range of future applications," notes Gallo. "Recently, we announced that Cisco telepresence will interoperate with standards-based video conferencing. This will enable customers to bring existing standards-based videoconferencing sessions into a Cisco TelePresence meeting. While using TelePresence interoperability, the meeting will preserve the experience for Cisco telepresence users, while allowing standards-based video conferencing users to participate.

"There are numerous possible applications for the technology in the future – from TelePresence at home, helping families to have an in-person meeting experience despite being in different locations, to a virtual banking agent who has specific expertise connecting with you via telepresence at your local branch."

The ExCel Centre in London is holding Telepresence World 2008 on 18-19 March. For more information go to [www.telepresenceworld.com](http://www.telepresenceworld.com)

#### technologies



Bob Johnson of Teliris lists some of the basic technologies behind today's telepresence:

- **Codecs** – broadcast quality running 60fps with low latency in reasonable bandwidth environments
- **Eye contact algorithms** based on the following concepts: continuous presence of all participants; ability to receive one to many streams from multiple remote sites; ability to line up the tables to allow for eye contact between all participants
- **Dynamic equipment** in each room capable of changing position to accommodate the requirements of the algorithm
- **Interoperability** – ability for the system to interoperate with standards based 323 and 264 systems
- **Transport** – ability to access IP transport systems that can support the bandwidth and class of service requirements of the codecs
- **Managed service** including: No user UI for call setup; Ability to control all room elements and monitor on a 24/7 basis; Guaranteed end to end SLA so the customer can leverage a functioning system in spite of variability in bandwidth and component availability