

Via Satellite®

April 2010

The Leader in Global Communications Coverage

TELEPRESENCE:
SATELLITE'S RISING STAR

SATELLITE RADIO:
TRADITIONAL STATIONS FIND HELP
IN BROADCASTING TECHNOLOGY



Satellite Industry Responds to

Haiti Disaster

NEW IN VIA SATELLITE:
BROADCASTERS CORNER

This Month: Bhavneet Singh,
MTV Networks International



TELEPRESENCE: Satellite's **Rising Star**

Decreasing costs, technological advances and enhanced experience mean the future is bright for telepresence via satellite.

BY GIOVANNI VERLINI

If you have participated in videoconferences, you would have noticed how the experience has changed over time. What used to be little more than a video phone call on relatively small screens presenting distorted faces and often affected by slight voice delays has become an experience that delivers impressive voice and audio quality to and from multiple locations and truly engages the senses. Like so many other applications and technologies, what is now commonly referred to as telepresence has grown from being an expensive niche technology — limited to the boardrooms of multinational companies — to an application used in a host of disparate sectors. The addition of enhanced features to the delivery of audio and visual transmissions of meetings has added to the experience: the possibility of real-time sharing of documents as well as adds-on like computer-displayed information and whiteboards has made telepresence into a mainstream application for a variety of industries. From simple videoconferencing between two offices, telepresence now is employed to facilitate distance government, allow remote access to hazardous environments, provide education to communities and even perform remote surgery.

Yet the fundamental business proposition for telepresence remains unchanged. At a time when companies around are under pressure to increase connectivity while reducing costs associated with travelling, telepresence seems to be the ideal solution to this conundrum — transporting information rather than people is the expression often used to describe the new way to conduct business. For example, a technology industry leader such as Polycom, which markets itself as provider of unified collaboration solutions, is now promoting telepresence as a solution that allows customers to cut costs and travel while boosting productivity.

Green Technology

While telepresence grew in sophistication and quality, technology advances both in the hardware and delivery chain made the delivery of telepresence via satellite a reality. This comes at the same time as an increasing number of companies demand applications that involve signals relayed over satellite to remote or multiple locations. After all, the advantages of satellite communications over terrestrial technologies remain true for telepresence as for other applications — e.g., mesh topology networks, broad geographical coverage, multicast capabilities, etc. “The true value-add of telepresence over satellite is the ability to bring a rich communication and collaboration experience to two or more parties who need to connect robustly, but who are geographically separated or on-the-move,” says John Morris, senior manager, global government solutions group, Cisco. “Further, parties who are dependent upon this flexible wireless satcom medium because a fixed wired infrastructure between them is not accessible, due to non-existence, cost, lack of security or other reasons, would look at a satellite-based solution. People involved in defense, oil and gas, telemedicine, desert or at-sea platforms, disaster recovery operations, remote governance in low-populated areas, and others share these same limitations,” he says.

Growing Commercial Success

Telepresence is a relatively old application dating back to the early 1990s in its commercial form. Its satellite incarnation also has been there ever since, though it is only in recent years that it has revealed its commercial potential. In the area of private broadcasting, for example, industries ranging from pharmaceutical to financial are realizing the benefits of reaching their target audience with an immersive and interactive experience through HD television programmes. This market has boomed over the space of just a few years. “In 2005, Velocity spawned a new industry, utilizing satellite technology to change the way in which companies deliver a targeted message to their niche audiences and reach key decision makers as well as the elusive C-Suite,” says Philip Elias, president and CEO of Velocity Broadcasting.

Other companies, such as Cisco, officially included telepresence over satellite as a supported feature of their TelePresence solution set with their TP v1.5 code release in February

2009. “The follow-on release of TP version 1.6 in November 2009 enhanced the satellite solution by offering an even-further compressed resolution-and-motion-control menu setting in the codec referred to as ‘Extended Reach TelePresence’ in marketing literature, or ‘720-Lite’ in the codec configuration menu,” says Morris. “This configuration puts the bandwidth for a single-screen endpoint TelePresence call within the bandwidth envelope of a single T-1 line, including encryption headers and collaborative display for PowerPoint slides or documents. This means that users’ experience also is becoming enriched by add-on technologies that companies like Cisco and partners are developing. Collaborative whiteboard technologies, for example, allow users to share a real time draw-sketch-create capability over the link. Handheld, HD, two-way video, two-way audio, wireless device interoperability, on the other hand, allows applications such as telemaintenance.”

Other initiatives aimed at saving bandwidth costs include making telepresence into a truly on-demand service. In this sense, Cisco has presented the addition of its Internet Routing In Space (IRIS) to the satellite network. “The ability of IRIS to assign bandwidth dynamically to users when they need it means that rich video services like telepresence will be available without needing to dedicate or pre-provision bandwidth to each user,” says Morris. By cutting bandwidth costs, these developments are expected to make it much easier for corporate and government customers to deploy telepresence via satellite across their networks.

The Real World

There are signs that, while still largely limited to the corporate environment, telepresence via satellite is spreading its reach. Cisco’s telepresence solutions via satellite, for example, are being used within the U.S. Department of Defence as well as other defence ministries around the globe. For example, CommandAccess, a service designed for military and civilian agencies deployed in remote areas of operation by CapRock Communications, enables customers with portable and manpackable terminals to benefit from broadband satellite communications at speeds up to 1 megabit per second.

Civilian applications, also feature high on the list, as in many cases telepresence is the only means to provide essential services to entire communities. Recently, for example, a contract was awarded from the government of the Canadian province of Nunavut to a system integrator who partnered with Cisco for the deployment of services to 25 remote northern villages. The services included remote-governance, telemedicine and morale benefits.

An old candidate for telepresence, telemedicine, remains one of the most interesting applications. “Telepresence over satellite was deployed and in daily use in a mobile healthcare vehicle in China, providing remote care and medical support for the victims of the 2008 Sichuan earthquake,” says Morris. Telemedicine’s reach is, of course, global. U.S. charity Medical Missions for Children, an organization focused on providing

