



Health before all

Alcatel, coordinator of the Research and Development (R&D) project Healthware, is to develop satellite-based telemedicine services.

Few topics have raised more people's expectations within the satellite industry than telemedicine. As one of the most pressing problems in developing countries is the lack of adequate health infrastructure, telemedicine seems to be the ideal solution to address this imbalance in the world, and bring first-rate medical expertise to virtually anywhere on earth. And satellite is the ultimate vehicle for delivering this application.

However, so far telemedicine has failed to make it beyond the boundaries of one-off experiments or small scale projects - in other words, it has yet to become a mainstream satellite application. But things could be about to change thanks to a joint industry initiative currently taking place in Europe.

The project

Alcatel has announced that it has been chosen as coordinator of the Healthware Research and Development (R&D) project, a programme co-funded by the European Commission (EC). Grouping 19 partners in a European consortium, the Healthware project is designed to foster the development of satellite-based telemedicine solutions, in particular those using Digital Video Broadcasting - Return Channel by Satellite (DVB-RCS) technologies.

The use of DVB-RCS technologies guarantees broadband transmission capacity from any medical facility (hospital, clinic, retirement home, dispensary, etc.), and opens new possibilities for highly interactive applications, such as second opinions or surgical video-assistance.

The Healthware project also addresses the issues of interoperability between DVB-RCS platforms, integration with mobile and terrestrial solutions, and open standard application and service platforms, in order to enhance the deployment and operational flexibility of these services. One of the main focuses of the project is service quality, to ensure reliable, secure end-to-end service.



The Healthware project will focus on the areas of chronic respiratory disease, cardiology and oncology, via four main applications:

- medical training;
- teleconsultation;
- second opinions; and
- home services.

Healthware is a three-year project. It will include a survey of customer requirements, and the definition and specification of networks, telecommunication and applications. Applications will be consolidated through an industrial validation phase using a platform at Alcatel Space's location in Cannes, southern France, and then deployed across pilot networks in Europe.

About the Healthware project

Launched in May 2005, Healthware is an integrated project of the 'Aeronautics and Space' thematic priority of the sixth Framework Program (FP6), under the 'End-to-end satellite telecommunications systems for telemedicine applications' topic.

This three-year project is valued at Euro 5.5 million, of which Euro 3.7 million is funded by the European Commission (contract 516171). Alcatel Space coordinates a consortium of 19 partners: Telespazio, Alcatel Espacio, Eutelsat, CNES as well as key actors from the health sector in Italy, Greece, UK, Poland and Czech Republic.

Pioneering telemedicine trial by I-Linx

Inmarsat partner, I-Linx, has launched a pioneering telemedicine trial in rural India using Regional BGAN. The trial is providing remote medical diagnostics for people in need of medical care in the Nagapattinam area of southern India, where there were more than 700 deaths caused by the Asian tsunami.

I-Linx teamed up with health software experts TeleVital about a year ago to assist Non-Governmental Organisations (NGOs) to deliver specialised healthcare to people in remote areas of the world. In Nagapattinam the project assisted Rescue Foundation - an Indian NGO - to send critical diagnostic data gathered from patients in rural villages via a mobile facility.

The team is touring with a Regional BGAN terminal to remote villages to help people with a broad spectrum of medical issues - including trauma counselling for many people who lost loved-ones in the tsunami. Medical images are streamed in real-time across the Internet so that the specialists in India can provide a diagnosis while talking to patients using web-based audio conferencing.

The Regional BGAN terminals link to TeleVital's browser-based telemedicine solutions - helping to transmit key information such as X-rays, ultrasound scans, MRI scans and angiograms. Roselie Vasquez-Yetter, Vice-President of I-Linx, explained: "We planned for more than a year to run this trial covering all aspects of medical diagnosis. But the service is also proving extremely helpful dealing with the aftermath of the tsunami - linking the NGO representatives on the ground with specialists in New Delhi. A key factor is the TeleVital software, which enables large files to be compressed into small packets of data so that it can be downloaded in real time via Regional BGAN terminal," she said.

In February, in a live demonstration of the technology, doctors in St Stephen's Hospital, New Delhi, were linked with an NGO in Tamil Nadu and the US-based SID International Health and Nutrition Workgroup in Washington DC.