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which to test terminals for compliance and interoperability. ESA is developing that test bed for SatLabs. An independent professional testing laboratory will be selected to operate the test bed and execute the qualification programme on behalf of SatLabs. The target is to be operational by the end of 2004. In the meantime, ad-hoc interoperability test campaigns will be organised with interested companies. The Group is also working towards the definition of a standardised interoperable PEP that will guarantee high performance for IP applications, giving at the same time freedom in the implementation of terminals and systems while maintaining interoperability. Many other tasks are ongoing to further consolidate the position of DVB-RCS in the operational, commercial and application-support domains. Thanks to the ever-growing, proactive and committed SatLabs membership, the work programme is constantly evolving with new challenging targets. I don't see any particular constraints on what the SatLabs Group can achieve."

For more information about the SatLabs Group and how to become a member, please visit <http://www.satlabs.org>, or send an e-mail to info@satlabs.org.

Satellite Technology to Climb Everest

A satellite-based Health Monitoring Kit from the Canadian company March Networks is being used to aid a group of climbers in their attempt to scale the 9000 m summit of Everest, the World's tallest mountain. The climb has claimed the lives of about one hundred people over the years.

The March Networks technology will log the blood-oxygen levels (SpO2), heart rates, blood pressures and body temperatures of the climbers. The recorded data will be stored on Bluetooth-enabled PDAs and ultimately transmitted via satellite to a Canadian-hosted website.

The lightweight, portable Health Monitoring Kit is fully equipped with the necessary medical devices, and can operate independently of its companion Video Services Gateway and videoconferencing cameras, which are typically used in home-based telehealth applications for remote nursing visits.

"Having more information available to all climbers is a vital element of a successful ascent,"



says Ben Webster, a renowned Canadian climber and leader of the expedition.

"By using the wireless telehealth system, we will not only see first-hand how our bodies are reacting to the exertion, but we will also be able to track the data, be cognizant of significant changes or trends, and be able to make informed decisions based upon that information."

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"The European Space Agency (ESA) inspires the vision for Europe's future in space and, through a diverse range of projects, develops the strategies needed to see it realised"



The satellite-based Health Monitoring Kit

Mr Webster is making this climb as part of a television documentary for the Discovery Channel, entitled 'The Everest Story' and is using the telehealth technology to better monitor his team's health as they push their physical limits in extreme conditions during the trek. The ascent to Mount Everest began in late March and the climbers are expected to reach the summit in mid-May.

The technology assisting the group during the climb is based on an ESA co-funded project from March Networks and Telesat of Canada. They worked together to develop the highly successful TeLeCare tele-medicine project, which allows 'remote patient diagnosis and monitoring' via satellite. With the system, nurses can videoconference with a patient anywhere within the satellite's transmission coverage.

For more information about ESA Telecom's involvement in telemedicine, please visit <http://telecom.esa.int/telemedicine>.

New Artemis Brochure

A brochure on ESA's Artemis spacecraft, covering its history and development, is now available on-line and in printed copy.

Launched on 12 July 2001, Artemis has been designed to qualify new space technologies and promote new services. It carries payloads for Data-Relay, Land-Mobile and Navigation Services, which form elements of the European Geostationary Navigation Overlay Service (EGNOS).

A launch failure, abnormal orbits and a nail-biting recovery operation, Artemis has seen more than its share of setbacks. The Artemis story, now available in this concise and easy to read brochure, therefore makes fascinating reading.

The brochure starts with a thorough description of the successful rescue by the Artemis Satellite Team, which earned them the AIAA Award. It is followed by a detailed description of Artemis' innovative Ion Propulsion System without which, and a manoeuvre called 'low-thrust orbital transfer', Artemis might have been lost forever. The feasibility of many of today's planned missions relies on the pioneering work done by the team to ensure that the spacecraft would reach its intended final orbit.

To download your copy of the Artemis brochure, please go to: <http://telecom.esa.int/artemisbrochure>.

To request a hardcopy by post, please e-mail or fax your name, affiliation and full postal address to: telecom@esa.int or fax: +31-71-5654598.

