MOWGLY

MObile Wideband Global Link sYstem

MOBILE BROADBAND SERVICES FOR TRAIN, BOAT AND AIRCRAFT

The rapid growth of broadband internet for personal and professional use shows a clear trend towards increased band-width demand, high speed services and applications. The provision of cost-effective mobile broadband services to airborne, maritime and high-speed train passengers seems feasible only via a satellite system.

The MOWGLY project studied the implementation of DVB-S2/DVB-RCS standards for broadband access (internet and streaming applications) to users of collective mobile vehicles (aircraft, trains and vessels) with the objective of offering a quality of service similar to the traditional terrestrial networks.

The project started in January 2005 and successfully ended in March 2007 after two years of technical development and several experimentations on boat, train and aircraft. Gathering leading actors of transportation and telecommunication industry as well as SMEs and universities, the MOWGLY consortium has levered up this challenge.

MOWGLY focused on business case analysis, engineering studies and performance evaluation targeting trials on a prototype communication chain with the objective of validating the technological development, assessing the services offered to potential customers and defining a business model. The new DVB-S2/DVB-RCS standard has a potential of an efficient open approach for broadband access.

MOWGLY investigated innovative solutions for satellite terminals in mobile environments, such as advanced transmission solutions for a group of passengers using collective terminals with quality of service control and networking technologies.

TRIALS PROVE SUCCESS OF MOWGLY TRANSMISSION TECHNIQUES

All proof of concept trials were successfully performed and have demonstrated that a common system may be used for different applications. MOWGLY transmission techniques and user oriented services have confirmed their capability to fully support broadband transmission in maritime, aeronautical and terrestrial environment.

Thanks to a good collaboration with the RENFE Spanish Railway Company, the train team has demonstrated the stability and robustness of the AAS DVB-S2 / DVB-RCS broadband satellite access solution in the highly disturbed train environment. The trial was performed on a regular Madrid-Seville railway line (a 900 km round trip). During the 5 hour experiment and despite the electrical environment, the poles and the high speed, the broadband internet connection was never interrupted and remained at top quality throughout the trip. In addition, the switch from satellite connection to terrestrial 3G in tunnels was also successfully experienced in more than 10 tunnels crossed between Madrid and Seville, with no service interruption.

The maritime team has also deployed a demonstration of Maritime Wideband Link System and the aircraft team a demonstration of an Aero Broadband system based on A9780 DVB RCS product.

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LIST OF PARTNERS

- Thales Alenia Space, France
- Airbus, Germany
- Rockwell Collins France, France
- Orbit, Israel
- Eutelsat, France
- Alastom Transport, Spain
- Alcatel CIT, France
- MBI, Italy
- Triagnosys, Germany
- Teleinformatica e Sistemi s.r.l., Italy
- Video & Suono, Greece
- University of Surrey, UK
- Ineco, Spain
- Advantech, UK

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PROJECT INFORMATION

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SATELLITE TELECOMUNICATION