

HEALTHWARE

Standard and interoperable satellite solution to deploy Healthcare services over wide areas



Project references

- Activity area : Aeronautics & Space
- Specific Program : Integrating and Strengthening the European Research Area
- Project Coordinator : Alcatel Space (Fr)
- Project Web site : <http://healthware.alcasat.net>
- Contact : Pascal Lochelongue e-mail : pascal.lochelongue@space.alcatel.fr

Project objectives

- To boost the deployment of DVB-RCS technology on a large scale,
- To design e-health services, integrate and test technical solutions that fulfill end-users requirements,
- To achieve platforms interoperability for large scale deployment of e-health services,
- To allow medical network leaders to develop e-health satellite based services,
- To perform pilot validation for fine tuning of the services,
- To identify obstacles, delivery chain's actors, decision makers and authorities, legal and ethical aspects to deal with to achieve sustainable services.

Themes & Applications domains

The project will favor 3 themes (**Chronic respiratory diseases, Cardiology, Oncology**) in 4 preferential applicative domains (**Services at home, Medical training, Second Opinion and Teleconsultation**).

- Services at home stands for patients monitoring and remote assistance (in isolated areas, recovery houses, islands, ...).
- Medical training stands for dissemination of medical knowledge towards medical staffs, nurses, auxiliary nursing staff.
- Second opinion stands for interactive video-communication between medical experts, specialists, doctors, ... sharing documents (medical exams, images, reports, ...).
- Teleconsultation stands for interactive video-communication between patient and doctor.

Technologies

- DVB-RCS star systems : satellite solution with reception and transmission capabilities (up to 2Mbps) at the end-users premises, with a central hub and allowing good quality and interactive services.
- DVB-RCS mesh systems : satellite solution with reception and transmission capabilities (up to 2Mbps) at the end-users premises. There is no hub, allowing highly interactive services.
- DVB-S systems : satellite solution with reception only capabilities at the end-users premises. Interactive services are possible by combination with a terrestrial return channel.
- Terrestrial and mobile technologies will combine with satellite technologies to offer end-to-end services.

Services & Applications platform concept

- To build a modular and standards based platform,
- To provide a set of network modules (protocol enhancement, multicast, QoS, security, ...), management modules (scheduling, accounting, administration, ...), generic application modules (videostreaming, push, portal, mirroring, videoconferencing,) and specific application modules (image processing, clinical trials, consultative databases, ...),
- To implement QoS mechanism to improve services performance and sustainability,
- To achieve satellite solutions interoperability and transparent users interconnection,

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Planning

- HEALTHWARE is a 3 years project
- T0 is 1st of May, 2005.
- A first 18 months period is dedicated to users requirements collection, services definition, system specifications and services and applications testbed implementation. First experiments and tuning are achieved over a small size pilot network.
- The second 18 months period is dedicated to large scale pilot validation and results evaluation.

Partners

The consortium gathers high skill partners active in :

- Industrials and Telecommunication services : Alcatel Space (Fr), Alcatel Espacio (Es), Telespazio (It), Eutelsat (Fr)
- Research : CNES (Fr), Forth (Gr)
- Services : Telbios (It), Telemedicine Technologies (Fr), Total Care Network (Gr), CardioExpress Telemedical Services (Gr)
- Engineering & Consulting : D'Appolonia (It), C2 Team (UK)
- Academics : UBHT / Bristol Royal Infirmary (UK), CHU Toulouse (Fr), Jagiellonian University (Pol), Masarykova Univerzita v Brne (Cz), University of Cyprus (Cy)
- User associations : Ehtel (Be), Remifor (Fr)

