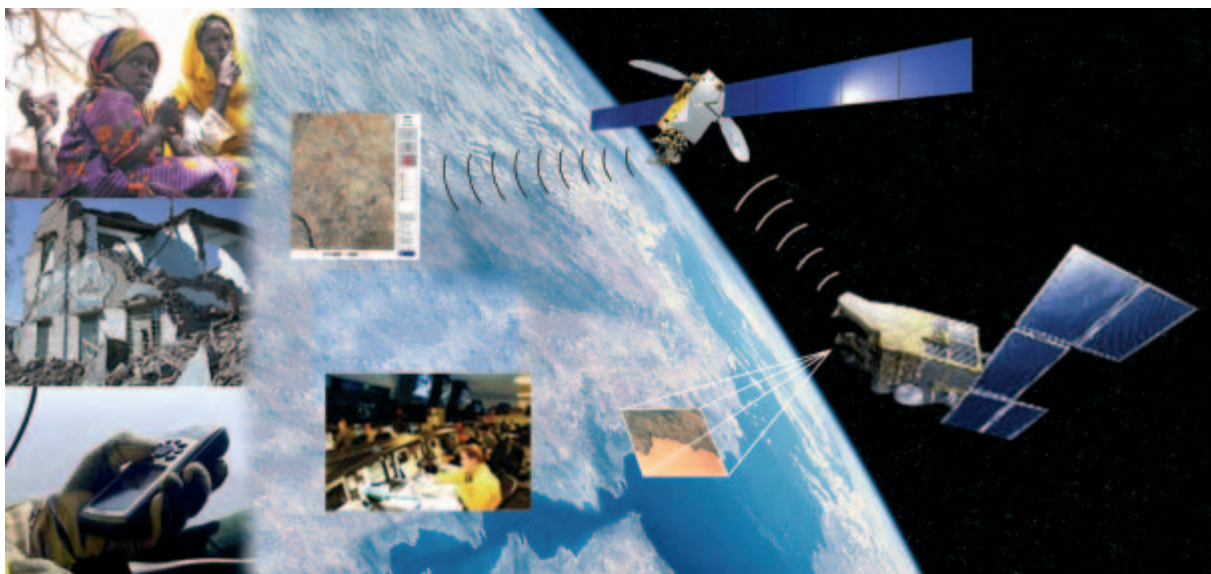




Preparatory Action for Security Research (PASR 2004)

ASTRO+ ADVANCED SPACE TECHNOLOGIES TO SUPPORT SECURITY OPERATIONS



The objectives

of **ASTRO+** are to study and illustrate how space capabilities - Earth Observation and Reconnaissance, Navigation, Telecommunication and their integration and implementation into services and infrastructures:

- can contribute in the short and long term to the equipment of Europe in security facilities supporting in particular the improvement of foreign operations,
- can support the definition and elaboration of the European Research Security Programme by proposing an R&T innovation roadmap for space.

Main results

- Show the benefits of space technologies through the demonstration of precursor services for joint operations abroad
- Work with users of European security operations (peacekeeping forces, civil security forces, NGOs) in order to increase the value of space capabilities
- Answer to the implementation of a European security strategy by proposing new operational services available in short term using space and by proposing a medium-term R&T action plan to exploit emerging mission concepts
- Set up networking mechanisms between space sector, research, users and stakeholders to create a multidisciplinary approach to address space services for security and to create a European framework for a "Space and Security charter".

Description of the work

The duration of **ASTRO+** was 15 months, the first 8 months dedicated to transverse analysis and definitions with the end users, the 7 last months dedicated to demonstration of missions, feedbacks analysis and R&T conclusion.

The activities of **ASTRO+** have been broken down into 7 work packages series, defined and validated in close cooperation with the users and space stakeholders.

State of the art assessment – Mission scenarios – Service architecture evolution

Refinement of needs evolution with the end user programme and characterisation of potential solutions at short to long term.

Performance of R&T analysis and developments

Analysis of space technologies per segment (EO, NAV, COMM and their integration, dual use) to develop and

propose for user validation new space services and infrastructures to support the mission concepts elaborated.

Demonstration of improved space-based security applications

To achieve the evaluation of added value brought by integrating the three space technologies together an exercise was run in Poland begin February 2006 to represent operations abroad through a scenario showing:

- a situation centre installed in Toulouse integrating Imagery intelligence facilities, civil and secured communications, tracking services, and communication with a distant theatre.
- an operation centre in charge of regular rehearsals for crisis management operations abroad of European forces, integrating secured mobile communication and tracking for vehicles and forces, local imagery facilities.

G.A. SEC4-PR-009600

Total Cost : € 2,946,866

EU Contribution : € 2,200,000

Starting Date : 1/1/2005

Duration : 15 months

Coordinator:

EADS Astrium SAS Ground Systems,
Applications and Services
France

Contact:

Bruno Vatan
Tel : +33 (0)5 62 19 69 48
Fax : +33 (0)5 62 19 50 74
E-mail : bruno.vatan@astrium.eads.net

Partners:

EADS Astrium Limited

EADS Astrium GmbH

Alcatel Space

Alenia Spazio

Telespazio

Centre National d'Etudes Spatiales

Deutsches Zentrum für Luft- und Raumfahrt

Alcatel ETCA

Ecole Royale Militaire de Belgique

Fondation pour la Recherche stratégique

Istituto Affari Internazionali

Indra Espacio

Landmåteriet Metria

Infoterra Limited

Nottingham Scientific Limited

Space Research Centre Polish Academy of Science

QinetiQ

Royal United Services Institute for Defence & Security Studies

SkySoft Portugal

European Union Satellite Centre

Infoterra GmbH

UK

DE

FR

IT

IT

FR

DE

BE

BE

FR

IT

ES

SE

UK

UK

PL

UK

UK

PT

ES

DE