

the only available means for 'real' global monitoring and includes existing and new satellites such as,
 National: SPOT-5, TerraSar-X, TanDEM-X, Cosmo Skymed, Radarsat-2, Pleiades
 EUMETSAT: Jason-2, MSG, MTG, MetOp, Post-EPS
 Third Party missions: RapidEye etc.

GMES Services will provide 'FAST Track Services' which will begin by 2008. These include land monitoring, emergency response and marine services. Others to be included are air quality, water management, food security, maritime surveillance and environmental conditions as they impact health.

GMES has been funded to date to the amount of €230 million (€130 million by ESA and €100 million by the EC). Continued funding will rise to greater than €1 billion by 2013. As GMES moves forward, increased emphasis will be on developing services and applications as compared to defence and security alone, this likely in response to increased public pressure to acquire and use space information for regional and locally decision making purposes. As Astrium points out, GMES success will be directly measurable by the satisfaction of users and citizens together with political authorities – 'Space at the Service of Citizens'.

Marc Tondriaux, Director Ground

Segment, Applications & Services, EADS Astrium and Director of Infoterra group pointed out that Infoterra Group consists of Infoterra GmbH, Infoterra Ltd., and Infoterra France SAS. Offices for the group are located in Germany, France and the United Kingdom.

Tondriaux explained the value chain for the group as a consultancy whose sales and marketing force includes earth observation programming and telemetry and sales. Accordingly, the acquisition and processing of airborne data, its analysis, formatting and software design components together with hosting, all fall under this group. Founded in 2001, Infoterra GmbH employs 40 at Friedrichshafen with an annual turnover of €5 million (2004). Infoterra Ltd. in the UK employs 175 in Farnborough with a turnover of €20 million (2004). In France, 100 employees are located at Sophia Antipolis, which had a turnover of €8 million (2004).

Infoterra GmbH will focus primarily upon mapping and monitoring European land use. Infoterra Ltd. will provide support for humanitarian relief worldwide. Meanwhile, Infoterra France SAS will be primarily organized to support risk management including fire and flood.

Joerg Herrmann is the Managing Director Infoterra GmbH and is involved with both the Friedrichshafen headquarters and the Potsdam production facilities near

Berlin. The ground receiving station is located at Neustrelitz – north of Berlin toward the Ost See. It is this group that will drive TerraSAR-X and provide GMES Services for the product through development and marketing.

Beginning in the fall of 2006, TerraSAR-X will provide 1 meter resolution imagery globally through a range of capabilities including detection, recognition and identification at 16, 3 and down to less than 1 meter resolution, respectively. Electronic beam steering for the satellite will provide fast switching between targets and nodes as well as varying distance between scene types.

The efficiency of TerraSAR-X is highlighted from an example in Afghanistan where 650,000 square kilometers were surveyed at 1:50,000 in 2.5 months. Production is expected to keep pace within 4-month time frames. The new TanDEM-X satellite, yet to be launched, is expected to provide the highest resolution DEM imagery available.



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