

EARSC

European Association
of Remote Sensing
Companies



22-23 March

Le Meridien Hotel, Dubai

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Vice Chairman EARSC

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Introduction

- Welcome
- Background:
 - ESA funded research – Study of Geo-Information Service supply and demand in the GCC region
 - Conducted as part of the Value Added Element of the Earth Observation Envelope Programme (EOEP)
 - Study conducted by VEGA Consulting
 - Revealed tremendous opportunities for the GCC region to exploit EO products and services
 - An immature market
 - A lack of awareness about engaging with European suppliers
- This seminar organised to help address these issues

Seminar Objectives

- Improve understanding of the European EO industry and provider capabilities
 - supplier presentations of real case studies
- Understand potential benefits to the GCC region
- Understand the barriers to uptake of services
 - targeted post-presentation discussions
- Ability for customers and suppliers to engage pragmatically
 - Supplier trade stands
- Provide you with a stimulating networking opportunity!

Market development in the GCC Region

<messages>

- EO has become part of the more general concept of Geo-information, where users receive information tailored to their needs and pertaining to their precise place in space.
- EO offers added-value cost-effective solutions to business problems associated with the interplay between asset management, technical processes, systems and data management, rapid dissemination of data, results or services, and distribution channels.
- European EO service industry is moving to operational services
- The EO service sector is being recognized as a leader in the development, deployment and integration of science and technology into policy and decisionmaking by industry and other stakeholders.
- Open to collaborative partnership with local industry

Market development in the GCC Region

<industry facts>

- Industry can add value through finding opportunities in new markets and in exports
- When industry can work in a thriving home market then EO industry able to develop exports and have a positive contribution to the economy of Europe
- dynamic sector: entrepreneurial spirit and innovation
- Size: aprox 200 companies in Europe (EARSC has 67 members) Business to Business approach and B-G
 - rise to revenues in Europe of between 500m and 1b
 - value created is much higher (hard to derive -involvement public sector)
 - foresee a roughly 50:50 market split between commercial and governmental segments.
 - Concerns: competitiveness threat, business case is not clear - investment , returns transparent public sector procurement, data policy & regulation
- Market drivers: GMES, export markets, geo-marketing, LBS, defence-intelligence...
- raising user awareness is needed



Market development in the GCC Region (3)

<EO services a key domain>

- **strategic access to information**
- **source of innovation and creativity**
- **potential for wealth creation through exports**
- **support to other business/market segments**

Market development in the GCC Region (4)

<why are needed geo-information services?>



Water – 20% of all surface water sources seriously threatened by pollution



Soil Erosion – 17% of total European land area affected, economic loss around 85 € per ha



Biodiversity – 335 species highly endangered in Europe



Agriculture – intensification leads to water stress, soil erosion and biodiversity decline



Urban Settlements and transport networks growing - leads to soil sealing and fragmentation of landscape

Responsible management requires adequate geo-information

Industry Outlook – Key messages

- Strengths
- Weaknesses
- Role of EARSC
 - ***EARSC is the voice of the European geo-information service industry!***

Industry Outlook – Key messages

<Strengths of the European EO industry>

- Large experience providing information based on RS data to government, industry and the citizen
- Mastery of space-borne/airborne/in-situ systems and sensors technologies
- A long history of close collaboration with Earth scientists in a large variety of thematic domains
- Indigenous to Europe, a continent with extremely diversified landscapes and environmental problems
- Strong partnership experience across European borders
- A dense network of relations with other continents and countries, from historical heritage
- Innovation capability (spin-off from world class research in scientific laboratories and industry, new forms of partnerships,...)

Industry Outlook – Key messages

<Markets strengths>

- Demand for geo-information services is fed principally by urban expansion – which is continuing
- Growing awareness of GIS and related products and their potential contribution to the development agenda
- Recognition of European/Canadian strengths in the industry, particularly use of satellite data:
 - Mapping across wide geographical expanses, and as an alternative to aircraft-based sources which are subject to over-lying permissions that limit their coverage
- A more cost effective option for data gathering when large volumes of data are required:
 - Supporting the investment cases behind regional satellite launches such as DubaiSat-1 in the U.A.E.

Industry Outlook – Key messages

<Weaknesses>

- Satellite data limitations - availability, quality, timely delivery
 - does not suit all applications and requirements
- In a low labour cost economy, data seen as an expensive proportion of overall project cost
- Lack of skills to generate a market of sufficient maturity to be truly successful and influential
- Potential impact of financial crisis in the region
- Possibility of regulatory changes in response to security threats or economic deterioration
- A period of economic and commercial uncertainty lies ahead
 - projects may be cancelled, postponed, changed or scaled down

Industry Outlook – Key messages

<Role of EARSC>

- A non-profit-making organisation created in 1989
- Mission & Objectives:
 - To foster the development of the European Geo-Information Service Industry
 - To stimulate a sustainable market for GIS using EO data, openly accessible to all members
- A long and complex path to maturity and market expansion
- Today EARSC has more than 65 members in more than 19 countries, and is a recognized association worldwide
- Represents European GIS providers creating a sustainable network between industry, decision makers and users
- Communications - website, newsletter, directorate, numerous events on both European and International stages

Characteristics of EO services in the GCC Region

- **Political** - dominated by security, drives governmental regulation of supply and sale of data, particularly high resolution imagery
- **Economic** - debt crisis in Dubai –infrastructure and development projects cancelled, postponed, slowed or closed down
- **Social** - population growth and impacts
- **Technical** - local capability issues. Government strategy to establish independent skills and capability . Reliant on expatriate technical resources
- **Legal** - constraints to business, particularly for expatriates
- **Environmental** factors - lower priority in the development

Encouraging market growth through collaboration

- **Challenges**
- **Opportunities**

Encouraging market growth through collaboration

<Challenges>

- User GIS departments conduct significant 'added-value' activity normally seen on supply side in Europe or Canada
- User requirements focused on data sourcing (data resolution, accuracy, timeliness of delivery) not information products.
- Principal GIS users in key field of real-estate and urban management with a threat to future demand
- Immature market delivers project-by-project services not repeatable services to an established user community
- Limited number of regional GIS providers and established competitive landscape
- Small number of active organisations and staff numbers compared to ESA community levels
- Substantial registration and regulatory controls on businesses
- Few trade associations - partnerships with European organisations are emerging

Encouraging market growth through collaboration

<Opportunities>

- Real-estate, public authority, energy and environmental sectors
- Natural resistance to engaging external capability from Europe/Canada now recognised
- Need for technical and capability development recognised:
 - Technical - securing better, more suitable data supplies under appropriate service terms
 - Capability – sufficient skills awareness, training and development to support national delivery of geo-information services
- Successful relations being fostered between customers and suppliers on project by project basis
- Organisations developing capability to respond themselves

Graphics Library Slide



Thank you!

ANNEXX

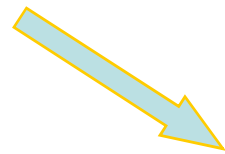
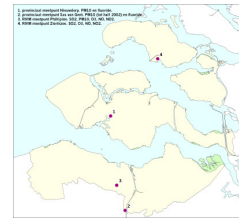
What is EARSC ?

- EARSC is a non-profit making organisation created in 1989 representing the European remote sensing value added industry, as well as data distribution and comprehensive end-to-end chain suppliers
- Close to 70 members representing 19 countries join EARSC, with SME's as well as large member companies and employees of more than 3000 – the entire VA sector, however, is much bigger
- EARSC coordinates workshops in structural and technical issues that present challenges to key public opinion leaders
- EARSC fosters relationships with the media and the public to give them a better understanding of how remote sensing programs benefit the European 's economy, security, growth and sustainable development

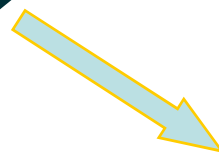
What does EARSC do?

- EARSC's **mission** is to foster the development of the European geo-information service industry.
- Our **vision** is to create a sustainable market for geo-information services, openly accessible to all our members.
- To achieve these, we focus on:
 - Improving customer awareness and acceptance of Earth observation and remote sensing based solutions
 - Improving market access for our members
 - Promoting our members capabilities
 - Engaging with key organisations (ESA, the EC and others) to make the EO VA sector's views known and acted upon

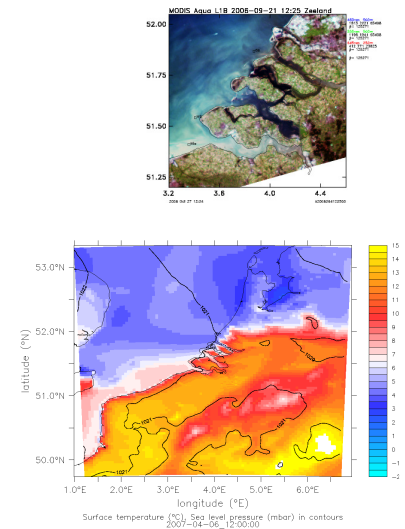
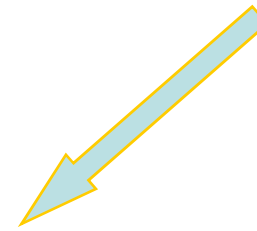
EARSC's Members cover the whole value added chain, i.e. from data acquisition to services to serve users efficiently and cost effectively



Ground Receiving Stations



Service Provider



67 MEMBERS/ 19 COUNTRIES

Austria (1 Corporate)

[GeoVille Group](#)

Belgium (5 Corporate) (2 Obs)

[Aerodata International Surveys](#)

[Belgian Institute for Space Aeronomy \(Observer\)](#)

[Eurosense Belfotop](#)

[GeoID](#)

[GIM- Geographic Information Management nv](#)

[Vito nv \(Observer\)](#)

[Walphot S.A.](#)

Bulgaria (1 Corporate) (1 Obs)

[Eurosense EOOD](#)

[ReSAC, Remote Sensing Application Center \(Observer\)](#)

Canada (1 Obs)

[PCI Geomatics \(Observer\)](#)

Czech Rep. (1 Corporate)

[GISAT s.r.o.](#)

France (6 Corporate) (1 Obs)

[EADS Astrium Satellites](#)

[Euroconsult](#)

[France Développement Conseil \(FDC\)](#)

[Noveltis](#)

[SERTIT-ULP \(Observer\)](#)

[Spot Image](#)

[Thales Alenia Space France](#)

Finland ()

Greece (2 Corporate)

[Aratos Technologies S.A.](#)

[Grace Ltd.](#)

Germany (9 Corporate)

[Brockmann Consult](#)

[Definiens AG](#)

[EADS Astrium GmbH](#)

[European Space Imaging](#)

[GAF AG](#)

[IABGAF](#)

[OHB-System AG](#)

[RapidEye AG](#)

[VCS Aktiengesellschaft](#)

Italy (8 Corporate)

[Chelys](#)

[e-geos \(Telespazio S.p.A.\)](#)

[Eurimage](#)

[Flyby s.r.l.](#)

[INNOVA Consorzio per l'Informatica e la Telematica](#)

[Planetek Italia S.r.l.](#)

[SERCO](#)

[Tele-Rilevamento Europa TRE](#)

Luxemburg (1 Corporate)

[SES-Astra](#)

Netherlands (3 Corporate) (1 Obs)

[BMT Argoss](#)

[Neo](#)

[Satellite Services BV](#)

[TNO \(Observer\)](#)

Norway (2 Corporate)

[Kongsberg Spacetec AS](#)

[ANSUR](#)

Poland (2 Corporate)

[Eurosense Sp. z.o.o.](#)

[GEOSYSTEMS Polska Sp. z o.o.](#)

Portugal (2 Corporate)

[Critical Software S.A.](#)

[Edisoft S.A.](#)

United Kingdom (7 Corporate)

[Assimila Ltd](#)

[DMC International Imaging](#)

[Fugro NPA Group](#)

[Infoterra Ltd](#)

[ITT Visual Information Solutions](#)

[Logica](#)

[SciSys](#)

Spain (7 Corporate) (1 Obs)

[Aurensis](#)

[Deimos Space](#)

[GMV](#)

[Indra Espacio, S.A.](#)

[INSA S.A.](#)

[INTA \(Observer\)](#)

[Sener](#)

Sweden (2 Corporate)

[Metria](#)

[Spacemetric](#)

Switzerland (1 C)

[MFB-GeoConsulting GmbH](#)

Ukraine (1 Obs)

[Yuzhnoye State Design Office \(Observer\)](#)

www.earscc.org

EARSC

European Association
of Remote Sensing
Companies

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Working
for
A Better Future

EARSC

EARSC is a non-profit-making organisation which is actively involved in coordinating and strengthening the Earth-observation chain and promoting the European Earth observation industry in programmes such as Global Monitoring for Environment and Security (*GMES*). It is open to corporative and observer members with deeply interest in the Earth Observation sector.

[▶ Read More](#)

News

Integrating in-situ monitoring and EO in the framework of GMES and GEOSS

Thursday, May 31, 2007

The GMES and GEOSS initiatives, in concert with other activities, are creating a paradigm change in geo-spatial and environmental information sharing and recognise that geo-spatial products and services are a key to both economic return and management of

Join Us

If your company is also interested in remote sensing, EARSC membership can bring you a lot of benefits. So why not join [EARSC](#) right away?

To get more information on [EARSC membership](#), please [contact us](#).

EOMag

EO services / Market: agriculture

As the satellite imagery archive continues to grow, it will be increasingly possible to track changes over time for applications such as agriculture. Farmers worldwide make substantial annual investments in farm chemicals, yet continue to lose crops due to pest infestations, plant diseases, and poor farming practices. Using high spatial resolution imagery, inadequate irrigation and soil erosion can be identified quickly, while herbicides, pesticides, fertilizer, and other agricultural treatments can be more accurately assessed, closely monitored and optimised.

When combined with other information (farm census, seed sales, market information, etc.) Earth observation outputs make a significant contribution to the efficiency of modern agricultural practice, while the consistency and broad coverage of the data are important to the large companies in today's market.

EO services / Market: fisheries

Space observations of oceans have evolved over last four decades and have been increasingly used for understanding various oceanic conditions. For those studying the ocean's environmental processes or assessing its marine resource potential Earth observation can help to identify the potential fishing zones and to assess fish stocks. The EO industry is already delivering products that help optimise fishing fleets; it also provides data for fish stock control monitoring and detection of biophysical parameters such as primary production and sea surface temperature.

EO services / Market: forest

Precisely located Earth observation data has assumed great importance in forest mapping and management, fire damage monitoring and the increasingly important problem of illegal logging in developing countries. Currently the demand for forestry information is driven by international and European environmental conventions. National governments are introducing geo information to provide the information necessary for forest policy development.

However, EO data can be more easily and cost-effectively managed by private operators. Earth observation is being used in many areas of forestry, including forest inventory, health, wild land, chemistry, carbon accounting and land cover mapping. For example, forest managers know how much wood will be available at any one time on a sustainable basis. They will be able to compare up-to-date maps of forests and conserved areas with information from wood suppliers to prevent protected wood from being taken.

EO services / Market: energy

One of the most established markets in Earth observation is within the areas of natural resources exploration including oil, gas and minerals and the Energy sector in general. Earth observation products aid in the development of initial off or on shore surveys as well as in the areas of oil spill mitigation and remediation.

Energy companies are one of the pillars of the market. Energy is an input universally required by the economic and social infrastructure of all countries. The Earth observation industry can optimize the available spatial data for specific locations using ground-based monitoring techniques providing the existing surface networks with data where none was previously available. Such optimization occurs through the development of specific decision support system tools that require detailed meteorological and specific parameters information depending on the energy activity.

EO services / Market: oil & gas & mining

Earth observation imagery is used extensively by exploration companies in support of their search for new oil and gas reserves — both on land and at sea— as well as playing an important role in exploration, extraction and safe transportation of the world's oil and gas reserves.

Earth observation is commercialising science solutions to provide a competitive advantage in the market place of mining during the design and construction of underground structures and during the operating period of these structures.

EO services / Market: renewable energy

Real opportunities exist for information from Earth observations to contribute to the optimisation of renewable energy systems for power production, and to contribute to the provision of information for optimal integration of traditional and renewable energy supply systems into electric power grids.

Energy sources such as solar, wind, and wave power facilities, offer environmentally-friendly alternatives to fossil fuels but are particularly sensitive to environmental conditions. These energy sources are intermittent, and their availability depends largely on local climate and weather. Local climate data on cloud cover, solar irradiance, and on wind/wave speed and direction —combined with other environmental parameters such as land elevation and land cover models— are vital elements in developing a strategy for the location and operation of solar, wind, and wave power facilities.

EO services / Market: water

Water authorities require access to reliable information at the regional scale. This can be derived from traditional and laborious point measurements, but Earth observation can additionally provide data on the temporal evolution of the extent of open water surfaces and indices of irrigation or water scarcity such as the spatial and temporal variations of the vegetation phenological cycle.

Earth observation data provides new options to diagnose land and water resources conditions, and therefore an opportunity exists for providing new services.

EO services / Market: infrastructures

There is sustained interest in Earth observation products and services from a broad range of sectors of the economy, including construction and other infrastructures, commercial and even residential real estate companies.

The application of Earth observation technology in exploration can save time, money and increase efficiency. The processed imagery is also able to provide accurate and up-to-date information for many purposes. Different users of the information include: oil and gas exploration/production companies, geophysical/ eo-chemical services companies, mineral exploration/operators and independent consultants.

EO services / Market:

Other geospatial data provide a range of societal benefits, such as improvin public safety and transportation access providing companies with options for reducing fuel usage and improving operational efficiencies.

Data on drainage, watersheds, buildings, and land uses has vital importance to infrastructures and EO data can help to understand these better. Road networks can be more efficiently and effectively managed by drawing up on quantitative and qualitative real time information. EO data is used to increase the efficiency of project planning, shorten project timelines for delivery and significantly reduce costs for developing and managing the highway corridors. Large investments are being made to upgrade road/highway infrastructures and the transportation sector has begun to understand the potential benefits of using EO value-added products. The most requested products are therefore cartography and specific thematic and morphological maps, such as digital elevation models (DEMs).

EO services / Market: infrastructures

Ship routing for safe transportation and efficient use of fuel is critical for worldwide commerce. Earth observation supplies information and imagery which improves the maritime weather forecast. Shipping is therefore supported by an accuracy day-and-night coverage of the entire globe.

The telecommunications and utilities industries have seen the use of large-scale of EO data, such as land-use categories of urban and vegetated areas, as “clutter classifications”. These interpretations have been used to assist in the network development and expansion planning process and to look for areas in modelling cellular telephone signal propagation, which in turn helps engineers to locate cell towers.

EO services / Market: services - insurance

EO services help to generate revenues for Insurance companies by providing real-time data for understanding hazards and by adding value to imagery datasets for visualisation during a risk assessment, evaluating variables that would lead to additional operational costs.

This approach provides the insurance customers with unparalleled opportunities to understand and assess future risks. The importance of post-crisis analysis could be improved if the insurance sector would start to use satellite data operationally, for the assessment of damage caused by natural disasters.

EO services / Market: services

MEDIA

The potential of the news and media market is very high, because prospective users are not limited to the technical community. All consumers could be considered a client. Images could be used for publishers, media and newspapers for reportage and articles.

LEISURE/TOURISM

The Earth observation industry offers new techniques for creating promotional material for tourism using web sites based on EO data seen from a pictorial point of view and deploying virtual reality medium scale applications.

New products also exist in the leisure sector providing information on textures and landscapes for video games, such as flight simulators.

EO services / Market: security

The security segment is a well-established user of EO data as a key information source, and it is handled with more and more sophisticated GIS instruments. The main applications are the generation of maps, target monitoring and detection, and digital elevation model generation. Data fusion techniques that combine data from different sources are also used. Earth observation data makes an excellent basis for medium to large scale cartography.

Mapping, civil protection and global security applications of geospatial data information are currently present in the market. The needs of environmental assessment and infrastructure applications are substantial and are likely to increase as our scientific understanding advances, and thereby provide future economic benefits.