The GIGAS Forum

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Bringing together GEOSS, INSPIRE, GMES, and SEIS

Workshop W6 (PS30), Hall E, Thursday 14:00-16:00
Eva Klien, Alessandro Annoni, Pier Giorgio Marchetti

Scope and Objectives

- Various environmental initiatives share commonalities but are being developed independently → makes up a complex landscape in terms of adoption of standards introducing interoperability barriers.

- The Workshop provides

  - Introduction into the GIGAS project, which is a support action for setting up and activating the GIGAS Forum.

  - Methodologies generated and tested for monitoring and comparing existing initiatives (like GEOSS, INSPIRE, GMES, and SEIS)

  - Methodologies for facilitating a consensus building process on how to influence their evolution.

  - Discussion of the purpose and scope of the GIGAS Forum

Agenda

14:00-14:20:	The GIGAS project – a consensus-driven approach for influencing the evolution of environmental systems and initiatives (Eva Klien)
14:20-14:40:	Monitoring and analysing interoperability gaps– methodology and outcome examples (Pier Giorgio Marchetti)
14:40-14:50:	Discussion
14:50-15:10:	The GIGAS Forum - a place to meet, discuss and find solutions and best practices for interoperability problems (Alessandro Annoni)
15:10-15:30:	Discussion
15:30-15:40:	Future activities (Eva Klien)
15:40-16:00:	Discussion

Workshop Discussions

- Approach:
  - Usability of the methodology for your work?
  - Feedback on the structure of recommendations (typology and targeted stakeholders)
- Forum:
  - Feedback on the scope and content of the forum; what would you expect?
  - What is the role that you would like to play?
  - Strategies on how to make the Forum sustainable
- Future Activities
  - Feedback on the themes targeted for the 2nd loop;
  - How and where could you contribute?
  - Ideas for a cross-initiatives scenario
- Questionnaires

Project Data

- Full Title: **GEOSS INSPIRE and GMES an Action in Support**

- Funding Scheme: **Support Action**

- Duration: **24 Month**

  1st of June 2008 – 31th of May 2010

- Effort: **3.084.359 / 2.099.989** (Requested EU contribution)

- Consortium: **19 partners (Co-ordinator Fraunhofer IGD)**

European Commission -
Information Society and Media

i2010

COOPERATION

ICTPSP

Towa .... larc

- **GEOSS** (Global Earth Observation System of Systems)
  - Built by the **Group on Earth Observations (GEO)** on the basis of a 10-Year Implementation Plan running from 2005 to 2015.
  - Seeks to connect together all existing Earth Observations resources and to make it easily accessible with the aim of support better decision making on 9 Societal Benefit Areas
- **INSPIRE Directive**: *establishing an Infrastructure for Spatial Information in the European Community* (14 May 2007)
  - Legislative instrument that lays down a general framework for a European Spatial Data Infrastructure (SDI) for the purposes of Community environmental policies and policies or activities which may have an impact on the environment. It builds upon National SDIs operated and maintained by European Member States
- **GMES** (Global Monitoring for Environment and Security)
  - GMES is a joint initiative of the European Commission and European Space Agency that consists of 3 components:
    - Space Component that relies on existing or planned European space infrastructure (co-financed by the EU and ESA)
    - In-Situ Component that relies on facilities, instruments and services at national, regional and intergovernmental levels inside and outside the EU.
    - Service component on Marine, Atmosphere, Land, Emergency at pre-operational stage

Interoperability on European Level?

- Shared commonalities:
  - focus on environmental monitoring,
  - use of geomatic and geographic information,
  - their Europe- or worldwide dimension,
  - their reliance on international standards and
  - the advanced Spatial Data Infrastructures that are needed for their implementation

→ all three initiatives are significantly contributing to the implementation of SEIS as a basis for improving sharing of environmental-related data and information and the provision of services
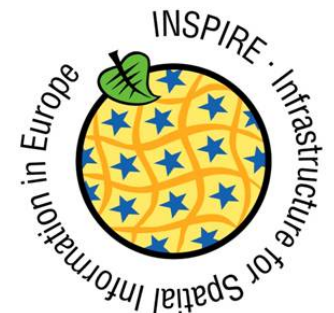
- However:
  - Different organisational models, different stakeholders, different governance, different funding, different levels of implementation, different approaches for technical development, different timelines

→ risk of evolving into separate, incompatible services and not profiting from the benefits of an interoperable approach

…an <u>A</u>ction in <u>S</u>upport to the <u>G</u>EOSS, <u>I</u>NSPIRE and <u>G</u>MES

- Coherent and interoperable development of these initiatives
- Concerted adoption of standards, protocols, and open architectures

- ✓ Recommendations to increase architectural coherence
- ✓ Strengthened EU contribution to international standardisation
- ✓ Agenda for further strategic research

Objectives

- Promote the coherent and interoperable development of the GMES, INSPIRE and GEOSS initiatives through their **concerted adoption of standards, protocols, and open architectures**.

  - Analyse the gaps between the different initiatives and propose strategies to overcome them

  - Highlight best-practice examples from finished FP6 or ongoing FP7 projects relevant for the identified gaps

  - Initiate a consensus process on a broad basis for public consultation and consensus building

  - Shape the initiatives by providing short term action items

  - Influence the relevant standardisation bodies to ensure the long-term action

  - Provide an agenda for further strategic research areas to ensure investigation on the problems that are unsolved today
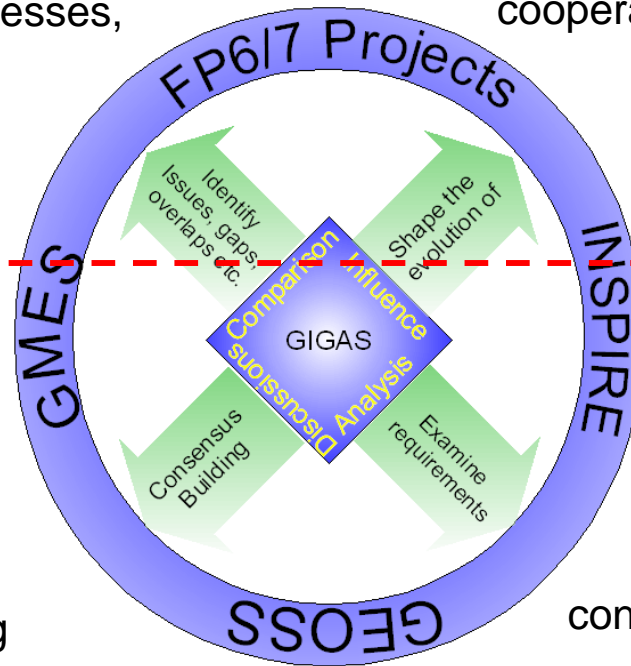
Consensus-driven Approach

1. Analysis

Monitor each initiative and selected FP projects (architecture approaches, requirements, consensus processes, and resultant service-oriented interfaces and encodings)

2. Comparison and Recommendations

Identification of possible synergies that can be built and further areas of cooperation, to highlight the gaps and overlaps within the initiatives.
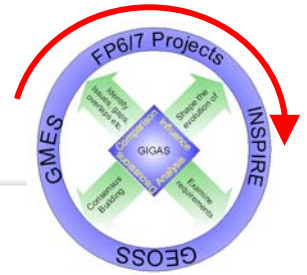
2 iterations

FP6|7 Projects

Identify issues, gaps, overlaps etc.

Shape the evolution of

Comparison
Influence
Discussions
Analysis

GIGAS

GMES

INSPIRE

GEOSS

Consensus Building

Examine requirements

4. Influence

Suggest modifications to INSPIRE, GEOSS and GMES and be proactive in influencing and shaping their evolution

3. Discussion consensus

Recommendations will be revised through a broad consultation to achieve as wide a consensus as possible

Towards eEnvironment, 25-27 March, Prague

WP3
Alessandro Annoni, JRC

Analysis, Comparison and Draft Recommendations (loop 1)

- Methodology and Refine Scope & Targets

- Technology Watch Reports (V 1)   ✓

  - Architecture interoperability

  - Catalogue, metadata and resource discovery

  - Sensor Planning Service

  - User Management   ✓

  - Ordering

  - Web Map Service

  - Observation and measurements

  - [Data harmonisation / Semantic Interoperability]

- Comparative Analysis Report (V 1)

  → Identify interoperability gaps

  → formulate draft recommendations

final review phase

Convergence and Outreach (loop1)

- Consensus building :
  - Based on a study of the interoperability situation, draft recommendations (GIGAS consortium) to
    - The 3 initiatives (GEOSS, INSPIRE, GMES)
    - The standardization bodies (ISO, OGC, CEN)
    - Input to the research agenda   ongoing
  - **Involve stakeholders for refinement and feedback**
    - → **Regular Stakeholder Workshops for presenting and discussing the draft recommendations**
    - → **The GIGAS Forum**
  - Output : consolidated recommendations
- Inform and shape : channel the recommendations
- Impact monitoring and assessment

Contributions to the Community

- Consensus process that facilitates communication between INSPIRE, GEOSS, GMES and the standardisation bodies

- Understanding requirements, commonalities and discrepancies between INSPIRE, GEOSS and GMES architectures and identify common interoperability needs

- Contribute to a rapid uptake of standards

- Design of an open, persistent test-bed in which organisations or external projects can integrate their (compliant) services

- Recommendations for the new research agenda 2011-2012

Website & Forum

GIGAS
www.thegigasforum.eu

Home | Partners | Events | Forum | Contact

Welcome to the GIGAS project

GMES — European Information Services for Environment and Security

INSPIRE — Infrastructure for Spatial Information in Europe

GEO — GROUP ON EARTH OBSERVATIONS

The GEOSS, INSPIRE and GMES an Action in Support (GIGAS) promotes the coherent and interoperable development of the GMES, INSPIRE and GEOSS initiatives through their concerted adoption of standards, protocols, and open architectures. Given the complexity and dynamics of each initiative and the large number of stakeholders involved, the key added value of GIGAS is bringing together the leading organisations in Europe who are able to make a difference and achieve a truly synergistic convergence of the initiatives. Among them, the Joint Research Centre is the technical coordinator of INSPIRE, the European Space Agency is responsible for the GMES space component, and both organisations together with a third partner, the Open Geospatial Consortium play a leading role in geographic information sectors, with the scientific leadership of the Fraunhofer Institute.

This consortium will achieve the objectives set through an iterative and consensus-based approach which includes: in-depth analysis of the requirements and barriers to interoperability in each of the three initiatives and strategic FP 6/FP 7 projects; comparative evaluation of this activity as input to a forum of key stakeholders at a European level; consensus building in the forum on how to update and integrate the architectures of GMES, INSPIRE and GEOSS, and influence standards development and adoption. From these recommendations follow actions to shape the direction of the initiatives and to define a roadmap for future development, including the key research topics to be addressed to sustain the convergence of the initiatives. GIGAS thus will contribute to the emergence of a milestone towards building a Single Information Space in Europe for the Environment.

GEOSS What's new
- Next GEOSS Sensor Web Workshop in Japan
- White Paper on the GEOSS Data Sharing Principles
- Peru becomes the 77TH member of GEO

Latest INSPIRE News
- Comitology register for proposal for INSPIRE Implementing Rules for Discovery and View Services published 2009-01-13
- Comitology register for proposal for INSPIRE Implementing Rules for Monitoring and Reporting published 2009-01-13
- INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119 published 2008-12-19

GMES What's new
- Urban Atlas 2009-01-19
- Jason-2 2009-01-16
- Emergency Management 2009-01-12

GIGAS News
- The GIGAS project was presented at the EPROS (European Plan for Research in Official Statistics) Working Group Meeting organised by EUROSTAT in Luxembourg on 7 November 2008. For more information, please contact Mrs Eva Klien. Dec. 2nd 2008

GIGAS Events
- **Towards harmonisation of SDI initiatives** Centre Albert Borschette, 36 rue Froissart, Brussels, Belgium Jan. 28th - 29th 2009 [more info]

Latest ISO News
- Safer ski-touring with new ISO standard 2009-01-14

Latest OGC News
- Climate Change Integration Plugfest to be launched at FOSS4G 2009-01-20

GIGAS is a Support Action funded under the 7th Framework Programme of the European Commission. The project runs from June 2008 to May 2010.

http://www.thegigasforum.eu

Bringing together GEOSS, INSPIRE, GMES, and SEIS

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Future Activities

Dr. Eva Klien
Fraunhofer Institute for Computer Graphics Research
Darmstadt, Germany

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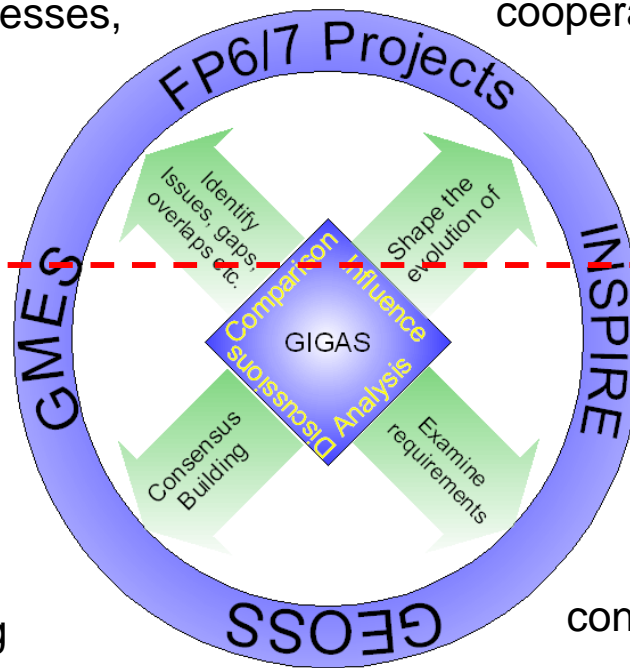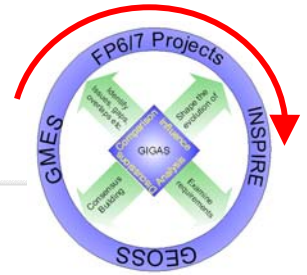
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Suggest modifications to INSPIRE, GEOSS and GMES and be proactive in influencing and shaping their evolution

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Central diagram labels: FP6|7 Projects, GMES, INSPIRE, GEOSS, GIGAS, Comparison, Influence, Discussions, Analysis, Identify Issues, gaps, overlaps etc., Shape the evolution of, Consensus Building, Examine requirements
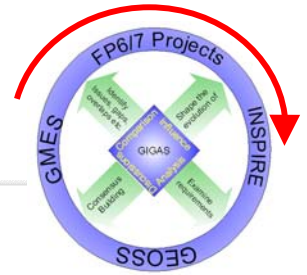
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- Comparative Analysis Report (V 1)

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final review phase

Analysis, Comparison and Draft Recommendations (loop 2)

- Feedback from Stakeholder Workshop 28/29 January in Brussels and from the Advisory Boards:

→ Re-Structuring of the technology watch into themes (instead of concrete features)

- Themes / Areas proposed to be targeted in loop 2:
  - Continue the activity on technology watch for Catalogue / Discovery
  - Updating the technology watch for Architecture
  - Data Access / Download Services
  - Data Harmonisation / Semantic Interoperability
  - User Management

- Definition of a cross-initiatives scenario as common thread across the themes

Discussion

- Feedback based on your experiences on the themes targeted for the 2nd loop:
    - How and where could you contribute?
    - Other areas (concrete examples?)
- Ideas for a cross-initiatives scenario