FACT SHEET SUITABLE FOR WEB PUBLISHING AND PRESS RELEASES

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Lead partner:	SINTEF
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Quality Controllers:	
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Consisting of

SINTEF	STIFTELSEN SINTEF, Department of Applied Mathematics, Oslo, Norway
Fraunhofer	Fraunhofer Institute for Computer Graphics Research, Darmstadt, Germany
CNR-IMATI-GE	Institute for Applied Mathematics and Information Technologies of the National Research Council (CNR-IMATI), Genova, Italy
MOSS	M.O.S.S. Computer Grafik Systeme GmbH (MOSS), Munich, Germany
HRW	HR Wallingford Ltd (HRW), Wallingford, UK
FOMI	Hungarian National Mapping and Cadastral Agency (FOMI), Institute of Geodesy, Cartography and Remote Sensing, Budapest, Hungary
UCL	University College London (UCL), Research centre for Photogrammetry, 3D Imaging and Metrology, London, UK
TUDelft	Delft University of Technology (TUDelft), Department of Earth and Climate Sciences & Man-Machine Interaction Group, Delft, The Netherlands
IGN	Institut National de l'Information Géographique et Forestière (IGN), Paris, France
UBO	Université de Bretagne Occidentale (UBO), European Institute for Marine Studies, Brest, France
Ifremer	L'Institut Francais de Recherche pour l´Exploitation de la Mer (Ifremer), Brest, France
Liguria	Regione Liguria, Genova, Italy

DOCUMENT HISTORY

Version[1]	Issue Date	Stage	Content and Changes
1.0	November 30, 2012	Draft	Press release basic text
2.0	December 12, 2012	First official version	Added fact sheet, updated FOMI logo, added front matter
2.1	December 17, 2012		Two copy/paste errors fixed
2.2	February 11, 2013		Adapted to IQmulus deliverables template, including logo. Removed comment about website.

[1] Integers correspond to submitted versions

EXECUTIVE SUMMARY

This deliverable consists of two parts:

- A basic text for the press release to be translated and adapted by partners for specific press releases.
- A one page fact sheet.

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1 INTRODUCTION

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- A basic text for the press release to be translated and adapted by partners for specific press releases.
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2 PRESS RELEASE BASIC TEXT

IQmulus

will leverage the information hidden in large heterogeneous geospatial data sets and make them a practical choice to support reliable decision making

Recent emergencies, such as the toxic industrial mud spill in Ajka, Hungary, in October 2010, and the flooding rain in Genova, Italy, in November 2011, have emphasized the fact that actually a lot of crucial information is indeed contained in existing large geospatial datasets but it is hidden and in no way integrated in on-going decision processes. Valuable knowledge could be extracted from this data but currently the hidden information is typically only accessed in hindsight for damage assessment and knowledge only derived in a belated "what went wrong" analysis.

The ***IQmulus*** concept was developed to do something about this situation. Its goal is to use cutting edge computational approaches for data fusion and data analysis as well as cloud infrastructures and graphical processing units to make crucial information from extremely large geospatial datasets available on time and to derive and visualize important knowledge for the relevant level of decision making.

IQmulus (A High-volume Fusion and Analysis Platform for Geospatial Point Clouds, Coverages and Volumetric Data Sets) is a new four-year *Large-scale Integrating Project* with a total budget of 10.1 Million €, of which 8.1 Million € are funded by the EU Seventh Framework Programme (FP7 grant agreement 318 787) in the area *Intelligent Information Management* (ICT 2011.4.4 of Challenge 4: Technologies for Digital Content and Languages).

New emerging data acquisition techniques provide fast and efficient means for multidimensional spatial data collection. Airborne LIDAR surveys, SAR satellites, stereophotogrammetry and mobile mapping systems are increasingly used for digital reconstruction. All these systems provide point clouds, often enriched with other sensor data, yielding extremely high volumes of raw data, typical samples of which will be provided for the project work by some of the ***IQmulus*** consortium partners.

Based on a new methodology for the fusion and analysis of geospatial data, the ***IQmulus*** infrastructure will make it possible to analyse the patterns and latent information in the data more efficiently, to manage data uncertainty and to generate new value-added data and products with shortened workflows. This will require new technical approaches to the definition, configuration and deployment of functional spatial processing services, independent of data size and execution architecture, with distributed processing of heterogeneous geospatial data in cloud environments, and powerful visualization capabilities.

IQmulus will implement two test scenarios: *Maritime Spatial Planning* and *Land Applications for Rapid Response and Territorial Management*, addressing both expert users (such as for example engineers investigating suitable locations for a wind park) and decision makers (for example in emergency cases that require quick responses), both from within and from outside the project consortium.

It will be of great importance that the users can specify a desired workflow on a high level and do not have to learn complicated technical jargon. All implementation details will remain unseen for the users who will be heavily involved in the project from the very start in an initial requirement specification phase, and later in the testing of components and in two testing and evaluation cycles of the developed prototypes.

IQmulus (www.iqmulus.eu) has started on November 1, 2012, led by the Applied Mathematics Department of SINTEF ICT, Norway, with Chief Scientist Dr. Tor Dokken as the project coordinator. The project consortium consists of 12 partners from 7 countries, namely 3 teams from institutes for applied research (from Norway, Germany, and Italy), 3 university research groups for geo-spatial research information processing (from the UK, the Netherlands and France), 1 industrial SME partner (from Germany), teams from 4 national organizations (from Hungary, France, and the UK) and 1 regional agency (from Italy). The first plenary meeting of the consortium to plan the project activities in detail, for example for gathering formal user requirements, already took place on November 21-23, 2012, in Genova, Italy.

Project partners:

- SINTEF ICT, Department of Applied Mathematics (coordinating), Oslo, Norway
- Fraunhofer Institute for Computer Graphics Research (Fraunhofer), Competence centers for Spatial Information Management, Visual Computing System & Interactive Engineering Technologies, Darmstadt, Germany
- Institute for Applied Mathematics and Information Technologies of the National Research Council (CNR-IMATI), Genova, Italy
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- L'Institut Francais de Recherche pour l´Exploitation de la Mer (Ifremer), Brest, France
- Regione Liguria, Genova, Italy

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IQmulus Project Coordinator - Chief Scientist Dr. Tor Dokken, SINTEF ICT

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3 FACT SHEET

Below is a screenshot of the IQmulus fact sheet. It is attached in full size on the next page.

SEVENTH FRAMEWORK PROGRAMME

A High-volume Fusion and Analysis Platform for Geospatial Point Clouds, Coverages and Volumetric Data Sets

IQmulus

IQmulus at a glance: *IQmulus will leverage the information hidden in large heterogeneous geospatial data sets and make them a practical choice to support reliable decision making*

Motivation and Goals

Current situation

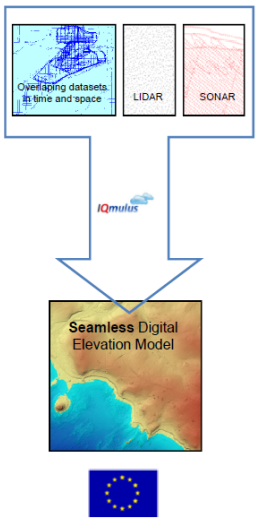
- Valuable information exists in huge geospatial datasets but is hidden and not integrated in the decision process
- Often it is only accessed for damage assessment in a „what went wrong?" analysis (e.g., for the 2010 toxic mud spill in Ajka, Hungary, and the 2011 flooding in Genoa, Italy)

Objectives

- Make information from large geospatial datasets available on time, with interactive visual decision support, and at the relevant level of decision making

Two test cases of economic and social importance to Europe

- Marine Spatial Planning (e.g., for wind farms)
- Land Applications for Rapid Response and Territorial Management (e.g., for flooding)



Core Innovations

The IQmulus Infrastructure will offer
A **new methodology** for fusion and analysis of geospatial data:

- Independent of data modelling paradigm
- Not bound to predefined data partitioning
- Allowing the expression of basic correlation patterns, advanced analysis and knowledge discovery algorithms
- Managing uncertainty

A **new technical approach** to the definition, configuration and deployment of functional spatial processing services with:

- Independence of data size and execution architecture
- Distributed processing of heterogeneous geospatial data
- Powerful visualization capabilities by leveraging modern GPU features on graphics machines and web-clients

Quick Facts

IQmulus (FP7-ICT-2011-318787) is a 4-year Integrating Project (IP) in the area of *Intelligent Information Management* within ICT 2011.4.4 Challenge 4: *Technologies for Digital Content and Languages*. IQmulus started on November 1, 2012, and will finish October 31, 2016. Its total budget is 10 147 459€, with an EU contribution of 8 100 000€. See:
http://www.iqmulus.eu

The Consortium

SINTEF, Fraunhofer IGD, imati, M.O.S.S., HR Wallingford, fomi, UCL, TU Delft, IGN, UBO, Ifremer

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A High-volume Fusion and Analysis Platform for Geospatial Point Clouds, Coverages and Volumetric Data Sets

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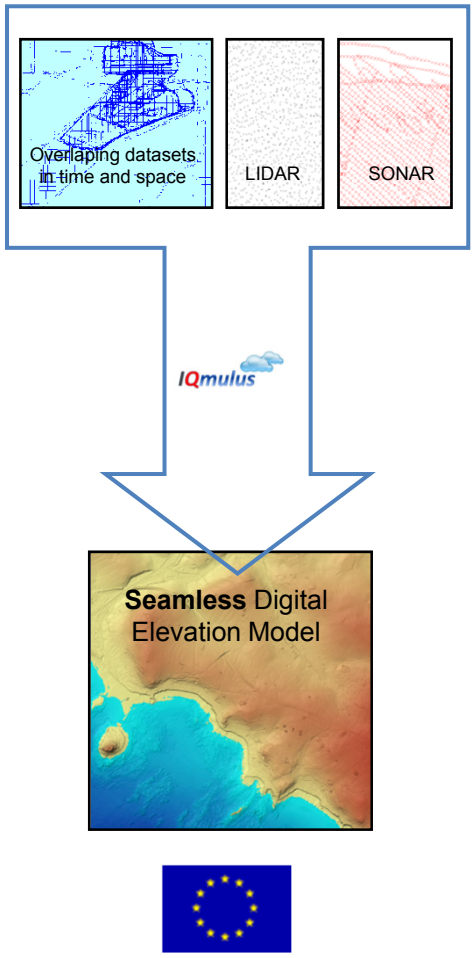

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