



Griffith Research Award

Geomatics for GeoScience

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Outline of Presentation

- Recap of Objective's
- Progress to date
- Next steps

Theme of the day.....Metadata: what, why, where, when



Research Objective:

**To facilitate open access to GSI data
on a web-enabled basis**



■ Four key themes

1. Geological Data integration
2. Web data delivery
3. Web visualisation
4. Data Interoperability



Approach

1. **Geological Data Integration**

Objective:

Integrate existing diverse GeoScience data resources into a common (digital) geo-database infrastructure

2. **Web-enabled delivery**

Objective:

Discovery of and access to GeoScience data within Ireland



Approach Continued

3. Web-enabled visualisation

Objective:

Interactive 2D/3D/4D visualisation to help interpret and understand complex GeoScience environments

4. Data Interoperability (including external systems)

Objective:

improve sharing and manipulation of GeoScience data between GSI and academic institutes, by facilitating interoperability between their information systems



Approach Continued

Easy to appreciate GeoScience data...

e.g. visualise your GeoScience maps in Google Earth

But what about GeoScience metadata

e.g. nice to acknowledge creators, data owners, etc.
of your GeoScience maps in Google Earth



Why bother with metadata?

- WHO, HOW, WHERE, WHAT concerning data
- It is a necessary tool for geospatial data management
- Simple exchangeable files (XML)



Why bother with metadata?

BENEFITS.....

- So we all can share and discovery each other research gains
- “Metadata **helps** people, who use geospatial data, to **find** the data they **need** and determine **how best to use it**, while it also **benefits** the data-producing organisation (by providing a well documented record of all their datasets)”

[SDI Cookbook]



Overview of Progress to date

- Recruitment complete team consists of
 - Declan Dunne
 - Trung Pham
 - Ying Wu

- Meetings held
- Initial reviews begun
- Agreed next steps in work plan -
 - Focus on metadata - trial use of GeoNetwork tool



Progress

- Established arrangements for systems access (accounts, etc.)
- Ongoing scoping types of databases sections / individuals
- Planning in progress for metadata / data workshops
 - GSI Sections
 - Griffiths awardees
- Evaluation underway for Intrepid 3D Geomodeller (trial license)
- Prototype Development Platform under specification
- Literature and best practice reviews ongoing-key docs identified
- FP 7 Projects/Proposals (GSI involved)
 - One Geology Europe
 - GeoSeas



Initial findings

- Some existing systems, large and well developed e.g. **Interactive Web Data Delivery System (IWDDS)** for INFOMAR
 - Allows large datasets to be queried and downloaded
 - “Clip, Zip and Ship”
 - Developed to deliver INFOMAR marine datasets
 - Bathymetry, etc.
 - Adapted to include ‘onshore’ GSI data, vector & raster data
 - – 6” sheets etc.
 - 7Tb of disk on server in HEAnet



Initial findings

- GSI created new web map viewers for GIS datasets
- Some datasets available to download easily; pre-zipped data packages
- Some 'web services' created
 - Allows GIS users to link their desktop applications directly to GSI data server



Initial findings

- scope for improvements:
 - In metadata for discovering geological data
 - Geological tools
(e.g. Integration with GIS, metadata, web delivery, etc.)



Next steps

- Geomatics for GeoScience team to tune GeoNetwork to INSPIRE Spec
- All users can access GeoNetwork, to experiment with it from November 2008
- Metadata workshop mid-November 2008
- Continue scoping/evaluation work on
 - Collaborative working environment system (est. trials q2 09)
 - IWDDS
 - GeoModeller 3D ongoing
- Down and dirty, up-close and personal with databases
- Continue lit. review, acquire specialist documents, other software
- Pursue broader scale linkages FP7, One Geology (One Geology Europe), etc.



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