



# Data management and data reality in the Geological Survey of Ireland (GSI)

Management of massive point cloud data: wet and dry  
At  
Oracle Nederland BV 26<sup>th</sup> Nov 2009

**Archie Donovan on behalf of GSI team**

# DCENR Natural Resources

# Core Data initiatives

GSI  
Data  
Applications

PAD  
Data  
Applications

Engineering  
Data  
Applications

EMD  
Data  
Applications

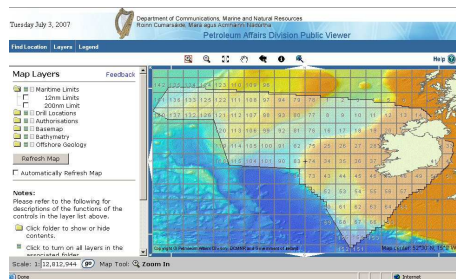
8 -10 Tb  
of 90Tb total

2 Tb

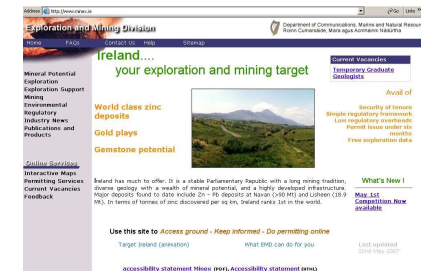
2 Tb

0.3 Tb

Internal  
small  
funding



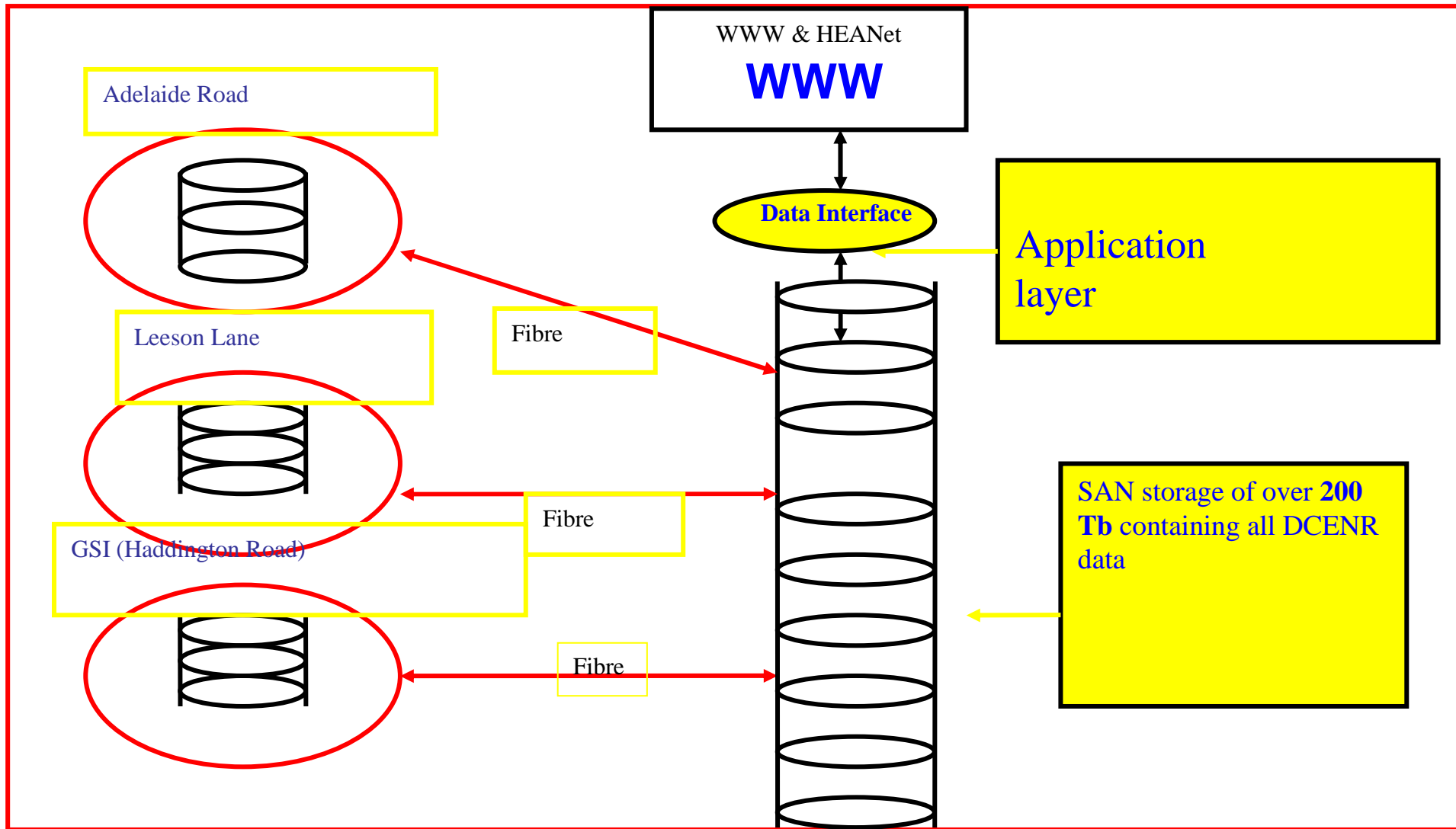
Internal  
small  
funding



## ISD

Plans, Specs and Costings for future Storage and Disaster Recovery (DR)

Figure 3: Proposed implementation schema of proposed Project 3.



# GSI's large database solution experience

- 8 different departmental Oracle installations: 2 of which are exclusively used by the GSI
- In the past 15 years the GSI has trained 3 different Oracle Administrators: each left after training and got better paid jobs
- Two major Oracle based applications:-  
**GeoData**: allowing access to GSI's Openfile and Mineral deposits data ( 5 years in development)  
**DMS**: Document Management System (2 years in development)

# GSI's Oracle based apps

External on web  
Geodata since mid 2008



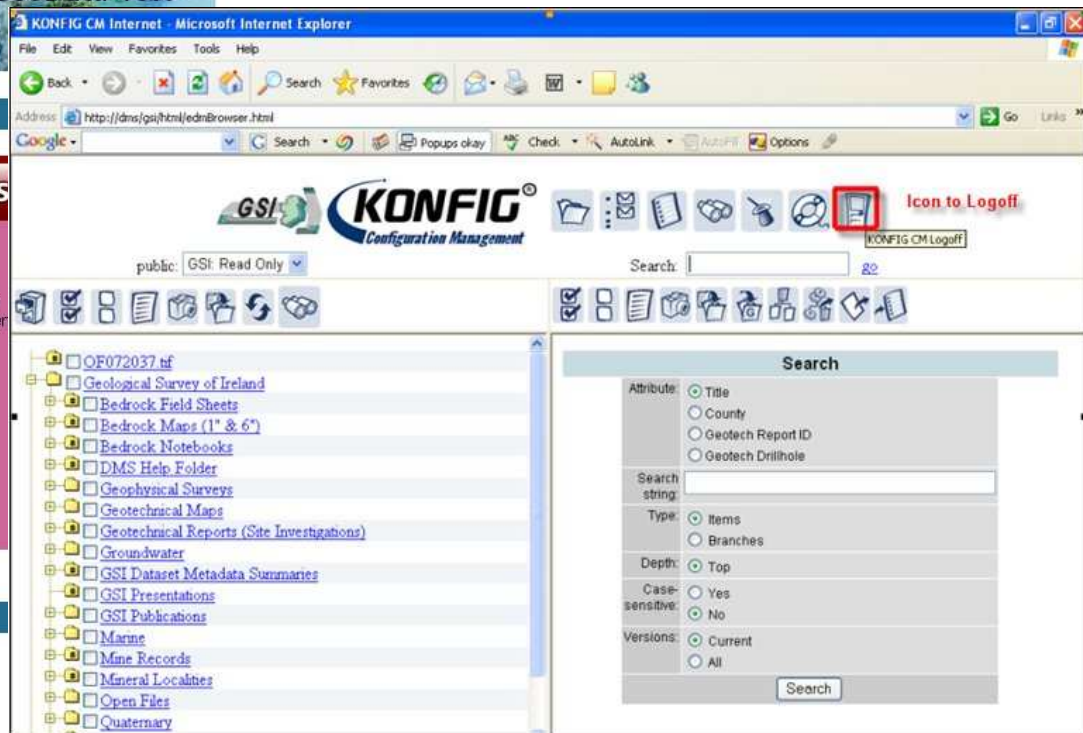
**Open File**

A database containing scanned images of reports relating to mineral exploration carried out in Ireland from the 1950s to the present, as reported by the company carrying out the work. Images available for bulk download via the 'Query' Portal & images can be viewed individually online via the 'Browse' Portal.

**Mineral Depos**

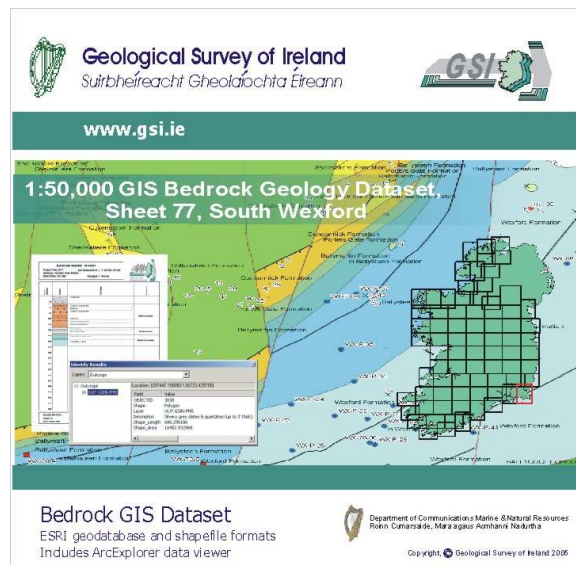
A database containing summary information (where and what) on Ireland's mineral deposits, occurer and showings.

Internal to GSI  
DMS since mid 2002



# Initial strategy.....package and ship

- Move from Paper map production to GIS CD based products
  - ArcReader Format
  - 1:500,000, 1:100,000, 1:50,000 scale series

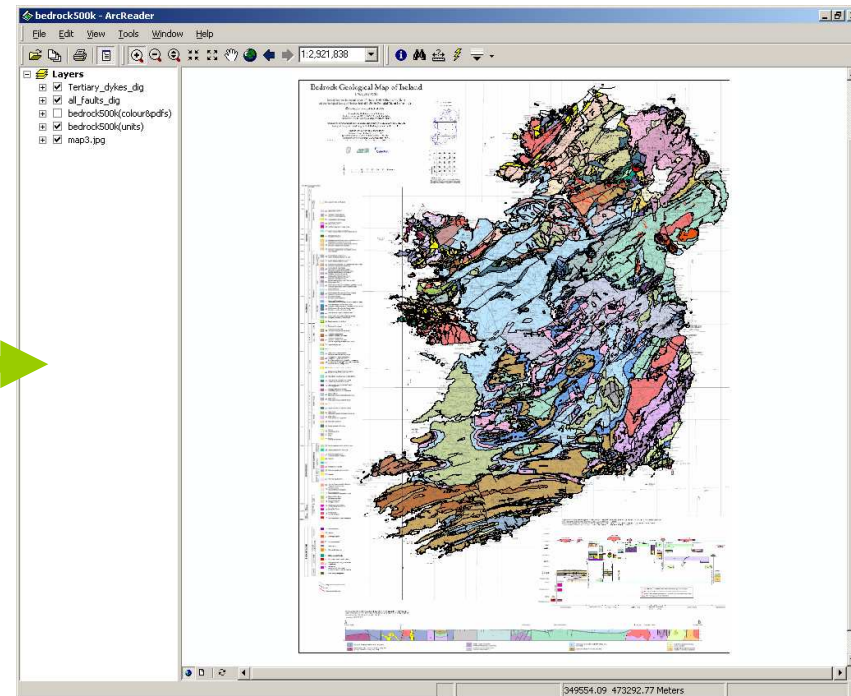


# Initial strategy.....package and ship

Interactive GIS CD Data Distribution



ArcReader free GIS Viewer installed

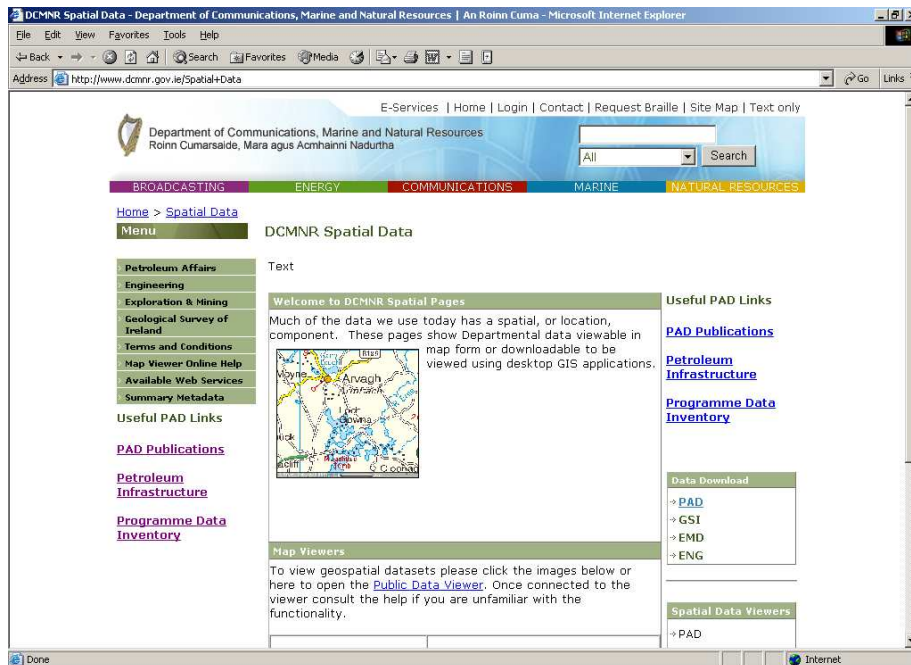


# Another Strategy..... Pre-decide what users want

A simple to use map viewer

[dcmer.gov.ie/spatial data](http://dcmer.gov.ie/spatial data)

Key datasets from 4 Divisions  
Download pre-zipped  
GIS data (no clipping)



# Divisional Spatial Home Pages (GSI, EMD, PAD, Eng)

E-Services | Home | Login | Contact | Request Braille | Site Map | Text only

Department of Communications, Marine and Natural Resources  
Roinn Cumarsaide, Mara agus Acmhainni Nadurtha

BROADCASTING ENERGY COMMUNICATIONS MARINE NATURAL RESOURCES

Home > Spatial Data > Geological Survey of Ireland

Menu GSI Spatial Data

Petroleum Affairs  
Engineering  
Exploration & Mining  
Geological Survey of Ireland  
GSI Data Downloads  
Terms and Conditions  
Map Viewer Online Help  
Available Web Services  
Summary Metadata

**Welcome**

The **GEOLOGICAL SURVEY OF IRELAND (GSI)**, founded in 1845, is the National Earth Science Agency. It is responsible for providing geological advice and information, and for the acquisition of data for this purpose. GSI produces a range of products including maps, reports and databases and acts as a knowledge centre and project partner in all aspects of Irish geology.

GSI is a division of the Department of Communications, Marine & Natural Resources (DCMNR) and has about 60 multi-disciplinary staff.

**Useful GSI Links**

[GSI Website](#)  
[GSI Contacts](#)  
[GSI Programmes](#)  
[Geology for Everyone](#)  
[GSI Newsletters](#)

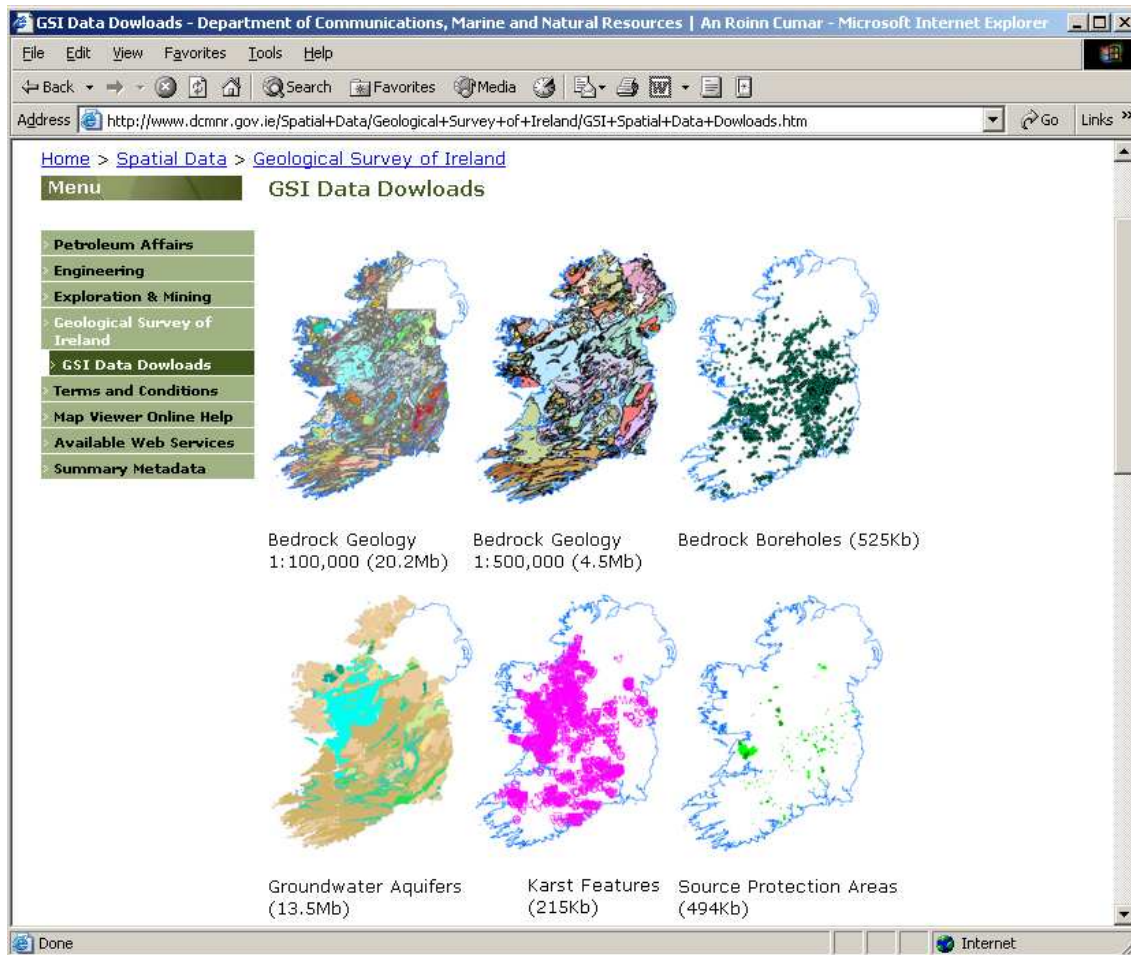
**The Shop**

**Data Download**

→ [GSI](#)  
→ [PAD](#)

- Links to divisional viewers
- Links to existing GSI web mapping services
- Links to GSI data download page
- Links to GSI 'metadata' page

# GSI datasets added



- **Bedrock**
  - 100k, 500k, boreholes
- **Groundwater**
  - Aquifers, karst features, vulnerability, rock units, source protection areas
- **Geotechnical**
  - boreholes, site report areas
- **Geological Heritage**
  - Fossil Locations
- **Minerals**
  - Mineral localities, active quarries
- **Marine**
  - Seabed zones, track lines
- **Quaternary**
  - 500Mb of GIS data

# GSI/MI Web Sites

## 10 Linked Sites

Sporadic updates

➤ 2007

New **gsi.ie**

Web Mapping

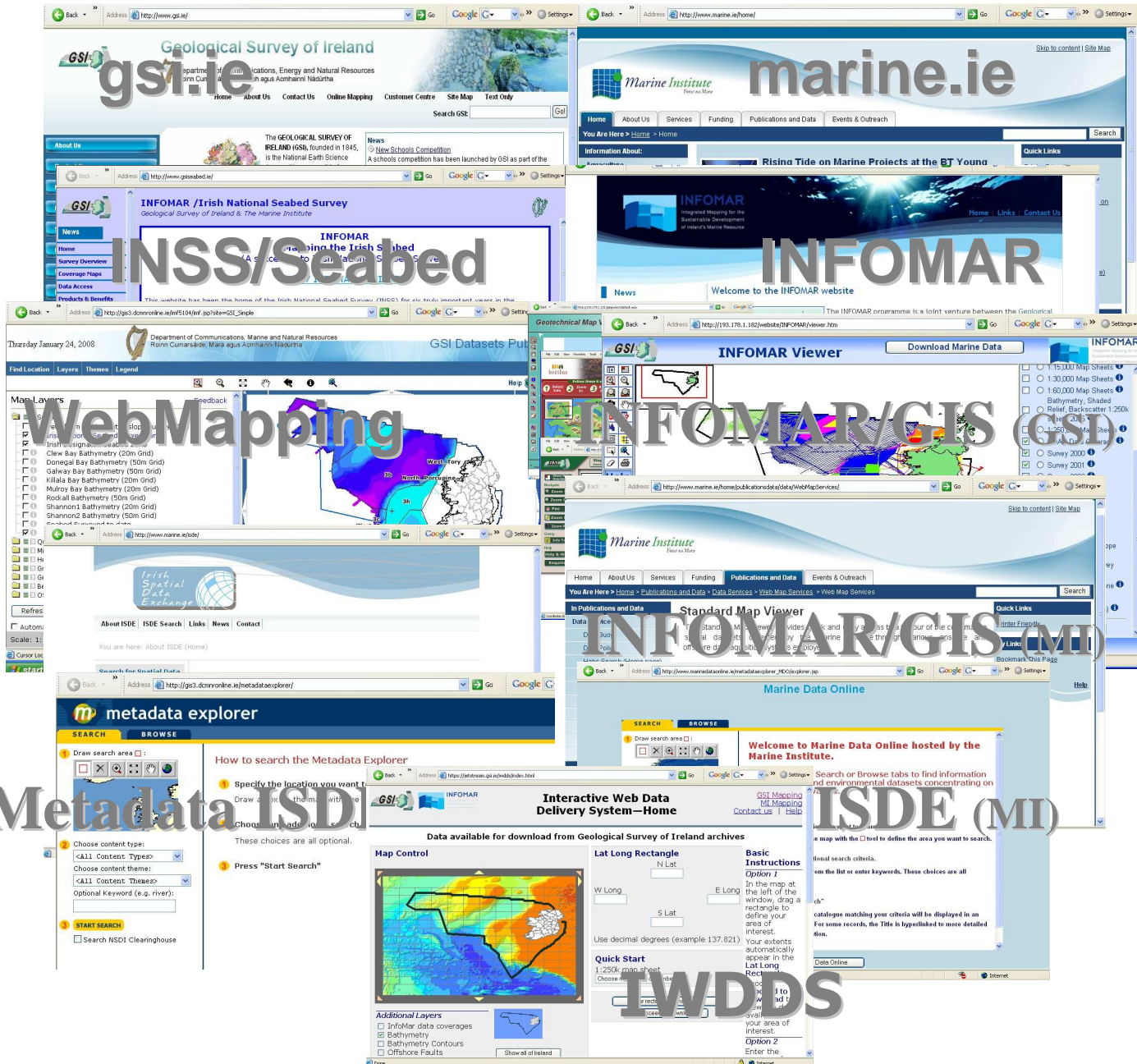
➤ All digital data free...no need for e-commerce front-end

➤ Q1 2008 New **INFOMAR** Site

Metadata ISD

ISDE (MI)

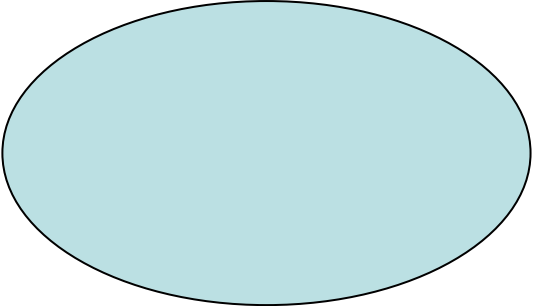
IWDDS



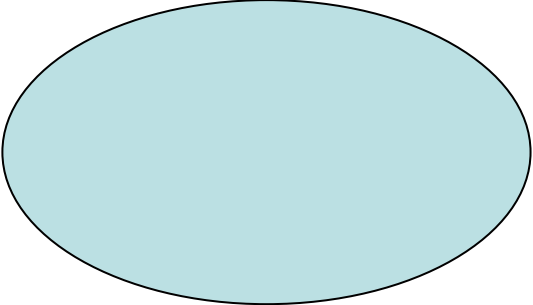
**Internal Applications**

***D***  
***C***  
***E***  
***N***  
***R***

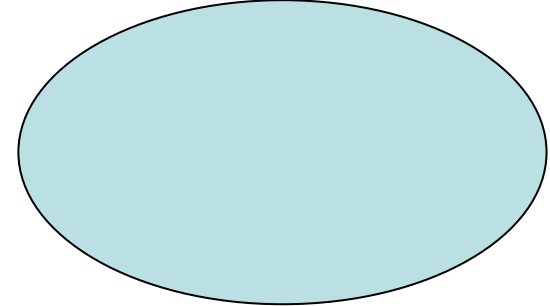
**GSI**



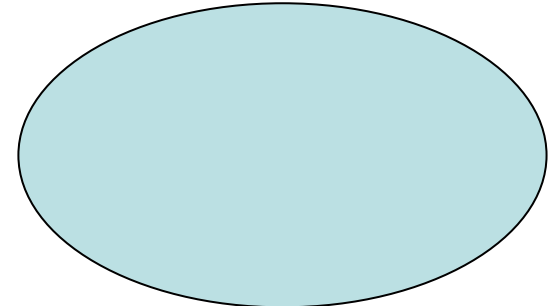
**Engineering**



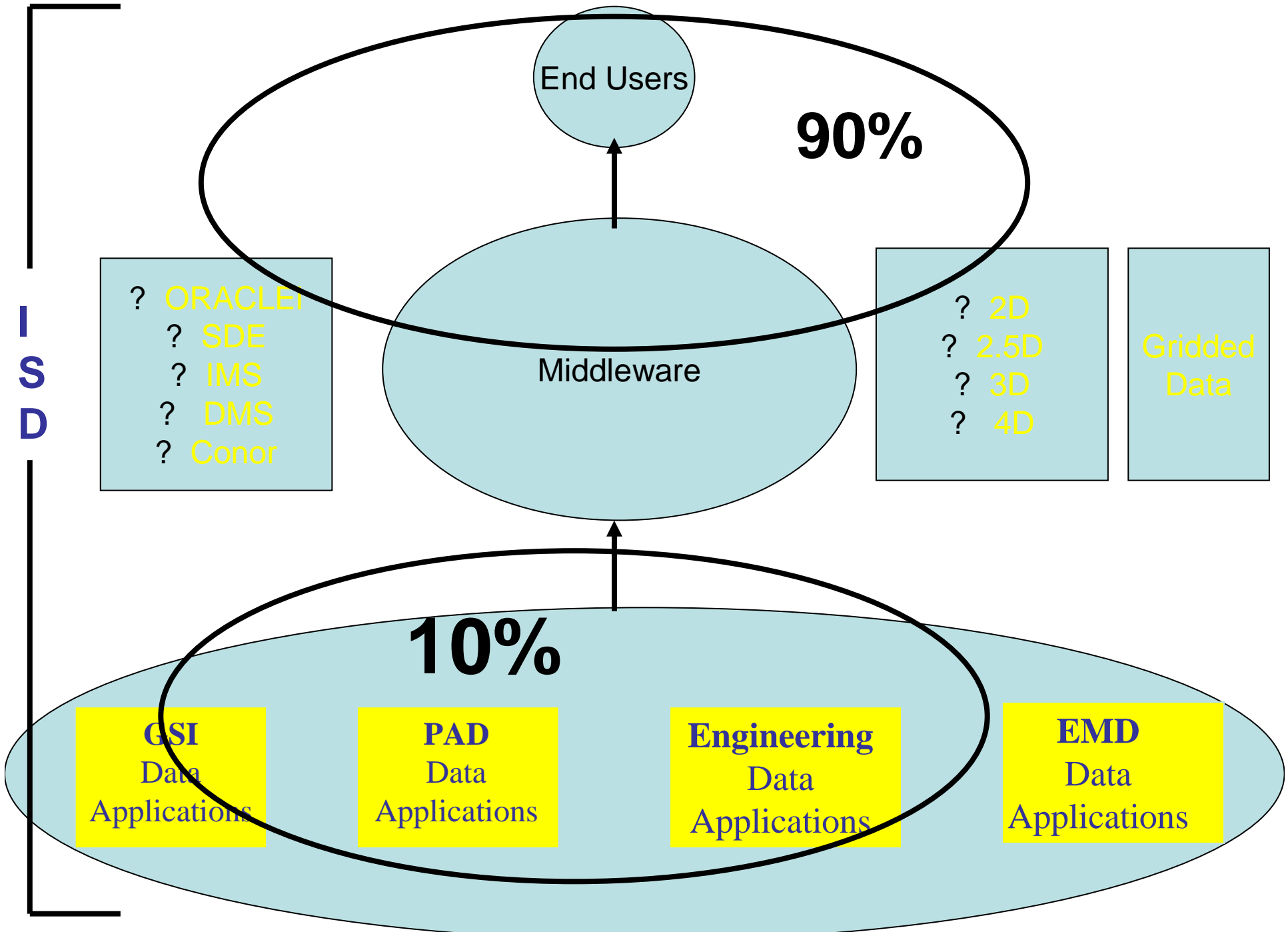
**Exploration  
Minerals  
Division**



**Petroleum  
Affairs  
Division**



**I  
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L**



ISD

End Users

90%

Middleware

- ? ORACLE
- ? SDE
- ? IMS
- ? DMS
- ? Conor

- ? 2D
- ? 2.5D
- ? 3D
- ? 4D

Gridded Data

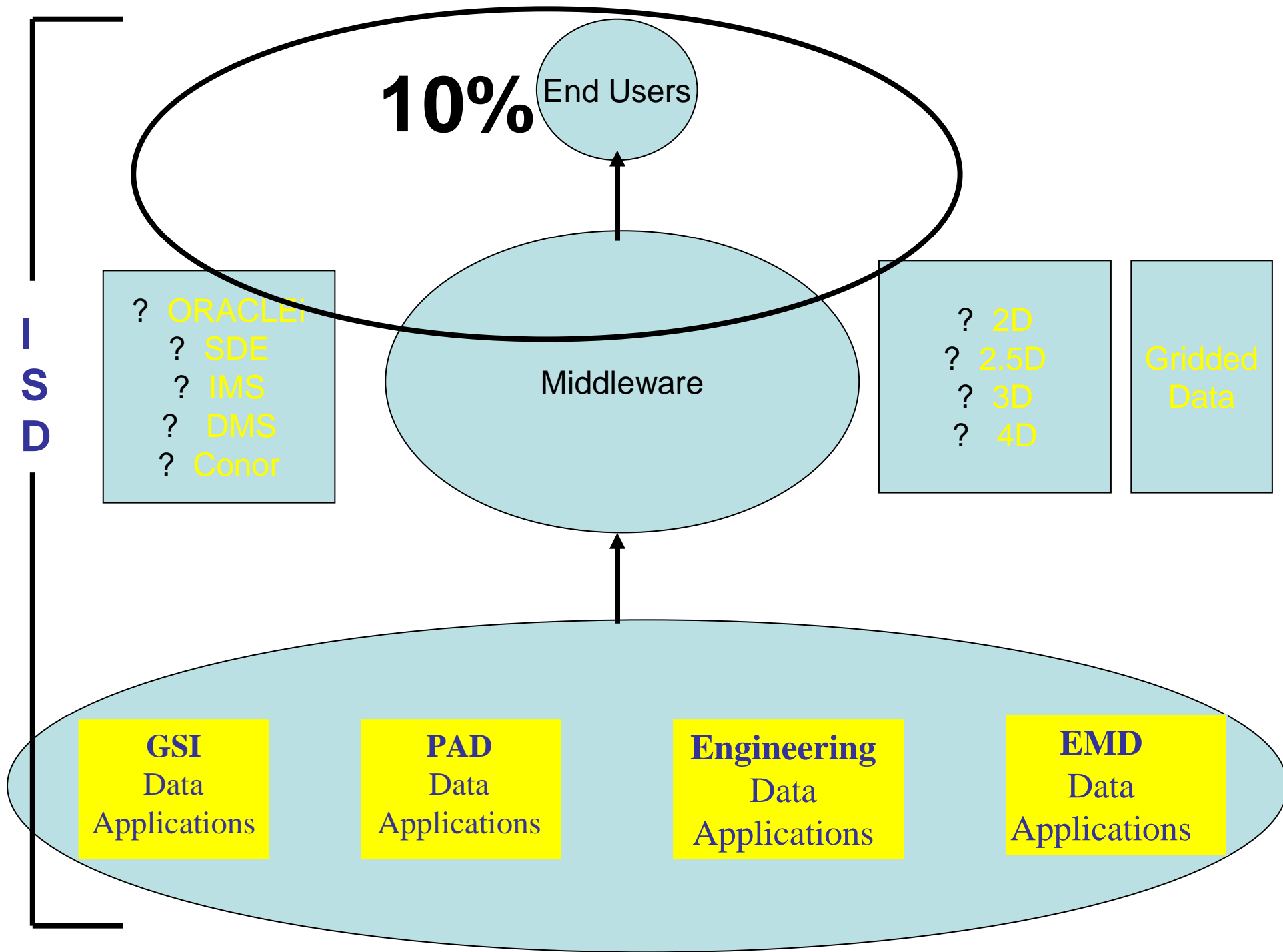
10%

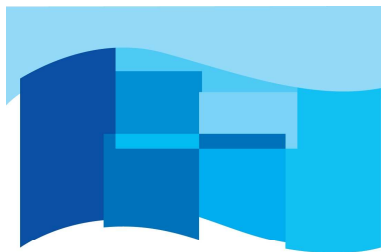
GSI Data Applications

PAD Data Applications

Engineering Data Applications

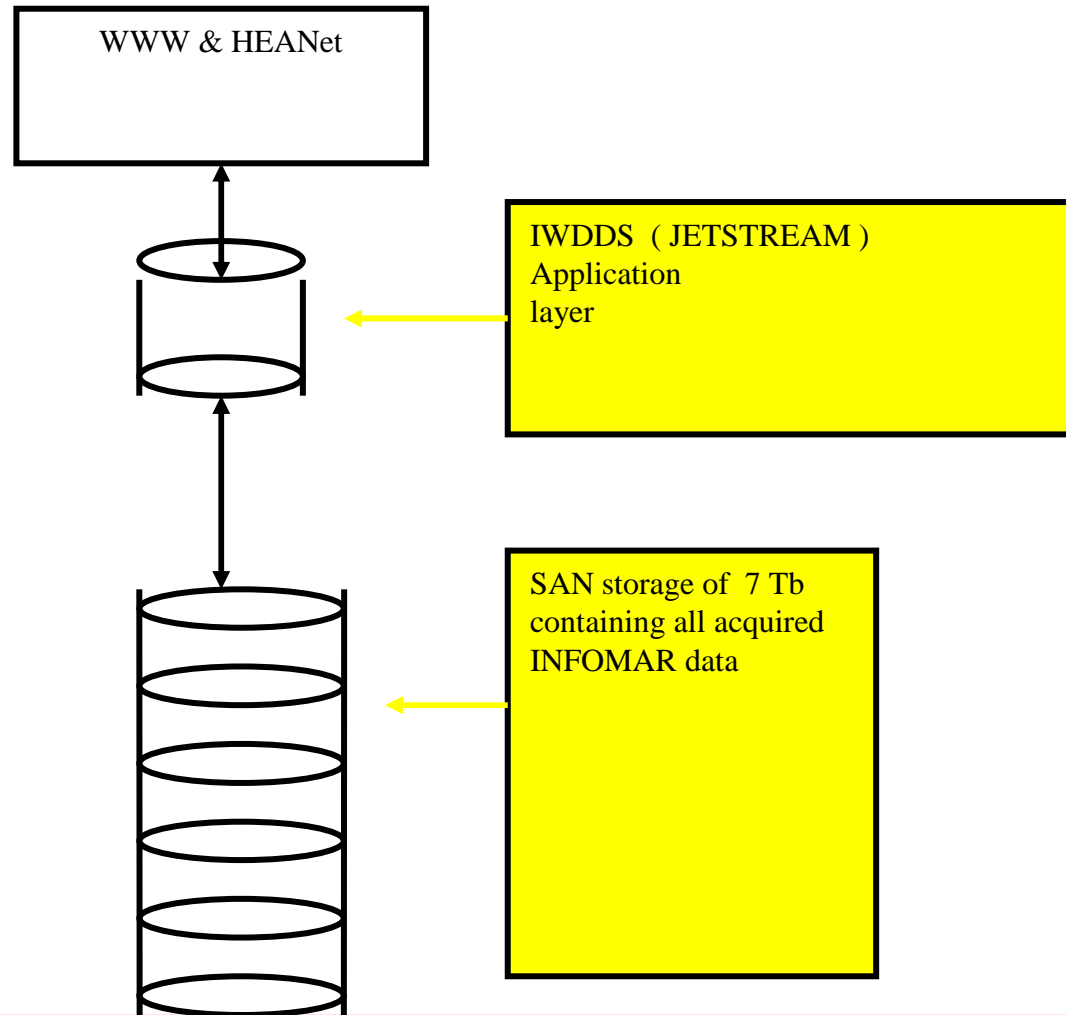
EMD Data Applications





**INFOMAR**

Integrated Mapping for the Sustainable Development of Ireland's Marine Resource



**Figure 2: Implementation schema of INFOMAR interactive web data delivery system.**

# IWDDS – digital data download site

- **Interactive Web Data Delivery System**
- 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

Example !

# IWDDDS

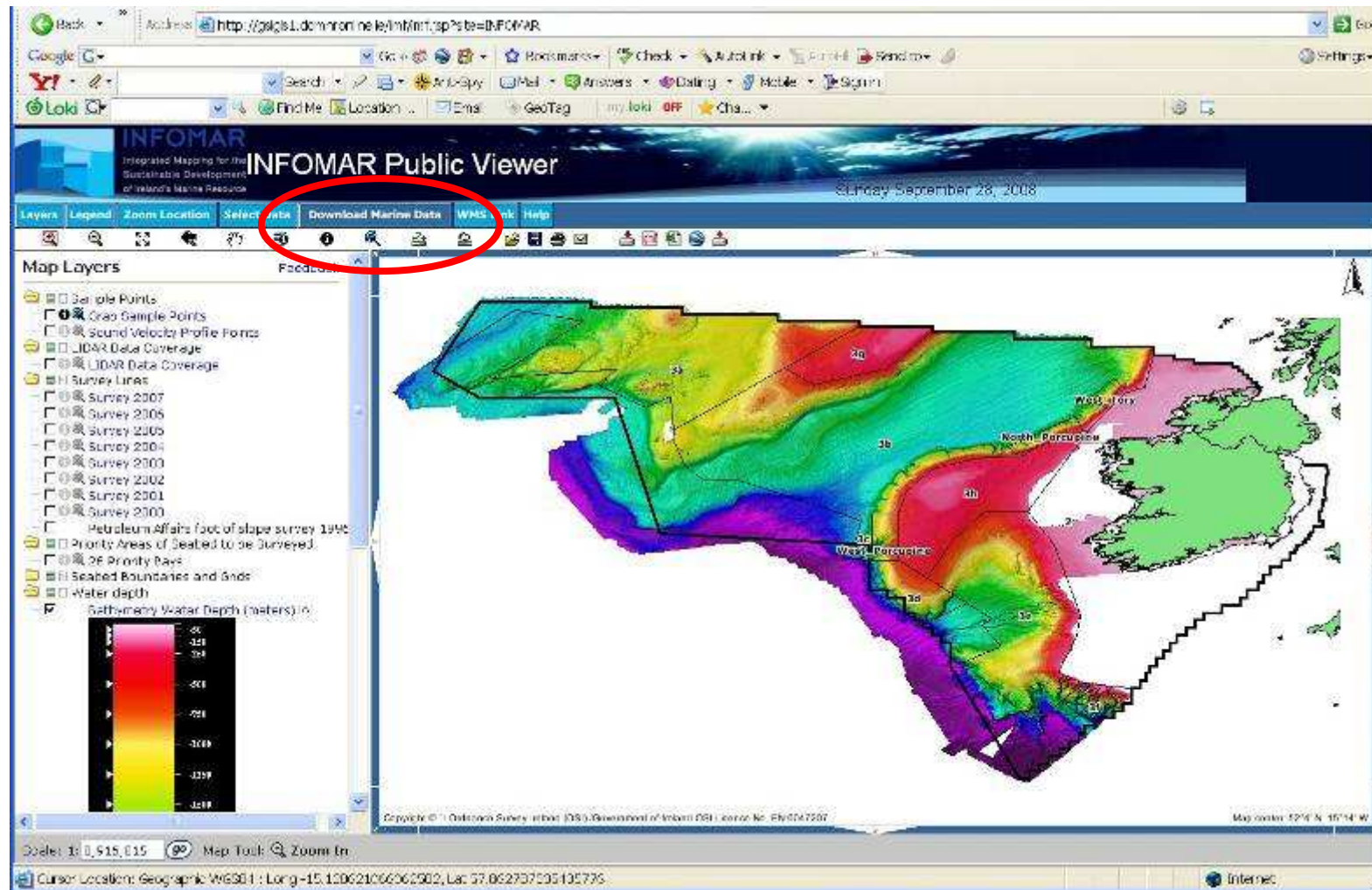
<https://jetstream.gsi.ie/iwdds/index>

The screenshot shows a web browser window displaying the 'Interactive Web Data Delivery System—Home' page. The browser's address bar shows the URL <https://jetstream.gsi.ie/iwdds/index.html>. The page header includes the GSI and INFOMAR logos, the title 'Interactive Web Data Delivery System—Home', and navigation links for 'GSI Mapping', 'MI Mapping', 'Contact us', and 'Help'. The main content area is titled 'Data available for download from Geological Survey of Ireland archives' and is divided into several sections:

- Map Control:** A map of Ireland with a black outline of a specific region. Below the map is a section for 'Additional Layers'.
- Use the INFOMAR GIS Viewer:** A section with the text 'Click the button below to view and query the data available before downloading it' and a button labeled 'INFOMAR GIS Viewer'. This section is circled in red.
- Lat Long Rectangle:** A section with input fields for 'N Lat', 'W Long', 'E Long', and 'S Lat'.
- Basic Instructions:** A section with two options: 'Option 1' (drag a rectangle on the map) and 'Option 2' (enter coordinates). A red arrow points to the 'Proceed to download' button in the instructions.

The browser's status bar at the bottom shows 'Done' and 'Internet'.

# INFOMAR GIS viewer hosted in LGCSB



# How does it work ?

The screenshot shows a Windows Explorer window with the address bar set to `E:\H1240_Runaby Head to The Tuns\XYZ_Example`. The left pane shows a folder tree with `XYZ_Example` selected. The right pane displays a list of files:

Name	Size	Type	Date Modified
JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0027_20080412_153726_Voyager.BRR	0 KB	ERR File	25/09/2008 11:...
JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0027_20080412_153726_Voyager.XYZ	881040 KB	XYZ File	12/08/2008 17:...
JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0028_20080412_163840_Voyager.BRR	0 KB	ERR File	25/09/2008 11:...
JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0028_20080412_163840_Voyager.XYZ	505760 KB	XYZ File	12/08/2008 17:...

A red arrow points from the file `JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0027_20080412_153726_Voyager.XYZ` in the list to a TextPad window. The TextPad window title is `TextPad - E:\H1240_Runaby Head to The Tuns\XYZ_Example\JIBS_08_EM3002_TPE_CelticVoyager_EM3002D_TPE_2008_003_0027_20080412_153726_Voyager.XYZ`. The window content shows a list of data points:

```
-007.1590022,55.3522013,29.656,1,-42  
-007.1589989,55.3522054,29.656,2,-42  
007.1589958,55.3522095,29.626,3,-49  
-007.1589940,55.3522113,29.656,4,-43  
-007.1589895,55.3522173,29.576,5,-43  
007.1589880,55.3522191,29.636,6,-49  
-007.1589853,55.3522234,29.616,7,-43  
-007.1589824,55.3522261,29.636,8,-43  
007.1589802,55.3522302,29.626,9,-49  
-007.1589774,55.3522339,29.616,10,-43  
-007.1589743,55.3522375,29.616,11,-43  
-007.1589708,55.3522423,29.536,12,-43  
-007.1589695,55.3522445,29.616,13,-42  
-007.1589655,55.3522495,29.516,14,-42  
-007.1589642,55.3522510,29.556,15,-42  
-007.1589615,55.3522552,29.556,16,-42  
-007.1589595,55.3522591,29.536,17,-41  
-007.1589543,55.3522647,29.456,18,-41  
-007.1589530,55.3522651,29.556,19,-41  
-007.1589514,55.3522665,29.556,20,-41  
-007.1589493,55.3522714,29.596,21,-41  
-007.1589463,55.3522752,29.576,22,-41  
-007.1589437,55.3522793,29.536,23,-41  
-007.1589405,55.3522823,29.556,24,-41  
-007.1589379,55.3522864,29.556,25,-41  
-007.1589363,55.3522905,29.636,26,-41  
-007.1589329,55.3522943,29.516,27,-41  
-007.1589294,55.3522979,29.526,28,-41  
-007.1589283,55.3522993,29.536,29,-41  
-007.1589240,55.3523051,29.536,30,-41
```

# Internal workings revealed

The image displays a Windows file explorer window and a metadata viewer window. The file explorer shows a directory structure with files like BACKSCAT.LINE, BACKSCAT.PD, BEAMNUMBER.LINE, etc. A blue callout box points to these files with the text "Xyz ascii format Converted into a binary equivalent". The metadata viewer shows details for a specific file, including Name, Size, Type, and various metadata fields like Name, Version, and Projection. A blue callout box points to the metadata fields with the text "Geo-referenced Metadata of the dataset".

**Xyz ascii format  
Converted into a  
binary equivalent**

**Geo-referenced  
Metadata of the  
dataset**

Name	Size	Type
BACKSCAT.LINE	1 KB	LINE File
BACKSCAT.PD	19156 KB	PD File
BACKSCAT.PD.vec	1 KB	VEC File
BEAMNUMBER.LINE	1 KB	LINE File
BEAMNUMBER.PD	19156 KB	PD File
BEAMNUMBER.PD.vec	1 KB	VEC File
DEPTH.LINE	1 KB	LINE File
DEPTH.PD	76619 KB	PD File
DEPTH.PD.vec	1 KB	VEC File
INDEX.INDX	1 KB	INDX File
INDEX.PD	1 KB	PD File
INDEX.vec	1 KB	VEC File
LATITUDE.LINE	1 KB	LINE File
LATITUDE.PD	76619 KB	PD File
LATITUDE.PD.vec	1 KB	VEC File
LONGITUDE.LINE	1 KB	LINE File
LONGITUDE.PD	76619 KB	PD File
LONGITUDE.PD.vec	1 KB	VEC File
SurveyInfo	1 KB	File

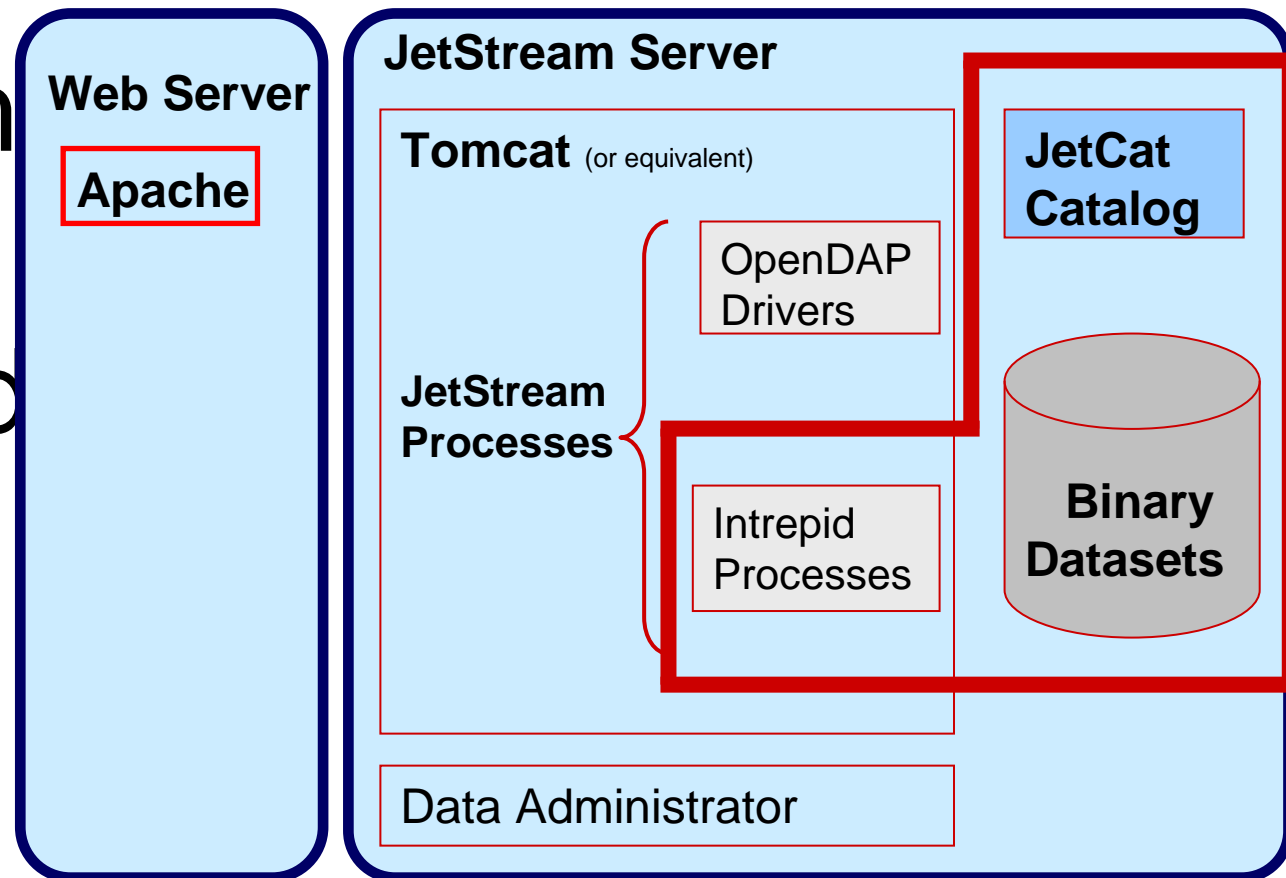
Name	Size	Type	Date Modified
JIBS_O6_EM3002_TPE_CelcticVoyager_EM3002D_TPE_2008-103_0027_20080412_153725_Voyager		File Folder	28/09/2008 11...
JIBS_O6_EM3002_TPE_CelcticVoyager_EM3002D_TPE_2008-103_0027_20080412_153725_Voyager.S	1 KB	1st File	25/09/2008 11...
JIBS_O6_EM3002_TPE_CelcticVoyager_EM3002D_TPE_2008-103_0027_20080412_153725_Voyager.DIR	0 KB	X Local Usbng ...	25/09/2008 11...

# Catalog file

ID	DIR	X	Y	Z	WGS84	Product	Geometry	Resolution	URL										
0183	dr..DIR	-8.537286	-7.242561	55.851113	55.917837	WG884	Bathymetry	VECTOR	77569 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_02/0183										
0139	dr..DIR	-9.376396	-7.611543	55.953355	55.977713	WG884	Bathymetry	VECTOR	77535 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_02/0139										
0874	dr..DIR	-7.363124	-7.122040	55.338505	55.582483	WG804	Bathymetry	VECTOR	77539 http://localhost:8000/gads/servlet/jetstreamDB/bathy/CE03_05/0874										
2807	..DIR	-8.034549	-6.054591	53.773854	53.965440	WG884	Backscatter	VECTOR	77523 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_02/2807										
7577	..DIR	-8.701290	-8.875888	51.399494	51.480841	WG884	Backscatter	VECTOR	77503 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_01/7577										
3360	..DIR	-9.949755	-7.519754	55.329890	55.342428	WG884	Backscatter	VECTOR	77443 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_01/3360										
0312	dr..DIR	-7.751622	-7.112335	55.777752	55.820093	WG884	Bathymetry	VECTOR	77354 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_03/0312										
0341	dr..DIR	-7.752390	-7.104728	55.750723	55.818320	WG884	Bathymetry	VECTOR	77290 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_03/0341										
2949	..DIR	-6.113413	-5.087705	53.607540	53.774124	WG884	Backscatter	VECTOR	77146 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_02/2949										
6002	..DIR	-8.232935	-8.980023	54.313841	54.336594	WG804	Bathymetry	VECTOR	77122 http://localhost:8000/gads/servlet/jetstreamDB/bathy/CV03_01/6002..DI										
3608	..DIR	-8.057771	-7.501191	55.315156	55.334847	WG884	Backscatter	VECTOR	77059 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_01/3608										
0123	dr..DIR	-10.063655	-9.264603	54.955263	55.616894	WG884	Bathymetry	VECTOR	77104 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_02/0123										
0435	dr..DIR	-8.320200	-7.408534	55.642371	55.740384	WG804	Bathymetry	VECTOR	76791 http://localhost:8000/gads/servlet/jetstreamDB/bathy/CE03_04/0435										
3607	..DIR	-8.087738	-7.506870	55.316997	55.334794	WG884	Backscatter	VECTOR	76744 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_01/3607										
2923	..DIR	-6.031734	-6.073237	53.598871	53.775752	WG884	Backscatter	VECTOR	76731 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_02/2923										
5190	..DIR	-14.877307	-12.805955	52.029843	53.800653	WG804	Bathymetry	VECTOR	76680 http://localhost:8000/gads/servlet/jetstreamDB/bathy/3h/5190..DIR 51										
6199	..DIR	-8.371463	-9.079577	54.246186	54.282906	WG884	Bathymetry	VECTOR	76601 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CV03_01/6199..DI										
6033	..DIR	-8.259549	-8.963400	54.305371	54.311915	WG884	Bathymetry	VECTOR	76559 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CV03_01/6033..DI										
4055	..DIR	-8.858113	-8.444652	54.778186	55.226238	WG804	Backscatter	VECTOR	76547 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_03/4055										
5201	..DIR	-14.825161	-12.836064	52.072389	53.841002	WG804	Bathymetry	VECTOR	76516 http://localhost:8000/gads/servlet/jetstreamDB/bathy/3h/5201..DIR 52										
2931	..DIR	-6.078895	-6.078003	53.602058	53.775622	WG884	Backscatter	VECTOR	76496 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_02/2931										
f214442_si_ME_2m.tif		-6.146358	-6.146358	-5.845876	53.058238	53.132732	WG884	.tif	GRID	75474 http://localhost:8080/gads/servlet/jetstreamDB/Maps/1_15000/8									
f214442_si_ME_2m.tif		-6.146358	-6.146358	-5.845876	53.058238	53.132732	WG804	.tif	GRID	75474 http://localhost:8000/gads/servlet/jetstreamDB/Maps/1_15000/8									
2989	..DIR	-8.138422	-8.097591	53.628178	53.843699	WG884	Backscatter	VECTOR	76419 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_02/2989										
6015	..DIR	-8.293331	-8.961188	54.317545	54.324286	WG884	Bathymetry	VECTOR	76401 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CV03_01/6015..DI										
FIRS 00	EG002	TP6	CellioVoyager	DM3002D	TP6	2003-103	0027	20000312	153726	Voyager	-9.344082	-7.039103	55.615760	55.702220	WG884	Backscatter	VECTOR	76284	http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_03/2863
2863	..DIR	-8.120663	-6.084920	53.772436	53.964762	WG884	Backscatter	VECTOR	76280 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CV04_03/2863										
1976	..DIR	-7.568737	-7.344198	55.229271	55.409207	WG884	Backscatter	VECTOR	76261 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE04_04/1976										
2854	..DIR	-6.118030	-6.063500	53.773302	53.963703	WG804	Backscatter	VECTOR	76242 http://localhost:8000/gads/servlet/jetstreamDB/Backscat/CV04_02/2854										
3995	..DIR	-8.520939	-7.735895	55.226669	55.304992	WG884	Backscatter	VECTOR	76041 http://localhost:8080/gads/servlet/jetstreamDB/Backscat/CE03_03/3995										
6007	..DIR	-8.300537	-8.960683	54.323787	54.330327	WG884	Bathymetry	VECTOR	76031 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CV03_01/6007..DI										
0141	dr..DIR	-9.147384	-7.721404	55.952077	55.974340	WG884	Bathymetry	VECTOR	76026 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_02/0141										
6009	..DIR	-8.292899	-8.958603	54.321904	54.326608	WG804	Bathymetry	VECTOR	75953 http://localhost:8000/gads/servlet/jetstreamDB/bathy/CV03_01/6009..DI										
0893	dr..DIR	-8.114545	-7.428586	55.460943	55.589321	WG884	Bathymetry	VECTOR	75735 http://localhost:8080/gads/servlet/jetstreamDB/bathy/CE03_05/0893										
f312412_by_200dpi.tif		-10.409188	-10.216091	51.673501	51.760816	WG884	Bathymetry	GRID	75907 http://localhost:8080/gads/servlet/jetstreamDB/Maps/1_150										
f312412_by_200dpi.tif		-10.409188	-10.216091	51.673501	51.760816	WG804	Bathymetry	GRID	75907 http://localhost:8000/gads/servlet/jetstreamDB/Maps/1_150										

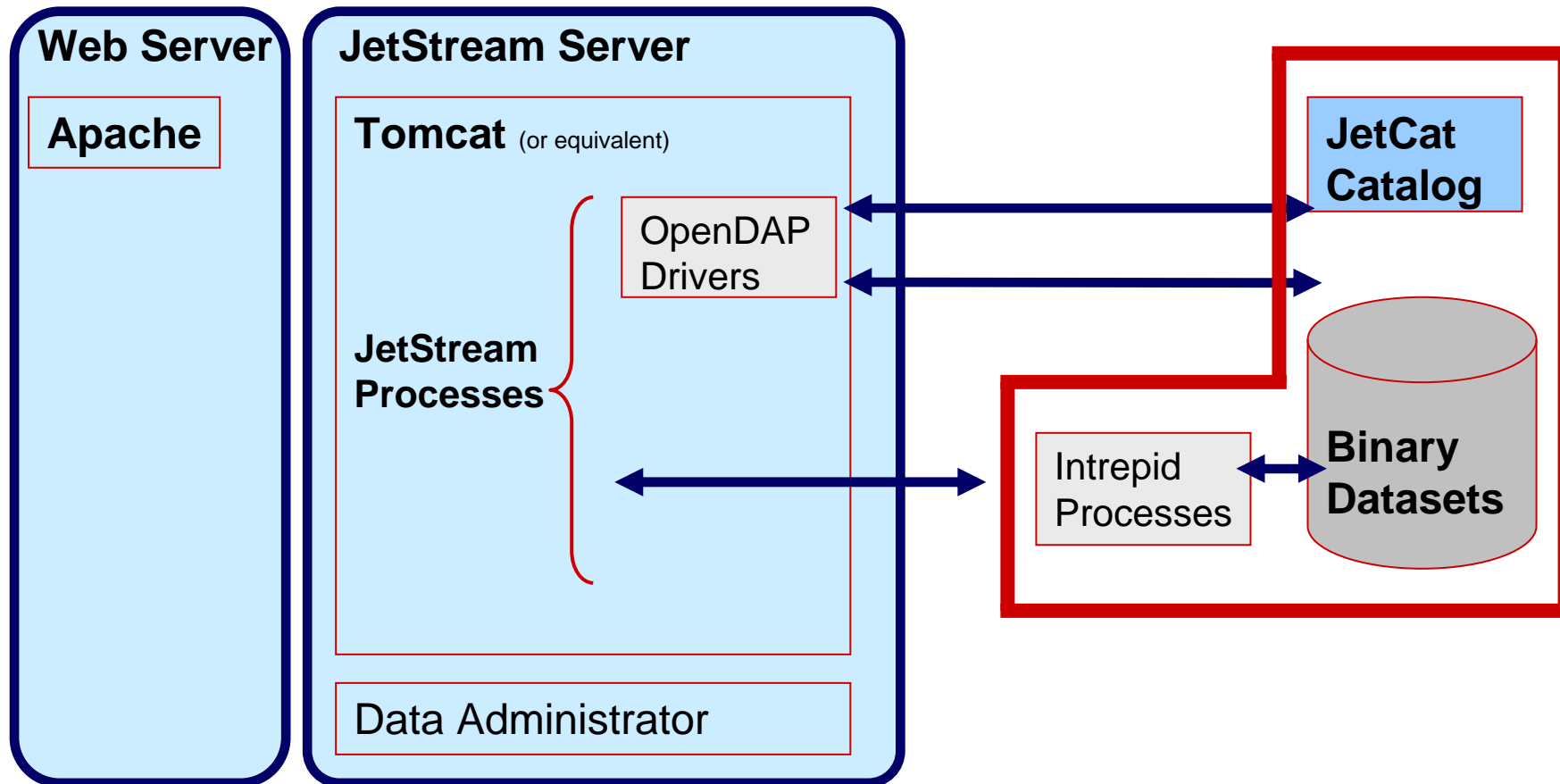
# Jetstream schema

JetStream  
in a  
Distributed  
World



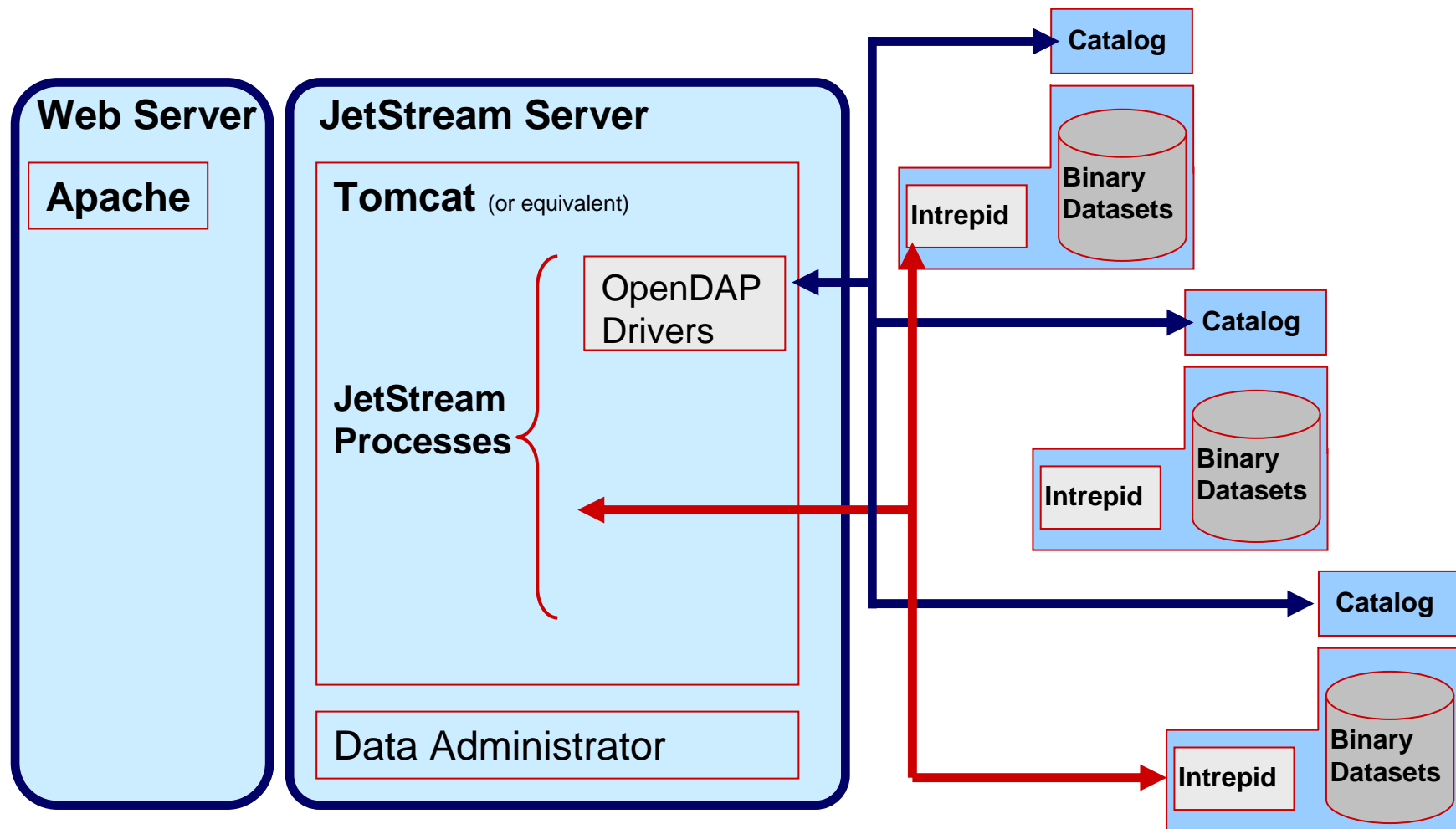
The data, Intrepid Processes and the Catalog can be distributed

# JetStream in a Distributed World

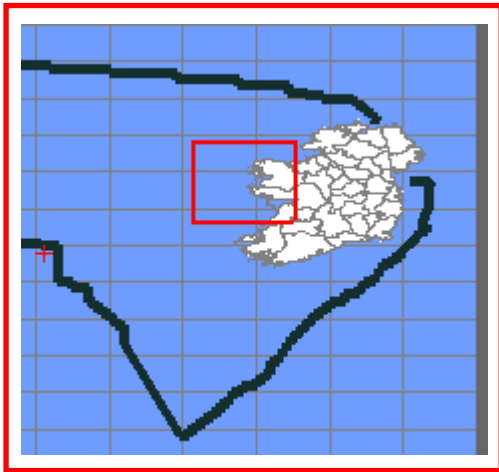


The data, Intrepid Processes and the Catalog can be distributed

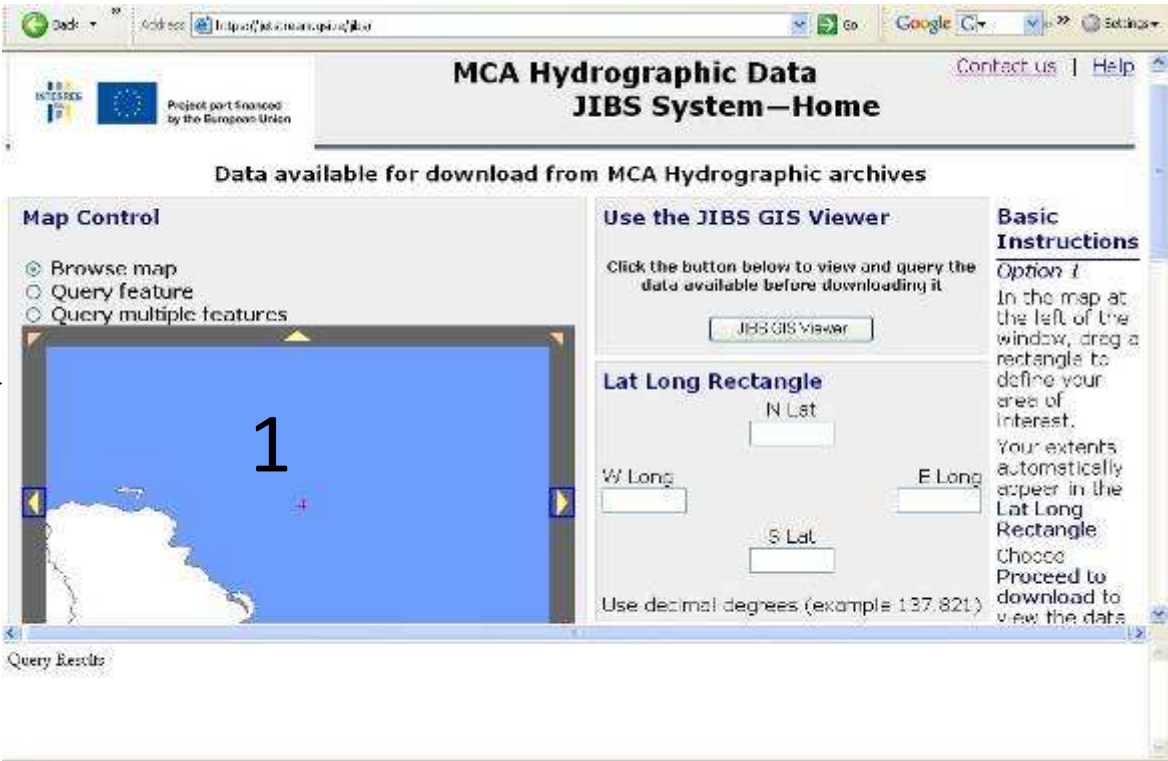
# JetStream in a Distributed World



# SELECT .....SEARCH.....DOWNLOAD



**1**.....SELECT AREA OF INTEREST



- Additional Layers**
- InfoMar data coverages
  - Bathymetry
  - Bathymetry Contours
  - Offshore Faults
  - Offshore Geology
  - Offshore Igneous
  - Offshore Intrusives
  - Offshore Tectonic Elements
  - Onshore Geology

**2**.....SELECT TYPE OF INFORMATION REQUIRED

# SELECT .....SEARCH.....DOWNLOAD

SELECT TYPE OF DATA  
- VECTOR OR GRID

MCA Hydrographic Data JIBS System [Contact MCA](#) | [Help](#)

INTERREG Project part financed by the European Union

### Select data type, region and theme

Data Type: Vector datasets  
Region: Offshore  
Theme: Bathymetry

More  
Next

Region and theme do not apply to reports.  
Each region has a different set of available themes.  
Select a region, then select a theme.

### Examples of available data

Data Type	Theme	Example
Gridded datasets	Backscatter	Acoustic backscatter grid
Gridded dataset	Bathymetry	Bathymetry super grid
Vector datasets	Bathymetry	Bathymetry XYZ
Report		Performance appraisal of a survey

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### Select data type, region and theme



Data Type: Vector datasets  
Region: Gridded datasets  
Vector datasets  
Reports  
Theme: More  
Next

### Select data type, region and theme

Data Type: Vector datasets  
Region: Offshore  
Theme: Bathymetry  
Bathymetry  
Backscatter  
sgy  
More  
Next

SELECT THEME

# SELECT ..... **SEARCH** ..... DOWNLOAD

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**JIBS System**

### Available datasets

Data type and area of interest  
Datasets listed on this page fall within or intersect your area of interest.

**Data Type** VECTOR    **Min Longitude** -6.873    **Min Latitude** -6.873  
**Theme** Bathymetry    **Max Longitude** -6.529    **Max Latitude** -6.529

### Search Results

Please select the data you wish to download. **Note:** Multiple datasets may be selected. Be aware of download data file size.

Download all datasets?

Vector 1 of 64

<b>Dataset Name</b> 6085	<b>Download this dataset?</b> <input checked="" type="checkbox"/>
<b>Additional Information</b> <ul style="list-style-type: none"><li>An estimated 10.0% of this dataset is within the area of interest.</li><li><a href="#">Preview image</a></li></ul>	<b>Columns (fields) required in download</b> <ul style="list-style-type: none"><li><input type="checkbox"/> DEPTH</li><li><input type="checkbox"/> LATITUDE</li><li><input type="checkbox"/> LONGITUDE</li></ul> <p>To select all columns (fields), leave all check boxes clear. Only check boxes if you are selecting specific columns (fields).</p>

**DATABASE IS SEARCHED FOR DATASETS  
IN THE SEARCH AREA,**

**HERE 64 SETS WERE FOUND.**

**SELECT THE DATASETS YOU WANT**

SELECT ..... **SEARCH** ..... DOWNLOAD

### Vector 2 of 2332

<b>Dataset Name</b>	Energy_buoy_Conamara_2007_dual_2007-307_0082_20071103_101509_Conarr
<b>Additional Information</b>	<ul style="list-style-type: none"><li>• An estimated 76.0% of this dataset is within the area of interest.</li><li>• <a href="#">Preview image</a></li></ul>

SHOWS % OF DATASET IN SEARCH AREA

### Vector 2 of 2332

<b>Dataset Name</b>	Energy_buoy_Conamara_2007_dual_2007-307_0082_20071103_101509_Conarr
<b>Additional Information</b>	<ul style="list-style-type: none"><li>• An estimated 75.0% of this dataset is within the area of interest.</li><li>• <a href="#">Preview image</a></li></ul>



ALLOWS FOR PREVIEW OF DATA SET

### Preview image of dataset

**Name of dataset:** 2073..DIR  
Generating image dynamically ...



**SELECT .....SEARCH.....DOWNLOAD**


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**JIBS System**

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**Licence Agreement.**

The frame below contains one or more licence agreements for your data selection. Please read the agreements carefully. If you agree to the conditions, check the *I have read, and agree to* checkbox and continue to complete the form below.

*Geological Survey of Ireland* 

**Letter of agreement for use of digital data**

The Geological Survey of Ireland (GSI) reserves the copyright to all geological and related information it supplies, unless otherwise stated. The data may not be copied or reproduced in any form without the written permission of the Director, GSI.  I have read, and agree to the **Licence Conditions**.  
(Each downloaded dataset includes a copy of its licence conditions.)

**Please tell us how you will use the data**

You must complete all fields that are marked with an asterisk \*.

**Development** \*

If licensee proposes to develop a Derivative Dataset, specify details, otherwise tick "not applicable".

Done Internet

**DATA IS DELIVERED BY**

- **ZIP FILES THROUGH AN FTP SITE**
- **CLIENT NOTIFIED BY EMAIL**

**SELECT .....SEARCH.....DOWNLOAD**

## Data types delivered

- \* line data as ASCII files
- \* grid data in ER Mapper grid format
- \* arc shape files
- \* geotiffs
- \* google KMZs
- \* Reports
- \* Maps
- \* Select from Supergrid of all data

### Other Benefits

- \* Reporting tools for measuring usage
- \* Access to metadata
- \* A more graphical view of surveys

## Maintenance

- \* Performed via remote access to IWDDS server (D15) by GSI staff (D4)

**SELECT .....SEARCH.....** **DOWNLOAD**

## **On the fly processes**

### **Gridding on the fly.**

The user can select extents and specify a grid cell size

### **Maps on the fly**

Datasets directly from the repository presented as colour images, and correctly registered in a map with simple basic map elements... co-ordinates, scale bar, north arrow, title.....

# **IWDDS – download stats**

## **(1<sup>st</sup> June 2007 – 31<sup>th</sup> Jan 2008)**

- Greater than 12,000 downloads IWDDS
  - c. 142Gb of data downloaded (142,000Mb)
  - FTP transfer mechanism
- Increase in large data requests on-site in GSI, 1Tb hard drives!
  - UKHO, BGS, Olex, Sodena, MaxSea

# IWDDS usage stats

2007			Origin	Users
		<b>Total No</b>	Irish	153
Q1			English	70
Q2	June	50	Australia	4
Q3	Jul	49	German	3
	Aug	38	Canadian	2
	Sep	27	USA	2
Q4	Oct	35	Italy	2
	Nov	19	French	2
	Dec	6	Spanish	1
<b>2008</b>				
Q1	Jan	16		
	Feb			
		<b>229</b>		

Discipline	User breakdown
Engineering	45
Education	45
Marine	44
Environmental	39
Geology	33
ICT	33
Mining	11

INFOMAR  
Interactive Web Data Delivery System

Site Administration

- Job Queue
- Report (completed jobs)
- Monthly Usage Summary Report
- Processing Log
- Servlet Log

**IWDDS usage stats  
after 7 months operation  
up to Jan 2008**

IWDDS registered customers

**699** Registered customers  
as of end August 2009

## IWDDS usage stats after 26 months operation up to Aug 2009

Origin	Users
Irish	505
English	103
USA	21
French	12
Dutch	12
Canadians	9
Australians	8
Swedish	8
Spanish	5
Belgians	4
Italians	4
Norwegians	3
Germans	2
Polish	1
Monaco	1
Israeli	1
	<b>699</b>

Discipline	User breakdown
Environment	207
Research	133
Education	100
General Public	54
Government	51
Energy & Water	30
Planning & Development	27
Agriculture, Forestry & Fish	19
GIS	15
Tourism & Recreation	15
Minerals & Exploration	14
Oil & Petroleum Exploration	13
Transportation	9
Health & Community Services	5
Communications	4
Emergency Services	3
	<b>699</b>

# 2008 IWDDS Stats

## Summary Usage Report 2008

Month	#Users	#Downloads	#Datasets	%DataJobs	%GridJobs	%MapJobs	Size
January	38	846	846	100.00	0.00	0.00	28.77 GB
February	56	1000	1000	100.00	0.00	0.00	29.38 GB
March	40	1259	1259	100.00	0.00	0.00	58.74 GB
April	33	1023	1023	100.00	0.00	0.00	68.65 GB
May	29	752	752	100.00	0.00	0.00	22.09 GB
June	41	443	443	100.00	0.00	0.00	24.79 GB
July	29	244	244	100.00	0.00	0.00	11.47 GB
August	28	907	906	100.00	0.00	0.00	26.59 GB
September	37	1836	1834	74.56	15.58	9.86	86.80 GB
October	52	973	973	39.05	10.28	50.67	47.90 GB
November	54	1302	1302	96.01	0.00	3.99	40.55 GB
December	18	3637	3637	99.86	0.00	0.14	81.81 GB
<b>Total</b>	<b>455</b>	<b>14222</b>	<b>14219</b>	<b>92.46</b>	<b>2.16</b>	<b>5.39</b>	<b>527.54 GB</b>

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# 2009 IWDDS Stats

## Summary Usage Report 2009

Month	#Users	#Downloads	#Datasets	%DataJobs	%GridJobs	%MapJobs	Size
January	48	3061	3058	54.07	34.86	11.07	145.10 GB
February	38	2346	2346	90.28	4.26	5.46	70.43 GB
March	40	3750	3750	92.96	2.83	4.21	95.45 GB
April	31	1652	1652	99.33	0.00	0.67	39.79 GB
May	35	1161	1161	71.66	25.84	2.50	57.98 GB
June	36	696	696	63.94	14.37	21.70	27.03 GB
July	26	1779	1779	93.03	5.62	1.35	42.29 GB
August	23	597	597	90.45	0.00	9.55	13.01 GB
September	0	0	0	0.00	0.00	0.00	0.00 GB
October	0	0	0	0.00	0.00	0.00	0.00 GB
November	0	0	0	0.00	0.00	0.00	0.00 GB
December	0	0	0	0.00	0.00	0.00	0.00 GB
<b>Total</b>	277	15042	15039	81.97	10.97	7.06	491.08 GB

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# Overall cost of IWDDS system

- **€12,000 pa for hosting in the HEANet**
  - **€130,000 for hardware and DBMS from Unitech**
  - **€210,000 for application development from Intrepid**
  - **€100,000 for phase2 enhancements from Intrepid**
- Total €452,000**
- **€????? A considerable amount of sweat equity from the INFOMAR project team**

Further Information

**[www.gsi.ie](http://www.gsi.ie)**

**[www.infomar.ie](http://www.infomar.ie)**

[archiedonovan@gsi.ie](mailto:archiedonovan@gsi.ie)

T:01-6782798

F:01-6782579