

# Making metadata a part of your daily data diet



One tin contains cat food and the other has beans.

**Would you select A or B?**

Think of metadata as food product labelling. Labels provide specific information about the ingredients in these tins as metadata records do for spatial datasets.



Think of metadata as a recipe for brewing a fine ale. Would you know which ingredients to use? You will also need to know how to mix and brew the ingredients and the duration of the fermentation process.



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**Beer Style:** Brown Ale

**Recipe Type:** extract

### Description:

Nice amber color. Galena bittering hops are high alpha acid but much smoother than nugget or chinook hops. Aroma is fantastic. Not overpowering just about perfect for my taste.

### Ingredients:

- 3.3 lbs lite extract
- 2 lbs dark dme
- .5 lbs crystal malt
- 2 oz galena hops
- muntons dry yeast

**OG:** 1.048 **FG:** 1.010

**Primary Ferment:** 8 days

### Procedure:

Crystal malt in bag bring water to boil discard grains. Add malt extracts and 1.5 ozs galena hops boil for 45 minutes. Add last .5 oz of galena hops for 1 min. transfer wort to carboy add yeast.

Without a recipe, you might find yourself drinking swill rather than a fine ale.

## What is metadata?

**Metadata** represents a documented summary of information that describes something, in this case, a spatial dataset. The details include the *What, Where, When, Why and Who* of a dataset, and the means to access and use it. A metadata record may answer the following questions:

**What** is the purpose of the dataset?

**Where** did the dataset originate?

**What** attribute information does it contain?

**What** processes or algorithms were employed to create it?

**What** spatial reference system does the dataset use?

**What** geographic area or extent does it cover?

**What** is the granularity of the data?

**When** was the dataset created?

**When** was the data collected?

**What** are the access and use restrictions and how much will it cost?

**Who** is responsible for creating the metadata record for the dataset?

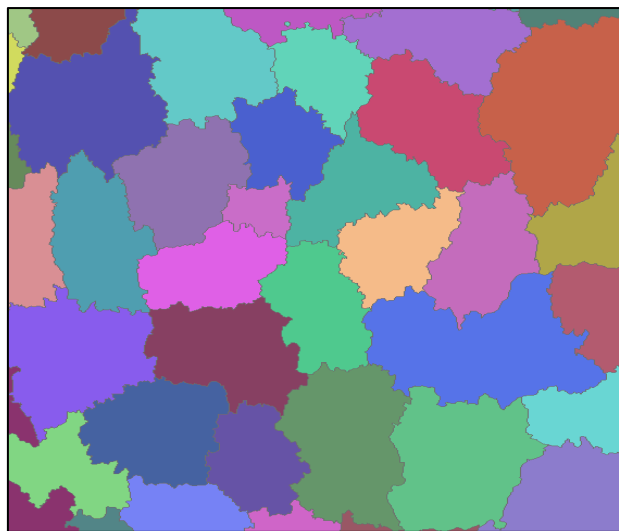
**Where** and **how** do I acquire the dataset?

**Whom** do I contact for more information or access to the dataset?

Can you answer the following questions?:

Name	Size	Type	Date Modified
jez_soils2.dbf	14 KB	DBF File	11/11/1999 14:29
jez_soils2.shp	125 KB	SHP File	20/10/1999 23:23
jez_soils2.shx	1 KB	SHX File	20/10/1999 23:23
jez_soils3.dbf	14 KB	DBF File	12/05/2019 23:18
jez_soils3.sbn	1 KB	SBN File	12/05/2019 23:17
jez_soils3.sbx	1 KB	SBX File	12/05/2019 23:17
jez_soils3.shp	125 KB	SHP File	12/05/2019 23:17
jez_soils3.shx	1 KB	SHX File	12/05/2019 23:17
soils1.apr	357 KB	APR File	09/05/2019 00:34
soils2.apr	469 KB	APR File	09/05/2019 01:03
soils3.apr	486 KB	APR File	15/05/2019 00:20
soils.apr	195 KB	APR File	01/04/2001 23:57

Which datasets do these files represent?



What do these polygons represent?

FID	Shape	AREA	PERIMETER	A10SOILP#	A10SOILP-ID	ARC-ID	LPOLY#	RPOLY#	POLY-ID	SOILCLASS
2	Polygon	205037.40625	2854.017090	2	1	2662	2	2	52005	UpC
3	Polygon	7759044	30731.910156	3	2	2596	3	3	8210	GuD
4	Polygon	98960.21875	1210.482056	4	3	0	4	4	8203	WmE
5	Polygon	4257001	34723.601563	5	4	2357	5	5	8192	VbD
6	Polygon	13112360	123709.296875	6	5	1993	6	6	8155	WmF
7	Polygon	73276.28125	1271.327026	7	6	2653	7	7	8191	WhF
8	Polygon	1802398	14282.209961	8	7	2646	8	8	8188	WhE
9	Polygon	311326.3125	5024.500977	9	8	2648	9	9	8187	WhD
10	Polygon	31646000	130463.296875	10	9	2641	10	10	8554	VbD
11	Polygon	145485.59375	1735.811035	11	10	2643	11	11	8208	WhD
12	Polygon	642108.375	10473.910156	12	11	2582	12	12	9014	EbF
13	Polygon	2296537	24645.380859	13	12	2441	13	13	8576	WhE
14	Polygon	178981.90625	2156.708008	14	13	2636	14	14	9018	VbD
15	Polygon	89592.40625	1754.155029	15	14	2697	15	15	9012	UsD
16	Polygon	2704050	23853.519531	16	15	2631	16	16	8609	GuD
17	Polygon	104809.601563	1589.582031	17	16	2630	17	17	9020	WhE
18	Polygon	73713.78125	1141.522949	18	17	2625	18	18	20666	WhE
19	Polygon	38971	774.400391	19	18	2623	19	19	8202	WwO
20	Polygon	44667752	193799.90625	20	19	2621	20	20	8604	VbD
21	Polygon	2733101	31330.449219	21	20	0	21	21	9022	WhE
22	Polygon	2743654	32333.269531	22	21	2352	22	22	8605	WmF
23	Polygon	213043.703125	3308.434082	23	22	2613	23	23	9034	VbD

What do these SOILCLASS attribute values in the far right column mean?

## A list of reasons for making geospatial metadata and the GoGeo portal part of your spatial data activities.

- GoGeo** provides support to create a mindset and operational structure for managing and storing dataset information for departmental and intra-departmental use.
- GoGeo** ensures integrity of existing and new datasets using metadata as a tracking mechanism to monitor changes and edits to datasets.
- GoGeo** maintains an inventory of datasets to reduce redundancy and time required to reassess existing datasets for new and future applications.
- GoGeo** eliminates or reduces the risk of redundancy in data collection or deletion of existing datasets.
- GoGeo** reduces effects of staff turnover and minimises its disruptive effects.
- GoGeo** protects investments of time and cost dedicated to data development.
- GoGeo** ensures that other organisations will not replicate data at added cost and time.
- GoGeo** provides potential users with a dataset catalogue to view and select datasets to complement or augment existing in-house datasets for new applications.
- GoGeo** allows for more spontaneity amongst users as they browse the metadata records published on the GoGeo portal.
- GoGeo** enables the discovery of a dataset which may instigate the user to develop an idea for a new application.
- GoGeo** metadata can be referenced and cited for project proposals.
- GoGeo** catalogue can serve as a private repository for each UK academic institution to store, manage and share its metadata internally.
- GoGeo** can provide a quick, short-term solution for data creators to announce their datasets and applications.
- GoGeo** saves the time required for a dataset user to open the file in a GIS to extract information and evaluate.
- GoGeo** allows organisations and individuals to advertise and sell their datasets to other interested parties in academia and in the private and public sectors.

**GoGeo** interoperability between the GoGeo portal and other portals allows for spatial data advertisements to reach a large audience of data users.

**GoGeo** includes the online Geodoc metadata editor tool, which creates metadata records compliant with other UK academic and public sector portals, and international portals, which use UK GEMINI 2.1, INSPIRE, ISO 19115, FGDC, Dublin Core and DDI standards.

**GoGeo** EC INSPIRE Directive mandates the creation of geospatial metadata for data related to the environment.



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## Metadata: for those inadvertently deleted dataset files and



Jupiter Images 2006



Jupiter Images 2006

## unexpected system failures.



# Animated and interactive online metadata modules for eLearning

## GoGeo Metadata News (Biannual circulation)

Go to GoGeo at <http://www.gogeo.ac.uk/> and select 'Learn about Metadata' on panel

# ACCESS TO FREE SPATIAL DATA ShareGeo Open Data Repository

Go to ShareGeo at <http://www.sharegeo.ac.uk/>

## Closed version of ShareGeo (Available in Digimap Collections)

Go to Digimap at <http://edina.ac.uk/digimap/>

For further assistance, please contact Tony Mathys at

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The University of Edinburgh  
Causewayside House  
160 Causewayside  
Edinburgh  
EH9 1PR

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**tele:** (0) 131 651 1443  
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## SPATIAL DATA, MAP SOURCES AND OTHER ONLINE RESOURCES (GoGeo portal has 1000s more listed)



### Archaeology Data Service (ADS)

The Archaeology Data Service (ADS) supports research, learning and teaching with high quality and dependable digital resources. It does this by preserving digital data in the long term, and by promoting and disseminating a broad range of data in archaeology.

<http://ads.ahds.ac.uk/>

### ACORN PETROLIUM SERVICES

This map gives access to oil and gas information for North Sea waters and works.

<http://tiny.cc/1vpfe>

### Baltic GIS Portal

The Baltic GIS portal currently acts as a GIS/Data coordination centre of the Baltic Sea Regional Project (HELCOM). The Baltic GIS portal delivers online spatial data, produced or processed at the Institute of Ecology, Vilnius University. This includes a GIS and satellite imagery database of the Baltic Sea and Europe.

<http://gis.ekoi.lt/gis/>

### British Geological Survey Geoscience Data Index (GDI)

The site allows users to search for information about British Geological Survey's data collections covering the UK and other areas world wide. Data in the GDI includes borehole records, opencast coal prospecting sites, water wells, site investigation reports, drill core, geochemistry, superficial deposits 1:625000 and bedrock 1:625000. Access is free, the interface is easy to use, and it has been developed to enable users to check coverage of different types of data and find out some background information about the data. Orders can be carried out on the web site.

<http://www.bgs.ac.uk/geoindex/>

### British Isles GPS Facility (BIGF)

The British Isles GPS archive Facility (BIGF) has provides a secure long-term archive of GPS data from a UK-wide network of over fifty continuous GPS recording stations (including those of the Ordnance Survey) for free of charge use.

[http://www.bigf.ac.uk/data\\_availability.htm](http://www.bigf.ac.uk/data_availability.htm)

### Climatic Research Unit

The Climatic Research Unit is concerned with the study of natural and anthropogenic climate change.

<http://www.cru.uea.ac.uk>

### Consultative Group on International Agricultural Research (CGIAR)

The CGIAR website includes a full range of geospatial resources including their Geospatial Toolkit and free, processed SRTM 90M Global DEM data. The alliance mobilizes agricultural science to reduce poverty, foster human well being, promote agricultural growth and protect the environment.

<http://www.cgiar-csi.org/>

### .data.gov.uk

This site is intended to deliver a wealth of UK government data to the public.

<http://data.gov.uk/>

### Dundee Satellite Receiving Station

Dundee Satellite Receiving Station, Dundee University, UK, maintains an up-to-date archive of images from NOAA, SeaStar, Terra and Aqua polar orbiting satellites. Images from geostationary satellites covering the whole earth are also available. To view the images for free please complete the on-line registration form.

<http://www.sat.dundee.ac.uk/>

### Earth Explorer

Upgraded in October 2010, Earth Explorer offers a wide range of free mapping and imagery products (satellite and aerial). Landsat, SPOT, AVHRR, Declassified Satellite (CORONA), Radar, SRTM elevation, Global Land Survey and more.

<http://edcsns17.cr.usgs.gov/EarthExplorer/>

### Eden Data Archive

The University of Oxford EDEN Project offers an archive of customised public domain data for EDEN partners to use, a distribution centre for data produced by the Horizontal Integration Teams for use by EDEN partners and a repository of EDEN sub-project data and results for distribution within and/or between sub-projects. Registration will enable the user to full access to EDEN Services.

<http://ergodd.zoo.ox.ac.uk/eden/>

## **EDINA**

EDINA, based at Edinburgh University Data Library, is a JISC-funded national data centre. It offers the UK tertiary education and research community networked access to a library of spatial data, information and research resources.

## **Digimap: Ordnance Survey Collection**

### **Historic Digimap**

### **Geology Digimap**

### **Marine Digimap**

### **UKBORDERS**

### **agcensus**

<http://www.edina.ac.uk>

## **English Nature**

English Nature GIS Digital Boundary Datasets are now becoming available for downloading via the internet. The data are suitable for use in a GIS. Free registration is required.

[http://www.english-nature.org.uk/pubs/gis/GIS\\_register.asp](http://www.english-nature.org.uk/pubs/gis/GIS_register.asp)

## **GEO Data Portal**

The GEO Data Portal (used by UNEP) holds national, sub-regional, regional and global statistics and spatial datasets (maps), covering themes like Freshwater, Population, Forests, Emissions, Climate, Disasters, Health and GDP. Display them on-the-fly as maps, graphs, data tables or download the data in different formats.

<http://geodata.grid.unep.ch/extras/datasetlist.php>

## **Global Change Master Directory (GCMD)**

Global Change Master Directory (GCMD) enables users to locate and obtain access to earth science datasets and services relevant to the global change and earth science research. The GCMD database holds more than 15,000 descriptions of datasets and services covering all aspects of earth and environmental sciences.

<http://gcmd.nasa.gov/>

## **Global Land Cover Facility (GLCF)**

The Global Land Cover Facility (GLCF) provides earth science data and products (Landsat, IKONOS, Quickbird and more). In particular, the GLCF develops and distributes remotely sensed satellite data and products that explain land cover from the local to global scales. Primary data and products available at the GLCF are free to anyone via FTP and map interface. Online datasets may be accessed electronically through the Earth Science Data Interface (ESDI).

<http://esip.umiacs.umd.edu/index.shtml>

## **INSPIRE geoportal (prototype)**

The INSPIRE geoportal provides the means to search for spatial data sets and spatial data services, and subject to access restrictions, view and download spatial data sets from the EU Member States within the framework of the *Infrastructure for Spatial Information in the European Community (INSPIRE) Directive*. INSPIRE aims at making available relevant, harmonised and quality geographic information to support formulation, implementation, monitoring and evaluation of policies and activities which have a direct or indirect impact on the environment. The INSPIRE geoportal page includes an INSPIRE **metadata editor** and a **metadata validator**.

<http://www.inspire-geoportal.eu/>

## **MAGIC**

MAGIC is a one-stop shop for rural and countryside information from the partner organisations, bringing together definitive rural designation boundaries and information for rural land-based schemes.

<http://www.magic.gov.uk>

## **Marine Environmental Data & Information Network (MEDIN) Data Discovery Portal**

Data Discovery Portal for marine environmental data and information.

<http://portal.oceannet.org/search/full>

## **Marine Irish Digital Atlas**

The atlas is a comprehensive resource for coastal and marine information and spatial data in both the Republic and Northern Ireland. GIS users can search the database of available layers, view metadata, and in some cases download data.

<http://mida.ucc.ie/>

## **Mimas**

Manchester Information and Associated Services (Mimas) is a JISC-supported national data centre run by Manchester Computing, at the University of Manchester. The centre provides the UK higher and further education and research communities with networked access to key data and information (Landmap) resources (optical, radar, elevation) to support teaching, learning and research across a wide range of disciplines. MIMAS services are available free of charge to users at eligible institutions although site licence and/or user registration may be required.

<http://www.mimas.ac.uk>

<http://www.landmap.ac.uk/>

### **National Biodiversity Network (NBN) Gateway**

The National Biodiversity Network (NBN) Gateway site allows users to view distribution maps and download UK wildlife data by using a variety of interactive tools. It is completely dependent on the data providers. Use the search engine, the geosearching facility or shortcuts to create maps and view data.

<http://www.searchnbn.net/>

### **National Center for Earth Resources Observation and Science (EROS)**

EROS is the data centre for the USGS mapping mission. Global coverage datasets are available from EROS including aerial photography, map products and satellite data (land classification /DTMs) alongside extensive search utilities.

<http://edc.usgs.gov/>

### **National Digital Archive of Datasets (NDAD)**

The National Digital Archive of Datasets (NDAD) provides online access to archived digital data and documents from UK central government departments since 1963. Documents and data cover broad themes such as health, education, housing, crime and the environment.

<http://www.ndad.nationalarchives.gov.uk/>

### **Natural Environment Research Council (NERC)**

Providing a network of data centres which support and guide NERC-funded organisations in data management. These centres are responsible for the long-term curation of data and provide access to NERC's data holdings.

<http://www.nerc.ac.uk/research/sites/data/>

### **National Library of Scotland's Bathymetrical Survey of the Fresh-Water Lochs of Scotland, 1897-1909**

This is a pilot web-mapping application, which uses zoomable Ordnance Survey mapping to search and display images and records of the Bathymetrical Charts. This is the first comprehensive examination of the depths and nature of 562 inland Scottish lochs, including some 60,000 soundings on 223 coloured maps.

<http://maps.nls.uk/bathymetric/index.html>

### **Noise Mapping England**

The Noise Mapping England project is the first stage in the development of a National Ambient Noise Strategy for England. The project aims to establish the environmental noise climate across England. The London Road Traffic Noise Map is available here as well.

<http://services.defra.gov.uk/wps/portal/noise>

### **Scottish Environment Protection Agency (SEPA)**

SEPA's main aim is to provide an efficient and integrated environmental protection system for Scotland. SEPA holds a large range of environmental data.

<http://www.sepa.org.uk>

### **Scottish Natural Heritage**

The aims of Scottish Natural Heritage (SNH) are to secure the conservation and enhancement of the natural heritage of Scotland. SNH provides GIS digital datasets for free download.

<http://tiny.cc/z8ko4>

### **Second Administrative Level Boundaries (SALB)**

The SALB dataset is free. It aims to improve the availability of information about administrative boundaries down to the second sub-national level. It is a global digital dataset consisting of digital maps and codes that can be downloaded on a country by country basis.

<http://www.unsalb.org/>

### **Soil Portal**

The Soil Portal aims to help build a thematic spatial data infrastructure on soils. This portal serves as a collecting point for all relevant soil information in Europe. All the data in the Soil Portal are harmonised with the EU INSPIRE project.

<http://eusoils.jrc.it>

### **USGS Global GIS Databases & Metadata List**

This website offers metadata information for USGS (United States Geological Survey) datasets along with description of USGS data products.

<http://webgis.wr.usgs.gov/globalgis/datasets.htm>

### **UK Data Archive**

The UK Data Archive (UKDA), at the University of Essex, is a national resource centre that acquires, disseminates, preserves and promotes the largest collection of digital data in the social sciences and humanities in the UK.

<http://www.data-archive.ac.uk>

### **UK Location Metadata Editor**

Online metadata editor for UK public sector to create and publish INSPIRE-compliant metadata.

<http://locationmetadataeditor.data.gov.uk/geonetw/ork/srv/en/main.home>

### **What's In Your Back Yard?**

What's in Your Backyard gives you on-line access to the Environment Agency's environmental data for England and Wales. Enter a postcode or place name to find your area of interest displayed on an interactive map. Criteria include water quality, flood warnings, pollution data, river quality, urban waster treatment and many more.

<http://www.environment-agency.gov.uk/maps/>

## GLOSSARY AND REFERENCES

### **Academic Geospatial Metadata Application Profile, Version 2.1 (UK AGMAP 2.1)**

UK AGMAP 2.1 is a template designed to support the documentation and discovery of spatial datasets, dataset series and geo services within UK Higher and Further Education. UK AGMAP 2.1 also serves as a metadata element field template for the GoGeo portal and Geodoc metadata editor tool. UK AGMAP 2 supports the creation and export of INSPIRE and UK GEMINI 2.1 compliant metadata records.

<http://www.gogeo.ac.uk>

### **ANZLIC, Spatial Information Council**

ANZLIC is the Spatial Information Council's joint initiative for the governments of Australia, New Zealand and the States and Territories of Australia. ANZLIC's role is to facilitate easy and cost effective access to the wealth of spatial data and services available from a wide range of organisations in the public and private sectors.

<http://www.anzlic.org.au/>

### **Association for Geographic Information (AGI)**

The AGI plays a pivotal role in developing and promulgating geographic information policy in the UK so as to maximise the use of geographic information for the benefit of the country. It is also maintains UK GEMINI 2.1, the current UK geospatial metadata standard.

<http://www.agi.org.uk/>

### **Content Standard for Digital Geospatial Metadata (CSDGM)**

The Federal Geographic Data Committee (FGDC) created this to provide a common set of terminology and definitions for documenting digital spatial data. CSDGM establishes the names of data elements and compound elements (groups of data elements) to be used for these purposes, the definitions of these compound elements and data elements, and information about the values that are to be provided for the data elements.

<http://www.fgdc.gov/>

### **Data Documentation Initiative (DDI)**

The Data Documentation Initiative (DDI) is an effort to establish an international criterion and methodology for the content, presentation, transport, and preservation of "metadata" about datasets in the social and behavioural sciences.

<http://www.icpsr.umich.edu/DDI/>

### **Dublin Core (ISO 15836)**

A metadata element set that is specifically designed to describe digital resources. There are fifteen elements in total (e.g., Title, Creator), which you can qualify with sub elements. It can be used to describe objects, containers, and collections.

<http://www.dublin.org>

### **e-Government Metadata Standard (e-GMS)**

The e-Government Metadata Standard (e-GMS) provides the list of elements and refinements used by the UK public sector to create metadata for information resources. It also gives guidance on the purpose and use of each element. This standard is also mapped to Dublin Core.

<http://www.esd.org.uk/standards/egms/>

### **European Umbrella Organisation for Geographic Information (EUROGI)**

EUROGI was established at the end 1993 as an initiative of the European Commission. Its mission is to maximise the effective use of geographic information for the benefit of the citizen, good governance and commerce in Europe.

<http://www.eurogi.org/>

### **Federal Geographic Data Committee (FGDC)**

The FGDC is the authoring body of the Content Standard for Digital Geospatial Metadata (CSDGM). It also promotes the co-ordinated development, use, sharing and dissemination of geographic data.

<http://www.fgdc.gov/>

### **Intra-governmental Group on Geographic Information (IGGI)**

The Intra-governmental Group on Geographic Information was established in 1993 to enable departments to liaise effectively and exchange best practices for geographic information to increase the efficiency of central government and meet its responsibilities for provision of geographic information to the general public.

<http://www.iggi.gov.uk/>

### **Infrastructure for Spatial Information in Europe (INSPIRE)**

INSPIRE is an initiative launched by the European Commission and developed in collaboration with Member States and accession countries. It aims at making available relevant, harmonised and quality geographic information to support formulation, implementation, monitoring and evaluation of Community policies with a territorial dimension or impact.

<http://inspire.jrc.ec.europa.eu/>

### **INSPIRE Annex I, II & III Spatial Data Themes**

INSPIRE Directive addresses 34 spatial data themes needed for environmental applications. These themes are subdivided in the three annexes of the directive and can be found here.

<http://tiny.cc/9r186>

### **INSPIRE Regulations for England, Northern Ireland and Wales [SI 2009, No 3157]**

<http://tiny.cc/xvof2>

### **INSPIRE Regulations for Scotland [SSI 2009, No 440]**

<http://tiny.cc/uw3wd>

### **International Organization for Standardization (ISO)**

A worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. International organizations, governmental and non-governmental also take part in the work.

<http://www.iso.ch>

### **ISO 19115 International Metadata Standard**

This International Standard, adopted March 2003, defines the schema required for describing geographic information and services. It provides information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital geographic data.

<http://www.iso.ch>

### **North American Profile of ISO19115:2003 Geographic information – Metadata**

<http://tiny.cc/4fofe>

### **National Geospatial Data Framework (NGDF)**

The National Geospatial Data Framework (NGDF) is the name given to the spatial data infrastructure of the UK. This initiative's aim was to improve awareness and access to geospatial information and encourage its wider use.

<http://www.agi.org.uk/>

### **Open Geospatial Consortium (OGC)**

OGC is an international industry consortium of companies, government agencies and universities participating in a consensus process to develop publicly available geo-processing specifications. Open interfaces and protocols defined by OpenGIS® Specifications support interoperable solutions that "geo-enable" the Web, wireless and location-based services, and mainstream IT, and allow technology developers to make complex spatial information and services accessible and useful with applications.

<http://www.opengeospatial.org/>

### **Portal**

A portal is a network service that brings together content from diverse distributed resources using cross searching, harvesting, and alerting technologies, and collating these into an amalgamated form for presentation to the user. This presentation is usually via a web browser. A portal can be a personalised, common point of access where searching can be carried out across one or more than one resource and the amalgamated results viewed. Information may also be presented via other means, for example, alerting services and conference listings or links to e-prints and learning materials. Please visit the JISC web or more information.

[http://www.jisc.ac.uk/programme\\_portals.html](http://www.jisc.ac.uk/programme_portals.html)

### **UK GEMINI 2.1**

The UK GEMINI Discovery Metadata Standard is a defined element set for describing geospatial, discovery level metadata within the UK. The profile is the result of collaboration between the Association for Geographic Information (AGI) and national and local government, and the academic community, including EDINA. UK GEMINI 2.1 is INSPIRE compliant and was released in August 2010. UK GEMINI 2.1 supports the online *UK Location Metadata Editor*.

<http://tiny.cc/4ow6a>

### **UK Location Programme (UKLP)**

UKLP is a UK pan-government initiative to improve the sharing and re-use of public sector location information. UKLP incorporates the implementation of the UK Location Strategy and the EC INSPIRE Directive. Coordination is through the Location Council, with DEFRA as the lead government department.

<http://location.defra.gov.uk/>

### **XML: eXtensible Markup Language**

A subset of SGML constituting a particular text markup language for interchange of structured data. The Unicode Standard is the reference character set for XML content. XML is a trademark of the World Wide Web Consortium.

<http://en.wikipedia.org/wiki/XML>