

Supporting Users of Electronic Data Resources in Research and Teaching

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- **What is data?**
- **Where do you get it from?**
- **Support Services**
- **Developments in data storage, dissemination and analysis**
- **User Experiences**
- **Conclusions**

What is Data?

Some definitions:

a collection of observations or other information related to a particular question or problem

information, most commonly in the form of a series of binary digits, stored on a physical storage medium for manipulation by a computer program

a collection of facts from which conclusions may be drawn

a single piece of information; a fact; especially a piece of information obtained by observation or experiment

information in numerical form that can be digitally transmitted or processed

Data Types

Micro data

- Large-scale government surveys
- Population censuses
- Election and public opinion surveys

Aggregated data

- Macro-level economic indicators

(Geo-)Spatial data

- Census/administrative boundary data
- Satellite imagery
- Base mapping - raster/vector

Financial data

- Company-level data

Micro data

anorectic.sav [DataSet1] - SPSS Data Editor

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
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Attributes of Glasgow postcode sectors_2001

FID	Shape*	SECTORS	LABEL	AREA	NAME
0	Polygon		GNC09	13	G77 6 (part)
1	Polygon		GNC05	13	G76 0
2	Polygon		QLC18	11	G66 7
3	Polygon		QLC19	11	G66 8 (part)
4	Polygon		QZC01	23	G33 6 (part)
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14	Polygon				
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Indicators

14 Economic performance

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BACK

Average annual change in consumer price index (%)

Reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or may change at specified intervals.

I Rank	Country	Average annual change in consumer price index (%)	
		1990-2003	2002-03
1	Norway	2.3	2.5
2	Iceland	3.2	2.1
3	Australia	2.4	2.8
4	Luxembourg	2.0	2.0
5	Canada	1.8	2.8
	Sweden	1.7	1.9
	Switzerland	1.3	0.6
	Ireland	2.7	3.5
	Belgium	1.9	1.6
	United States	2.6	2.3
	Japan	0.4	-0.3
	Netherlands	2.6	2.1
	Finland	1.6	0.9
	Denmark	2.2	2.1
	United Kingdom	2.7	2.9
	France	1.6	2.1
	Austria	2.1	1.4
	Italy	3.3	2.7
	New Zealand	1.9	1.8
	Germany	1.8	1.0

	A	B
1	Name	BARCLAYS - PRICE INDEX
2	Code	BARC(PI)
3	28/06/2004	5130.4
4	28/07/2004	4948
5	28/08/2004	5578.6
6	28/09/2004	5683.2
7	28/10/2004	5817.4
8	28/11/2004	5828.1
9	28/12/2004	6257.4
10	28/01/2005	6160.8
11	28/02/2005	6064.2
12	28/03/2005	5914
13	28/04/2005	5731.5
14	28/05/2005	5602.7
15	28/06/2005	5962.3
16	28/07/2005	6091.1
17	28/08/2005	5903.2
18	28/09/2005	6182.3
19	28/10/2005	5849.6

Spatial data

Financial data

Aggregate data



Library

British Library of Political and Economic Science



University of Manchester, July 2006

Edinburgh University
Data Library

National Statistics

Office of National Statistics (ONS)

- Government department that provides UK statistical services
- ONS is responsible for producing a wide range of key economic and social statistics which are used by policy making

General Register Office for Scotland (GROS)

- responsible for registering vital statistics in Scotland in addition to the Scottish Census

Northern Ireland Statistics and Research Agency

Statistics for Wales – National Assembly for Wales

JISC-funded UK Data Centres

EDINA - hosted by Edinburgh University Data Library

MIMAS – run by Manchester Computing at the University of Manchester

UK Data Archive – based at University of Essex

Economic and Social Data Service, ESDS – collaborative and distributed services

Arts and Humanities Data Services – distributed services

Free Resources

Large range of statistics and data available online:

- Non-Governmental Organisations
- National/Regional Statistical Institutes
- Government websites (national/local)
- Independent Research Organisations
- Charitable Organisations

Data Discovery Tools:

- Intute Social Sciences – Statistics and Data Section
- Go-Geo!
- Reviewed internet resources e.g.
Edinburgh University Data Library External Sources
ESDS International's "Guide to freely available international data resources"

Commercial Services

There are many commercial data resources/products/services offered at discounted rates to the tertiary education community:

- Datastream, FAME, AMADEUS
- Ordnance Survey Data
- Address Manager/Finder

In addition to licensed commercial software such as:

- ArcGIS/MapInfo (for spatial data analysis)
- SPSS, STATA, SAS (statistical analysis packages for micro-data)

Data Support Services

Institutions provide support for data services in different ways:

- Data Libraries
- University Libraries
- Computing Centres
- Research Offices
- Academic Departments

Data Libraries go beyond the support of national data centres & statistical agencies:

- Act a 'repository' of data
- Reference service
- Train users to access and handle data resources

UK Data Libraries

Edinburgh University Data Library - first such service in the UK, 1983

Oxford University Data Library –1988

London School of Economics Data Library –1997

RLab Data Service –1999, providing support to LSE’s research laboratory

Other institutions with ‘Social Statistics’ libraries:

- University of Southampton
- Strathclyde University

Other Support

DISC-UK (Data Information Specialist Committee – UK)

A support group formed in 2003 whose aims are as follows :

- Foster understanding between data users and providers
- Raise awareness of the value of data support in Universities
- Share information and resources among local data support staff

IASSIST (International Association for Social Science Information Service & Technology)

An international organization of professionals working in and with information technology and data services to support research and teaching in the social sciences

Institutional Repositories

UK Repository Projects:

- StORe – Source-to-Output Repositories
- GRADE - Geospatial Repository for Academic Deposit and Extraction
- R4L – Repository for the Laboratory
- SPECTRa
- CLADDIER

Proprietary Repository Systems:

- SDA – Survey Documentation & Analysis
- VDC – Virtual Data Center
- NESSTAR? - Networked Social Science Tools and Resource

Role of data in eScience

eScience

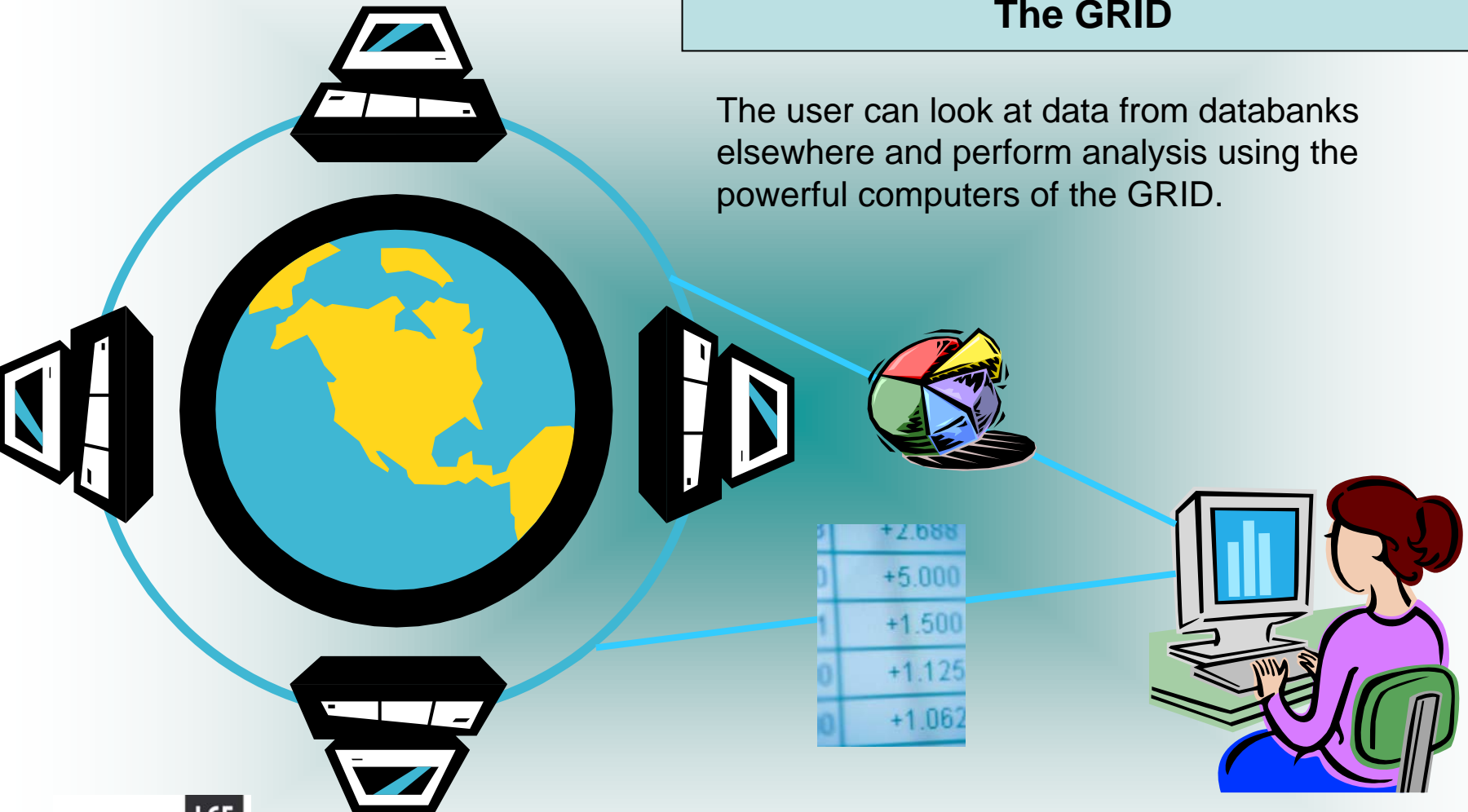
“...is about global collaboration in key areas of big science and the next generation of infrastructure that will enable it” Dr John Taylor

Key words to understand eScience

- Collaboration
- Data
- Research
- Infrastructure

The GRID

The user can look at data from databanks elsewhere and perform analysis using the powerful computers of the GRID.



Reviews of User Experience

(2001) **An enquiry into the use of numeric data in learning & teaching: report and recommendations for UK higher education.** Robin Rice (Edinburgh University Data Library) et al.

- **Barriers**

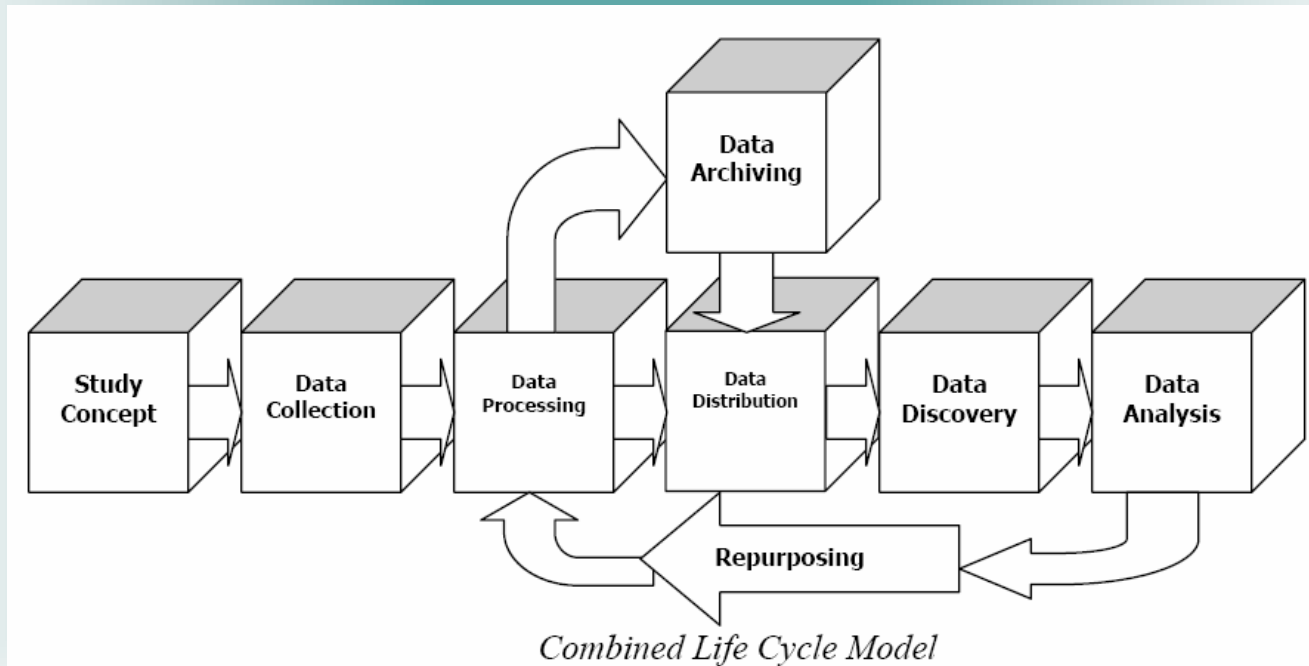
- Problems locating data
- Lack of awareness of available data
- Lack of local user support
- Different service providers, multiple registration systems and interfaces

Locating data

Metadata from national data centres shared across institutions

- National data centres to be 'localised' (Rice et al,2001)

Metadata standard for Social Sciences Data : Data Documentation Initiative, DDI version 3.0



Awareness of available data

Data Centres and Libraries coordinated promotion to raise awareness

Training courses, workshops and conferences

- Links to local data support staff/teaching staff

Other channels of communication

- Mailing list
- RSS feeds\Blogs\Wikis

Libraries need someone knowledgeable about data resources and support

- Understanding local needs
- Data sources
- Other support areas (statistical support/research methodology/survey design)
- Support group and associations (IASSIST/DISC-UK)

Local data support

- **Locating data and raising awareness**
- **Troubleshooting**
- **Hands-on training**
- **One to one help**
- **Easing tedious registration**
- **Streamline ordering**
- **Manage institutional subscriptions**

Easier Access

- Reducing number of interfaces
- **Authentication methods**
 - Global usernames and passwords (ATHENS)
 - Shibboleth
- **Data aggregators (beyond 20/20 or Nesstar)**
- **Grid technologies**

Outcomes & Recommendations

- **Metadata for all to make data easier to find**
- **Closer collaboration between local support and national data centres**
- **Sufficient resources allocated to data support at the institutional level**
- **Adoption of new technologies for data access and data management**