



# *AHM Parallel Session July 6th*

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Developing Learning, Training & Awareness Materials  
for e-Social Science  
- Andrew Gold

# *Structure of the Presentation*

- Part 1: Fast Track
  - Developing learning materials for e-Social Science
- Part 2: Tutorials
  - The Access Grid and SAMD Web Tutorials
- Part 3: Approach
  - Designing for reuse & accessibility
  - Important issues regarding standards

# *Part 1: Fast Track*

- Aims to:
  - The aim is to familiarise people with the use of the new Grid technologies for social science research
  - Fast Track involves the speedy creation of reusable and accessible online & workshop learning and teaching materials
  - Working collaboratively with the NCESS hub and nodes to target materials at 'early adopters' of the Grid and e-Social Science
  - Provide guidance on the production of learning & teaching materials that are coherent, reusable and accessible

## *Part 2: The Tutorials*

- Two Web-based Tutorials are in production
  - Access Grid
  - SAMD
- Access Grid (AG)
  - Advanced videoconferencing technology, encouraging collaboration between scholars, aiming for near face-to-face meeting quality
- SAMD
  - A demonstrator project showing the benefits of applying Grid technologies (e.g. a single sign-on to multiple datasets, and easy access to computational resources) to facilitate social science research

## *AG Tutorial (Structure)*

- Structure consists of:

1 Home page

4 Main Units

1. Introduction to (the) Access Grid
2. Social Science and the Access Grid
3. A Guide to Using the Access Grid
4. Beyond the Access Grid

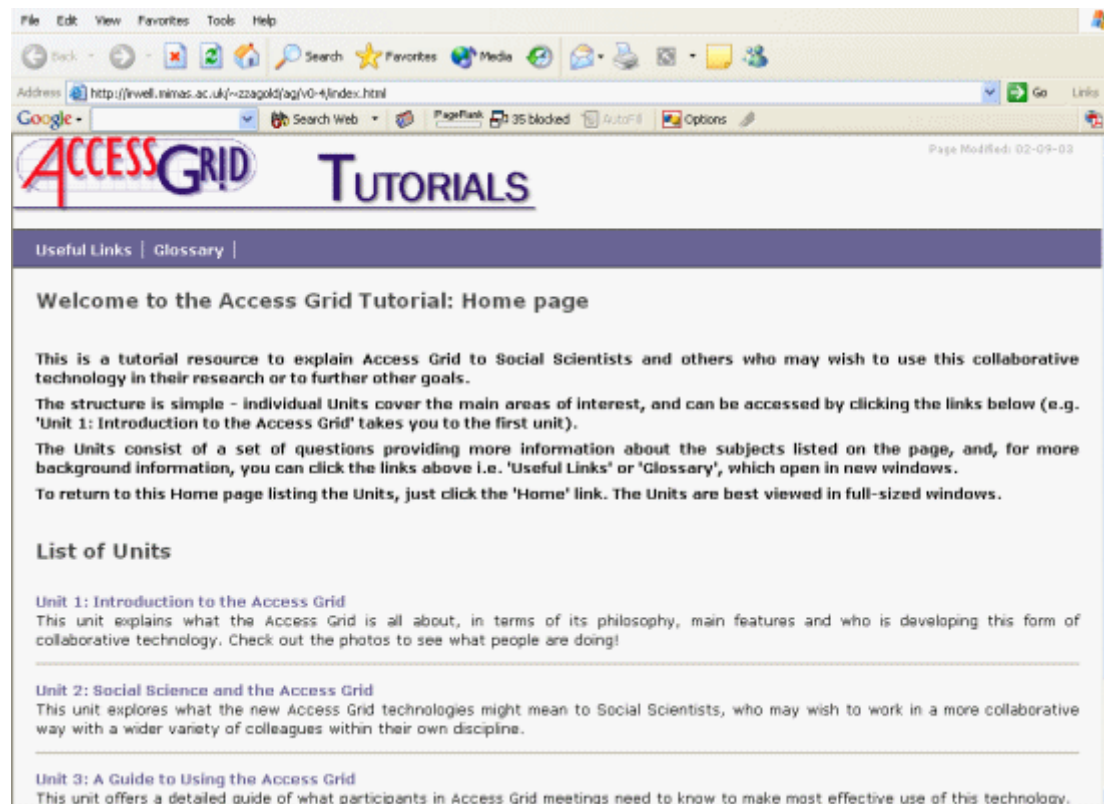
With a variable number of HTML pages within each Unit

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1 Glossary page

1 Useful Links page

# AG Tutorial (Home page)



The screenshot shows a web browser window displaying the 'ACCESS GRID TUTORIALS' home page. The browser's address bar shows the URL: <http://rwell.mimas.ac.uk/~zzagok/ag/v0-4/index.html>. The page features a navigation menu with 'Useful Links' and 'Glossary'. The main content area is titled 'Welcome to the Access Grid Tutorial: Home page' and contains the following text:

This is a tutorial resource to explain Access Grid to Social Scientists and others who may wish to use this collaborative technology in their research or to further other goals.

The structure is simple - individual Units cover the main areas of interest, and can be accessed by clicking the links below (e.g. 'Unit 1: Introduction to the Access Grid' takes you to the first unit).

The Units consist of a set of questions providing more information about the subjects listed on the page, and, for more background information, you can click the links above i.e. 'Useful Links' or 'Glossary', which open in new windows.

To return to this Home page listing the Units, just click the 'Home' link. The Units are best viewed in full-sized windows.

**List of Units**

**Unit 1: Introduction to the Access Grid**  
This unit explains what the Access Grid is all about, in terms of its philosophy, main features and who is developing this form of collaborative technology. Check out the photos to see what people are doing!

**Unit 2: Social Science and the Access Grid**  
This unit explores what the new Access Grid technologies might mean to Social Scientists, who may wish to work in a more collaborative way with a wider variety of colleagues within their own discipline.

**Unit 3: A Guide to Using the Access Grid**  
This unit offers a detailed guide of what participants in Access Grid meetings need to know to make most effective use of this technology.

## *AG Sample Section*

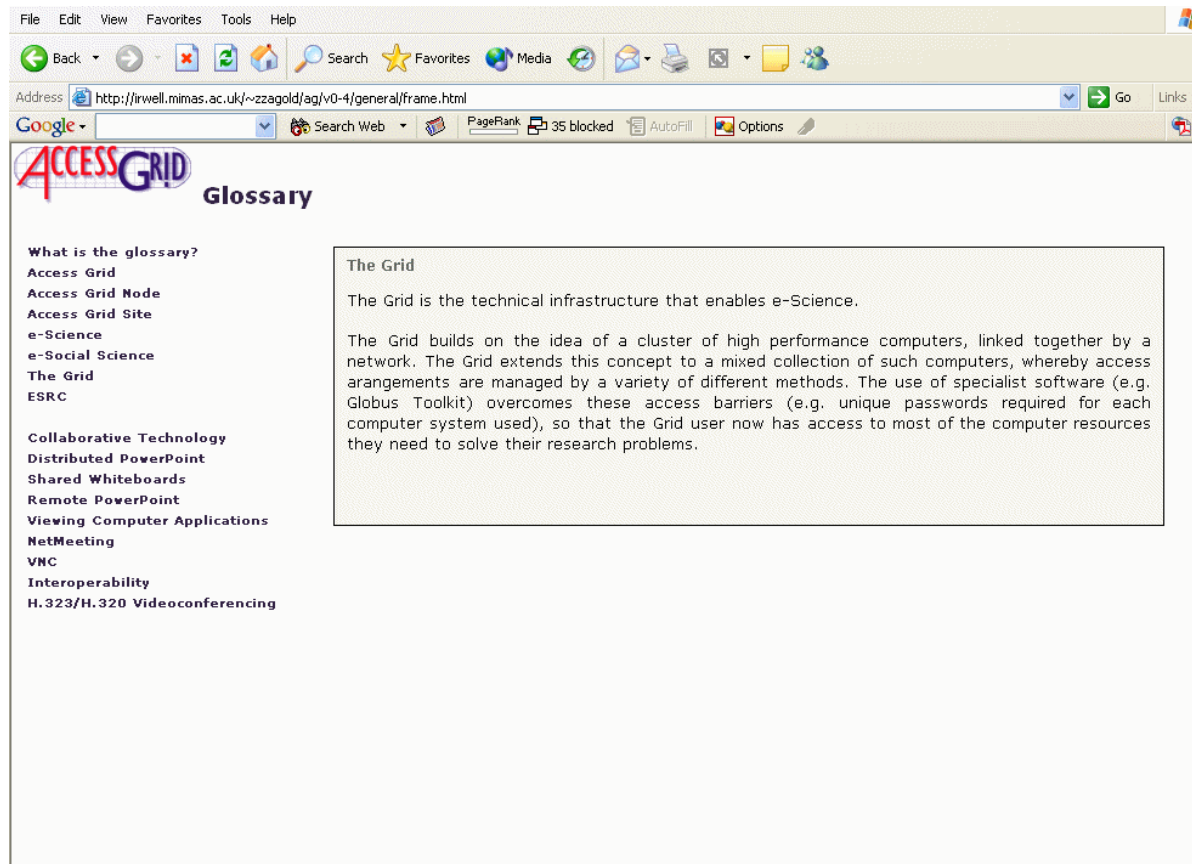
### How do People Meet Using the Access Grid?

There are many Virtual Venues available to Access Grid users. Whereas in a normal meeting, people simply meet in a specified place, at a pre-determined time, in an Access Grid meeting we need to specify the virtual meeting place as well.

The first set of Access Grid rooms were named after microbrews available in the Chicago area, e.g. Full Sail Room, Bridgeport Room. However, there is now one Virtual Venue for each institution that has Access Grid, meaning there are no problems with booking.

In a Virtual Venue, groups can meet together as well as share data and applications.

# AG Tutorial (Glossary page)



The screenshot shows a web browser window with the following details:

- Address bar: <http://irwell.mimas.ac.uk/~zzagold/ag/v0-4/general/frame.html>
- Page Title: **ACCESS GRID Glossary**
- Navigation menu (left):
  - What is the glossary?
  - Access Grid
  - Access Grid Node
  - Access Grid Site
  - e-Science
  - e-Social Science
  - The Grid
  - ESRC
  - Collaborative Technology
  - Distributed PowerPoint
  - Shared Whiteboards
  - Remote PowerPoint
  - Viewing Computer Applications
  - NetMeeting
  - VNC
  - Interoperability
  - H.323/H.320 Videoconferencing
- Content area (right):
  - The Grid**
  - The Grid is the technical infrastructure that enables e-Science.
  - The Grid builds on the idea of a cluster of high performance computers, linked together by a network. The Grid extends this concept to a mixed collection of such computers, whereby access arrangements are managed by a variety of different methods. The use of specialist software (e.g. Globus Toolkit) overcomes these access barriers (e.g. unique passwords required for each computer system used), so that the Grid user now has access to most of the computer resources they need to solve their research problems.

# AG Tutorial (1<sup>st</sup> E-Social Science Access Grid Event)



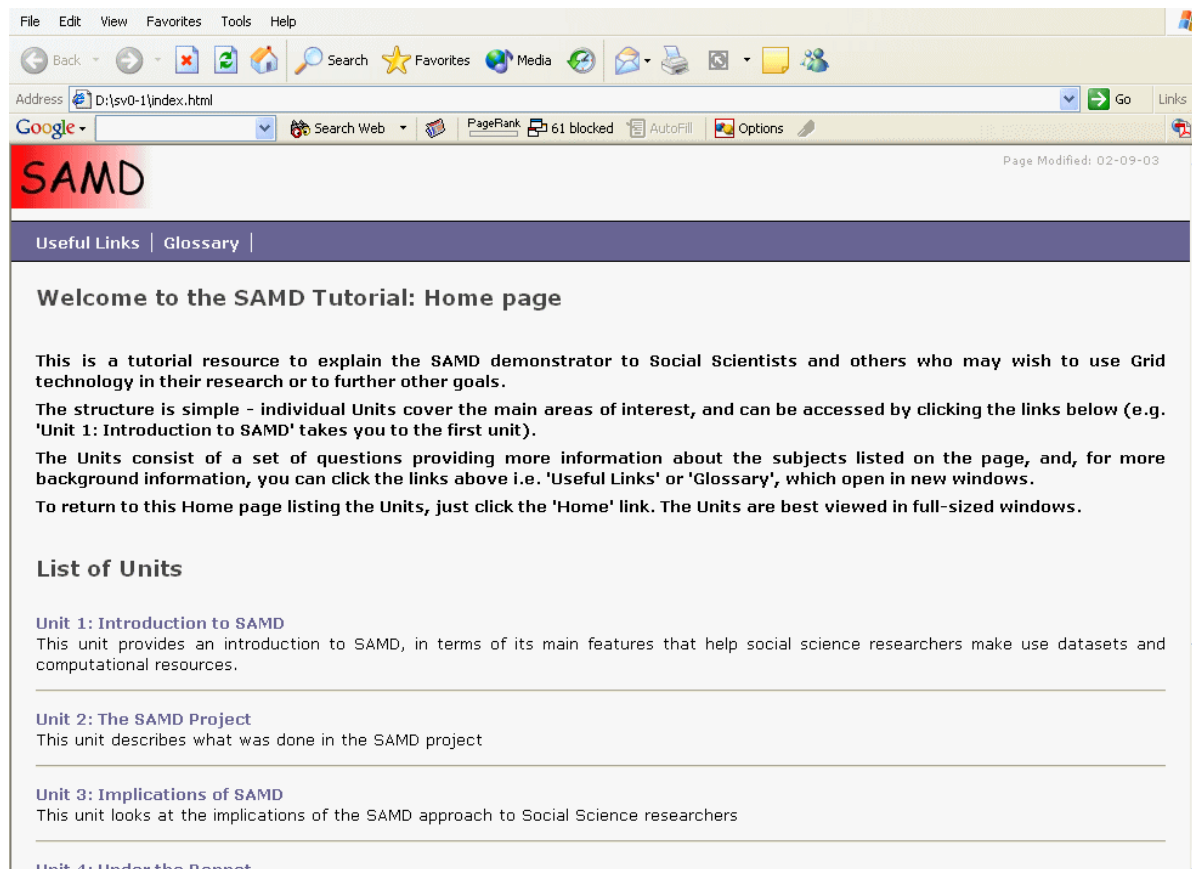
# *AG Tutorial (Performing Arts over the Access Grid)*



## *SAMD Tutorial (Overview)*

- Tutorial structure similar to Access Grid
- SAMD as a demonstrator project
  - Brief outline of pre-SAMD situation for researchers
  - Main benefit to researchers using SAMD
  - Easier (single sign on, search d/sets)

# SAMD Tutorial (Home page)



The screenshot shows a web browser window with the following content:

- Address Bar:** D:\sv0-1\index.html
- Page Title:** SAMD
- Page Modified:** 02-09-03
- Navigation:** Useful Links | Glossary
- Section Header:** Welcome to the SAMD Tutorial: Home page
- Text:**

This is a tutorial resource to explain the SAMD demonstrator to Social Scientists and others who may wish to use Grid technology in their research or to further other goals.

The structure is simple - individual Units cover the main areas of interest, and can be accessed by clicking the links below (e.g. 'Unit 1: Introduction to SAMD' takes you to the first unit).

The Units consist of a set of questions providing more information about the subjects listed on the page, and, for more background information, you can click the links above i.e. 'Useful Links' or 'Glossary', which open in new windows.

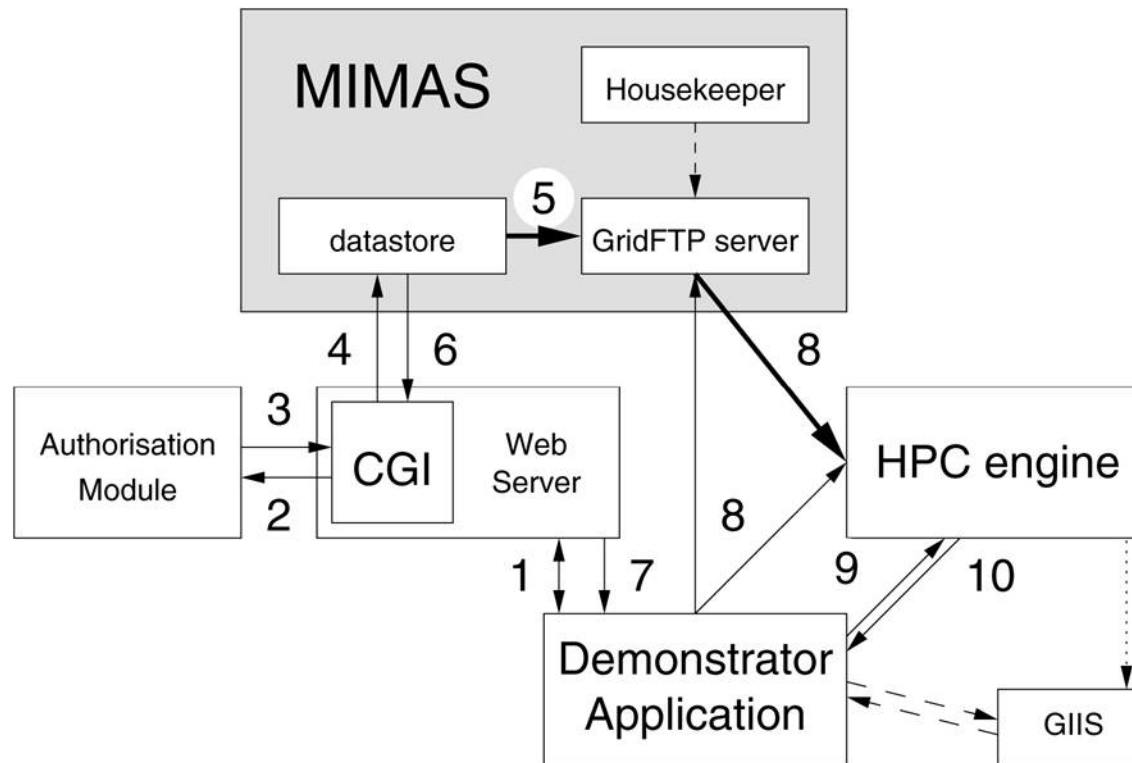
To return to this Home page listing the Units, just click the 'Home' link. The Units are best viewed in full-sized windows.
- Section Header:** List of Units
- Unit 1: Introduction to SAMD**

This unit provides an introduction to SAMD, in terms of its main features that help social science researchers make use datasets and computational resources.
- Unit 2: The SAMD Project**

This unit describes what was done in the SAMD project
- Unit 3: Implications of SAMD**

This unit looks at the implications of the SAMD approach to Social Science researchers
- Unit 4: Under the Bonnet**

# SAMD Tutorial (Architecture)



# SAMD Tutorial (The GUI)

Data Acquisition

ONS CasWeb

Enter Search Term  
interest rate

Search Type: Keyword  
Periodicity: Quarterly  
Seasonality: Any

Start Year:  End Year:

Output format: Space separated

Search Results

- 136 , AMU , QU , Inter-bank : 3 month interest rate - % per
- 049 , EUBF , QU , Local Authority interest rates Mortgages
- 049 , EUBU , QU , Local authority interest rates 2-5 years r
- 049 , EUBV , QU , Local authority interest rates mortgages
- 049 , EUBW , QU , Local authority interest rates mortgages
- 049 , EUBX , QU , Local authority interest rates 10-15 year
- 049 , EUBZ , QU , Local authority interest rates 10-15 year
- 052 , GOZU , QU , Pension Funds: Net Investment: UK der
- 052 , GOZX , QU , Pension Funds:Net Investment:Oversea
- 096 , AJDI , QU , Interest rates- Deposits with local authori
- 122 , AJOD , QU , LA interest rates: recent public stock iss
- 067 , AJOE , QU , LA interest rates: mortgages 1 year
- 096 , AJOH , QU , Interest rates- Deposits with local autho
- 049 , AJDJ , QU , LA interest rates: mortgages over 15 yea

Saved Results

Transferred Results

Up Down

## *Part 3: Approach*

- Using available standards & guidelines
  - E.g. from W3C, CETIS and MIMAS
  - IEEE Learning Object Metadata (LOM), IMS etc
- Designing for reuse & accessibility
  - To increase the life-span of materials; increase audience of users; general good practice for production of e-Learning materials
  - Accessibility is a legal requirement now
    - DDA (The Disability Discrimination Act 1995)
    - SENDA (Special Educational Needs and Disability Act 2001)

# Standards

- By using standards ...
  - If content is developed as small, self-contained 'chunks' of learning, known as Learning Objects, then following standards help these chunks to be aggregated, and so on.
  - Content can be stored in a repository, where it can be discovered by the user performing a search of the repository. This requires agreed metadata to be added to the resources for indexing purposes.

## *Designing for Reuse (Content)*

- How to write reusable content
  - **Guidance** is available (e.g. CETIS for Writing Guides)
  - Design for reuse at start
- The Tutorial's design ...
  - Units may be reused in other contexts
  - The 'Unit' level is more independent, more coherent
  - Individual pages can be re-located within Units if necessary
  - **Separate content from design**
    - Use Style Sheets
    - Keep Navigation in a separate file (.shtml)

# *Designing for Reuse (Methods/Tools)*

- **Methods**

- Design for reuse at the beginning,
- Web pages easier to repurpose than Word or other formats
- Use of CSS for sustainable design, and accessibility
- Use XHTML valid code
- Dublin Core metadata to aid indexing of content
- Use tools like RELOAD for recombining content

## *Designing for Accessibility (Method/Tools)*

- **Web Page Editing**
  - **Use** Style Sheets to control format
    - User choice of style sheet for font size, colour etc
  - **Use LIFT** for Dreamweaver to check pages automatically
    - Checks for ALT tags etc
  - **Use Guidelines** CETIS (Centre for Educational Technology and Interoperability Standards)  
<http://www.cetis.ac.uk/members/accessibility/index>
  - **Avoid** less accessible techniques
    - Frames, Tables, Flash etc

# *Experience*

- E-Learning content takes time
  - Reuse content & designs wherever possible
  - Iterative process
- Testing
  - Test in the main browsers (IE 5 & 6; Opera; Netscape 6+)

## *Quality Assurance*

- Included in Fast track bid for JISC funding
  - Formal system for requesting changes between manager and developer
- Internal reviews of material
  - Once the tutorials were at a reasonable stage of development
- External reviews
  - Provided by ESRC Resource Board members

*And finally ...*

- The Tutorials are in the process of being reviewed, and are due for general release to the e-social science community around August 2004
- Ask to become a reviewer !?