

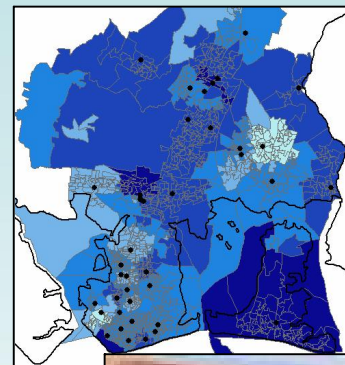
Geo-Refer: geographical referencing resources for social scientists

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Geographical referencing

- A key data linkage and mapping tool
 - Link survey results to census data
 - Associate postcoded patient records to Indices of Deprivation
 - Allocate questionnaire responses to urban/rural neighbourhood types
 - Identify which service delivery locations fall within different policy areas
 - Use GPS to record survey locations



Geo-Refer: background

- Geographical referencing: a key data linkage and mapping tool
- Frequently needed by non-geographers but no obvious source of methodological guidance (“phone a friend?”)
- Recent experience in creation of online learning materials
- 2-years, funded under first round of RDI

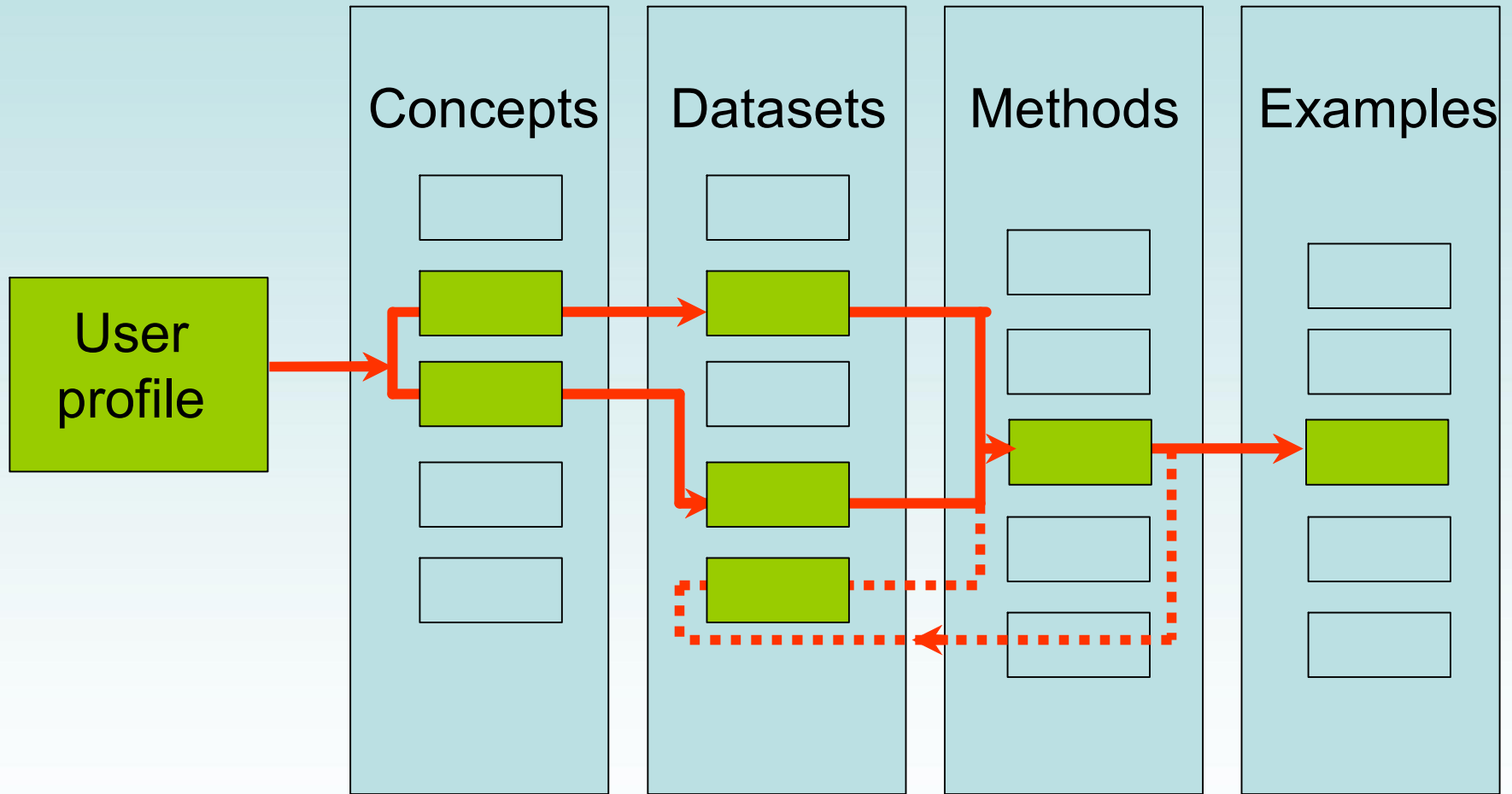
On-line learning resources

- Advantages
 - Whenever/wherever suits
 - Own learning pace/style
- Issues
 - Knowing what is available (Integration)
 - Prescribed/linear pathways (A to Z v customised)
 - Up to date? (Sustainability)
 - Format (Standards/compliance)

Geo-Refer: Aims

- Develop on-line learning resources for social scientists who are not geographers but who need to undertake some sort of geographical referencing
- ‘Intelligent’ assembly of materials: customisable to individual’s specific research needs
- Re-usable, updatable, sustainable within other learning environments

Learning resource structure



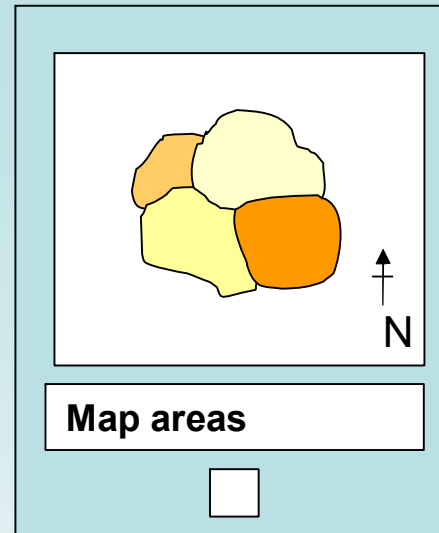
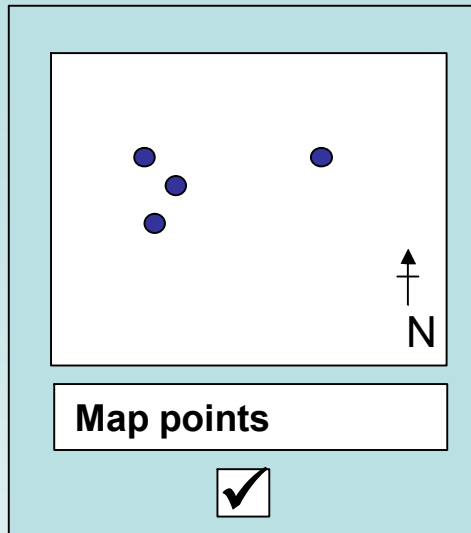
The tricky bit ...!

Customised delivery specific to users' needs

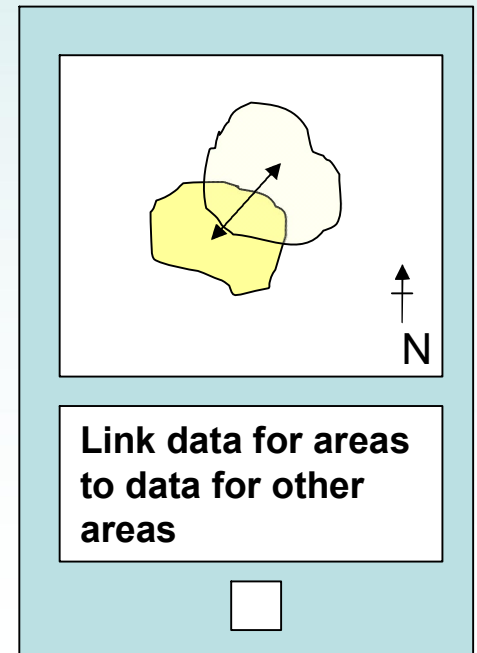
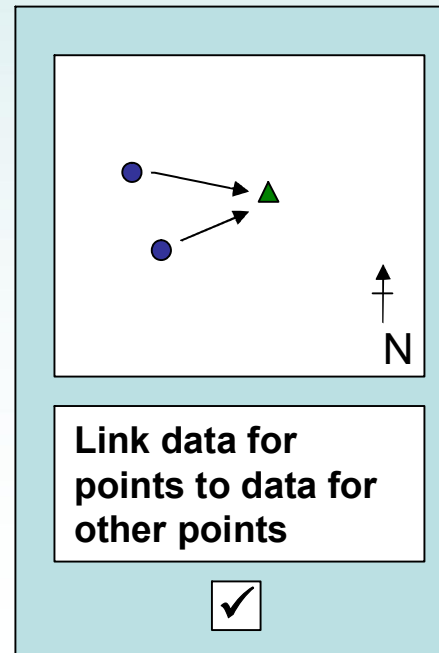
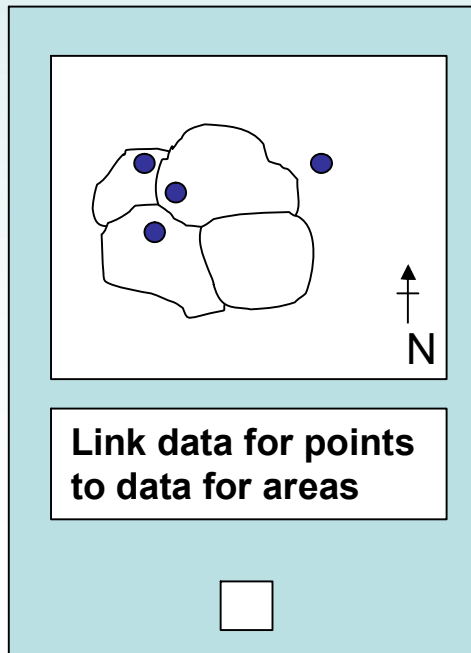
- How to understand users' needs?
- User profiling ...
 - “Speaking the language”
 - Knowing enough to articulate needs
 - Asking the right questions
 - “Leading by example”?
 - Learning from face-to-face experience, but still very difficult ...

Visual examples

Map?



Link?



The tricky bit ...!

Customised delivery specific to users' needs

- How to understand users' needs?
- User profiling ...
 - “Speaking the language”
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How might this work for an individual user?

Joe
Bloggs

I've got data from a GP survey. I'd like to map where the patients live.



On-line user profiling

Joe
Bloggs

User
profile

Geo-Refer User Profile Form - Microsoft Internet Explorer provided by the School of Geography, UoS

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Reload Print Mail News RSS Feeds

Address <http://www.geog.soton.ac.uk/geo-refer/profile.php> Go Links Information Systems Services (ISS) ISS Subscribe

Google Search Web 102 blocked AutoFill Options

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RESEARCH
COUNCIL

GEO-REFER
User Profile form

RDI
Researcher
Development
Initiative

Part 1 - Personal Information

Please answer all the following questions as fully as possible to help us identify the geographical referencing resources that are relevant to your project/study.

Discipline

Below is the list of subject areas used by ESRC. Please choose the nearest subject(s) to your own project/study. Your answer will help us to search for examples relevant to your interests.

- ☐ Area and Development Studies
- ☐ Demography
- ☐ Economic and social history
- ☐ Education
- ☐ Environmental Planning
- ☐ Human geography
- ☐ Linguistics
- ☐ Management and business studies
- ☐ Political science and international studies

Done Trusted sites

User profiling

Tell us about:

- Geo-referencing operation(s)
- Data
- Date(s) - range?
- Geographical area(s)
- User's location/affiliation
- Software
- Discipline/domain

Joe Bloggs

Map points

Postcodes

2006

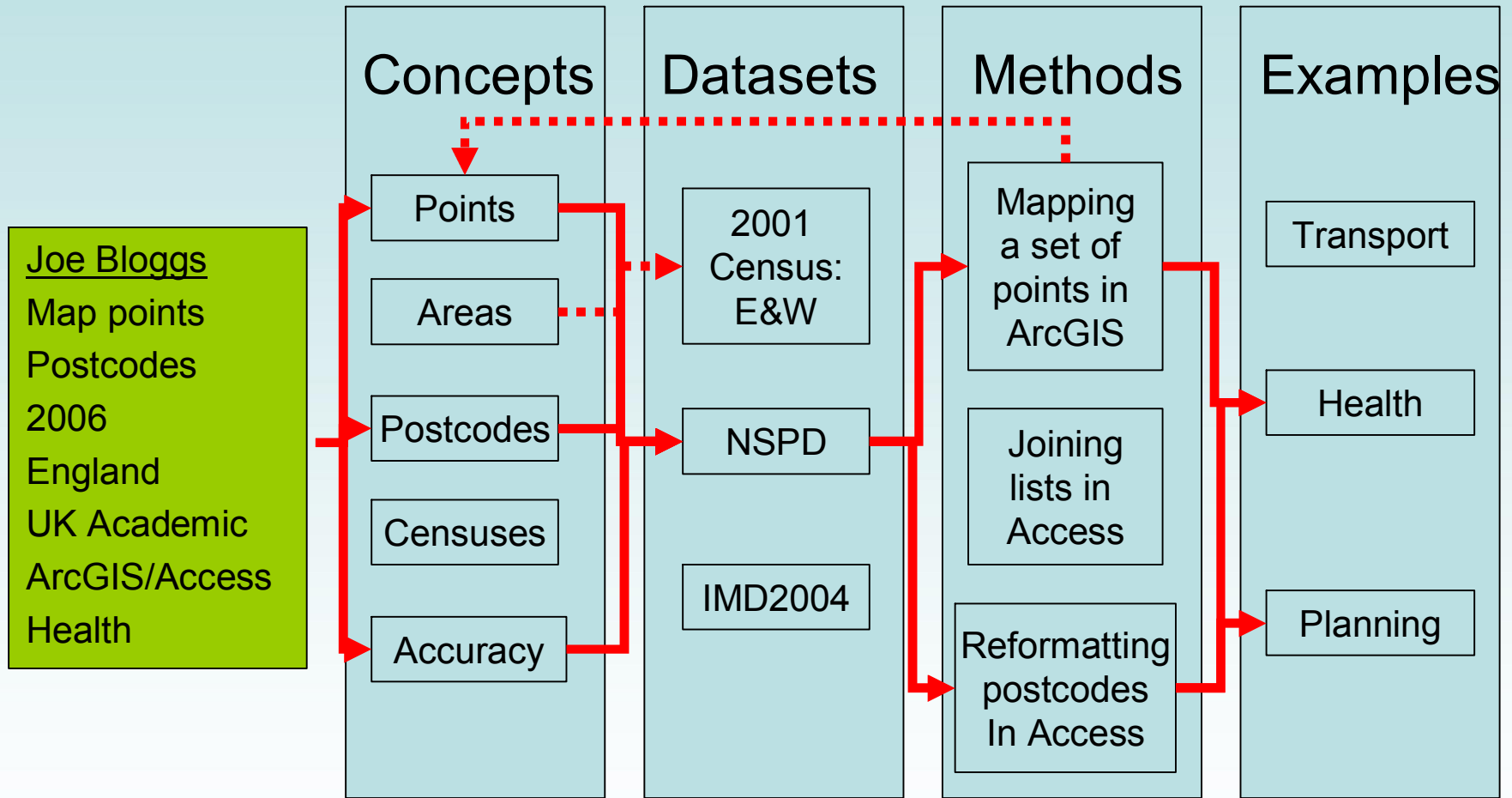
England

UK Academic

ArcGIS/Access

Health

Customised set of learning resources



The diagram illustrates a workflow from Concepts to Examples. It is organized into four main columns: Concepts, Datasets, Methods, and Examples.

- Concepts:** Includes Points, Areas, Postcodes, Censuses, and Accuracy. Red arrows show a flow from Points to Postcodes, and from Postcodes to Accuracy.
- Datasets:** Includes 2001 Census: E&W, NSPD, and IMD2004. A red arrow points from Postcodes to NSPD.
- Methods:** Includes Mapping a set of points in ArcGIS, Joining lists in Access, and Reformatting postcodes in Access. Red arrows show a flow from Mapping points to Joining lists, and from Joining lists to Reformatting postcodes.
- Examples:** Includes Transport, Health, and Planning. Red arrows show a flow from Transport to Health, and from Health to Planning. A red arrow also points from Reformatting postcodes to Planning.

A yellow box on the left lists the user: Joe Bloggs, Map points, Postcodes, 2006, England, UK Academic, ArcGIS/Access, and Health.



E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL

E.g. Concept: The spatial nature of social science data

GEO-REFER Learning Resources Repository - Microsoft Internet Explorer provided by the School of Geography, UoS

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address <http://www.geog.soton.ac.uk/geo%2Drefer/samplesocsciobj.html>

Google Search Web

GEO-REFER

This tutorial contains

Geographical Referencing

The spatial nature of social science data

The social sciences deal with many objects of study which are spatially located. It is entirely aspatially – for example examining the relationship between an object and its geographical location. However it is possible to undertake explicitly spatial analyses (e.g. to identify the local unemployment rate in a particular neighbourhood) or to use location data to identify the spatial nature of social science data opens up possibilities for data to be treated aspatially, but it is necessary to be aware of the spatial location of the object surveyed in the form of a spatial coordinate. Geographical science is usually indirect, by reference to some administrative area.

Search
Go

Project
Concepts
Datasets
Methods
Examples
W'shop 1
W'shop 2

**WITHY CLOSE
LEADING TO
GASTON GARDENS
AND
TENCH WAY
KINGFISHER WAY**

Many social science phenomena do not fit neatly into the above categories because they take place at spatial locations which are not readily described by indirect referencing systems such as addresses or areas. An example would be a theft from a car parked on the edge of a wood. This event may be one of a series of objects of criminological study which display interesting geographical patterns but which cannot be described except by complex textual description and for which it is not possible to identify specific grid references after the event. Other examples might include road accidents or environmental quality. In the latter case neighbourhoods will display different aesthetic characteristics potentially affecting quality of life, but which cannot be assigned to exact spatial coordinates.

ROMSEY INDUSTRIAL ESTATE

1. JELLY	15. KINGSMEAD ROAD	29. HARTWOOD ROAD	43. THE PINE
2. HICKMAN ROAD	16. WINDY	30. TULLY ROAD	44. KIRKBY ROAD
3. HARTWOOD ROAD	17. JAY	31. HARTWOOD ROAD	45. KIRKBY ROAD
4. HARTWOOD ROAD	18. JAY	32. HARTWOOD ROAD	46. KIRKBY ROAD
5. HARTWOOD ROAD	19. JAY	33. HARTWOOD ROAD	47. KIRKBY ROAD
6. HARTWOOD ROAD	20. JAY	34. HARTWOOD ROAD	48. KIRKBY ROAD
7. HARTWOOD ROAD	21. JAY	35. HARTWOOD ROAD	49. KIRKBY ROAD
8. HARTWOOD ROAD	22. JAY	36. HARTWOOD ROAD	50. KIRKBY ROAD
9. HARTWOOD ROAD	23. JAY	37. HARTWOOD ROAD	51. KIRKBY ROAD

2. GEO-REFER Learning Resources Repository - Microsoft Internet Explorer provided by the School of Geography, UoS

Address http://www.geog.soton.ac.uk/geo/%2Drefer/g03_102a.html

Google Search Web  

File Edit View Favorites Tools Help

Back Forward Stop Home Search 

This adds your .dbf file as a Table. You can open the table and selecting "Open".

GEO-REFER Learning Resources Repository - Microsoft Internet Explorer provided by the School of Geography, UoS

map to the layer - say "Yes".

Your points are now mapped!

The screenshot displays the ArcMap application window. The title bar reads "Untitled - ArcMap - ArcInfo". The menu bar includes "File", "Edit", "View", "Insert", "Selection", "Tools", "Window", and "Help". The toolbar contains various icons for file operations, navigation, and editing. The "Layers" panel on the left shows a tree view with the following structure:

- u:\geo-refer\samdata\arc
 - arc_crimes (selected)

The map area shows a white background with several blue dots representing crime locations. The status bar at the bottom indicates the current coordinates as "465787.55 103243.72 Meters".

NB. To help you keep track of the files that you have created, it is probably worth tidying up and removing any files which you no longer need. You could therefore remove the "CRIMES Events" layer and the "CRIMES" table from your Map now by right-clicking on them and selecting "Remove".

Work in progress ...

- Content creation on-going
- Adaptive design in prototype
- Workshops '06/'07 (30 May, Manchester!)
- Principles for sustainability by design
- Liaison/embedding with other projects/initiatives
- Community of people with interest in sustainable on-line research methods training
- Evaluation

Geo-Refer:

Contributions to researcher development

- On-line learning materials
- Face-to-face workshops
- Training the trainers
- Innovative ways of organising materials for delivery customised to individuals' needs
- Recommendations for modes of working and design of re-usable, updatable objects for sustainable on-line resources

Resources

Adaptive learning technology

Strategy/sustainability

www.geog.soton.ac.uk/geo-refer

Next workshop:
Geo-referencing resources for social
scientists, 30 May 2007, CCSR,
University of Manchester