

eIUS Use Cases

In these examples, underlined elements are based either on the original interview data or on feedback sent by the informants in response to draft versions of the use cases. Key activity types are highlighted in italics and relevant ICTs in bold.

Use Case 16 – Digital Geography

Narrative

1. Victoria is a quantitative geographer in at the UCL Centre for Advanced Spatial Analysis (CASA) who works closely with institutions in the health geography domain. She is an expert in using **Geographical Information Systems (GIS)** and is involved in *analysing data and building models to locate geographical areas where particular diseases or other health related characteristics are clustered.*
2. Today she is *analysing this new data set to include the results in the final report* which she has to deliver as a paper document to the Primary Care Trusts (PCT) in London. The aim of the report is to develop strategies on targeting teenage pregnancy. Her analysis is comparing geographical areas identified in previous research with the newest frequencies per location of teenage pregnancy using **GIS software**. The data she uses for her analyses is mostly confidential and has already been collected by health institutions like NHS or PCT. She recently *received an Excel sheet by email* from Henry, a colleague at the PCT in London providing her with a new set of data on teenage pregnancy.
3. The analysis process is usually preceded by a literature review on the relevant health area including studies as well as PCT and NHS guidelines on handling confidential data. Additional geographic data may further come from different other sources, such as **Edina's Digimap Collections**. On the dissemination end the *visualisation of geographical data has become more and more essential* over the last years and is an important means of *presenting* Victoria's findings – this can sometimes be a tedious task only using **GIS** and image editing software.
4. For Victoria the **GMap Creator** has become an invaluable daily tool in visualising and mashing up different layers of data. The tool enables users to deploy geographical data on top of a Google map, hence creating a thematic map with different layers of data in a relatively easy, very quick and guided way. After completing the largest part of her analysis of the teenage pregnancy data with **GIS** Victoria *saves a standard shapefile* which combines geographical data with relevant attributes. Then she opens the **GMap Creator** and *processes the shapefile to build a map* for her report. She *determines the data, configures the colours and names to be displayed* and clicks the button to *create and save the map*, her last task before lunch.

5. The **GMap Creator** has been developed by Victoria's colleagues at the CASA laboratory based on work in GeoVUE (Geographic Virtual Urban Environments), one of seven nodes in the National Centre for e-Social Science (NCeSS). The remit of GeoVUE is the development of innovative web-based technologies for the social and geographical sciences. The laboratory at CASA is committed to support the *testing and development of new tools and concepts in the field* of Digital Geography, a term referring to the new potentials for geographic analysis and visualisation evolving through Web 2.0, the ease of use of new tools, and in general user generated content and new enhanced ways of sharing, communicating and disseminating information.
6. In the tool's development process Victoria collaborated closely with Beatrice, researcher and main developer of **GMap Creator** and Albert, a researcher working in the areas of 3D architecture, urban planning, geography and outreach. She was actually involved in testing the tool and set up the **London Profiler** as a case study, a still existing site showing socioeconomic data from different sources for London as a Google map overlay with different colours for different data. The site can for example show the frequency of Asthma for the London region, but also Census data or house prices can be displayed and mashed up all together.
7. Back in the office Victoria finds an email with a question from a user who had seen one of her maps on **MapTube** where she *publishes her maps – if the data is not confidential*. The developments of **GMap Creator** and the **London Profiler** subsequently had led to the launch of a web-based map sharing community site hosted by CASA called **MapTube**. She quickly draws up a reply and sends it out.
8. To inform herself on some recent activities of her colleagues and the digital geography community she opens her browser and navigates to the **Digital Urban blog**. This blog, one of the central information dissemination **blogs of CASA**, is maintained and written by Albert, who along most research colleagues at CASA is especially active in *using blogs as a tool strongly embedded in the research process*.
9. She reads his latest post which reminds her of something. She browses and *logs in* the **online word processor**, where she finds Albert working on one of their next publications in the **Journal of Artificial Societies and Social Simulation (JASSS)**. She edits another section of the online document, saves it and prints out the new draft, which also includes Albert's changes.

Relevant ICTs

ICT	Comments
Geographical Information Systems (GIS)	GIS is a collection of software to store, edit, analyse and display data linked to its geographical location.
Digimap Collections ¹	A service of EDINA, the JISC national academic data centre, offering online maps and spatial data of Great Britain for UK HE and FE.
GMap Creator ² (includes the use of shapefiles)	This freeware tool was developed by CASA to enable users with some knowledge of maps to quickly create their own visual mapping of geographical data from diverse sources. The user needs a GIS shapefile, a standardised format containing the geographical information linked with attributes and then can configure some details of the layout (colours of overlays etc). The result is saved in a ready to publish Google maps website and consists of the usual different scales/zoomability.
London Profiler ³	The London Profiler website has been developed with the GMap Creator and provides users with diverse geo-demographics of the Greater London area. These data layers can be selected by the user to overlay the map with the data in different colors.
Maptube ⁴	MapTube is a free service provided by CASA to allow users to share their maps, view maps and mashup various maps and their data layers online.
CASA and Digital Urban blogs ⁵	The CASA and Digital Urban blogs have up to 3000 readers each day and are updated with new posts on a daily basis. They not only serve as a dissemination tool, e.g. for working papers and software, but also are seen as very useful in getting feedback on outputs, ideas and the newest trends in the community. This often inspires the research process and the development of new tools.

1 <http://edina.ac.uk/digimap/>

2 <http://www.casa.ucl.ac.uk/software/gmapcreator.asp>

3 <http://www.londonprofiler.org/>

4 <http://www.maptube.org/>

5 <http://blog.casa.ucl.ac.uk/> & <http://www.digitalurban.blogspot.com>

Online Word Processor	Online Word Processors, like Google docs – although this is not the one used in this case – provide the functionality of a common word processor on the web. Documents are stored online and can be easily accessed, instantly shared between collaborators, edited and saved.
Journal of Artificial Societies and Social Simulation (JASSS) ⁶	The interviewee emphasised the attractiveness of the Journal of Artificial Societies and Social Simulation (JASSS) as a proper peer-reviewed online journal due to its clearing time of only two weeks.

6 <http://jasss.soc.surrey.ac.uk/>

Commentary

This use case is based on two researchers working at CASA at UCL in the domain of digital geography. Interviewee 1 (Victoria) is conducting research in the geographical health domain, while interviewee 2 (Albert) is working directly at the CASA laboratory looking at 3D architecture, urban planning, new web-based tools and outreach. The narrative is intertwined between the two domains in the middle part taking the GMap Creator and MapTube tools as overlapping areas of activity.

Not mentioned in the narrative: The process of getting confidential health data for interviewee 1 (Victoria) is quite complex: data has to be encrypted when sending it via email, while usually such encrypted data even has to be collected by the interviewee in person.

The start of the research process for interviewee 2 (Albert) also includes looking at sites like YouTube, other blogs and new tools, besides getting inspiration through the communication on the CASA blogs. The open plan character of the CASA laboratory further supports close collaboration and exchange between colleagues which fosters the development of ideas.

For collaboration in the NCeSS GeoVUE context the Access Grid⁷ is used monthly for meetings. The interviewee also mentioned the Ordnance Survey Mastermap Address Layer⁸ as another source for geographic data to be used as data layers in maps.

He reported from a collaboration with BBC's Radio 4 on the Credit Crunch Survey – the results being displayed in the Credit Crunch Mood Map⁹ – which shows the inclusion of traditional media routes can lead to an enormous increase of hits on a new media website Web 2.0.

Other Editorial Considerations

Element	Usage
Links to direct quotes?	Yes
Year?	No
Month?	No
Time of day?	No
Location given?	Yes
Real institutions named?	Yes
Real journals named?	Yes
Real conferences named?	No

7 <http://www.accessgrid.org/>

8 <http://www.ordnancesurvey.co.uk/oswebsite/products/osmastermap/layers/address/>

9 <http://www.maptube.org/map.aspx?mapid=303>

