

Licence to Share: Research and Collaboration through Go-Geo! and ShareGeo
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Recognition of the value of sharing research data, findings and collaborating is increasing but there are key practical and intellectual property issues at the heart of this ideal of shared data. Intellectual property, the licensing of derived or updated data and notions of trust and quality are particularly important in the sharing of voluntary geographic information. Go-Geo! and ShareGeo, a service and beta service run by EDINA, seek to address these issues and make geospatial datasets discoverable and shareable to those in research and education in the UK and beyond.

GoGeo! is an online resource discovery tool which allows for the identification and retrieval of records describing the content, quality, condition and other characteristics of geospatial data that exist within UK tertiary education and beyond. The service provides a way for researchers and academics to share information about their work without having to share their data, allowing other GoGeo! users to build personal social networks of new contacts and collaborators working in their area of interest.

ShareGeo is a national geospatial data repository, currently part of the EDINA Digimap suite of geospatial services, which provides a facility for users to share and reuse geospatial data created anew or derived from existing community licensed data. ShareGeo currently operates within the context set by major UK geospatial data providers (Ordnance Survey, British Geological Survey, UK Hydrographic Office) and existing HEFCE-Content Provider licences. ShareGeo is therefore uniquely placed as a data sharing space for UK academia since policies and operational characteristics are specifically tailored for geospatial data sets and all sharing takes place through UK Access Management Federation authentication.

In this paper we will examine the benefits and challenges for the two services and look towards future developments and cultural changes that will allow ShareGeo and GoGeo! to continue to widen access and extend the life of research data sets in a social web approach that also respects and adheres to complex geo data licensing agreements.

Enabling Discovery and Sharing of Geospatial Data

The Social Web and Web 2.0 are built around the notion of sharing, communities and the ability to effectively reuse information in an open and collaborative way. Rich service development, mash-ups, innovative research and professional and personal networking are enabled by this ethos but those working with geospatial data much of the social web functionality is not fully compatible with strictly licensed and restricted data.

In building and developing ShareGeo and GoGeo! we have taken care to focus on the opportunities and benefits of the social web and apply these to geospatial data in such a way that the limitations of open, commercially funded or under-maintained services are avoided. In GoGeo!, for instance, the catalogue can be viewed – and data custodians contacted – by anyone on the web but users must log in to provide details about their own research data. New metadata records offer Flickr-like options in that contributors define the use of their records with a variety of access/visibility levels and restrictions to choose from. Go-Geo! is designed in such a way that metadata records can be restricted to only being visible to the researcher or researchers with an institution. Concerns over the provenance of data can mean that researchers don't want to publicise their data but they still require a place to document it. GoGeo! can thus be used as a personal or institutional archiving site. Alternatively records can be published and in this scenario Go-Geo! acts as an awareness raising platform. By uploading metadata rather than data this is also a platform that allows sharing of research information long before publication.

ShareGeo takes a social web model of deposit, sharing and download but does so via authentication that allows for data based upon or derived from the Ordnance Survey or other licensed sources to be shared with academia (most licensing bodies being primarily concerned with restricting data from commercial use). ShareGeo offers a rare chance for the discovery of data and contacts even as for users who only browse and download. As a contributor ShareGeo offers greater opportunities for collaboration since the user is able to share not only published findings but research data which allows exchange with potential collaborators and contacts who can play complementary roles in ongoing research work.

ShareGeo has a particular role in preserving the outputs of emerging and student researchers who may find their work orphaned by lack of funding, completion of a study period (particularly when access to underlying licensed data ceases) or a lack of opportunity for publishing original but incomplete or niche work. Current practice means that research may be duplicated, experiences are not always shared and opportunities to compare new work to that of predecessors are not fully exploited. If the sharing of data sets can be incorporated into normative academic practice, far more value can be garnered from original research data at every level through sharing, reuse, collaboration and development. Researchers

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can, from the outset of their careers, gain the skills and awareness of the importance of collaboration and contribution to the wider academic, UK geo spatial and research communities.

The specific benefit of ShareGeo's authenticated model is that a degree of quality control is integral to the service. Any user depositing information to the system must be a student, researcher or staff at a UK institution subscribing to Digimap and, whilst that does not automatically guarantee that their data will be of high quality, it does mean all users hold a reasonable level of experience with research processes. Indeed Digimap users form a trusted network of interested academics and researchers with many common skills in interpreting and plotting data as well as common access to shared geospatial data services which means it an ideal targeted group to share and collaborate with. Data uploaded to ShareGeo is enhanced with automatically generated metadata, for example, geographic extent of the dataset, which is also monitored for quality further ensuring the quality of data available for download.

Practice, Potential and Proposed Developments

For ShareGeo to have real value to the UK academic and research communities there are cultural issues surrounding the use and sharing of data (especially unpublished data) and the restrictions of traditional scholarly networking and recognition patterns. However the increased sharing and preservation of research outputs is a practice that resonates with wider research and academic drivers for open information and the preservation of funded (especially publicly funded) research. Indeed the impact of sharing data with peers through ShareGeo could impact both the bibliometric and the economic and social impact of research strands of the proposed Research Excellence Framework (formerly the Research Assessment Exercises).

In order to further enhance the ShareGeo beta service we are looking at developing in several areas: Web services to allow for the visualisation of deposited geospatial data in ShareGeo which will enable discovery and evaluation of data; an Open ShareGeo variant which would allow sharing of data that is not restricted (there are already data sets of this type but they currently sit behind the Digimap authenticated login); Semi-automatic upload of data from desktop Geographical Information Systems applications to allow users to transparently and easily deposit data to ShareGeo; additional social features such as annotations, tagging and ratings which could be used both to make data sets more engaging and for specific collaborative working or teaching and learning purposes particularly across small project or large community groups. Integration between GoGeo! and ShareGeo is also envisioned as a natural evolution of the ShareGeo deposit process.