

OneGeology Operational Management Group Fourth meeting

13:30-17:00 2 July – 9:00-13:00 3 July 2009
SEGEMAR, Avenue Julio A Roca 651, Buenos Aires

Meeting Papers

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OneGeology Secretariat,
3 June 2009

OneGeology Operational Management Group**Terms of Reference**

The OneGeology Operational Management Group is one of two task groups set up under the provisions of the Brighton Accord.

1. The primary goal of the OneGeology Operational Management Group will be to deliver the OneGeology vision laid out in the Brighton Accord. Under the guidance of the OneGeology Steering Group the OneGeology Operational Management Group will provide overall coordination of OneGeology.
2. The OneGeology Operational Management Group shall consist of persons nominated by Geological Survey organisations and approved by the OneGeology Steering Group. The OneGeology Operational Management Group will be chaired by the Executive Secretary of OneGeology, assisted by the Secretariat, the Technical Working Group, as well as additional persons recruited to carry out specific action items or responsibilities, or from related international organisations.
3. The responsibilities of the OneGeology Operational Management Group will include: coordination of the initiative in order to achieve its agreed success criteria; coordination of resources obtained to support the initiative; drafting position and policy papers for consideration by the Steering Group (including IPR and funding); helping to arrange technical assistance to participants; recruiting new participants; coordinating relationships with other organisations; managing OneGeology communications; and guiding the work of the Secretariat.
4. The OneGeology Operational Management Group will provide direction to the OneGeology Technical Working Group and receive a report from the Group following each of its meetings.
5. The OneGeology Operational Management Group will hold meetings at least annually.
6. The OneGeology Operational Management Group will report at least quarterly to the Steering Group

OneGeology Secretariat
April 2009

OneGeology Operational Management Group Fourth meeting

13:30-17:00 2 July – 9:00-13:00 3 July 2009
SEGEMAR, Avenue Julio A Roca 651, Buenos Aires

Provisional Agenda

Thursday, July 2

1	Introductions and Welcome	IJ	13:30-13:40
2	Welcome from SEGEMAR	R. Page	13:40-13:50
3	Agreement of Agenda	IJ	13:50-14:00
4	Actions from last OMG Meeting (Oslo, 12 August 2008)	JB	14:00-14:20
5	Status Updates		14:20-16:30
	a) Operational status	IJ	14:20-14:40
	b) Technical status	FR	14:40-15:00
	c) OneGeology-Europe	KA	15:00-15:15
	d) OneGeology-N. America : Geoscience Information Network (GIN)	LA/JB	15:15-15:30
	Coffee Break		15:30-16:00
	e) OneGeology-S. America	SA Rep	16:00-16:15
	f) Summary of other nations reports	OMG Rep	16:15-16:30
6	Overview and results of Steering Group Meeting (23/24 April 2009)	IJ	16:30-17:00

Friday, July 3

7	Introduction to agenda for Day 2 and Overnight Thoughts on Day 1	JB	9:00-9:30
8	Discussion and Implementation Items	IJ	9:30-12:00
	a) Future governance, operation and funding of OneGeology	IJ	9:30-10:00
	b) Relationships with associated international bodies – policy and progress	JB	10:00-10:20
	c) Intellectual property and copyright policy	JB	10:20-10:40
	Coffee Break		10:40-11:00
	d) Success Criteria and actions for 2009, 2010, 2012	FR	11:00-11:30
	e) OneGeology at conferences and meetings (booths, presentations, presence, public relations, etc.)	HT	11:30-12:00
9	Any Other Business	IJ	12:00-12:30
10	Review actions	HT	12:30-12:45
11	Wrap-up and Date and Location of Next Meeting	IJ	12:45-13:00

Ian Jackson and John Broome,
OneGeology Secretariat,
29 April 2009

OneGeology Management Group Meeting 3
IGC Oslo
14:00 13th August 2008

Attendees:

Ian Jackson (British Geological Survey)
Kristine Asch (Federal Institute for Geosciences and Natural Resources - Germany)
Cathy Truffert (Bureau de Recherches Géologiques et Minières - France)
Jean-Paul Cadet (Commission for the Geological Map of the World)
Philippe Rossi (Commission for the Geological Map of the World)
Marko Komac (Geological Survey of Slovenia)
John Broome (ESS - Geological Survey of Canada)
Robert Tomas (Czech Geological Survey)
Koji Wakita (AIST - Geological Survey of Japan)
Marivic Uzarraga (CCOP)
Jean-Jacques Serrano (Bureau de Recherches Géologiques et Minières - France)
Carlo Cipolloni (APAT - Geological Survey of Italy)
Katy Booth (British Geological Survey)

Apologies: Harvey Thorleifson (Geological Survey of Minnesota - USA)
Luca Demicheli (APAT - Geological Survey of Italy)
Francois Robida, (Bureau de Recherches Géologiques et Minières - France)
Patrice Christmann (Association of European Geological Surveys)
Dave Soller (United States Geological Survey)
Urszula Stepień (Polish Geological Institute)

*Progress on Actions from the previous (Paris) meeting are recorded in Appendix A - Actions still relevant are highlighted. It was agreed that the notes of the meeting would be kept brief and the focus would be on listing the actions. **New Actions generated during this meeting are recorded in Appendix B.***

1) Welcome and Introductions (IJ)**2) Overview of Minutes and Actions from the Paris meeting (IJ)**

Virtually all relevant actions from the Paris meeting have been completed. (see Appendix A)

3) Review of ICOGS business, OneGeology Steering and ICCGGM meetings (IJ)

The ICCGGM meeting was not held and will be re-arranged. The ICOGS meeting incorporated a discussion on the review of the structure of ICOGS which resulted in a difficult debate. The OneGeology Steering Group meeting had a much wider participation with 42 attendees; discussion took place at a higher level than was planned. However, positive unanimous support for OneGeology was received. The Chief Executive of the New Zealand Survey is very supportive and requested to be on the Steering Group representing the Oceania Pacific region. There are a number of actions from the Steering Group and these are noted in their minutes.

A number of statements which were agreed at the Steering Meeting were underlined:

- It was confirmed that BGS would continue in the role of operational secretariat and BRGM technical secretariat for the next 18 months.
- It was confirmed that both the Technical Working Group and Operational Management Group should continue also.

- OneGeology is an initiative of the Directors of the geological surveys and this, for the moment, is separate from ICOGS.
- The current OneGeology governance model will continue for the time being and the Steering Group (yet to confirm membership and meet) have been tasked with defining that model and its future evolution.

A brief summary and progress review was given to ensure all were briefed.

A 15 minute 'technical briefing' was requested i.e. what can be done with the data, how can it be used, e.g. downloads, import into Google Earth, etc. A bulletin for Directors was agreed. Jean-Jacques was asked to speak with Francois and produce a 15 minute summary PowerPoint presentation.

It was felt important that there should be a transparency about the Steering Group to all new partners to OneGeology and therefore the distinction between the Steering Group (overarching executive level) and the Operational Management Group (more detailed operational level) should be clearly defined. It should also be highlighted that the Operational Management Group is an open, non-inclusive group.

John Broome agreed to compile a list of questions and comments that have been asked during the IGC conference and circulate to all. All were asked to send questions to John.

The Secretariat will add these to the FAQ's on the website.

Marko Komac offered to give a presentation at the forthcoming EuroGeoSurveys meeting in Rome.

4.) Operational status, future strategy and plans (IJ)

Ian Jackson will arrange the first meeting of the Steering Group as soon as possible (hopefully November). The Operational Management Group will assemble papers for this meeting.

Immediate tasks now include follow-up work from IGC and responding to the many enquiries and emails as a result of both IGC and the press attention. No further communication campaigns are planned for the immediate future.

Actions from the Steering Group meeting require completion and some tasks, such as the preparation of papers will be assigned to members of the Operational Management Group.

5) Technical status, future strategy and plans (JS)

Jean-Jacques provided an update. The main points in brief were:

- In the Client, a 'zoom to layer/country' tool will be added.
- Within the CGMW map, different layers and properties will be selectable.
- The access constraints will be made more visible
- Newfoundland data is to be added.
- Individual Canadian provinces etc can be added (and similar for other countries). This will also be an issue for the Steering Group to discuss.
- BRGM are waiting for a more stable Firefox 3 version to be released however, it can be used with IE and FLOCK.
- The registry will be re-organised into subfolders as follows:
World>Continent>Country>Region

Kristine and Marko agreed to draft a paper reviewing the hierarchical organisation of the Portal, the best way to organise it and the preferred naming conventions and report this to Jean-Jacques by the end of September.

The Level 2 WFS Cookbook is scheduled for release by December 2008.

Jean-Jacques and the BRGM team were thanked by all and Ian will also write an official letter of thanks.

John Broome also suggested a letter of appreciation to BGS from the Operational Management Group.

6) Funding and Support actions (OneGeology-Europe & Geoscience Information Network) (IJ)

A brief overview of 1G-Europe was provided. The project will begin on 1st September 2008. There will be a kick-off meeting in Rome on the 11th – 13th September, hosted by APAT.

It was recommended that Lee Allison should be contacted directly for details and documents concerning progress with GIN.

7) Review of events at IGC (IJ)

All agreed the IGC had gone extremely well for OneGeology from every perspective.

8) Review of this meeting and next steps

9) Timing of next meeting (IJ)

It was agreed that the next meeting should take place immediately after the Steering Group Meeting, possibly in January 2009. This should be tied in with the timing of another meeting if possible to reduce the amount of travel. Possible locations suggested – GIC, Japan, Bangkok, or at BGR Germany. Proposals to host this meeting should be sent to Ian Jackson who will then communicate to all.

Ian was asked put all his presentations onto the BGS ftp server.

-Close of meeting-

Appendix A

 Status of Actions agreed at the Paris OneGeology Operational Management Meeting, 1st March 2008.

Status	Action number	Action	Lead (in bold)
In hand	2.1	Show % of country coverage on the web map	KB to add to web
Done	2.2	Add French Guyana to the 1G map	KB
Done	2.3	Provide information on possible legal status options to IJ	PR, HT, DS, KW, JB
Done	2.4	Ian to provide to OMG paper from UK lawyers by end April	IJ
Done	2.5	Provide feedback on the legal options paper	All
Done	2.6	Compile all feedback into paper for Steering Group by 31 st May	IJ
Done	2.7	Update current list of potential members of pro-tem steering group and circulate to OMG.	KB
Done	2.8	Email table of the other organisations etc to all for comment/update by 8 th March	JB
Discharged	2.9	All to comment to JB by 31 st March	All
Done	2.10	Submit article to Research@EU	IJ
Done	2.11	Investigate translation options for main 1G documents and web pages	LD, FB.
Done	2.12	Follow up former translation action on Martin P	FB
Done	2.14	Reissue the white countries list	KB
Action remains	2.15	Marine domain: CGMW to supply data and identify scientific contacts	PR
Discharged in another way	2.16	Antarctica: BGS to collaborate with CGMW in producing best coverage.	PR, IJ
Done	2.17	CGMW make contact & recruit Kazakhstan	PR
Done	2.18	Write 1-page paper summarising current IPR position and options. Circulate to all.	JB
Done	2.19	Provide feedback to JB on IPR paper	All
Done	2.20	Include in 'participation in 1G' document for steering group.	IJ
Action remains	2.21	Draft a list of positive benefits, send to IJ by 31 st March	FB, HT
Done	2.22	Write direct personal emails on potential participation to 40+ surveys who have not responded to Buddy coordination request. TD to provide brief	IJ, TD
Done	2.23	Circulate 'Terms of reference' and "participation" DRAFT documents	IJ
Done	2.24	Provide feedback on terms of reference and "participation" documents by 31 st March	All
Action remains	2.25	Write a 1-page plain English synopsis of the cookbook for the directors by 31 st March	RT and TD

Discharged		Send draft paper on 1G at the IGC to all	IJ
Discharged	2.26	Launch event at plenary – all provide ideas to IJ on actual launch activity (e.g. children and pieces of jigsaw) by 31 st March	All
Discharged	2.27	1G floor poster to be produced	LD
Discharged	2.28	Provide relevant graphics and size to LD	KB
Discharged	2.29	Provide 1G pin/lapel badges for all	KB
Discharged	2.30	Provide badges for those involved saying ‘ask me about 1G’	KB
Discharged	2.31	Send itemised list of tangible financial or in-kind contributions to 1G IGC activities (e.g. wine, beer, printing, funds) to KB	All
Discharged	2.32	Those responsible for each of the IGC events to keep all providing input to their items informed	KB, CT, HT, MC, IJ, JB, TD, PC
Discharged	2.33	Media brief best practice template to be provided to operational management group	MC (KB)
Done	2.34	Geo-information symposium – submit a paper on 1G	HT
Done	2.35	Brief survey directors on the facts and position of 1G in preparation for ICOGS meeting – ie make sure they are fully aware and informed.	All
Done	2.36	Write a briefing paper including a 1G business model, & strategy & objectives for years following IGC for the steering group	IJ
Done	2.37	Produce draft set of Success Criteria for 1G (as per original 1G and Brighton mission and vision for progress to 33 IGC) and circulate to OMG for comment	JB
Done	2.38	Draft TOR for the operational management group of 1G and circulate to all by 31 March and revise and re-issue by 30 April	JB, HT
Discharged	2.39	Comment on OMG ToR by 14 April	All
Discharged	2.40	Contact U. Stepien to explain the decision that the OneGeology not be modified or regionalized	JB
Discharged	2.41	Oslo – to be arranged	IJ
Discharged	2.42	Subsequent meeting in Italy – to be arranged	LD

Annex B

Actions agreed at IGC Oslo OneGeology Operational Management Meeting, 13th August 2008

Action number	Agenda Item	Action	Owner
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3.1	Review of ICOGS business, OneGeology Steering and ICCGGM meetings	Provide a bulleting for Directors outlining what can be done with the 1G data, how can it be used, e.g. downloads, import into Google Earth	KB
3.2		Jean-Jacques was asked to speak with Francois and produce a 15 minute summary PowerPoint presentation.	JS (FR).
3.3		Compile a list of questions and comments that have been asked throughout the IGC conference and circulate to all.	JB
3.4		Add the above list to the FAQ's on the website	KB
3.5		Marko Komac offered to give a presentation at the forthcoming EuroGeoSurveys meeting in Rome	MK
3.6	Operational status future strategy and plans	Arrange the Steering Group Meeting as soon as possible	IJ
3.7		Actions from the Steering Group meeting require completion and some tasks, such as the preparation of papers will be assigned to members of the Operational Management Group	IJ/All
3.8	Technical status, future strategy and plans	draft a review paper on the hierarchical organisation of the Portal, the best way to organise it and the preferred naming conventions, report to Jean-Jacques by end September	KA / MK
3.9		Write letters of appreciation to BRGM/BGS	IJ/JB
3.10	Timing of next meeting	Proposals and suggestions to host the next meeting should be sent to IJ who will then communicate to all	All present and IJ
3.11		Place presentations on the FTP server	IJ

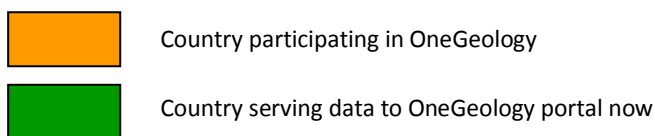
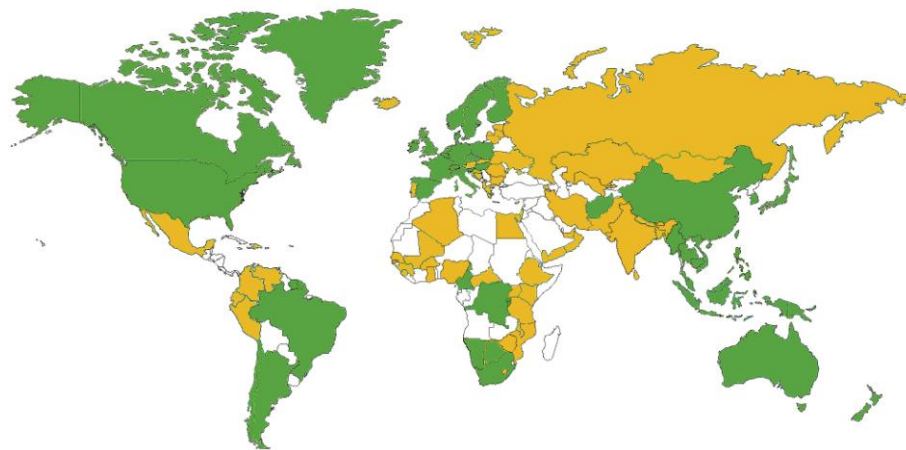
Kathryn Booth
September 2008

Status and progress of OneGeology – operational, scientific, technical

1. Background

The OneGeology concept originated in 2006. It was endorsed by the international geoscience community in Brighton in 2007 where goals were set for the next 18 months. Its portal was launched at the 33 IGC in Oslo in 2008 with 25 nations serving data.

2. Operational aspects



Today there are 102 countries participating in OneGeology, 40 of which are serving data (a list of these countries is attached as Appendix A). OneGeology is coordinated through a two-part “hub” - a Secretariat based in BGS and the portal technology and servers provided by BRGM. The “hub” is guided and supported by two international groups – the Operational Management Group (OMG) and the Technical Working Group (TWG). A Steering Group to provide strategic guidance for OneGeology was formed at the end of 2008 and met in April 2009.

The Operational Management Group last met in August 2008 at the 33IGC and will meet next in late June in Buenos Aires. Members of the OMG produced a list of draft Success Criteria for the next 4 years (until 2012) which are providing the goals for the OneGeology work programme. Major aims are to increase the number of participants, increase the number of those participants serving data, and increase the number of participants moving from a web map service to a web feature service offering significantly improved functionality. An important aim will be to establish an effective and sustainable governance structure.

Two regional initiatives which are strongly linked to OneGeology are OneGeology-Europe and the US project Geoscience Information Network (GIN). The former is a 2 year, €2.6 million project funded by the European Commission and involves 19 European countries; GIN involves all the US States and the USGS and is funded by the NSF. Both these initiatives heavily involve OneGeology (global) people and each reinforces the other.

Communication and outreach have always been a priority for OneGeology. The website is dynamic and is updated at least weekly. A newsletter is regularly produced and disseminated worldwide. In the last 6 months presentations have been given by members of the OneGeology OMG in China, Japan, Zagreb, San Francisco, Edinburgh, Cape Town and Windhoek. In the near future presentations will be given in Prague, Vienna, Buenos Aires and Portland. The audiences for these presentations range from geological surveys, to international conferences and workshops on geoscience, informatics and also spatial data infrastructures.

3. Technical aspects

The OneGeology portal was launched at the 33 IGC in Oslo. During the first six first months, it received 420 000 visits. In March 2009, 40 countries are serving data. 125 map datasets (local, national, continental or global) are registered and documented with standardized metadata.

Using the web service address available in the register, each dataset can be displayed in various GIS packages or portals. The OneGeology portal has been designed and optimized to search and display multiple layers coming from distributed servers. It provides the usual visualisation tools (zoom, pan, transparency control,...) as well as a functionality to save a combination of data sets into a “web map context” that can be shared with other users. To support the portal and the registry access, BRGM has put in place an infrastructure of 15 virtual servers.

To help the participants to register their datasets, the Technical Working Group has developed standards for naming the datasets. It also provides cookbooks for preparing web services to deliver maps or features according to GeoSciML standard. The cookbooks are available for download on the OneGeology website.

A new version of the portal is under development and will be released in June 2009. Based on a new version of the OpenLayer technology, it will provide better performance, an improved user interface and new functionalities for searching the registry dataset. The services that deliver features (WFS) will be more visible for the users looking for data access and download.

A technical evolution from the current “register” to an “OGC catalogue” will be achieved before end of 2009. It will make possible the connection between the OneGeology catalogue and external catalogues supporting the OGC/ISO standards.

The Technical Working Group meets twice a year. It met in Copenhagen in January and will meet in Quebec City in September 2009, back to back with a meeting of the CGI/Interoperability Working Group.

4. Issues and problems

A summary of the more challenging issues follows:

- Getting in touch with countries which are not participating in OneGeology and reaching the right people in these organisations.

- Some participating nations are unable to serve data because their national laws/organisation business models say they must charge for geological map data.
- Many participating nations are happy to have their data served by others, but the long term goal is to have them serve their own data – that will need money and training.
- Where will long term funding come from and what is the policy on sponsorship?
- What is the optimum relationship between OneGeology and component/linked regional initiatives such as those in Europe and the USA?
- OneGeology’s global profile has resulted in enquiries from universities, individuals and companies asking if it is possible for them to participate and serve geological map data – how should we deal with these requests?
- Should we extend it to detailed mapping and/or derived thematic maps and to 3D models?
- The longer term plans for OneGeology – after 2012 – are not articulated and have been queried: what is the vision?

Appendix A: List of countries participating in OneGeology as at 1 June 2009

Afghanistan	Gambia	Norway
Albania	Germany	Oman
Algeria	Ghana	Pakistan
Argentina	Greece	Papua New Guinea
Armenia	Guinea	Philippines
Australia	Hong Kong	Peru
Austria	Hungary	Poland
Bangladesh	Iceland	Portugal
Belgium	India	Romania
Bhutan	Indonesia	Russia
Bosnia and Herzegovina	Iran	Rwanda
Botswana	Ireland	Senegal
Brazil	Israel	Sierra Leone
Bulgaria	Italy	Singapore
Burkina Faso	Japan	Slovakia
Cambodia	Kazakhstan	Slovenia
Cameroon	Kenya	South Africa
Canada	Korea	Sri Lanka
Central African Republic	Kosovo	Spain
Chile	Lithuania	Sweden
China	Latvia	Switzerland
Columbia	Lesotho	Tanzania
Democratic Republic of Congo	Luxembourg	Thailand
Croatia	Malawi	United Arab Emirates
Cyprus	Malaysia	Uganda
Czech Republic	Mali	United Kingdom
Denmark	Mexico	Ukraine
Dominican Republic	Mozambique	United States of America
Ecuador	Mongolia	Uzbekistan
Egypt	Namibia	Vanuatu
Estonia	Nepal	Venezuela
Ethiopia	Netherlands	Vietnam
Finland	New Zealand	Yemen
France	Nigeria	Zimbabwe

Ian Jackson and Francois Robida
Updated 1 June 2009

OneGeology-Europe: Status and Progress

Project summary and justification

Rich geological data assets exist in the Geological Surveys of each country of the world, including each European Member State, but they are difficult to discover and are not interoperable. For those outside the Survey, or nation they are not easy to obtain, to understand, or use. Geological data are essential to the prediction and mitigation of landslides, subsidence, earthquakes, flooding and pollution. Geology is a key dataset in INSPIRE (Annex II). It is needed for the Groundwater and Soils Directives, GMES and GEOSS. OneGeology-Europe will make geological spatial data held by the Geological Surveys of Europe discoverable and accessible and see Europe play a leading role in the global OneGeology initiative. The project will accelerate the development and deployment of a nascent international interchange standard for geology, GeoSciML, enabling the sharing of data within and beyond the geological community. It will facilitate re-use of geological data by a wide spectrum of public and private sector users. It will address the licencing and multilingual aspects of access and move geological knowledge closer to the end-user where it will have greater societal impact. The project will provide examples of best practice in the delivery of high resolution digital geological spatial data to users, e.g. in the insurance, property, engineering, mineral resource and environmental sectors. The project will see Europe be a world leader in the development of a geoscience SDI and make substantial progress towards INSPIRE goals. The project will deliver: an interoperable geology spatial dataset at 1:1 million for all the EU; higher resolution applied geological spatial data services for several Member States; multilingual discovery portal; robust OGC compliant data model, schema/mark-up language; web portal providing multilingual access to the data; best practice examples of the delivery of geological data to a range of users; best practice licencing guidance; exchange of science, informatics and business skills and experience across the EU and globally.

Status and Progress

The OneGeology-Europe project has had a productive first nine months since the launch meeting in Rome in September 2008. All the Work Packages have started their respective work tasks and progressed their development and deliverables. The aims of the first months of the project were the initiation of each of the Work Packages, through Work Package meetings and discussions, the building of Work Package networks, followed by starting the various work tasks in accordance with the schedule outlined in the Description of Work. In these first six months, eight deliverables were scheduled for completion and these were delivered to the EC in accordance with the Grant Agreement at the end of February 2009.

Specific objectives achieved by the project's Work Packages are summarised below:

WP1	Project management, online project repository set up, project presentation created, Quality plan, Operational Management Group meetings, project finance and intra-project newsletter done
WP2	User requirements, Online questionnaire and first and second drafts of a User Needs report. Work on Gap Analysis started
WP3	Geological specification: Analysis of available national and international schemes. International workshops held; Development of a draft specification for review in progress (to be released in July).
WP4	Metadata: data audit and review of metadata profiles undertaken and documented; progress towards multilingual profile
WP5	Data model: INSPIRE alignment/compliance documented; GeoSciML review undertaken

	and necessary development specified
WP6	GeoPortal: workshop to investigate portal specification and need held; prototype portal developed
WP7	Legal and IPR: Initial workshop held. Report on existing legal framework produced; GSO visits and reviews have been planned
WP8	Awareness and Communication: Project templates and communication strategy; website developed; Awareness seminar held
WP9	High resolution and applied data: Catalogue and review of high-resolution and applied showcases produced
WP10	External links: Networks developed through attendance/presentations at a significant number of conferences and meetings. Experts invited to OneGeology-Europe meetings.

Management of the project has been carried out through scheduled Operational Management Group (OMG) meetings and frequent communication between Work Package Leaders via contact, phone and e-mail. Two OMG meeting have been held and ensured common understanding of the project, resolved major issues and monitored progress against the original detailed project Work Package plans and taken constructive action when necessary.

A number of issues have arisen during the first six months, something that is not unexpected given the complexity of the project deliverables and the considerable number of project partners across Europe. The majority of the issues have their origins in Work Package communication and also scheduling team member involvement from the different parts of the EU. These have been overcome with only minor alteration to schedules and through flexibility within Work Package teams and networks.

Most Work Packages are on schedule but some tasks and deliverables have not been delivered as planned and corrective work has been necessary to bring these back on schedule.

Kristine Asch
2 June 2009

OneGeology-N. America : Geoscience Information Network (GIN)

The Association of American State Geologists (AASG) and the U.S. Geological Survey (USGS), agreed in 2007 that "the nation's geological surveys develop a national geoscience information framework that is distributed, interoperable, uses open source standards and common protocols, respects and acknowledges data ownership, fosters communities of practice to grow, and develops new web services and clients" (Allison et al., 2008). The AASG and USGS subsequently formed an interagency Steering Committee to pursue design and implementation of the Geoscience Information Network (GIN). The national GIN concept involves four modular components: 1. Agreement on open-source standards and common protocols through the use of Open Geospatial Consortium (OGC) standards. 2. A data exchange model that will start by utilizing the geoscience mark-up language GeoSciML (CGI IWG, in press; Cox and Richard, 2006), which is an OGC, Geography Mark-up Language (GML)-based application. 3. Prototype data discovery tools or catalogues (National Data Catalogue – NDC - developing under the USGS National Geological and Geophysical Data Preservation Program – NGGDPP) and National Geologic Map Database - NGMDB). 4. Data integration tools developed or planned by a number of independent projects that can be applied to various applications.

National data base inventory - As part of the NGGDPP, 36 U.S. state geological surveys are compiling inventories of data and samples they maintain or that are outside the surveys but are available to be archived, or that are at risk of being lost. The USGS will compile these inventories into a preliminary assessment of the scope and size of geologic data resources in geological surveys or available to them. Next year, the states will start compiling metadata catalogues for these data. These resources are the primary initial target of the GIN.

Completing the GIN - The GIN implementation plan will enable basic network operation by establishing service definitions, standard protocols, and best practices through community workshops, and implementation of the architecture via a series of test bed systems. The first test bed will focus on services for serving interpreted geospatial features (for example, a geologic map), implemented in the context of the IUGS-CGI Interoperability Working Group GeoSciML development. Priorities for subsequent service development will be established by a Steering Committee; one high priority candidate is serving observation data recorded at point locations (for example, samples, chemical analyses, boreholes). Test bed network nodes will be initially implemented and tested on a single server and after a demonstration for the community the service will be rolled out to other nodes in the network. The network will use data discovery services that are being implemented as part of the AASG-USGS NGGDPP and the USGS NGMDB. Web services will enable integration of GIN data with other applications and data sources.

Sustainability - Like the Internet, a successful information network will create a tipping point at which users and providers will see the network as critical to their basic functions such that populating and maintaining that network becomes a necessary cost of doing business. Few organizations are mandated to maintain a web site yet most realize that without one, they essentially do not exist in today's environment. We are quickly moving to a similar situation for sharing data in an interoperable manner.

The AASG-USGS workshop participants acknowledged the need to recognize providing and using interoperable, web-enabled information resources as part of their mission and the GIN value should be sufficiently compelling to support network maintenance and development just as they currently do for web sites. Once the framework GIN is built and test beds demonstrated successfully, we expect that other data providers and users will find compelling needs for use of the network for a

wide variety of specific tasks, that will help fund full implementation and expansion of the GIN. We also expect each network participant will include costs for expanding their contributions to GIN in their base operating costs and grant proposals in the same way costs for web site activities are funded.

Education and training - We plan a "Circuit Rider" approach wherein GIN staff are dedicated to providing potential network participants with technical training or actually carrying out the technical work themselves by "riding the circuit" among them for short durations. The Circuit Riders services will be free, but will need to be prioritized by the Steering Committee. Our goal is to give each geological survey and USGS program the ability to write GeoSciML protocol "wrappers" to translate their data sets, and to guide them on server configurations necessary for the data sets to be discoverable by GIN users. For surveys or programs without the technical expertise to handle these chores, the Circuit Rider would carry them out either on site or remotely as required. Various online services exist to facilitate a virtual environment for the Circuit Riders to work interactively in real time with network participants, including shared access to computers or servers while writing or tutoring on code development. A Help Desk will provide no-cost remote assistance to providers and users. The goal is to provide service to not only the initial survey data providers but to other organizations that want to be early adopters of the GIN opportunities.

Mechanisms for change and adaptation in technologies - The challenge in creating a dynamic flexible community-based network is defining and maintaining sufficient standards to make the network effective and reliable while keeping it open to new developments. The GIN will be defined by collections of service definitions, interchange formats, and vocabularies that are established (to the degree possible) independent of any particular hardware, operating system, or lower-level network protocols. Adoption of new technology will only require implementation of network elements in a new environment, ideally with no change to any network service definitions or protocols. The architecture allows for the use of multiple conventions for different user groups.

Progress - Significant developments have occurred since 2007 when the AASG and USGS agreed to jointly develop a national, distributed, interoperable, data network based on open-source standards and common protocols. Most significantly, a grant from U.S. National Science Foundation is underwriting development of key components for data discovery and access and forthcoming demonstrations of these services to state geological surveys. A GIN web catalog service is being implemented for the National Digital Catalog and National Geologic Map Database and subsequently with USGS' comprehensive science catalog. Productive partnerships have been formed in the last two years. The 21-nation OneGeology-Europe (1G-E) consortium is including compatibility with GIN as part of a European Union spatial data infrastructure. GIN and 1G-E technical leaders are working together on common standards and architecture. The Marine Metadata Interoperability Initiative agreed to make their services and software for semantic ontologies and related functions available as a set of GIN-enabled applications. An emerging initiative in the international petroleum community to establish common metadata standards is adopting GIN to provide "end-to-end" integration of data access and discovery. Similarly, the U.S. Dept. of Energy has selected GIN as the architecture for a National Geothermal Data System to be created over the next 5 years at a cost of \$5 million, and is making an additional \$30 million available to fully populate the NGDS and use it as the basis for a national geothermal characterization and assessment program. Additional partnerships exist with the CUAHSI Hydrologic Information System and the iPlant Collaborative to share standards and architecture; with ESRI for a compatible geology data model in ArcGIS software; and with Schlumberger-MetaCarta for accessing geospatial data using geographic search.

Lee Allison
2 June 2009

OneGeology Steering Group

Meeting 1

Paris, 23-24 April 2009

Summary Minutes

Members present:

Africa: Dr G Schneider - Director of the Namibian Geological Survey and representative of the Organisation of African Geological Surveys

Asia: Dr H Kato – Director General of the Japanese Geological Survey and representative of CCOP

Europe: Dr M Komac – Director of the Geological Survey of Slovenia and representative of EuroGeoSurveys

North America: Dr S Kimball – Director of the United States Geological Survey

Oceania: Prof A Malahoff – Chief Executive of Geological and Nuclear Sciences, New Zealand

Ex-Officio

UNESCO: Dr R Missotten (and Dr Sarah Gaines)

CGMW: Dr Manuel Pubellier

OneGeology Secretariat:

Ian Jackson (BGS), Francois Robida (BRGM) and Katy Booth (BGS)

Apologies

South America: Dr Agamenon Dantas – President, CPRM, Brasil and representative of ASGMI

1. Introductions

1.1 Brief introduction by all attendees.

1.2 Apologies were received from Dr Agamenon Dantas (South American representative). Regret was expressed by all that he could not attend and it was AGREED to write, expressing disappointment.

ACTION: IJ/AM.

1.3 Professor Riccardi (President of IUGS) emailed reinforcement of IUGS support of OneGeology and offered further assistance where possible. It was AGREED to reply to Professor Riccardi, thanking him for his support. **ACTION: IJ/AM.**

2. Agreement of Agenda

2.1 All AGREED the agenda with no changes.

3. Terms of Reference

3.1 The Steering Group were requested to discuss, modify and/or agree their Terms of Reference. Several changes were proposed and AGREED. The revised Terms of Reference will be promulgated to the Steering Group and OMG. **ACTION: IJ.**

3.2 The Steering Group requested a dedicated web page to be set up to carry resources for them. Password protected Steering Group page(s) on the OneGeology website will be set up. **ACTION: KB.**

3.3 All presentations and material from the meeting will be placed on the Steering Group pages. **ACTION: KB.**

4. Election of Chair

4.1 Alex Malahoff and Gabi Schneider were elected as Chair and Deputy Chair respectively. The OneGeology community and other bodies are to be informed. **ACTION: IJ.**

4.2 It was suggested that at the end of the normal term (4 years coinciding with the IGCs) the Deputy Chair will take over the role of Chair and a new Deputy will be appointed. This will ensure continuity. All AGREED.

5. Global status and progress

5.1 Ian Jackson presented the latest position of OneGeology, and François Robida presented the technical aspects.

5.2 The Steering Group requested an explanatory list of all acronyms related to OneGeology. **ACTION: KB.**

5.3 Manuel Pubellier stated that Cuba intend to register their participation imminently. He will ensure that this is followed up if necessary. **ACTION: MP.**

5.4 The following issues were DISCUSSED:- successfully contacting the right people in countries not yet involved in OneGeology; countries not yet serving data, sustaining OneGeology; relationships; how to deal with other types of data e.g. universities, commercial companies (it was AGREED that non-geological survey and CGMW channels were not to be pursued by OneGeology in the next few years), 3D, thematic map data; the long term plans/strategy post 2012. CGMW offered assistance to encourage Russian participation and serving of data (using liaison by EuroGeoSurveys and letter from Chair of OneGeology Steering Group if helpful). **ACTION: MP (MK/AM).**

6. Regional status and progress

6.1 Each Steering Group member presented the status of OneGeology in their region.

6.2 The Steering Group requested a list of countries which are proving difficult to contact/engage so that they could assist in encouraging participation. **ACTION: KB.**

6.3 The Steering Group will attempt to directly enlist countries on the list and/or pass contact details on to the OneGeology Secretariat for action where possible/appropriate. **ACTION: All Steering Group.**

7. Future governance of OneGeology

7.1 The Steering Group discussed the future governance and operation options for OneGeology. It was AGREED that a not-for-profit legal entity, with an associated but separate OneGeology “Foundation” to raise funds should be pursued (this allows Geological Survey Organisations separation from the fund-raising). The Steering Group and the ‘Foundation’ would be separated by a ‘firewall’, communicating only through the OneGeology Secretariat (or its equivalent). It was AGREED that an options paper for the Steering Group was required so that this governance construct can be taken forward. **ACTION: IJ.**

7.2 The Steering Group members AGREED that they would brief their respective global regions on the decision above and inform them that necessary detailed options and implications of implementation are being explored prior to final recommendations. **ACTION: All Steering Group.**

7.3 On receipt of the options paper on governance model, the Steering Group will take final decisions, brief and make recommendations to each global region. **ACTION: All Steering Group.**

7.4 Caution was NOTED regarding the need for a ‘Firewall’ between the Steering Group and the fundraising ‘Foundation’. It was AGREED to ensure that the ‘Firewall’ between the SG and fund-raising ‘Foundation’ is both clearly defined and transparent (learning from IYPE experience). **ACTION: IJ.**

7.5 Regional representation and its basis was discussed. The current representatives are as follows:

Europe – representatives of EuroGeoSurveys
North America – representatives of USA, Canada, Mexico. (meet once per year)
South America – representatives of ASGMI
Africa – representatives of OAGS (meet once per year)
Oceania – representatives of Chief Government Geologists Office (encompasses all Oceania including smaller islands and nations)
Asia – representatives of CCOP

7.6 Current issues relating to representation include the involvement of India, Pakistan, Russia and the Middle East. Dr H Kato AGREED to attempt to improve Asian representation, through discussion within CCOP. **ACTION: HK.**

7.7 Dr Kato also AGREED to look at ways to increase involvement of India and Pakistan. **ACTION: HK.**

7.8 Manuel Pubellier AGREED to investigate how to involve more Middle Eastern countries (including through regional meetings if necessary) through CGMW and UNESCO. **ACTION: MP (RM/SG).**

7.9 The Chair of the Steering Group AGREED to write to the Central American countries encouraging participation, secretariat to draft. **ACTION: KB (AM).**

7.10 It was AGREED that OneGeology must as far as possible distance itself from political issues. The following statement “The prime focus of OneGeology is improving access to scientific data and scientific advancement, and that OneGeology should be as free from political and commercial influence as is possible” was ENDORSED. There is a need to ensure that this statement is widely understood and promulgated in the OneGeology community and beyond. **ACTION: IJ.**

8. Funding

8.1 The Steering Group discussed the options for the future funding of OneGeology with a view to making recommendations to Survey Directors and the OMG on the most appropriate future funding policy and strategy. Ian Jackson outlined the possibilities and issues including funding from geological surveys, international agencies, and commercial funding.

8.2 It was NOTED that ESRI has offered software and training to all OneGeology participants and a meeting has been arranged to further discuss options. It was AGREED that each funding source/offer should be judged on its own merits. It was AGREED that IJ should meet with ESRI, listen to their offer on software and training and report back to the Steering Group. **ACTION: IJ.**

8.3 Another option discussed was the setting up of a MoU with each individual/company/organisation, similar to practice used by the USGS. It was AGREED to send copies of USGS MoU agreements and similar to the Secretariat for reference. **ACTION: SK.**

8.4 It was NOTED that IYPE already have similar experiences, precedents and models that might be of use to OneGeology. It was AGREED to contact and discuss with Dr Ed de Mulder the IYPE model and experience (what proved acceptable to their user community, how their new fundraisers have performed and of any parallels/conflicts with OneGeology). **ACTION: IJ.**

8.5 Robert Missotten AGREED to report back on related UNESCO experience in setting up secure frameworks and agreements between ESRI and the UN. It was also AGREED to establish closer liaison and relationship for OneGeology and UNESCO and also links to UN, GeoParks. **ACTION: RM/IJ.**

8.6 The Steering Group requested that a strategy paper on funding OneGeology, with analysis of the different potential strands (geological survey, international bodies, commerce), is produced. **ACTION: IJ/FR.**

9. Relationships with associated international bodies

9.1 Ian Jackson outlined current OneGeology relationships and the Steering Group were asked to AGREE on the position and policy of OneGeology. Manuel Pubellier gave a brief presentation on the CGMW perspective.

9.2 The Steering Group DISCUSSED the “Relationships with Associated International Bodies” paper and AGREED that it should be converted into a final document and issued as an OneGeology policy document to the OMG and web site. **ACTION: IJ/KB.**

9.3 Technical links between the Portal and CGMW map data was DISCUSSED. Further discussion outside this meeting was recommended in order that the OneGeology portal links are appropriate and acceptable to both CGMW and OneGeology (FR and Philippe Rossi of CGMW to DISCUSS). **ACTION: FR (PR).**

9.4 The roles of the ‘observers’ (UNESCO/CGMW) were DISCUSSED. It was AGREED that their involvement has greatly aided discussions and it was recommended that they should be given ex-officio status (official Steering Group member without voting powers). This was AGREED. RM and MP thanked the Steering Group for this acknowledgement and support.

9.5 The Terms of Reference will be amended to include CGMW and UNESCO as ex-officio Steering Group members. **ACTION: IJ.**

9.6 A new draft MoU and structure will be developed (i.e. revising MoU of 2007 to reflect decision 9.5 and the up-to-date reality of OneGeology operations). **ACTION: IJ.**

9.7 Manuel Pubellier recommended that the Steering Group Chair, or his representative, represents OneGeology at the CGMW Board meetings.

9.8 It was suggested that other groups/bodies may be invited as observers initially, and that the Steering Group will have the authority to offer ex-officio status if it becomes clear it is necessary. This was AGREED.

10. IPR and Copyright

10.1 The Steering Group DISCUSSED the issues relating to IPR. The draft Policy document was APPROVED unanimously. The IPR and Copyright paper/policy will be converted to a final document and issue to the OMG and web site. **ACTION: KB.**

11. Success Criteria

11.1 The Steering Group DISCUSSED the Success Criteria presented and suggested several changes. It was AGREED that OneGeology is not currently at the stage where it can accept multi-source data but that various channels and options are being investigated. It was AGREED to produce a draft policy on this for the Steering Group to agree. It was AGREED to add ‘ocean floor data’ as an additional criterion.

Suzette Kimball and Alex Malahoff AGREED to organise their marine map data and provide to OneGeology as soon as possible. **ACTION: SK/AM.**

11.2 Amend the Success Criteria in line with Steering Group discussion/comments and promulgate to Steering Group and OMG. **ACTION: IJ.**

12. Future work and actions

12.1 The Executive requested the minutes NOTED their appreciation of the comprehensive papers and information provided for the meeting. Especial thanks should be extended to John Broome for his work in preparation of the papers for this meeting. IJ would draft email for Steering Group. **ACTION: IJ.**

12.2 It was requested that a draft Action list should be circulated as soon as possible after meeting (meeting notes to follow later). **ACTION: KB.**

12.3 OneGeology will endeavour to engage more specifically with GEO/GEOSS. IJ and RM will DISCUSS. **ACTION: IJ.**

12.4 The Steering Group AGREED to assist in representation of OneGeology at international conferences such as the AGU and EGU. The Steering Group are to be notified of forthcoming conferences/presentations/etc. for potential representation and the Secretariat will make material available. **ACTION: KB.**

13. A.O.B.

13.1 None.

14. Date and location of next meeting

14.1 The Chair of the Steering Group offered to host the next meeting in Wellington, New Zealand in April 2010. All AGREED.

14.2 AM to advise the Steering Group of the date ASAP. **ACTION: AM.**

14.3 HK offered to host the following meeting in 2011. HK will discuss arrangements for 2011 Steering Group meeting in Japan with JGS colleagues and advise the Steering Group. **ACTION: HK.**

14.4 MK suggested after the meeting that the Steering group could consider holding a half yearly telephone conference. IJ will arrange if Steering Group agree. Please let the Secretariat know. **ACTION: Steering Group/IJ.**

Dated 15/05/2009
Katy Booth
OneGeology Secretariat

Future governance, operation and funding

1. Options for governance and structure

At the 12 August 2008 meeting the pro tem Steering Group and Directors present agreed that the Steering Group model, comprising representatives of each of the world's 6 regions, staffed or nominated by geological survey directors in those regions would be the best governance model for OneGeology. The Steering Group will act as a non-executive Board representing geological survey directors within their regions and would set OneGeology policy, provide strategic guidance and would monitor performance and report back to geological survey directors within their regions. At the moment in organisational terms OneGeology is a voluntary collaboration, a loose federation of geological surveys, also supported by several global and regional bodies, including the CGMW, (which contributes both small scale regional and global compilation data and its existing international contact network). This loose federation structure has worked very well in the initial start-up phase of OneGeology to date, but the fundamental question is whether this is the right model for the next and subsequent phases. There are three basic options for the future structure of OneGeology: i) to continue the status quo; ii) to establish a legal entity; or iii) to create a hybrid of the first two – a more formal (but non-legal) organisation. The three options and their pros and cons were presented to the Steering Group

1.1 Status Quo

This option is to continue the current loose (ad hoc) federation of geological surveys and to maintain the “hub services” of both the secretariat and the portal service within one or two surveys, but not to create a more formal corporate structure. The advantages of this option are that it will need no significant change or complication in modus operandi and that it requires minimal formal commitment from participants each of whom possess very different business models. It also allows substantial degrees of individual freedom and flexibility to both the hub operators and the data providers. The disadvantages of this option are that the lack of formal commitment and lack of a formal or legal identity leaves OneGeology with little substance or security beyond its name and the current “gentleman’s agreement” between the actors. There is thus significant risk to any future operation, for example guaranteeing service levels, especially if the wish is to ensure OneGeology is sustainable and can be taken to a more advanced level of operation. The current structure cannot provide the clear and concrete base that partners may wish to have in order to invest further time and resources. It also limits the ability to collectively negotiate from a position of strength with the commercial and NGO sectors that are currently approaching OneGeology, for example, to offer funding or market products. If the aspiration is to secure and take forward and expand OneGeology then the entity needs a more formal personality. The lack of a legal status also makes it more difficult for the initiative to negotiate, receive and manage financial contributions.

1.2 Legal Entity

There are many different forms of legal status within and across the participating nations that may be suitable constructs for OneGeology. In Europe, for example, EuroGeoSurveys is a not-for-profit association established under the French Law of 1901. In the USA alternatives are incorporation as 501(c)(3) or (6) non-profits organisation (IYPE is incorporated in the State of Delaware as a 501(c)(3)). In the UK potential appropriate options are a Charity Company, a Community Interest Company, or a Mutual Trading Company.

The advantages of setting up OneGeology as a legal entity are that it would provide an established and transparent structure for the operation, with a defined agreement and clear accountability. It would allow partners in the entity to enter into formal relationships with the commercial sector, including sponsors, to negotiate on a business footing and to deal with those who wish to exploit OneGeology foreground intellectual property. (At the moment any sponsorship donation has to be placed in a BGS bank account.) It would give the capacity to enter into contracts and technical agreements for the development of the portal site and of technology required to receive, manage and process data and, potentially, to employ staff to manage the whole operation. The disadvantages are the relatively greater prescription of structure, protocols and commitment that a legal entity will require, especially in the set-up phase and also potential or perceived conflict with individual Survey legal contexts. This accompanying formalization of process and governance may also have the adverse effect of limiting the agility of OneGeology thus reducing its ability to quickly adapt to changing requirements and respond to opportunities.

1.3 Formal Organisation

This “middle” option is neither legal entity, nor loose/ad hoc, but envisages a structure with clear rules and procedures - a hybrid of the two models above (this is the model adopted by the International Steering Committee for Global Mapping). It could comprise a formal elected Steering Group made up of the heads/representatives of Geological Surveys, a Secretariat (a hub) and a series of working groups. These would all essentially be volunteer groups but with a clearly defined mandate. The advantages of this option are that it provides a more formal structure and procedures than the current ad hoc arrangement and, crucially, it is free from the potential problems that may arise if some national organisations have difficulty in signing up to a legal agreement. The disadvantages are that an essentially volunteer structure does not provide the binding commitment to guarantee hub and spoke service levels or generate the level and pace of action users and participants may desire. It is also possible that apathy and bureaucracy may render it ponderous and powerless and thus slow to decide and act.

1.4 Steering Group Conclusions

The Steering Group discussed the future governance and structure options for OneGeology. They agreed that a not-for-profit legal entity, with an associated but separate OneGeology “Foundation” to raise funds should be pursued (this allows Geological Survey Organisations separation from the fund-raising). The Steering Group and the ‘Foundation’ would be separated by a ‘firewall’, communicating only through the OneGeology Secretariat (or its equivalent). The Steering Group agreed that an options paper should be prepared for them on the choice of legal entity so that this governance construct can be taken forward.

2. Operation

- 2.1 The current operation of OneGeology is via an Executive Secretary and Secretariat in BGS, guided by Operational Management Group, comprising representatives from approximately 12 geological surveys and three international bodies. A Technical Working Group specifies the informatics infrastructure and the technical coordination – the “hub” registry and portal components - are managed and delivered by BRGM. The “spokes” (the data and the distributed network of map servers) are managed locally by individual geological surveys.
- 2.2 The key tasks of the Executive Secretary and Secretariat are, currently, leadership and coordination of the whole initiative, regular communication with participants, external organisations and the media, organising meetings and developing and maintaining the OneGeology website. BGS has funded the secretariat at the level of approximately £232,000 per annum (€290,000 or US\$460,000) through 2007/8 and 2008/9. This is the full economic cost (FEC) and equates to 4 person years per annum and does not include the cost of web server hardware and software rental. BGS has committed to maintain that level of funding/effort until March 2010.
- 2.3 BRGM provides the technical coordination – including the web registry and portal physical development and delivery and estimates that the effort to do this (staff costs plus hardware and software costs) is in the region of €275,000 per annum (FEC). BRGM has committed to maintain this level of funding/support until March 2010.
- 2.4 Other members of the Operational Management and Technical Working groups also devote significant resources to OneGeology, with participating nations contributing variable amounts of input, in addition to data, to the “spoke” component.
- 2.5 The “hub and spoke” model works well. But for the future, in addition to all participants agreeing to continue to be data providers and a core of survey representatives to take on responsibilities within the Operational Management Group (or its successor), it requires one, or at most two, individual geological surveys to be prepared to volunteer to operate the hub services currently carried out by the secretariat in BGS and web registry and portal by BRGM. If the wish is to maintain OneGeology at at least the current level of operational effectiveness, geological surveys offering to provide hub services should be expected to guarantee a level of service equivalent to or exceeding the current service levels.

2.6 Steering Group Conclusions

The Steering Group discussed this in relation to governance and funding. They requested that a strategy paper on funding OneGeology, with analysis of the different potential strands (geological survey, international bodies, commerce), is produced and that operational issues should be part of this paper.

3. Funding

- 3.1 OneGeology is a voluntary initiative of Geological Surveys. It is the Geological Surveys who are providing the data and resources from their own budgets to achieve OneGeology. BGS and BRGM contribute the equivalent of approximately €525,000 for coordinating OneGeology management and the portal – (these two together form the “hub”). Geological Surveys who

are members of the Operational Management and Technical Working groups provide significant input and resource in addition to that which they provide to serve data.

- 3.2 BGS has funded the start-up of OneGeology and the Secretariat at the level of approximately £232,000 per annum to date since 2007. This is the full economic cost (FEC) and equates to 4 person years per annum. This sum does not include the cost of web server hardware and software rental. BGS has committed to maintain that level of funding/effort (£230,000) until March 2010. BRGM provides the technical coordination – including the web registry and portal physical development and delivery and estimates that the effort to do this (staff costs plus hardware and software costs) is in the region of €275,000 per annum (FEC). BRGM has committed to maintain this level of funding/support until March 2010. To date, (with the exception of £20,000 of industry sponsorship specifically for the Brighton workshop and the EC funding for OneGeology-Europe and NSF funding for GIN), no additional external funds have been provided to achieve OneGeology global goals.
- 3.3 BGS funds are used for: management and coordination work by the Executive Secretary and the secretariat team; designing and maintaining the content of the OneGeology website; organising meetings and workshops; providing technical support to participants; managing the media communications programme; and maintaining relationships with related bodies. BRGM funds are used to develop and maintain the OneGeology web portal, the registry and a robust server platform (which successfully dealt with 29 million visits to the portal in the month of August 2008). Whichever Survey(s) provides them post-April 2010, these two “hub” elements are essential to maintain OneGeology as an effective operation.
- 3.4 To maintain OneGeology at its current level of operation one or two Geological Surveys must be prepared to continue to support the “hub” managerial and technical coordination. Additionally, several more Surveys must continue their proactive support for the OMG and TWG. Finally, those serving data must commit to continue to do so. The operation of the “hub” is a major issue and needs action and firm commitment from members of the Geological Survey community if they wish OneGeology to sustain.
- 3.5 It would be ideal if a source of funds outside Geological Surveys could be found to support all the functions in Section 3. This is an issue that needs to be explored more thoroughly than it has been to date. It is an issue that cannot be detached from the issue of commercial sponsorship.
- 3.6 If we can identify funds in addition to those needed to maintain the OneGeology at the current level of operation then there are several important pieces of work that can be done:
- There is a desperate need to assist those Surveys whose IT infrastructure and skills are insufficient to serve the data themselves. The former could be remedied by simple provision of hardware and software. The latter is a real need of many less well-developed countries and could be addressed by a number of international task teams doing short visits to set up web mapping training in the organisation.
 - Several Geological Surveys have advanced web map systems for high resolution geological map data and thematic data. Extending the technology of OneGeology to do this – and provide the documentation and training would significantly advance OneGeology’s usefulness.
 - The outreach and communications work has been excellent, but would be even more effective if it could be more sustained. The ideas are there but they need funding.

- 3.7 Basically there are three potential funding sources: a) the Geological Surveys themselves; b) international agencies (eg World Bank, UNESCO, European Commission); c) commercial companies. To attract funding from any of these sources however OneGeology needs to devise a well specified and justified work plan with detailed costs and benefits.
- a) Geological Surveys – It is difficult to see Geological Surveys making a significant additional financial contribution, either individually or collectively. They are enthusiastic about OneGeology but it will always be competing against higher priority projects in their programmes.
 - b) International agencies – While OneGeology is putting in place essential spatial data infrastructure which many international agencies regard as a priority in their programmes it is not easy to successfully bid for their limited funds. Nonetheless this is source of funds that OneGeology could pursue more aggressively than it has done to date.
 - c) Commercial companies - It is unarguable that the commercial sector (eg minerals, hydrocarbon, insurance and information companies) will benefit from improved accessibility of geological map data globally. It is reasonable to approach them to seek their support. Indeed an offer to provide software to all participants has already been received from a global GIS company (ESRI). Further the Chair of Anglo American has asked what he can do to assist OneGeology. However, these offers pose a dilemma – should OneGeology become associated with private sector funding? Some Surveys say that if we want to move forward with the ambitions in section 4 then “beggars can’t be choosers”. Other Surveys point to the fact that direct association with the private sector would compromise OneGeology’s impartial position.

3.8 Steering Group Conclusions

The possibilities and issues, including funding from geological surveys, international agencies, and commercial funding were outlined and the Steering Group discussed the options for the future funding of OneGeology with a view to making recommendations to Survey Directors and the OMG on the most appropriate future funding policy and strategy. They noted that ESRI has offered software and training to all OneGeology participants and a meeting has been arranged to further discuss options and agreed that OneGeology representatives should meet with ESRI, listen to their offer on software and training and report back to the Steering Group. They also agreed that each funding source/offer should be judged on its own merits and that the practice of geological surveys and organisations in this area (USGS and IYPE) should be examined. The Steering Group requested that a strategy paper on funding and operation of OneGeology, with analysis of the different potential strands (geological survey, international bodies, commerce), is produced.

Ian Jackson
1 June 2009

OneGeology: Relationships with Associated International Bodies

Background

The success of OneGeology is dependent on establishing clear and strong relationships with partners and stakeholders. Beginning at the inaugural workshop in Brighton in 2006, OneGeology has strived to establish strong relationships with other regional and international geoscience and spatial data initiatives and bodies. This paper identifies initiatives and bodies that OneGeology currently interacts with, or has developed a relationship with, and summarizes the current relationship. This paper has now become OneGeology policy on relationships after having been ratified by the OneGeology Steering Group on 24 April 2009.

Summary of Current Relationships

UNESCO

UNESCO has been supportive of OneGeology since its inception. Robert Missotten, Chief, Global Earth Observation Section, International Geoscience Programme Division of Ecological and Earth Sciences attended the Brighton Meeting.

Commission for the Management and Application of Geoscience Information (CGI)

The CGI is the IUGS Commission with the mandate for endorsing international geological standards and its relationship with OneGeology is complementary. The CGI coordinates the Interoperability Working Group which continues to develop standards and endorse geoscience standards, such as GeoSciML for the exchange of geological data. GeoSciML is the recommended standard schema for serving geological map to the OneGeology portal. The CGI also delivers outreach workshops such as GIRAF (Namibia, 2009) which promotes OneGeology and associated (CGI) standards to developing countries.

International Union of Geological Sciences (IUGS)

The IUGS is the International Committee of Scientific Unions (ICSU) parent body of the CGI and CGMW who interact with OneGeology in the complementary fashion noted. As the ICSU scientific union responsible for geology, IUGS is and has been a strong and consistent supporter of OneGeology.

International Year of Planet Earth (IYPE)

OneGeology was launched in the International Year of Planet Earth as a key geological survey initiative, to make public and Internet-accessible, the best available geological map data worldwide, initially at a scale of about 1:1 million, to better address the needs of society. OneGeology is regarded as a flagship IYPE initiative.

Commission for the Geological Map of the World (CGMW)

The CGMW was created in 1881. It is a non-profit-making scientific and educational body governed by French law. The CGMW is responsible for designing, promoting, coordinating, preparing and publishing small-scale thematic (geology, geophysics, ore deposits, natural resources, climate, etc.) OneGeology and CGMW have had a strong and complementary relationship, indeed OneGeology concept was originally presented to a CGMW General Assembly in January 2006. The objective of OneGeology is to provide online access to global geological map data which complements the CGMW objective of facilitating and coordinating the compilation of global and regional geological maps (which OneGeology serves in addition to

national datasets from geological surveys). The President and/or Secretary General of CGMW regularly attend and input to OneGeology meetings.

International Steering Committee for Global Mapping (ISCGM)

The primary purpose of ISCGM is to examine measures that concerned national, regional and international organizations can take to foster the development of Global Mapping in order to facilitate the implementation of global agreements and conventions for environmental protection as well as the mitigation of natural disasters and to encourage economic growth within the context of sustainable development. ISCGM and OneGeology are complementary initiatives based in different respective domains, topography and geology. The Chair of ISCGM has participated in OneGeology since its inception and has offered valuable advice on a number of governance and IPR issues.

International Consortium of Geological Surveys (ICOGS)

OneGeology is largely a product of the geological surveys that make up ICOGS. While geological surveys have always played an invaluable role within our own individual nations and also worked bilaterally to assist each other, OneGeology is the first time the surveys have pooled their expertise and data and knowledge bases on a global scale to deliver geological data for the planet. ICOGS members met in Oslo to discuss how they will take ICOGS forward in the future. Our understanding is that these discussions are ongoing.

Regional Organizations and OneGeology Initiatives (CCOP, ASGMI, AASG, EuroGeoSurveys, etc.)

These regional groups are each quite different in operation but have been very supportive of the policies, principles and implementation of OneGeology and are contributing to the overall objectives of OneGeology. OneGeology has also inspired a number of regional geoscience initiatives (like OneGeology-Europe and GIN) which are coordinating regional and continental-level geological map data which will be made available through the OneGeology portal.

Geoscience Information Consortium (GIC)

This body is formed of senior information managers and directors from the geological surveys of the world; it meets annually. GIC is strongly supportive of OneGeology and maintains a close interest in the technical developments.

Other scientific bodies

The International Lithosphere Program requested association with the OneGeology initiative.

Recommended Approach to Relationships

OneGeology's considerable success is built upon the voluntary contributions of well motivated partners. OneGeology technology, standards, and procedures are largely in the public domain and OneGeology governance is transparent and equitable. The continued success of OneGeology requires careful attention to continued transparency and openness in all relationships. Formal relationships with the international private sector bodies have not yet been developed because of the risk of real or perceived conflict of interest. It is recommended that OneGeology continues to operate an open and receptive stance to all international bodies that share mutual or associated goals. The relationships with CGI, UNESCO and CGMW are particularly important and it is recommended that they merit additional effort by OneGeology/the Executive Secretary to ensure optimum communication **(this now includes CGMW and UNESCO attending OneGeology Steering Group as ex-officio members)**.

John Broome (original paper)
March 2009

OneGeology Intellectual Property Rights (IPR) and Data Use Policy

Background

This document is based upon the results of discussions held at OneGeology Management Team meetings in Ottawa (2007) and Orleans (2008). It has now been ratified by the OneGeology Steering Group on 24 April 2009 as OneGeology policy in this area.

Experience with other data access initiatives has shown that clearly defining IPR and data use policy is important for the growth of OneGeology. Since different organizations contributing to OneGeology will have different data policies, a means must be provided to communicate these policy statements to users.

Issues and Risks

- OneGeology and organizations hosting OneGeology systems and services must not be placed in a position of responsibility for the data they provide access to (ie from geological surveys).
- If OneGeology IPR and data use policies are not clear and accessible potential data providers and users may not be willing to participate in the initiative.
- OneGeology data providers need to be able to communicate their IPR and data use policies through the OneGeology system, otherwise they may not be able to permit their data to be accessible via OneGeology.
- Current legal precedent has demonstrated that disclaimers have little value in protecting digital spatial data providers against possible legal action. Providers willingness to adequately describe their data, its use and limitations and demonstrating support to users regarding appropriate use of data offers the best protection.

OneGeology Policy

- The ownership of all data made available through OneGeology by the data providers (geological surveys and organisations) remains with the data provider.
- IPR must be clearly specified for each type of data (metadata, raster/image data, Web Map and Web Feature services) made available by the data provider.
- A clear default statement of “suitability for use” must be provided and a link or email address be provided for obtaining support or advice on “appropriate use” of the data.
- All metadata, visualizations, and data accessible through OneGeology are provided without charge for non-commercial use.
- There is no written licence agreement between OneGeology and its data providers or users but IPR and suitable use information is easily accessible.
- Foreground rights (i.e. systems and data that OneGeology creates as a result of its work) reside with the participants in OneGeology and will be made freely available in the public domain.

The following three questions and answers are designed to inform the user of OneGeology's data policies in a simple and understandable manner.

Q. Can anybody use the data?

In general, please feel free to use the data for non-commercial applications (e.g. personal and educational use and non-commercial research). Please recognize that data accessible via OneGeology are not owned by OneGeology therefore OneGeology does not take responsibility for the quality or accuracy of the data. If specific data policy/IPR statements are required by OneGeology data providers for data available for viewing or download on the OneGeology web site, they will accompany the data. Regarding commercial use please see the answer to the next question.

Q. Can I use the data for commercial purposes?

For commercial purposes, each OneGeology data provider sets its own policy. If the data are available for download and specific data policy/IPR statements are required by OneGeology data providers, they will accompany the data on the download page.

If the data provider does not explicitly permit commercial use, or you are uncertain if the usage you are considering is considered "commercial", contact the data provider directly for written permission for use of the data for your application.

Q. Do I have to get permission for placing a OneGeology product in a website or paper?

In general, if the website or product is non-commercial use, you don't need permission; however, please read any IPR statement associated with the data. You must however, acknowledge the source of the data in your paper or web site (the data provider), and we would also be grateful if you would let us know how you are using OneGeology via e-mail.

John Broome
March 2009

OneGeology Success Criteria for 2009, 2010 and 2012

(as amended and ratified by the Steering Group -24 April 2009)

	Success Criteria	By August 2009	By August 2010	By August 2012 (34 IGC)
1	Number of countries participating	110	125	140
2	Number of countries serving a WMS	55	65	70
3	Developed the technology, systems and documentation to serve a WFS	✓	-	-
4	Developed a new front end to the portal	✓	-	✓
5	Number of countries serving a WFS	10	25	40
6	Tested a prototype serving high resolution and applied geoscience data (including cross-border)	-	✓	-
7	Released a service for high resolution and applied geoscience data	-	-	✓
8	Developed initial version of standard geological terminology	-	-	✓
9	Number of third parties integrating OneGeology WMS/WFS into their web sites or web services	2	5	10
10	Integration of tools for metadata discovering into the portal	-	✓	✓
11	Refreshed the website at least monthly	✓	✓	✓
12	Held one OMG during the year	✓	✓	✓
13	Established a Steering Group	✓	-	-
14	Established a governance model	✓	-	-
15	Held one Steering Group meeting during the year	✓	✓	✓
16	Number of presentations/articles and papers	15/10	20/20	30/20
17	Define and clearly communicate IPR policy	✓	-	-
18	Establish a sub-Committee to produce a policy on different "channels" (universities, commerce, public)		✓	-
19	Produced a policy on high resolution and applied geoscience data	✓	-	-
20	Drafted, agreed and communicated a policy on sponsorship and commercialisation	✓	-	-
21	Registered OneGeology with the GEOSS Earth Observation portals	✓		
22	Subject to agreement on policy begin to negotiate with different NGOs, Donors (eg UN, World Bank) and possibly commercial sponsors	-	✓	✓
23	Designed and proposed a symposium/session for the 34 IGC	-	✓	-
24	Designed and implemented a booth, demonstrations and a symposium for 34 IGC and supply exhibition material for attendees at other conferences eg AGU/EGU	✓	✓	✓
25	Number of newsletters issued	4	4	4
26	Number of press releases	2	3	4
27	Organised series of international press conferences	-	-	✓
28	Engage and involve offshore community (with CGMW) to get offshore data (especially off continental shelf) into OneGeology	-	✓	-
29	Engage with GEO/GEOSS more specifically (with assistance from UNESCO)	✓	-	-

Ian Jackson
30 April 2009

Countries currently not participating in OneGeology (June 2009)	
Africa	Europe
Angola AGO	Andorra
Benin BEN	Belarus BLR
Burundi BDI	Faroe Islands FRO
Cape Verde CPV	Georgia GEO
Chad TCD	Gibraltar GIB
Comoros COM	Liechtenstein LIE
Cote d'Ivoire CIV	Macedonia, the former Yugoslav Republic of MKD
Democratic Republic of the Congo	Malta MLT
Djibouti DJI	Moldova, Republic of MDA
Equatorial Guinea GNQ	Monaco MCO
Eritrea ERI	Montenegro
Gabon GAB	San Marino SMR
Guinea-Bissau GNB	Serbia
Liberia LBR	Svalbard and Jan Mayen Islands SJM
Libyan Arab Jamahiriya LBY	Oceania
Madagascar MDG	American Samoa ASM
Mauritania MRT	Christmas Island CXR
Mayotte MYT	Cocos (Keeling) Islands CCK
Morocco MAR	Cook Islands COK
Niger NER	Fiji FJI
Reunion REU	French Polynesia PYF
Sao Tome and Principe STP	Guam GUM
Senegal SEN	Kiribati KIR
Somalia SOM	Marshall Islands MHL
Swaziland SWZ	Micronesia, Federated States of FSM
Togo TGO	Nauru NRU
Tunisia TUN	New Caledonia NCL
Western Sahara ESH	Niue NIU
Zambia ZMB	Norfolk Island NFK
Asia - Middle East	Northern Mariana Islands MNP
Azerbaijan AZE	Palau PLW
Bahrain BHR	Pitcairn PCN
British Indian Ocean Territory IOT	Samoa WSM
Brunei Darussalam BRN	Solomon islands SLB
Iraq IRQ	Tokelau TKL
Jordan JOR	Tonga TON
Korea (Democratic People's Republic of -North)	Tuvalu TUV
Kuwait KWT	Wallis and Futuna Islands WLF
Kyrgyzstan KGZ	South America
Lao People's Democratic Republic LAO	Bolivia BOL
Lebanon LBN	El Salvador SLV
Macau MAC	Guadeloupe GLP
Maldives MDV	Guatemala GTM
Mauritius MUS	Guyana GUY
Myanmar MMR	Nicaragua NIC
Qatar QAT	Panama PAN
Saudi Arabia SAU	Paraguay PRY
Seychelles SYC	Uruguay URY
Syrian Arab Republic SYR	
Taiwan, province of China TWN	
Tajikistan TJK	
Timor-Leste TMP	

Turkmenistan TKM	
Central America - Caribbean	
Anguilla AIA	
Antigua and Barbuda ATG	
Aruba ABW	
Bahamas BHS	
Barbados BRB	
Belize BLZ	
Bermuda BMU	
Cayman Islands CYM	
Costa Rica CRI	
Cuba CUB	
Dominica DMA	
Grenada GRD	
Haiti HTI	
Honduras HND	
Jamaica JAM	
Martinique MTQ	
Montserrat MSR	
Netherlands Antilles ANT	
Puerto Rico PRI	
Saint Kitts and Nevis KNA	
Saint Lucia LCA	
Saint Vincent and the Grenadines VCT	
St. Helena SHN	
St. Pierre and Miquelon SPM	
Trinidad and Tobago TTO	
Turks and Caicos Islands TCA	
Virgin Islands (British) VGB	
Virgin Islands (U.S.) VIR	