

OneGeology Technical Working Group Meeting GEUS, Copenhagen 21st January 2009 2-5p.m.

Attendees:

Ana Cristina Costa (Portugal INETI)
Agnes Tellez-Arenas (France BRGM)
Carlo Cipolloni (Italy ISPRA)
David Arctur (OGC Interoperability Programme Manager)
Herve Caumont (OGC/ERDAS/GEOSS)
Petr Coupek (Czech Republic CGS)
Tim Duffy (UK BGS, Chair)
Jong-Gyu Han (Republic of Korea KIGAM)
Sverre Iversen (Norway SGN)
Ian Jackson (UK BGS)
Lucie Kondrova (Czech Republic CGS)
Tomas Lindberg (Sweden SGU)
Mitja Pozar (Slovenia GeoZS)
Pedro Patinha (Portugal INETI)
Steve Richard (USA GIN/AZGS/USGS)
Peter Riisager (Denmark GEUS)
Maciej Rossa (Poland PGI)
Jasna Sinogoj (Slovenia GeoZS)
Jean-Jacques Serrano (France BRGM)
Lars-Kristian Stolen (Sweden SGU)
Jorgen Tulstrup (Denmark GEUS)
Frank Waardenburg (Netherlands TNO)
Willie Weng (Denmark GEUS)

1). Approval of minutes of last meeting (below) 06/08/2008

Adopted without correction.

2). Matters arising from those minutes:

ACTION Point 1 : BRGM will continue to work to get the KML writer to use KML 2.2 ("OGC Standard") and get ESRI services to work within it and/or provide advice to the ESRI based services how to make their services compatible with current KML/Googleeearth practices.- *see item 3) below.*

Carlo will continue to investigate, to test KML 2.2 files referring to ESRI WMS sources'. Some "ESRI" wms' run well in the 1g viewer and Google Earth – good location (Sweden), but other have wrong location ("with the same version of ESRI software" – Jasna) – the answer may be in ESRI's interpretation of how to declare the bounding box extent for the wms which may be different depending on different ESRI datastores e.g. shapefile or via arcsde, and may be interpreted differently by Google Earth's reading of that WMS bounding box. Don't know how to get/implement a legend in GoogleEarth, and no GetFeatureInfo tool capability there also. Discussion about :Must a Onegeology-Global WMS service work ok in Google Earth and in OneGeology to register it as a 1G-Global conformant service? => no agreement on this conformance restriction, even if GoogleEarth is a well known viewer (it has also some "bugs" or bad interpretation of the standard) – difficult to consider 1G viewer or GoogleEarth as a test viewer for ISO/OGC WMS.

ACTION POINT 1: It was agreed that the next WMS cookbook version from BGS (available May 2009) would recommend that new service providers test the visibility of their new WMS in more than one common client such as the 1g viewer and Google Earth (and perhaps Dapple www.geosoft.com) but as long as the service worked in the 1g-Viewer it would be accepted as conformant. Carlo to report on ESRI WMS in KML situation for that new cookbook version. Tim is to provide Agnes with working (in Google Earth/Google Maps and other KML clients like NASA Worldwind/Dapple) KML 2.2 examples that do their best displaying OneGeology existing services.

ACTION POINT 2: Tim Duffy to ask Steve Lime of MapServer directly to maintain the urls to the older versions of the MS4W kits. Want to move to v5.1.0 eventually, but nobody has compiled it yet for an MS4W kit.

MapServer 5.2.1 now released and MS4W kit version 2.3.1 released using it (02/12/2008.) Steve Lime (USA) has agreed to maintain on the master mapserver website all older versions and Jeff Mckenna(Canada) of the MS4W kits has agreed to maintain those and to encourage the rapid production of new MS4W kits as soon as new version of MapServer are released.

Next version 5.4 should be WMS 1.3 compliant and is now confidently due in March or April 2009 and immediately following this meeting it was decided to base the next cookbook on this version so that OneGeology-Europe and OneGeology-Global users and cookbook helpdesk supporters will not have to change/update their MapServer versions more than once during 2009 to be ISO standard WMS 1.3/INSPIRE/OneGeology-Europe compliant.

ACTION POINT 3: Members need to email Tim for username/password when Tim announces it is being used

OneGeology-Europe participants have been provided with a new collaborative working web system now : TeamSpace. However this (a commercial system that is in fact cheap per extra user) is not currently available to all OneGeology-Global technical working group collaborators and a decision will have to be made later – when we decide we need this utility- whether to use a different but free (but also commercial) Confluence WIKI offered by the NERC (BGS' sponsoring body) or whether we find the small amount of money to simply add teamspace licences for 1g-Global technical participants and hence use just one system for all such Global/European technical development work.

ACTION POINT 4: Joel to write Linux cookbook contribution and send to onegeologyhelp@bgs.ac.uk.

Received with thanks – will be used in the next WMS cookbook version.

ACTION POINT 5 : BRGM need to add any published (via getcapabilities responses) Access Constraints information to the Layer Details choice (OR add a new choice called 'Access Constraints?') displayed in the 'Active layers properties' once a layer has been added for display in the web client. The recommended contents for the Layer details choice (and Metadata URL and Data URL needs to be more clearly documented in the Help file for the web client AND (new) in the WMS cookbook

Access constraints now appear in the Active layers properties choices – but need to improve explanation about dataURL, ...- and provide a PDF help file for the whole interface rather than the scroll down version.

ACTION POINT 2: BRGM to provide the 1GG Registry/client viewer help with a PDF File (with the June version of the portal).

ACTION POINT 6: BRGM to investigate adding hierarchical capabilities to registry so users can better display continental, Regional (e.g. CCOP), national, local services (e.g. USA state geological surveys, Canadian provincial geological surveys, Australian state geological surveys).

Implemented.

ACTION Point 7: BRGM to look at different ways of displaying the service availability map ie, by geographic area , service provider (a point for each server?) etc. Currently this is limited to country only i.e. a Geographic area 'North America' cannot show whether a geological survey's server within that is working or not.

This option will be available soon, it is a specific service.

ACTION POINT 8: BRGM will investigate this, and look at which layer for each country will be displayed by implication of such an all layers request as the 'default' for that country, also the effect on the perceived 'client response' (in fact 30+ server responses) to display 100+ layers at once?

An option could be to add a check box in front of upper level (Europe for example) to select all layers available in all included countries => but could be very dangerous for performances, better to address this issue with OGC standard Web Map Context (WMC) documents.

ACTION POINT 9: BRGM will be adding a "zoom to layer" button to the client. Need to **require** service providers to provide "LayerExtent" to getCapabilities documents for this to work – add to cookbook and minimal OneGeology service compliance specifications.
Implemented.

ACTION POINT 10: BRGM to Add a tool tip to the GeoSciML tab (results of the "i" tool) which includes 2 paragraphs on what the GeoSciML results mean and are used for. Dave Soller to agree some words to be used here with Tim Duffy.
Implemented.

ACTION POINT 11: Proposed next (third) technical cookbook - 'How to serve your OneGeology data as a WFS' – for publication by December 15th 2008 - BGS leading drafting: - see item 4 below.

Action Point 12: TWG is involved in a further ACTION POINT from the OMG meeting that immediately followed the last meeting – Action Robert Tomas/TRD to write a one-page summary for Directors of Surveys what contributing to OneGeology really involves.

ACTION POINT 3: RT has now promised the first draft very soon.

3). Current and planned improvements to the OneGeology Portal Interface - Registry and Client (lead JJS): a new OpenLayers based Onegeology-Global portal was planned for release around the end of January 2009 – Jean-Jacques will explain and hopefully be able to show us some of the details. Known issues with the current portal and registry will be discussed.

A new release (replacement of Map Builder technology by OpenLayers) will be available soon, then some work has to be done to update BRGM components developed specifically for OneGeology on top of the basic components provided by OpenLayers. A new release of the portal will be available for June 2009 (probably before, but at least for the next OMG)

This new release will correct the problem with Firefox 3, and we expect better performances.

4). OneGeology Level 2 Web Feature Service (WFS) Cookbooks will be available by the time of the meeting - rolling out Level 2 services based on GeoSciML V2.0 and identifying who will provide them (lead TRD).

Two new cookbooks for use by OneGeology service providers were published and placed on the www.onegeology.org download pages last week:
[Cookbook 2: How To Map Data to GeoSciML Version 2. Version 1.0](#)

And

[Cookbook 3: How To Serve a GeoSciML Version 2 Web Feature Service \(WFS\) using Open Source Software. Version 1.0](#) – both as PDF files.

Produced by the GeoSciML consortium at www.geosciml.org but with specific OneGeology-Global chapters as 1GG and OneGeology-Europe will be some of the first users of these cookbooks.

The OneGeology OMG success criteria below require 10 OneGeology participants to setup and register with the registry 10 WFS' 'behind' existing WMS by end August 2009 and Tim asked for volunteers from those present, starting with the GeoSciML development consortium members but explicitly adding others who have not been involved in its development and therefore will be good new testers of these cookbooks and opensource software resources provided.

ACTION POINT 4: The following volunteered to setup a GeoSciML v2.0 WFS (will be restricted impact on service server usable from the "getFeatureInfo" button in the 1G Viewer) before August 2009 :
BGS, BRGM, SGU, CAN, ITA, GA, AZ (Steve), USGS ? (Action for Steve to ask Dave Soller), CGS + Slovakia (work together on GeoSciML), Slovenia.

5). Ensuring we meet the OneGeology-Global Operational Management Group Proposed Success Criteria (see table below- August 2009) and summary of problems that may slow such progress identified by the onegeologyhelp team (TRD)

The criteria were accepted by the meeting as suitable and achievable.

Criteria n° 12 : BRGM to advise in its web site we use 1GG (BGS, SGU, and NGU already done – therefore target of 2 sites referring to it by August 2009 already achieved).

6). The (urgent) need for a dataset (WMS service layer), web service (WMS/WFS) (and later discovery) metadata searchable catalogue for OneGeology-Global (TRD).

*Tim reported that 90% of queries/'complaints' coming into the BGS run onegeologyhelp@bgs.ac.uk helpdesk line by potential users of the Onegeology registry and map client viewer can be summarised as 'I cannot easily find what 'datasets' i.e.topics= individual wms layers such as lithostratigraphy or lithology or chronostratigraphy are available currently' – the portal and whole initiative is suffering from its **success in already** having approx. **100 dataset layers available** and the only way to see what is there is in practice to add each service and layer and look. Some of this information is available in the free form text in the abstracts published in the catalogue but nobody is going to search through these by eye in practice. In short whilst we have long term plans for a proper searchable catalogue of datasets (coming from the OneGeology-Europe project to be ISO/INSPIRE compliant etc) we need a short term solution to help with this. Also, there is currently no way to know if a WMS layer has had a new WFS service placed 'behind' it i.e.no way to know if when we use the getfeatureinfo tool it can also display a GeoSciML WFS response and therefore also no way to know if a full WFS service is available for use by anybody independent of any WMS service..*

ACTION POINT 5: Catalogue : BRGM kindly agreed to update the current registry and portal to better show available WFS (currently not visible as they are hidden behind the getfeatureinfo), and a simple search on layer title (the human readable 'dataset topic') to deal with the problem of more and more layers available. To add new buttons "Catalogue of layers" – "Search on layer title" (=> June 2009 with the new release of the portal).

Then, moving to a CSW Catalogue (GeoNetwork) but waiting for GeoNetwork to be CSW 2.0.2 compliant (and tested) => March – April (BRGM contributes to GeoNetwork development thanks to the French GeoCatalogue – for INSPIRE), the French GeoCatalogue should move to GeoNetwork CSW in March or April. The OneGeology Global will then be helped by the French team to move also to a GeoNetwork Catalogue (BRGM doesn't give any date for this implementation in 1GG)

GeoSciML Versions:

GeoSciML V3 will be GML 3.2.1 (and therefore ISO - not 'just' OGC- and therefore INSPIRE) compliant

Start 2009	Early 2010
GeoSciML v2.0	GeoSciML v3.0
Based on GML 3.1.1	Based on GML 3.2.1 and hence also ISO 19115/19139 Metadata standard
Using WFS 1.1.1	Using WFS 2.0 ? (ISO 19142), and Filter Encoding ISO 19143)
WMS 1.1.1	WMS 1.3

7). Current and planned improvements to existing Cookbooks and recommended opensource software (TRD) . (Need clearer record of who is using what technology for each WMS service and who is serving other people's data).

A new WMS cookbook will be written by BGS in April 2009 – to be ready for use by 1st May by OneGeology-Europe participants as well as new Onegeology – Global participants joining in Spring 2009 and as well as 1G-Global participants wishing to upgrade to a much improved and newer version of MapServer that also offers WMS 1.3 as well as WMS 1.1.1 services.

In order to improve chapters in this new cookbook BGS needs to know which software and which software versions are being used by everyone for each WMS service and also who is 'buddy' serving data for a sister organisation. This information is not clear/complete in the current catalogue of registered services and BGS will contact all to get this information and ask in the next cookbook that this information be provided as part of the service registration process.

ACTION POINT 6: BGS to email all current service providers for software and buddying information.

8). Likely timetable for integration of advancements developed by the EU funded OneGeology-Europe project into 'OneGeology-Global' (JJS)

First release of 1GE portal in March. Some improvement integrated in the new version of the 1GG client before June. Connection with the new 1GG catalogue after the French Catalogue moved to GeoNetwork.

9) Progress and support needs of other regional hubs including

Tim asked whether anyone present ever visited the Rumanian Geological Survey as they were close to getting their service running but were not quite completing it – a personal visit by someone who had a service up would probably help them get the service running. Unfortunately nobody present was planning to travel there currently.

The Chile and Argentina WMS services had been working for many months but for some months now have ceased working – WWW problems? (Brazil has remained working all the time).

The next 1G OMG meeting is planned for later June/early July in possibly Argentina and Tim was actioned to contact Chile and Argentina to see if the BGS helpdesk can help them get the services running again..

ACTION POINT 7: BGS to contact Chile and Argentina to offer support with wms services.

a). CCOP

China will have its own WMS 1:2.5 Million service – no dates yet but Tim and Jean-jaques have been invited to Beijing in the autumn to help get this set up.

There will be a Meeting CCOP (11 countries) in March under the GSJ Geogrid initiative where further CCOP contributions to OneGeology-Global will be discussed and the GSJ has already recently reported that new Vietnam and Malaysia 1M wms services will be buddy hosted by Japan.

b). 'OneGeology-USA' the NSF-GIN project - Steve Richard

See Steve Richard notes at end of this document.

10). Steps required by the OneGeology-Global Secretariat to encourage more of the currently 94 Geological Surveys to serve OneGeology Level 1 Web Map Services (WMS) or request others to host their WMS for them (we currently have more offers of hosting than we have of requests from Surveys to be helped).

The Secretariat plans to re-contact the following already signed up but not level 1 active currently countries' Geological surveys in spring 2009: Albania, Armenia, Bangladesh, Bosnia and Herzegovina, Colombia, Croatia, Cyprus, Dominican republic, Ecuador, Egypt, Ethiopia, Greece, Guinea, Israel, Kenya, Malawi, Mali, Mexico, Mongolia, Nepal, Oman, Pakistan, Peru, Sierra Leone, Sri Lanka, Tanzania, Uganda, Ukraine, Venezuela. Can anybody here help Romania?

ACTION POINT 8:

The following direct personal contacts were volunteered (no letter therefore to be written by BGS secretariat)

Faroe Islands => by Jorgen of GEUS

Bosnie-Herzegovina, Croatia and Armenia => by Slovenia (Jasna).

11). AOB and finish (achieved 4.35p.m).

There was no other issues requested.

12). Next Technical Meeting : suggested week of 21st of September, in Quebec (following the GeoSciML consortium meetings there) in order to give OneGeology-Global 'America' (North and South) technical working group contributors a better chance to travel to the meeting and contribute..

This has now been CONFIRMED as occurring on Friday 25th September 2009 2p.m. to 5p.m. at the offices of the Geological Survey of Canada, in Quebec hosted by GeoSciML consortium member:

Eric Boisvert

Spécialiste TI-GI / IT-IM specialist

Eric.Boisvert@rncan.gc.ca, 418-654-3705, facsimile/télécopieur

418-654-2615

490, rue de la Couronne, Quebec, Quebec, G1K 9A9

Commission géologique du Canada (Québec) / Geological Survey of Canada (Quebec)

Further details will be posted nearer the time.

OneGeology Proposed Success Criteria for the next four years:

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Technical

Operational

	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 channel serving academic data	-	✓	-
7	Released an initial service for academic data	-	-	✓
8	Tested a prototype channel serving commercial data	-	-	✓
9	Tested a prototype serving high resolution and applied geoscience data	-	✓	-
10	Released a service for high resolution and applied geoscience data	-	-	✓
11	Developed initial version of standard geological terminology	-	-	✓
12	Number of third parties integrating OneGeology WMS/WFS into their websites or webservice	2	5	10
13	Integration of tools for metadata discovering into the portal	-	✓	✓
14	Refreshed the website at least monthly	✓	✓	✓
15	Held one OMG during the year	✓	✓	✓
16	Established a Steering Group	✓	-	-
17	Established a governance model	✓	-	-

18	Held one Steering Group meeting during the year	✓	✓	✓
19	Number of presentations/articles/papers in conferences/journals	15/5/5	20/12/8	30/12/8
20	Defined and clearly communicated IPR policy	✓	-	-
21	Produced a policy on different "channels" (universities, commerce, public)	✓	-	-
22	Produced a policy on high resolution and applied geoscience data	✓	-	-
23	Drafted, agreed and communicated a policy on sponsorship and commercialisation	✓	-	-
24	Registered OneGeology with the GEOSS Earth Observation portals			
25	Subject to agreement on policy begin to negotiate with different NGOs, Donors (eg UN, World Bank) and possibly commercial sponsors	-	✓	✓
26	Designed and proposed a symposium for the 34 IGC	-	✓	-
27	Designed and implemented a booth, demonstrations and a symposium for 34 IGC	-	-	✓
28	Number of newsletters issued	4	4	4
29	Number of press releases	2	3	4
30	Organised series of international press conferences	-	-	✓

Steve Richard's USA NSF-GIN Onegeology Global situation notes presented at the above meeting:

Geoscience information network (GIN)

- US National Science Foundation funding, 3 years
- Objective— get geologic **data** accessible online
- Approach
 - standard mechanisms for discovery, data delivery, and encoding.
 - Assist community to implement data services
 - Promote development of applications to discover and utilize services.

Solution

- Develop communities of practice around shared data services (standards!)
 - Virtual observatories in Astronomy
 - A standard is a product that ships in volume
 - GIN is a framework to develop communities of practice in Geoscience community
- What is GIN:
- A collection of service definitions, interchange formats, and vocabularies
 - Catalogs that lead users to resources
 - A community of users – data providers and consumers

HOW?

- Build on existing work e.g.:
 - GEON
 - OneGeology

—GeoSciML, EarthChem, wet GIN

- Start small

- Focus on content

—Bootstrap – more content, more applications, more users, more....

Targets

- **Geologic map data**

—Build on GeoSciML test beds—mapped features, geologic unit, geologic structure

—Connection with ArcGIS

- **Geochem/Geochron data services**

—Build on Earthchem, GeoScience Australia development

- **Borehole lithology services**

—Build on GeoSciML testbed, GS Canada GIN

—Wrappers to import GeoSciML-encoded data to ModFlow, 3-D modeling software

In summary

- Lots of content available

- The software technology is reaching a mature stage (web services, markup languages)

- We want to start a bootstrapping process

OneGeology connections

- Work with states to implement 1:1,000,000 WMS

- Coordinate with European catalog development to ensure interoperable discovery mechanism

- Demonstrate level 2 WFS for Arizona, promote implementation by other states

Find, Get, Use

- The dream

- The Reality –

—Image services working

—Feature services mostly in proof of concept and testing phase (Windows v.1..?); bootstrap in progress