6th OneGeology (Global) Technical Working Group Meeting
8 October 2010, Accra, Ghana

Attendees: Tim Duffy (BGS- UK), Carlo Cipolloni (ISPRA-Italy), Dana Capova (CzechGS), Zuzana Krejčí (CzechGS), Shiferaw Ayele (GSE- Ethiopia), Tolesa Shagi (GSE- Ethiopia), Riitta Teerilahti (GTK – Finland), Markus Toloczyki (BGR- Germany), Stephanie Hass (BGR-Germany), Marc Bernd Torchala (Beak- Germany), Urvois (BRGM-France), Kwame Boamah (GSD – Ghana), John Duodu (GSD-Ghana), Clement Asare (GSD-Ghana), Maria Yusuf (GSD) , Keren-Happuch Osekre (GSD), Kwame Ahumah (GSD), Baba Mohammed (GSD), Ernest Brakohiapa (GSD), Maxwell Boateng (GSD), Stephen Akosa (GSD), Saviour Alomatu (GSD), Mrs. Alexandra Amoako-Mensah (Ghana Institution of Geoscientists), Samuel Atta (GSD), Dr. Thomas Adu (GSD), Mesfin Gebremichael (SEAMIC-Tanzania, by skype – audio reached him but had to type comments back, part of meeting, future action for Mesfin to get microphone fixed for true two way skyping on SEAMIC skype computer), Agnes Alaba Kuterema (GSM-Uganda), John Odida (GSM-Uganda)

ACTIONS ARISING FROM ONEGEOLOGY TWG MEETING OF 08/10/2010:

Action point	**Action**
AP1	Discussions are now taking place between the OneGeology secretariat and Bosnia-Herzegovina
AP2	*BGS will work with Clemens Portele for ESRI inc on testbed testing of ESRI software for future ESRI WFS capability*
AP3	*A bid to the IUGS CGI Council has recently been made to create these tools and documentation necessary for supporting Geosciml 2.1.1 production services. If bid successful, tools and documentation will be produced to support more OneGeology WFS' in 2011.*
AP4	*email and offer of support from onegeologyhelp@bgs.ac.uk on 09/09/20 has been sent to the 9 buddies hosting approx. 17 WMS' for other Geological Surveys around the world – onegeologyhelp to help them and monitor progress.*
AP5	BGR is working on Chad – Markus to pass contact details to Tim.
AP6	Mesfin of SEAMIC offered to host for any of the 'South Eastern' African countries currently on the participants map but clearly not serving/being served.
AP7	Carlo – did not Israel offer to host countries near it at some meeting after Brighton? – ACTION: 1g secretariat to follow up.
AP8	Markus believes BGR offered to host Ivory Coast – any progress Horst-Gunter Troppenhagen ? Action: 1g secretariat to follow up.
AP9	liaison between the BGS 1GG service side support and BRGM 1GG client/catalogue support (not present at this meeting) was required to work out what to propose in practice for enhanced dataset and service metadata and they are due to meet in January 2010 in Orleans to work out a proposal on this. The TWG would be consulted on these final proposals.
AP10	Tim to report this accreditation scheme feedback to 1G OMG accreditation sub-group.

Minutes of the 6th OneGeology (Global) Technical Working Group Meeting

1. **Minutes from the previous meeting**
   Approval of minutes of meeting 25/09/2009 (Quebec – see http://www.onegeology.org/docs/technical/TWG_Meeting5_Minutes250909.pdf)

2. **Apologies:** Agnes Tellez-Arenas (BRGM), those attending the recent interim meeting at Rome including Jean-Jacques Serrano (BRGM) – co-chair of TWG, (Mesfin Gebremichael SEAMIC – but possibly joining meeting by Skype), James Passmore (BGS), Marcus Sen (BGS), Ken Wilkinson (CGS), Fernando Perez Cerdan (IGME)

3. **Matters arising from 1GG-TWG meeting 25/09/2009**

   ACTION POINT 1: Secretariat to release new OneGeology WMS cookbook once MapServer 5.6 released in production version.
   Result: Published February 2010 – see http://www.onegeology.org/wmsCookbook/home.html

   ACTION POINT 2: at least Slovenia, Arizona, Czech (doing Slovak by agreement also) and Japan to put up WFS services based on the WFS cookbook and their existing WMS expressed datasets.
   Result: Czech and Slovenia are there, Arizona has agreed to have WFS up by end October 2010 and Slovak has not been added as a level 1 WMS yet but believe is in progress.

   ACTION POINT 3: Slovenia (Jasna) to continue to try to progress Croatia and Bosnia-Herzegovina.
   Result: work is progressing with Croatia. AP1: Discussions are now taking place between the OneGeology secretariat and Bosnia-Herzegovina.

   ACTION POINT 4: All potential formal members of the TWG to arrange for their nominations to be sent to onegeology@bgs.ac.uk
   Result: a few have formally – more nominations are welcome.

   ACTION POINT 5: getcapabilities cookbook convention will be expanded to populating abstract of the layer (= dataset for our community).
   Result: achieved February 2010 in new wms cookbook

   ACTION POINT 6: To collate the list of current keywords from the existing WMS (BRGM), then to provide a constrained list of keywords possibly to include the 1GE-WP4 recommendations when they appear.
   Result: achieved February 2010 in new wms cookbook

   ACTION POINT 7: Steve Richard to offer a chapter 2 for next version of WFS cookbook: 'How to serve GeoSciML v2.x as a bbox queryable WFS using Deegree v2.3 with xslt configuration'
   Result: see production services GeoSciML version 2.1.1 with validating tools including schematron discussion at https://www.seegrid.csiro.au/twiki/bin/view/CGIModel/RomeF2FOneGeologyGlobalTechnicalWorkingGroupMeetingNotes

   ACTION POINT 8: Fernando to discuss course options with AECI and report back.

Result: Report from Fernando Pérez Cerdan of IGME, September 2010:

ONEGEOLOGY TRAINING IN LATINAMERICA

FIRST STEP AND PLANNING FOR THE FUTURE

Background

In the OneGeology Management Group Meeting 4 held at Buenos Aires (Argentina) on 2nd-3rd July 2009 there was a discussion about why some countries do no participate in OneGeology. There are different reasons, two of them are:

- The lack of knowledge in WMS and WFS implementation as well as in GeoSciML

- Few economic resources to attend training courses outside

The IGME was willing to explore about finding out about resources provided by the Spanish Agency for International Cooperation and Development (AECID)

Two months later in the OneGeology Technical Working Group Meeting 5 held at Quebec (Canada) on 25th September 2009 there was a new discussion about this issue. Fernando Pérez Cerdán (IGME) informed about the AECID training courses conditions and funding. Gabriel Asato (SEGEMAR) provided a paper on possible GSML training course contents.

On October 2009 IGME and SEGEMAR agreed the content for a basic training course.
On November 2009 IGME sent to AECID the proposal for the training course.
On January 2010 AECID select the proposal to a candidate in its annual training program.
On March 2010 AECID approved the training course support in Cartagena de Indias (Colombia).

The training course: The course named "Web dissemination of geological maps and geological information" took place in Cartagena de Indias (Colombia) from 12-16 of April. 24 participants from ten countries of South America, Central America and Caribbean attended the event, most of them from national Geological Surveys and affine organisations.

The course was conducted by the IGME (Spain) and SEGEMAR (Argentina) and CPRM (Brazil) contributed with several lectures. Also INGEMET (Peru) gave a lecture.

The contents on the course were as follows:

Day 1:
- Opening Session
- Objectives, program and working plan
- Basic concepts of interoperability and Spatial Data Infrastructures
- Experience gained in international projects and initiatives
- Html

Day 2:
- Xml

Map services. The OGC WMS standard
Web servers and clients for geographic information

Day 3:
GIS services on ArcGis server
GIS services on Mapserver and Geoserver

Day 4:
Geobank, the Database fro CPRM.
Modelling databases and assembling products through ArcExibe
Principles of Metadata
Current progress on geological databases in INGEMET (Perú)

Day 5:
Round table: Summary, discussion and conclusions
Closing Session

After that course a time for reflexion about the future has been opened and some conclusions are arising.

- It's clear that a specific OneGeology Latinamerican working group should be set up. This working group will be the core for next training courses.
- A second edition of the basic course is needed, but it must be focused on Web Map Services (WMS). Each participant would work with their own data.
- An advanced course on GeoSciML and vocabularies would help many countries to start on OneGeology level 2.

The Future

Gabriel Asato (SEGEMAR, Argentina) is planning a workshop about "geoscientific information exploitation using the Internet" as an activity in the XVIII Argentinean Geological Congress (May) and a course about "digital mapping production in the context of NSDI" in the XIV Latin American Geological Congress (September).

Fernando Perez Cerdan will make a proposal to the AECI in order to find funding for two new courses next year, one basic (WMS) and one advanced (GeoSciML). Contents will be agreed with SEGEMAR (Argentina) and CPRM (Brazil).

Fernando Pérez Cerdan

ACTION POINT 9*:* GA Ollie, GSV Alistair, ISPRA Carlo, USGS Steve to provide Satish with example datasets to serve from ESRI geodatabase as GeoSciML WFS.
Result: BGS has recently received a new ESRI Geodatabase exemplar dataset for testing ESRI capability for serving GeoSciML version 3.0 rc2 GML 3.2.1 version within current GeoSciML testbed 4 from GA Ollie Raymond and AP2: BGS will work with Clemens Portele for ESRI inc on these trials.

New items – many with initial discussions on 03/09/20101 at ISPRA Rome recorded at https://www.seegrid.csiro.au/twiki/bin/view/CGIModel/RomeF2FOneGeologyGlobalTechnicalWorkingGroupMeetingNotes

4. Updating Cookbooks & moving to GeoSciML V2.1.1 'production services'

Need to move OneGeology Global Level 2 WFS' to well defined and validated GeoSciML V2.1.1 'production services' – tools needed to achieve this include: new How-to-Map to GeoSciMl v2.1.1 and how-to-serve WFS cookbooks based on newer versions of open source software Geoserver and Deegree, schematron validation tools and new CGI web available http uri vocabulary services for at least CGI dictionaries for simplelithology, ICS2009 age and structural faulttype.

Technical Working Group update to August 17th 2010:

Number of Geological Surveys with data layers being served as Level 1 WMS maps: >60

Number of data layers: 215

Number of data layers (features) being served as GeoSciML version 2.0 WFS: 7

Number of data layers (features) being served as GeoSciML version 2.1 WFS: 29

Total: 36 WFS' from 19 Geological Surveys

The OneGeology portal has received 60 000 visits in the reporting period (July 2009 – July 2010); which equates to approximately 4500 to 6000 per month. These visits originate mainly from the following countries:

1. USA 14500 (17,1%)
2. UK 8200 (9.72%)
3. Germany 7600 (9%)
4. France 7200 (8.5%)
5. China 4900 (5.83%)

(many other countries make up the remainder)

Result: AP3: A bid to the IUGS-CGI committee has recently been made to create these tools and documentation necessary for supporting Geosciml 2.1.1 production services.

5. Updating buddied Level 1 service WMS naming conventions

Need to update the buddied Level 1 service WMS naming conventions to the new WMS cookbook (now available as pdf or web pages)

Result: AP4: email and offer of support from onegeologyhelp@bgs.ac.uk on 09/09/20 has been sent to the 9 buddies hosting approx. 17 WMS' for other Geological Surveys around the world

6. African web services

Needs of African web service contributors and buddying hosts – what extra support do you need?

Marc Urvois commented: Algeria (president of AGS currently) ongoing project with BRGM – 1g secretariat to contact Francois Lyonnais to see if 1GG wms can be set up by BRGM. Morocco project finished <2 years ago.

AP5: BGR is working on Chad – Markus to pass contact details to Tim.

AP6: Mesfin of SEAMIC offered to host for any of the 'South Eastern' African countries currently on the participants map but clearly not serving/being served.

AP7: Carlo – did not Israel offer to host countries near it at some meeting after Brighton? – ACTION: 1g secretariat to follow up.

ISPRA (Italian Geological Survey) offered to host for countries between Israel to Tunisia also.

AP8: Markus believes BGR offered to host Ivory coast – any progress Horst-Gunter Troppenhagen ? Action: 1g secretariat to follow up.

7. Technical issues

What is technically holding back the expansion of African Geological Surveys' contributions?

With the offer of organisations like SEAMIC and CGS to host services for African surveys within the continent and increasingly affordable internet speeds both down the eastern and western sides of the continent and with the expected local geological survey IT infrastructure boosting to come from projects like MSSP and AEGOS.

The future technically for OneGeology web services was looking good in Africa (during these current meetings live web services were observed streaming to the GIS desktops of Burkina Faso and Ghana geological survey staff respectively) and the main barriers to getting more services up seemed to be making contact with some of the surveys particularly in the north of the continent and offers above for help on this are recorded in the previous item.

8. Review of the new OneGeology Metadata catalogue

Main new item of this meeting: Review of the new OneGeology Metadata catalogue and the need to define a more detailed Dataset (i.e. the datasets portrayed in the Level 1 service WMS layers') metadata profile to populate this metadata catalogue with – as the AEGOS WP1 members should have just defined a new AEGOS dataset metadata profile this should enable coordination between AEGOS/INSPIRE/OneGeology metadata futures to ensure integration of metadata in the Geological domain.

Earlier in the week the AEGOS Wp1 had been presented with a proposal to adopt the entire 41 element OneGeology-Europe metadata profile (a superset of INSPIRE metadata profile) and would be consulted later on whether each element was relevant to future AEGOS metadata. Unsurprisingly comments had been made at the large extent of this set of elements and whether they would ever

be realistically populated with good content without as much backup support and tools as the well funded 1GE participants had received. It was suggested that maybe a subset of such a large scheme would be appropriate for 1G Global and in fact analysis of the 1GE scheme did suggest that maybe as much as approximately 20 i.e. 50% of those 41 elements might not be needed. Metadata collection for 1GG may be aided by some of the service metadata being harvestable from the web services (as currently – but dataset metadata is not currently harvestable from such of course) and thus close AP9: liaison between the BGS 1GG service side support and BRGM 1GG client/catalogue support (not present at this meeting) was required to work out what to propose in practice and they are due to meet in January 2010 in Orleans to work out a proposal on this. The TWG would be consulted on these final proposals.

The key steer from IUGS-CGI and 1GG OMG on this would be that future geological metadata schemes should be consistent with each other i.e. perhaps with 1GG being a subset of 1GE/AEGOS/INSPIRE and the latter only differing by being subsets or supersets of each other, all fundamentally within ISO 19115 and ISO 19119 geospatial metadata standards

9. Any Other Business

Tim raised the issue of plans by the OneGeology Operational Management Group to introduce a web service accreditation scheme with 'increasing numbers of stars' to indicate an increasing level of sophistication of WMS and WFS OneGeology services.

An analysis of the practical technical increasingly sophisticated and conformant to the aims of OneGeology levels that could be designed for WMS and then WFS services indicated that there could be many levels or number so stars – up to an order of around 10. It had been suggested that maybe only 4 stars/levels should be in such a system.

The meeting was asked would they like such a formal accreditation system (which would have to be backed up by sophisticated – probably web service based themselves - tools to allow candidate services to be tested against each level of star attainment) and whether they thought the number of stars had to be limited to 4 say, rather than 10, and whether many countries only really able ever to achieve 1 star (e.g. simple WMS hosted for them with Onegeology naming conventions) would be put off by other countries having many more stars?

The meeting and John Odida in particular felt that such a formal accreditation system would be very helpful and useful to communicate to local management that 'x more resource' would be needed to achieve an extra star and therefore a many '10' star system would in fact be useful in building up gradual increasing functionality and sophistication backed up by funding for relevant infrastructures likely to come AEGOS phase 2 from 2012 and other sources. It was not felt that countries remaining on 1 star would feel bad about this – they were after all contributing to the core practical aims of OneGeology to get web services up and data accessible to all on the web .

AP10: Tim to report this accreditation scheme feedback to 1G OMG accreditation sub-group.

- End of meeting –

Tim Duffy
Co-chair OneGeology Technical Working Group
10/11/2010