Minutes
For the 11th Technical Implementation Group
26th May 2015 LNEG Lisbon Portugal: 0900- 17:00 CEST

Venue

Laboratório Nacional de Energia e Geologia, I.P.
Estrada da Portela, Bairro do Zambujal – **Alfragide**
Apartado 7586 - 2610-999 Amadora – Portugal

Host: Rita Caldeira of the Portuguese Geological survey (LNEG)

Website: www.LNEG.pt

AGENDA

1). Attendees :

- TimDuffy (BGS – UK) – co-chair
- JouniVuollo (GTK – Finland)
- EricBoisvert (GSC – Canada)
- MarcusSen (BGS – UK)
- JamesPassmore (BGS – UK)
- Agnes Tellez-Arenas (BRGM – France) co-chair
- SylvainGrellet (BRGM – France)
- Anthony Mauclerc (BRGM – France)
- Marko Komac (OneGeology MD - Slovenia)
- Pedro Patinha (LNEG Portugal)
- Urszula Stepien (PGI - Poland)
- Tomas Lindberg (SGU - Sweden)

2). Apologies:

- OllieRaymond (GA – Australia)
- MarkRattenbury (GNS – New Zealand)
- StephenRichard (AZGUS – USA)

- Pascal Perrier (BRGM – France)
- Francois Tertre (BRGM – France)
- Francois Robida (BRGM – France)
- H Sylva

But many of those absent from the INSPIRE conference will meet in late October at JRC, Milan at CGI/OGC meetings.

3). Minutes of last meeting 1ˢᵗ July 2014, Tucson and actions points from that meeting not on this main agenda:

1) OneGeology Administration to write to the 50 GSO's who have not yet offered web services or asked for a buddy.
Achieved
Note, CPRM - Brazil will buddy for 6 south American surveys shortly, and will eventually serve a WFS.
2) Christy Caudil (AZGS) to send James and Tim a copy of the GeoSciML-Portrayal WMS service check list document for consideration on how to integrate with other documentation.
Achieved
3) Francois Tertre (BRGM) will add button at bottom of statistics page to download the GeoSciML. GeoSciML include polygons that intersect the view frame.
Achieved
Also it would be a good feature to be able to search Lithology tree. Francois said it could be done, but probably will not be by September.
BRGM to implement, as part of greater WFS functionality, in the future.
4) Francois Tertre (BRGM) will continue to test GeoServer WFS response performance with full ERML database, and post issue to GeoServer if it is found to be not acceptable.
Francois reported that GeoServer performance was now adequate, but will report further when benchmarked against other service software (deegree, GeoServer, and Constellation from Geomatys).

WFS software (implementation tests)

Software currently tested are:

- GeoServer (which offer all the functionalities we need, but we still have to perform some performance tests)
- deegree (which presents 2 problems: implementation of voidable attributes, and requests on attributes)
- Constellation (currently tested and developed in France)

- BGS also uses XtraServer which is a commercial software.
- ArcGIS 10.3 does not and will not support complex feature GML.

BRGM (Sylvain, François T., Agnès), BGS (Marcus, James) and GSC (Eric), could work together

5) Leah Musil (AZGS) to send list of metadata harvesting issues she has from GetCapabilities documents to Agnes of BRGM in case she can shed light on these issues.

Achieved

Sent to BRGM. BRGM will respond when it has latest GeoNetwork version in production (which will be 3.0)

6) BGS (James Passmore) to provide BRGM with example JavaScript for 'GetInfo' tool for WCS layer.

Achieved

Supplied a sub-setting request example

7) BGS will produce data provider cookbook for WCS services using standard server software, and update portal documentation when portal is ready to support WCS services.

Achieved

Version 1.0 cookbook published as initial draft.

8) BRGM to implement this altered KML writing script so that OneGeology WMS 1.3.0 services referred to in the KML file will work in Google Earth (INSPIRE geoportal already does this).

Not yet done, but will implement in the next version of the portal.

KML

The KML generated should be tested in Google Earth. There is a problem with WMS 1.3. BRGM probably only needs to "comment out" the code added some years ago to deal with WMS 1.1.0. The problem seems to be only related to the use of CRS84 instead of EPSG code. The INSPIRE/JRC portal generates KML files correctly. See with James for detailed information.

9) James will check that New Zealand S. Victoria service has been re-registered, and look into getting Blue Marble base for south polar region projection backdrop. Also for Denmark issues find a north polar region image base map that doesn't have these problems if that is the issue.

Achieved.

further discussion in projection agenda item

10) BRGM will deploy base maps for N. Polar region using GeoServer rather than coming from a BGS server once BRGM have latest GeoServer software available in the autumn.

BRGM can´t yet have a GeoServer server in production.

BRGM will investigate if projection bug can get be fixed in MapServer (https://github.com/mapserver/mapserver/issues/2765)
BGS will move Arctic backdrop to production server.
11) GSC (Eric Boisvert) plan to move OneGeology services from Groundwater server to a dedicated OneGeology service using GeoServer (or some other software that works in the polar regions).
GSC have not yet been able to implement a GeoServer production service to enable Arctic projection.
12) Tim and Satish spoke by phone just before the meeting, and they will confer in late July by teleconference to discuss progress with WFS 2.0 support in ArcGIS server core.
Tim: ArcGIS 10.3 server (and beyond) no current intention to support complex feature WFS 2.0, only Simple Feature GML as most demand is for this.
13) Francois Tertre (BRGM) proposed to bring forward practical proposals for adding user content (geoscience documents) in the portal to the May, 2015 meeting.
This will be an agenda item

4). Multi-projection support

Issues: Is this satisfactorily working yet in the Arctic and Antarctic regions? BRGM GeoServer services for backdrops; Changes required to data provider services e.g. GSC.

- LCC doesn't work for BGS (MapServer with shapefile) and Finland (ArcGIS 9.3.1 with oracle) in portal. BGS to investigate further, but appears to be axis order issue (tests in the meeting).
- Layers deleted in one view reappear in projection view (if previously opened in the view)
- New Zealand not showing in Antarctic as projection information in service level is not harvested by current GeoNetwork
- Layers previously selected and visible do not turn back on.
- Agnes will consider with colleagues adding to the OneGeology portal the service checking system.(similar to the system implemented in old OneGeology-Europe portal)
- Agnes will consider with colleagues Herve Theveniaut renewing the Guyana service.

SRS

1. At the moment, SRS are read at layer level. Unfortunately, GeoServer only allows one SRS definition at layer level, others are at service layer. BRGM to instigate a solution (see how GeoNetwork harvests the SRS, and see if the

OneGeology (global) portal has to add a routine to read SRS at service level in order to determine if a layer can be displayed or not). See example with NZL when we change the SRS used by the portal.

2. When once change the portal SRS, all the layers (previously unchecked/made invisible) are visible.
3. When once change the portal SRS, if some layers are invisible because they do not have the corresponding SRS, then we change again the portal SRS, those layer are still invisible.

5). Recent support for OGC WCS services within OneGeology portal

Issues: Keywords their use and GetCapabilities harvesting; production of cookbooks to support this new service type and open source (GeoServer, MapServer, community Rasdaman) and commercial server software support (ESRI – when will they support WCS 2 for server and client?) including 'visualisation' mode (png, gif) versus data download mode. 'GetInfo' tool for WCS.
WCS services have been successfully added in the OneGeology (global) portal and catalogue. This implementation will be available in the next version of the portal. We now wait for services (the service registered was only for demonstration purpose).
WCS services and coverage have exactly the same naming and keyword conventions than the WMS services and layers
What's mandatory to register WCS, WMS, WFS in OneGeology (global) catalogue?
In the OneGeology (global) client, do we keep the "add OneGeology layer" with the tree by countries, or do change the search tool?

- Keep country list as one of the service selectors
- Allow keywords to list more than one geographic keywords
  - o A layer could have several values for a same keywords among: continent@, subcontinent@, geographicarea@, subarea@...
- Allow non UN geographic areas for example sea areas defined by EMODnet... others as applicable,
  - o BGS to source? (see NonCountryBoundGeographicAreaListings)
- Add keyword search tab with a drop down, allow multiple search terms
- Add Geographic (bounding box search ~ not keyword)
- Consider tab names, do we want to separate by geography and theme, or official (Geological Survey) and Academic...
  - o A search area (included in the portal, then requesting the GeoNetwork CSW) should allow a user to:
    - ▪ Search by thematic keyword (the tree of keywords should be presented

- Search by zoom in the map (list of the layers available in the currently displayed bounding box)
- Search by geographic area (the current tree should be still displayed because users are used to use it).
- Search by service type (WMS, WCS, WFS). And/or by "WMS for which it exists a WFS".
  - o The board to decide if they want separate tab names for the different search types once the new version of the portal is released.
- Add formally registering WFS services in the system
- Add service type keyword to facilitate search by service type...
- New functionality added to Open Layers button requires change to make it more obvious that this is the entry into the system. BRGM to consider how to implement this. The main button "add OneGeology layer" should be much more obvious for a new user.
- WCS keywords will be same as WMS requirements
- OneGeology keyword still required for a layer/coverage to be included in portal.
  - o Only a layer having the keyword "OneGeology" is considered to be a OneGeology layer. The others should not be registered in the catalogue.
  - o GeoNetwork will always generate one dataset per layer, but BRGM will consider to add a routine which will not add the layers not having "OneGeology" in their keywords. rather than deleting them by hand after harvesting as currently.
- Review issue of other service layers to be included, where service exists but can´t be modified. Investigate GIN type mediator/proxy as a solution.

Consequences

- geographicarea@ and continent@ keywords are no longer mandatory, but it's still a recommendation.
- subcontinent@ and subarea@ are still optional.
- dataowner@ (or dataprovider@) and serviceprovider@ are still mandatory (only one value allowed)

6). OneGeology metadata support

Issues: BRGM move to GeoNetwork 3.0 for the OneGeology metadata catalogue and support for keyword geoscience domain searches for data.

- Covered in above items.

Future relationship with OneGeology-Europe/EGDI and GNEISS metadata (catalogues) for INSPIRE compliant OneGeology services.

- GNEISS is unfunded
- EPOS tie in?
- EGDI-bridging project will investigate how to convert OneGeology-Europe (old to new GeoSciML) WFS services to be operable in the OneGeology portal
- If necessary OneGeology can link to existing metadata catalogues, such as the old OneGeology-Europe.

Technical Futures Items

GeoNetwork 3 Has been successfully tested (data from the old OneGeology (global) version have been migrated) but the portal is not yet linked to the CSW service. It should be done in the next weeks. Mails sent by AZGS should be explored to see if GeoNetwork 3 has fixed the listed problems. Else, BRGM will transfer the discussion to François X. Prunayre (GeoNetwork developer).
Use of "continental initiative" metadata catalogues in OneGeology We could explore the cost of adding the OneGeology-Europe metadata catalogue, and similar other CSW catalogue implemented by continental initiatives (such as the GEOSS catalogue currently available in the OneGeology (global) portal).

7). Discussion about the planned income generating publication platform (for scientific articles PDFs and shape WMSs

- Discussions with IUGS (episodes)
- BRGM have investigated technologies, review process (human interaction) for incorporating scientific articles, abstracts, etc. in the portal.
- Technologically possible, but issues on oversight, does the registered user have the authority to publish etc..
- Funding issue, competition with Government, EU open data / science initiatives, so must offer some unique selling point.
- Functionality to allow users to endorse uploaded datasets.

For a registered (and validated) user,

- To upload a document, and associated raw data: each data/document as a link in a metadata record.
- To upload a raw data, and register metadata.
- For some type of raw data (raster, shapefile), semi-automatic tool to create a WMS layer (and configuring the rendering).

- Regarding documents, they should only be already published in a conference/workshop/…
- Such a platform should be OpenData compliant.
- Statistics of use will be very important.
- Work with IUGS to upload existing (and future) raw data and articles will be possible.
- Work with IGC 2016 will not be possible.

8). Discussion about long term plans to provide cloud platforms for 'semi-automatic' configuration and serving of OneGeology WMS, WFS, and WCS services

Issues: the BRGM Carmen experience, the EU InGeoCloudS (nearly INSPIRE compliant services) project experiences and conclusions – the work that BRGM is working on post InGeoCloudS. Costs, 'automatic configurability', and practical conclusions.
Background is that some potential data suppliers have issues configuring and providing OGC services.

- What functionalities are required?
- semi-automatic creation of WMS conformant to a profile, proven in Carmen and InGeoCloudS, WFS has not really been developed (only by default simple feature WFS, that is obtained by setting up any MapServer service).
- BGS to explore HALE ability to create GeoServer AppSchema.

9). Discussion on the role out of proto-OGC GeoSciML 4 in 2015

State of play, production of cookbooks, small changes to portal clients and support for INSPIRE-CGI dual exact-match code value resolvable URI's.

- Portal to be modified to allow for this new version 4 of GeoSciML for WFS services.
  - GeoSciML V4 is almost ready (schema, implementation tested, schematron for INSPIRE and OneGeology). As soon as the first services are available, BRGM will have to change the tool (only the XPath for lithology and age). The *old* services will not be working in the tool any more. Vocabularies are not changing, and the possibility to query using CGI-URIs or INSPIRE-URIs is already available.
- Cookbook for EarthResourceML (ERML) 2.0 WFS for OneGeology in the medium term; and also for ERML-Portrayal? when supported tools for querying these schemas could be added.

- Inclusion of GroundWaterML (GWML) too in the long term

10). Discussion on feedback from recent OneGeology Technical Advisory Group

Issues including eventual support for 3D client in portal and perhaps sooner support for more sophisticated 3D use of GeoSciML including Chinese Geo3DML ideas etc.

- Introduction_to_Geo3DML_2014.10.28.pdf: An Introduction to Geo3DML - China Geological Survey
- Issue was discussed and we await the conclusions of the CGI-3D group chaired by Francois Robida in particular the conclusions of the scope of the term 3D here.
- part of a scoping study being undertaken currently by BRGM.

11). Any Other Business

Action Marko, OneGeology-Asia and OneGeology-Europe naming issues (trademark issues) re-branding, also check that the logos are the same for all related activities/sub-projects. Related projects need to link to OneGeology project; should reciprocal links be added?
Action BRGM
Urszula Stepien (PGI) asked BRGM to check if Russia/Commonwealth of Independent States (CIS) draws over over Poland.in the automatic layers,

Draft summary of actions arising

A. BRGM to fix the portal tool to create KML for WMS 1.3.0 services
   - ○ [Action 8 from Tucson meeting]
B. BGS to configure a production GeoServer server to provide the Arctic backdrop to the portal
   - ○ [Action arising from discussion of action 10 of Tucson meeting]
C. BRGM to investigate a solution to enable GeoServer services with multiple projections to be viewable using the multi-projection tool.
   - ○ [Action from multi-projection support]
D. BRGM will investigate issues relating to which layers are shown as visible when switching between projections.
   - ○ [Action from multi-projection support]
E. BRGM will consider adding a service availability tool/indicator to the portal
   - ○ [Action from multi-projection support]
F. BRGM will investigate reinstating the Guyana service
   - ○ [Action from multi-projection support]

G. BGS to investigate further the issue of LCC not working
- o [Action from multi-projection support]

H. BGS to canvas opinion for other (non UN geographic areas) vocabularies to define geographic extent, to be available as permissible values for geographicarea@ attributes
- o [Action from OGC WCS services]

I. BRGM to configure portal to allow WFS services to be explicitly registered (and searchable)
- o [Action from OGC WCS services]

J. BRGM to configure harvest system to allow a servicetype@ keyword, to facilitate portal searches by type of service.
- o [Action from OGC WCS services]

K. BRGM to consider how to automatically register only those layers/features/coverages that contain the OneGeology keyword, (and disregard all other layers).
- o [Action from OGC WCS services]

L. BRGM to create a new version of the portal that provides access to WMS/WFS/WCS registered services by geographic area, by type, and by theme.
- o [Action from OGC WCS services]

M. BRGM/BGS to review methodologies to incorporate existing non-OneGeology profile conformant services in the portal
- o [Action from OGC WCS services]

N. BRGM to migrate the existing OneGeology metadata catalogue to a new GeoNetwork 3 implementation.
- o [Action from OneGeology metadata support]

O. BGS/BRGM to consider technological solutions to allow for semi-automatic configuration of OneGeology candidate services
- o [Action from discussion about long term plans]

P. BGS to explore HALE ability to create GeoServer AppSchema
- o [Action from discussion about long term plans]

Q. BRGM portal to be modified to allow for GeoSciML 4 WFS services
- o [Action from discussion of proto OGC GeoSciML]

R. BRGM (Francois Robida) to report the conclusions of the CGI-3D group as a methodology to allow 3D content in/through the OneGeology portal
- o [Action from feedback from 1G TAG]

S. Marko to contact consortia related to OneGeology project over trademark and logo issues.
- o [Action from AOB]

T. BRGM to check whether the automatic layers are correctly ordered for CIS and Poland.
- o [Action from AOB]