OneGeology Technical Implementation Group Meeting

DATE: 28 June 2019

TIME: 09:00

VENUE: Royal Museum for Central Africa, Tervuren, Belgium

Invitees

All listed technical contacts for OneGeology

Apologies

- Ollie Raymond Geoscience Australia

Attendees

At Africa Museum

- James Passmore (JP) British Geological Survey (co-chair)
- Nicolas Mauroy (NM) Bureau de Recherches Géologiques et Minières (co-chair)
- Marcus Sen (MS) British Geological Survey
- Franck Theeten (FT) Africa Museum (host)
- Max Fernandez (MF) Africa Museum (host)
- Katarzyna Jóźwik (KJ) Polish Geological Institute - National Research Institute
- Urszula Stępień (US) Polish Geological Institute - National Research Institute

Remote

- Gabriel Asato (GA) - Part attendance
- Héryk Julien (HJ) Commission géologique du Canada - Part attendance
- Hiran Silva Dias (HD) CPRM - Part attendance

Introduction

Discussed the new OneGeology structure with a Strategic Steering Committee and Operational Group. This Technical Implementation Group (TIG) will have a more open membership with any OneGeology participants who want to contribute.

1. Minutes of the last meeting

http://onegeology.org/docs/meetings/TIG-Agreements-and-actions-Canada-2018.pdf

Accepted.

2. Actions arising

Read through the actions from the minutes. Those that have been made into issues on the Forge issue tracker will be covered in the next item. Those that aren't issues are discussed below.

Action 8: FR to discuss with OGC, putting money towards getting an OpenLayers developer to put WMC content back into OpenLayers. The next day OneGeology workshop on LOD requested that for now (until OWSContext was supportable) the OneGeology portal continue to support WMC output.

RESULT: Portal does have WMC output. No one at the meeting knows whether any approaches were made to OGC or OpenLayers developers on adding WMC. Forge issue 23806 created to follow up.

Action: BRGM to investigate using iframes or tabs to show GFI responses in the future portal

RESULT: (http://onegeology.brgm-rec.fr/mapClient_iframe/) or tabs to show GFI responses. This is particularly relevant for services with customised responses. BRGM looked into this but are concerned about the security implications. Currently some of the HTML gets cut out so some providers' legends don't display correctly. In staging version at http://onegeology.brgm-rec.fr/mapClient/ we can see that a full size GFI response can be seen. For example, look at Canada service. This now displays at a much better size. Looking at another example of UK Stoke on Trent service the graph does not display because it is not an iFrame. So we currently don't have a solution that enables full flexibility in customising the GFI response and that is secure. Another possible solution is to display the response as now but include a link to open a new window with the full response which can then show fully customised format without interfering with the Portal page. Made forge issue 23871.

Action 11: BRGM to Refresh GEOSS relationship, register new OneGeology CSW endpoint. - Was not actioned.

RESULT: Done.

ACTION: After table discussion NM agreed to speak with Michael (GSA) to discuss how GSA are currently capturing the data and possibly using these techniques to enhance stats already captured in the portal.

RESULT: some discussion has occurred. Will continue working on how to collect usage stats. Action closed.

ACTION: TIG to ask the OneGeology Board, what they would like to see/do with the statistics and the information that are currently being produced via the portal.

RESULT: This was done and the Board want to keep statistics internal. There is limited understanding that can be obtained from them. They will just be reported periodically. Action closed. It is useful for some people to know how much their services are used.

ACTION: All TIG members are asked to visit the technical pages and feedback to the onegeologyhelp email address with any ideas or suggestions.

RESULT: Limited response. Action closed.

ACTION: The TIG should interact with OGC Borehole Interoperability Experiment (IE), to ensure that the OneGeology 3D use cases for boreholes are included.

RESULT: MS and JP and other 1G participants were at OGC Borehole IE on Wednesday. The IE is finishing later this year. No one at the meeting is aware of any 1G Borehole use cases and this action was not carried out. Closing as not done.

ACTION: TIG to review current status with APIs for model discoverability and visualization including cross-sections and compile a comparable report of possible solutions, for the next OneGeology Board telephone conference in the autumn.

RESULT: Closing as not done.

ACTION : BRGM to add the minerals portrayal tools for ERML-Lite services to the portal, specifically to allow symbolization on commodity, mineral occurrence type and mines operating status.

RESULT: Not done. Created Forge issue #23808 to keep live.

ACTION : JP to push out view on top of existing ERML layers from M4EU to create ERML Lite service for the OneGeology portal.

RESULT: Closing as not done. There are issues with the data which makes this problematic to do.

ACTION: BRGM to re-instate capability to support loading and using WMC in the portal to facilitate Linked data.

RESULT: Done

ACTION: TIG to seek approval from OneGeology Board, to move forward with the discussed next stages. This was to do with things like Python, Jupyter notebooks etc. This was discussed with Board and approved for TIG to go ahead.

RESULT: Done. Setting up GitHub pages was first step.

ACTION: BRGM to investigate a more open repository for OneGeology code and report findings to the next Board telephone conference in the autumn.

RESULT: GitHub OK but haven't made conclusion about licensing. (Licensing is on the agenda of this meeting.)

3. Forge Issues

Forge is an Issue tracker run by BRGM. Access is currently restricted.

The meeting went through a number of open issues. Comments were added to issues themselves.

Open issues

During discussion of SLD issues FT asked whether it would be possible to make the SLD editing capability of the Portal accessible for more general editing (Created Forge issue 23809 - SLD to download).

HD has been moving services to ArcGIS Server but is having problems making things 1G compatible. He is investigating using GeoCAT to translate mxd to FOSSGIS. We are intending that 1G Portal should be able to use any standards compatible server so we think ArcGIS Server should be OK. HD mentioned the issue of having to edit the GetCapabilities XML file to customise it in ArcGIS. HD wants a simpler process.

Discussed how Portal can distinguish simple feature WFS from complex feature WFS. This arises because many users wish to download data but there are very few complex feature WFS. Many services which have had WMS set up also have a simple feature WFS set up (because software makes that easy) so we want to make those simple feature WFS more obviously accessible. Not sure if keywords are the best mechanism for this. Users also need to know what the WFS URL is. One possibility is to use another DataURL?

How we prioritise issues / what should be prioritized

Discussed handling bug issues, features and how they fit with the longer term strategic objectives of OneGeology. Reasonably lengthy discussion.

Conclusion: The TIG should meet more frequently than once a year (e.g. one face to face meeting with 3 other virtual meetings). At these quarterly meetings the TIG will review all the issues and mark which are priorities for the next quarter. JP and NM attend the Operations Group and will know what their priorities are; if we have to make a choice where we aren't sure what to concentrate on then JP and NM will consult the Operations Group.

Opening up forge / how to report an issue

TIG members who want access to the BRGM Forge issue tracker should email onegeologyportal@brgm.fr to obtain an account.

4. Establishing a standards group for Digital Twin

(and other actions from http://www.onegeology.org/docs/meetings/OSSC_MeetingMinutes_March_2019.pdf).

Discussed what a digital twin is and potential use cases for geological work compared with manufacturing. The meeting participants do not have any particular knowledge in this area so will send out a call to other 1G participants for input to this. (Created Forge issue 23818)

5. Improving involvement (open source platforms)

In Vancouver TIG meeting we discussed getting more active involvement rather than a once a year meeting.

Issues with using git(hub|lab)?

First action was to create OneGeology GitHub account (https://github.com/OneGeology), send an email about it and put some seed questions in the discussion forum at https://github.com/OneGeology/TechnicalDiscussion/issues . So far not much activity. Generally happy with GitHub as a platform. Activity might increase once Portal code put on?

How often should we meet (online/F2F)

e.g. have regular meetings to do issues review

Proposal: From now we will try to continue to have a face to face meeting about once a year. In addition we will try to have regular virtual meetings (3 or 4 times a year) which will cover reviewing the Forge issues and other technical matters. It may then be possible to shorten the face-to-face meeting to cover wider strategic issues and then get the TIG meetings included as part of other meetings such as OGC Technical Committee meetings.

Collaborative cookbooks / translations

We have changed the way we have created cookbooks over the length of the project. Not everyone is aware of them (need to raise awareness). They are very useful as beginners' guides to setting up services and this is still an important role for organisations without sufficient knowledge. Some parts may have got out of date. Having downloadable printouts of cookbooks is still useful for some organisations. (Even if the services will have to be deployed on servers with good connections, their development might be done on machines with poor Internet connectivity.) We want to put documentation on GitHub so that technical participants can help contribute to the documentation but it can be built to produce standard web pages.

Would StackOverflow be a good platform for more problem solving OneGeology queries? How would that compare with using GitHub issues?

Discussed awareness of where current cookbook material is on OneGeology website and template services for different software.

HJ has some experience with MapProxy and Docker containers for GeoServer; these could be useful additions to documentation and template services.

Proposal: The current "How to Use" and "Providing Services" cookbook source will be put on GitHub with build system configured to make GitHub pages that users can read. The current www.onegeology.org website content will be replaced with links to the GitLab pages content.

Translations: Non-native English speakers didn't think that translations were a high priority and can also cause more problems when software and standards are using English. We have had some cookbooks translated to Spanish in the past but now much older versions of the software.

A different question is handling queries from non-English using people. Can other 1G participants help answer or translate questions from non-English users? (Any ACTION?)

Discussed adding the versions of the software used in cookbooks. This is very useful for users but hard for authors to keep track of especially when different parts of the cookbook are updated at different times. Would discussion forum be a suitable place to put comments about differences in behaviour between different versions? Didn't reach a definite conclusion but this is an issue.

Collaborative code i.e. portal / plugins

Portal code can be put on GitHub as soon as a licence is agreed. BRGM would approve any pull requests for versions to be deployed.

Is there other useful code that could be contributed? E.g. Schematrons to validate services, Dockerfiles, … External projects we might want to contribute to? Owslib, GeoServer, ...

Which licence(s)

https://creativecommons.org/share-your-work/
This will be for cookbooks and other documentation. Discussed the differences between this and terms for data access and code. Agree to propose https://creativecommons.org/licenses/by-sa/4.0/ to operations group. (Created Forge issue 23818.)

https://choosealicense.com
This is for software code. The Portal code uses some third party open source libraries and so BRGM need to check whether they put any restrictions on what licence the code could be put under. There

may be other software we create but there isn't anything yet so didn't make any decisions in this meeting. (Created Forge issue 23822.)

6. Portal review / discussion

Planned developments

Adding ERML-lite support

NM hoping to do this before the end of the year. Having it done before the IGC in Delhi in March 2020 is very important.

Spent some time discussing the current ERML-Lite services and issues with symbolisation etc.

Issues with existing policy/strategy

Review current system

Discussed making the new globe view the default. At the moment it doesn't perform well and there are some other issues with which services can display, there was a problem with getting GetFeatureInfo working so we can't do it now. Meeting agreed that if the technical problems can be resolved, then the globe view would be a better starting view that would be more accessible to the general public.

Discussed having topographic features like countries and roads and city names visible so that it was easier for people to understand where they are. Looked at different backdrops and levels of transparency. Bing road is nice backdrop but if usage went up it might cost money.

ACTION NM: Make default transparency of layers when they are first added 50% (or close). Created Forge issue 23823.

ACTION NM: Experiment with making OpenStreetMap the default background for the small overview map to make it easier to understand where you are. Also check whether there are better OpenStreetMap symbolisation options which make City names, roads etc. clearer. Created Forge issue 23872.

ACTION NM: Consider a better icon for the overview map pop-up. Created Forge issue 23873.

ACTION NM: Experiment with making overview map automatically pop up when you are zoomed close. (You know where you are when zoomed out to country levels.) Created Forge issue 23874.

The automatically displayed layers often cause questions.

ACTION NM: Circulate the currently configured list of which layers are displayed at which zoom levels (and locations?) to meeting attendees who will then draw up a policy which describes how these should be selected. Created issue 23875.

UN Listing (Geographic classification):

The listing is not static and this can cause issues in the classification.

Proposal: Only use the geographic area from the service GetCapabilities and ignore the continent and sub-continent values. Use a Portal copy of the UN hierarchy to organise the services within the

geographic hierarchy and update this periodically as UN list changes. Drop the requirement to put continent and sub-continent keywords from cookbook guidance on 1G portal. This partially addresses problem; not completely.

ACTION NM: change portal to ignore the parent geographic areas for services and maintain hierarchy in Portal itself. Created Forge issue 23877.

ACTION MS: change cookbook guidance to drop parent geographic area keywords from OneGeology profile. Created Forge issue 23878.

How should we deal with areas not covered such as Sea Regions? Discussed but no resolution. JP will consult to see if there are, for example, official lists of sea regions.

Thematic keywords / @ style keywords in general

Should/could we be using vocabularies instead or as well, for example:

http://ogc2.bgs.ac.uk/cgi-bin/GEMAS/ows?Service=WMS&request=GetCapabilities

https://gs-seamless-og.geoscience.nsw.gov.au/geoserver/wms?version=1.3.0&service=WMS&request=GetCapabilities

Some keywords are used for portal functioning. Some are just our creations for making GetCapabilities ISO 19115 compliant (MD_LANG@..., MD_DATA@...,)

Could use the vocabulary attribute on Keyword elements to flag ones with special OneGeology significance. Explained the options but didn't make any definite decisions. Is it worth while doing a lot of work to change things? Really up to Portal and help desk implementers to decide how much work and how much it will help.

Is the profile working?

Is the current profile a burden for service providers? We often find we have to go round several times when registering services to get providers to correct their metadata. FT thought the naming conventions etc. were helpful in organising their services, not a burden.

Maybe it would be an idea to have a registration system where people put their WMS (or whatever) URLs and the form asks for some of the metadata instead of it having to be put in GetCapabilities? Discussed pros and cons of this approach. Perhaps some keywords like serviceprovider@ are less useful as metadata in service but could be on form to reduce burden a bit? A tool to create configurations from a form input would be very useful but significant effort to develop. QGIS Server might have some useful tools for this; investigate? There is also a QGIS plugin done by a French ministry, QSphere that enables creation of metadata. MapServer can create ISO metadata XML from its configuration file. No specific action but discussion was helpful in thinking about ways forward.

7. Web site review / discussion

How can we improve documentation?

Please could people review the www.onegeology.org website and provide feedback on whether you can find what you want there and use it easily.

8. Metadata

Filtered OneGeology layers (CSW)

We ask people to put OneGeology keyword in layer so that Portal knows which ones to harvest. Some people have services with non-OneGeology layers in their services. This isn't actually used to filter which layers are stored in 1G catalog; non-1G layers are just manually deleted after harvest. Maybe the OneGeology keyword still serves some use for discoverability though? No definitive conclusion so won't change anything for the moment.

GeoNetwork maps tab

ACTION NM: don't display GeoNetwork Maps tab unless we get its functionality working. Created Forge issue 23880.

SEO (JSON-LD and Open Graph)

For example, https://github.com/geonetwork/core-geonetwork/issues/3820. We have asked GeoNetwork to add the above types of metadata to GeoNetwork to make nicely harvestable by search engines. This has been added to a future version.

9. Service Monitoring

Reporting (for example how can we use it to monitor 95% up time for accreditation)

BRGM now monitor which registered services are operational but haven't decided what to do with this (e.g. whether to remove non-operational services from the Portal listing or put warnings about them in the listing.) Most important thing is for BGS to have access to this information so they can chase up poorly performing services manually. Then discussed whether Portal should display non-performing layers.

ACTION NM: make an accessible report of amount of downtime for each service. Created Forge issue 23881.

Service status maps (KML?) (can we replace the www.onegeology.org KML of active countries and regions)

The www.onegeology.org status map doesn't work properly now. Propose to delete it. The above BRGM status report will replace it.

10. Portal feedback

What do our users think? There is now a link on Portal for users to provide feedback. We have already received 24 responses. Reasonably satisfied with Portal. Reviewed the purposes and how people found the site. This feedback is quite informative and probably more useful than stats on web hits. We should review the report after the meeting and see if it can help influence improvements.

ACTION NM: compile ongoing reports before every TIG meeting for review.

11. HTTPS?

- Should we be recommending that services are https?
- Should the portal be https?
- What are the implications and issues?

Some organisations have a policy that they can't access non-HTTPS services. EGDI are going to accept only HTTPS services. NM said all services are being proxied so there shouldn't be a problem with the Portal serving HTTP services over HTTPS.

ACTION NM: Investigate switching portal to https and proxying non https OGC services. Created Forge issue 23882.

12. OpenAPI/WFS3/MVT/WMTS support

Does anybody want these?

We've had some requests for these. Discussed what priority should be. Concluded we will probably leave this for any interested contributors to code once Portal code goes on GitHub. Keep a watching brief. HD noted that Brazil are planning to implement HTTPS and WMTS services.

13. AOB

None.

Actions Summary

Where appropriate these have been made into Forge issues for tracking progress. (TIG members who want access to the BRGM Forge issue tracker should email onegeologyportal@brgm.fr to obtain an account.)

- BRGM: Contact OGC and OpenLayers developers about adding WMC support. Carried over from Vancouver TIG. Forge issue 23806.
- NM: Investigate having link to separate window for custom GetFeatureInfo responses. Forge issue 23871.
- NM: BRGM to add the minerals portrayal tools for ERML-Lite services. Carried over from Vancouver TIG. Forge issue 23808.
- NM: Look into making the Portal created custom SLDs available to users so they can use it as a simple SLD editing tool. Forge issue 23809.
- TIG chair: Put out a call to 1G technical contacts (and wider?) for input on standards relevant to "Digital Twins". Could create a GitHub issue as a forum for discussion. Forge issue 23818.
- TIG chair: Set a date for the first in a series of quarterly virtual TIG meetings, email details to 1G participants and set up GoToMeeting (or alternative). Forge issue 23819.
- MS: Put cookbook documentation source in GitHub repository and make it build GitHub pages. (Temporary licence statement?) 23820.
- TIG chair: Propose to operations group that we use Creative Commons licence specified above for OneGeology documentation. Forge issue 23821.
- NM: Check the current licences of software used by Portal code and agree with BRGM an open source licence to propose to OneGeology operations group for use when Portal code is made available. Forge issue 23822.
- NM: Make default transparency of layers when they are first added 50% (or close). Forge issue 23823.
- NM: Experiment with making OpenStreetMap the default background for the small overview map to make it easier to understand where you are. Also check whether there are better OpenStreetMap symbolisation options which make City names, roads etc. clearer. Forge issue 23872.
- NM: Consider a better icon for the overview map pop-up. Forge issue 23873.
- NM: Experiment with making overview map automatically pop up when you are zoomed close. (You know where you are when zoomed out to country levels.) Forge issue 23874.

- NM: Circulate the currently configured list of which layers are displayed at which zoom levels (and locations?) to meeting attendees who will then draw up a policy which describes how these should be selected. Forge issue 23875.
- NM: change portal to ignore the parent geographic areas for services and maintain hierarchy in Portal itself. Forge issue 23877.
- MS: change cookbook guidance to drop parent geographic area keywords from OneGeology profile. Forge issue 23878.
- JP: see if there are any definitive lists of sea regions that could be used in the geographic hierarchy listing in the Portal. Forge issue 23879.
- NM: don't display GeoNetwork Maps tab unless we get its functionality working. Forge issue 23880.
- NM: make an accessible report of amount of downtime for each service. Forge issue 23881.
- NM: Ongoing action to compile reports of user feedback for review before every TIG meeting.
- NM: Investigate switching portal to https and proxying non https OGC services. Forge issue 23882.