MIG-T - Call for participation #2441
MIWP-7b: MIG temporary sub-group on Extension of Download Service Technical Guidelines for Web Coverage Services (WCS)

18 May 2015 08:34 pm - Michael Lutz

Status:	Closed		**Start date:**	18 May 2015
Priority:	Normal		**Due date:**	31 May 2015
Assignee:	Jukka Rahkonen			

Description

This is a **call for participation** in the MIG temporary sub-group on Extension of Download Service Technical Guidelines for Web Coverage Services (WCS).

Many INSPIRE spatial **data themes** (orthoimagery, elevation, geology, atmospheric conditions/meteorological geographical features, oceanographic geographical features, soil, land cover, natural risk zones, energy resources) include data that, according to the INSPIRE data specifications, have to be made available as coverages. The 'Habitats and Biotopes' and Environmental Monitoring Facilities' specifications mention that the use of coverage model should be considered once mature implementations appear. Other data specifications such as 'Sea Regions' whilst not mandating data should be provided as coverages, would benefit from consideration within these guidelines.

The current **TG for download services** are based on Atom feeds (for pre-defined dataset download services) and WFS 2.0 (for pre-defined dataset and direct access download services). While coverage data can also be provided using Atom feeds or WFS, these options are not well suited for many coverage datasets, because single coverages are often several GB or even TB in size and users are typically only interested in some sub-set of the data, e.g. as defined by a user-defined bounding box or time period (trimming) or queries that reduce the dimension of the result coverage (slicing), e.g. extracting a temperature surface at a certain depth from a 3D ocean temperature coverage.

The MIG workshop on WCS-based INSPIRE download services on 14-15 October 2014 demonstrated that all operations required by the Download Service IRs can be mapped to the WCS 2.0 standard, and that using a WCS for providing coverage data provides a number of benefits and opportunities. The workshop also illustrated that further guidelines or best practices are needed for how to provide harmonised INSPIRE coverage data through the WCS. Such guidelines should revisit and, if required, propose updates to the encoding guidelines currently included in the data specifications.

The INSPIRE MIG has decided to **set up a temporary sub-group** to develop such guidelines as part of action MIWP-7b.

The main **outputs** of the sub-group will be:

  - Updated Technical Guidelines for Download Services to include WCS
  - Technical Guidelines (or updates to existing technical guidelines) for the provision of coverage data in conformance with the INSPIRE data models using a WCS
  - Open Source INSPIRE compliant WCS 2.0 implementation(s) based on existing mature WCS 2.0 software
  - Analysis of the impacts (e.g. costs) of implementing the updated Technical Guidelines

A detailed description of the scope, tasks and deliverables of the sub-group are available in the attached **Terms of Reference** (ToR).

Nominations by MIG representatives and applications from the pool of experts should be posted as comments to this issue, specifying the following information:

Name:
E-mail:
Affiliation:
Expertise: [list the experise and experience that qualifies the expert for participation in this sub-group]
Contributions: [describe how the expert will contribute to the the tasks and/or deliverables mentioned in the ToR]

Experts who would like to support the work of this sub-group can also apply by e-mail to Jukka Rahkonen with the above information and/or contact their national MIG-T representatives.

The initial deadline for nominations and applications is 2015-05-31.

The virtual **kick-off meeting** will take place on Tuesday, 23 June 2015, 11:00-13:00 CEST.

History

#1 - 20 May 2015 01:43 pm - Daniela Hogrebe

Nominated by Germany:

Name: Peter Baumann
E-mail: p.baumann@jacobs-university.de
Affiliation: Jacobs University, Bremen
Expertise: editor of the OGC coverage, WCS, and WCPS standards co-chair, OGC Coverages.DWG, WCS.SWG, BigData.DWG Principal Architect, OGC WCS Core Reference Implementation
Contributions: contribution to the Technical Guidelines, guidance on OGC WCS, from both standardization and implementation perspective, Software development of INSPIRE/WCS open source solutions (7.2)

#2 - 25 May 2015 08:28 pm - Alex Ramage

Nominated by the UK.

Tim Duffy

  - E-mail: trd@bgs.ac.uk
  - Affiliation: British Geological Survey
  - WCS/coverage experience: Volunteered to be one of the leads on adding WCS section to downloads services TG many months ago at MIG. Involved with earthserver project and getting WCS up and running for INSPIRE compliant OneGeology inititive. Hva already looked into this and its applicability with colleague James Passmore
  - Motivation: Many annex II and III themes can best have dataset web services expressed in WCS form.
  - Contribution: Keeping one opensource WCS software solution INSPIRE compliant as the identified needs appear – starting with the INSPIRE extended capabilities addition; contributing to the technical writing of the WCS chapter based on our experience with the FP7 funded Earthserver project, contributing to the View service TG, the Download TG and putting up exemplar INSPIRE services;

James Passmore

  - eMail: jpass@bgs.ac.uk
  - Affiliation: British Geological Survey (BGS)
  - WCS/coverage experience: Actively involved in the EU FP7 EarthServer project (http://www.earthserver.eu/), as part of the BGS lighthouse application to provide access to Terabytes of coverage data through OGC WCS and WCPS services; as part of this activity, filed many tickets to ensure that the software was as conformant as possible to the current INSPIRE download services documentation. As one of the BGS SDI technical experts I have hands-on knowledge of using multiple software (Rasdaman, ArcGIS, MapServer, GeoServer, GeoNetwork) to provision OGC and INSPIRE compliant services.
  - Motivation: Discuss errors/issues in the circulated 'WCS as Candidate INSPIRE Download Service for Coverage Data' document, offer a live demonstration of an INSPIRE compliant WCS 2.0.1 service to the meeting. Harmonization and clarity of download services technical guidelines.
  - Contribution: Keeping one opensource WCS software solution INSPIRE compliant as the identified needs appear – starting with the INSPIRE extended capabilities addition; contributing to the technical writing of the WCS chapter based on our experience with the FP7 funded Earthserver project, contributing to the View service TG, the Download TG and putting up exemplar INSPIRE services;

#3 - 26 May 2015 12:03 am - Michael Lutz

Thanks a lot, Daniela and Alex, for the nominations. Could you please also specify the planned contributions(related to tasks/deliverables defined in the ToR) of the nominated experts?

Thanks, Michael

Contributions: [describe how the expert will contribute to the the tasks and/or deliverables mentioned in the ToR]

#4 - 26 May 2015 08:45 am - Michael Lutz

Application from the pool of experts:

  - Name: Dave Dixson
  - E-mail: david.dixson@metoffice.gov.uk
  - Name: Pete Trevelyan
  - E-mail: peter.trevelyan@metoffice.gov.uk
  - Affiliation: The Met Office UK
  - Expertise: We are working on the issue of INSPRIE compliance at the met office. We have working knowledge of the WCS2.0 MetOcean profile.
  - Contributions: We are planning to propose at Boulder that we add stored queries functionality (as currently available on WFS2) to the WCS standard. If this goes ahead we would propose that we might want to make use of WCS Stored Queries in order to simplify the process of providing Inspire Compliant data via a WCS service.

#5 - 26 May 2015 08:51 am - Michael Lutz

Application from the pool of experts:
  - Name: Jachym Cepicky
  - E-mail: jachym.cepicky@gmail.com
  - Affiliation: Independent expert, memeber of Open Source Geospatial Foundation OSGeo.org, cooperation with Geosense.cz - (SME)
  - Expertise: Long-term open source GIS professional and developer, on the desktop, server and client side. Implementation of INSPIRE Geoportal and services in Czech republic. Contributor to open-geo-data initiatives. Implementation of OGC Services on Server and Client sides (WMS, WFS, WCS). Initial author of PyWPS - server-side implementaion of OGC WPS service. Co-author of the case study (czech) about opening of geo-spatial data, which is based on current INSPIRE best practices http://opengeolabs.cz/publikace/
  - Contributions:
    - Working on update of TG for the INSPIRE download service
    - Document current state of OGC WCS in Open Source software (client and server)
    - Help with technical implementation and so demonstration of feasibility of the scope and interoperability from the point of view open source software
    - Provide link to open source developer communities, making sure, the results of tests will arrive to proper developer, so that authors of the software can implement required features faster.
    - Help with outcomes and deliverables, from the practical perspective of SME and open source communities.

#6 - 29 May 2015 11:19 am - Michael Lutz

Application from the pool of experts:

- Name: Ilkka Rinne
- E-mail: ilkka.rinne@spatineo.com
- Affiliation: Founder & CTO, Spatineo Oy
- Expertise:
  - Good overall knowledge of WCS 2.0 standard and it's extensions based on the work done at OGC Coverages Domain Working Group
  - Several years of experience in handling and distributing coverage data for meteorological applications using standard web interfaces
  - member of the INSPIRE Technical Working Group for Atmospheric Conditions & Meteorological Geographical Features (TWG AC-MF)
  - several years of hands-on expertise in modelling and distributing spatial data using the GML coverage model and the OGC/ISO Observations & Measurements standard
  - Participant in the MIG workshop on WCS-based INSPIRE download services on 14-15 October 2014.
- Contributions:
  - Technical guidance for INSPIRE Download Service for WCS 2.0
  - evaluation of software implementations for INSPIRE WCS 2.0 profile
  - evaluation of the technical guidance against the needs of the meteorological INSPIRE datasets, including timeseries and forecast data.

#7 - 02 Jun 2015 02:28 pm - Christina Wasström

Nominated by Sweden:

- Name: Mauritz Bomark
- E-mail: mauritz.bomark@lm.se
- Affiliation: National Land Survey of Sweden
- Expertise: Knowledge as Team Leader for implementing Inspire services at the National Land Survey, project manager for developing elevation services, one of them a WCS (release 20150602)
- Contribution: Based on practical experiences, review and give input to coming suggestions for updating TG

#8 - 02 Jun 2015 05:18 pm - Jukka Rahkonen
- Description updated

Thanks Christina, Could you please also specify the planned contributions(related to tasks/deliverables defined in the ToR) of Mauritz?

-Jukka-

#9 - 04 Jun 2015 11:42 am - Alex Ramage

I have added Tim Duffy and James Passmore as the UK recommendations including their Contributions

#10 - 04 Jun 2015 12:37 pm - Michael Lutz

Application from the pool of experts:

- Name: Diomede Illuzzi
- E-mail: illuzzi@planetek.it
- Affiliation: Planetek Italia
- Expertise:
  - INSPIRE download services Technical Guidelines and Implementing Rules

- The OGC Web Coverage Service 2.0 specification
- Setting up and/or using WCS 2.0 services
- Development of WCS 2.0 solutions (clients, servers)
- Contributions:
- review of the TG
- testing the reference implementation
- analyse/demonstrate the interoperability of the deployed data and services with
- client applications, including the INSPIRE geoportal

Application from the pool of experts:

- Name: Mikko Visa
- E-mail: mikko.visa@fmi.fi
- Affiliation: Head of Group, Development of Services
- Expertise: Finnish Meteorological Institute INSPIRE and Open Data project manager since 2012. Administration and configuration of WMS/WFS/CSW services with for instance Geoserver and Geonetwork. FMI currently already has a "WCS-like" download service, we are hoping to have a standard-adhering WCS 2.0 service in the near future.
- Contributions:
- I hope to bring views to the group and to the technical guidelines from the MET-OCEAN domain as well as from rapidly updating big data sets with an eye on performance.
- implementation experiences from an existing real-world example with 3D meteorological and oceanographical data (mostly numerical weather prediction models)
- user experiences and user needs from a running service with high-volume 3D data not limited to INSPIRE data sets but open data as well
- current WCS-like implementation through WFS which provides download-links to "WCS-like" service, this will be converted to WCS2.0 standard in the near future
- provide input and contribute to deliverable a) and b) ie. the technical guidelines via above experiences especially from implementation perspective as we already have a lot of user/real-world experience

Nomination from the NL:

- Name: Jeroen Hogeboom
- E-mail: Jeroen.Hogeboom@kadaster.nl
- Affiliation: Kadaster Netherlands and the national SDI called PDOK
- Expertise: As Productowner of PDOK Jeroen Hogeboom has a lot of experience in Inspire specifications for webservices (WMS, WFS, WMTS, ATOM feeds), experience in setting up services for all Inspire themes.
- Contributions: Jeroen Hogeboom can contribute by having the raster testdata available on the relevant themes and being the contactperson for the Ministries responsable for the different sorts of rasterdata in the Netherlands. Jeroen Hogeboom could provide possibilities to test the new WCS guidelines and share practices on raster services now available by our national SDI.

#11 - 05 Jun 2015 03:37 pm - Michael Lutz

Nominations from Belgium:

- Name: Bart Cosyn
- E-mail: Bart.Cosyn@agiv.be
- Affiliation: SDI architect at AGIV (Agentschap Geografische Informatie Vlaanderen)
- Expertise: Contributor to TG on View services, Reviewer of the TG on Download services, OGC Technical contact, Member of National Standardisation Group on ISO/TC211, Technical Responsible at AGIV on the implementation of geo services and SDI supporting webservices (See also CV in MIG experts portal)
- Contributions: Reviewing and try to set a POC to show the possible implementation of the results of de TG discussions and proposals.

- Name: Ouns Kissiyar
- E-mail: Ouns.Kissiyar@agiv.be
- Affiliation: AGIV (Agentschap Geografische Informatie Vlaanderen). Also INSPIRE NCP & MIG-T member.
- Expertise: Setup of a rasterDB at AGIV with an eye on more efficient distribution of raster data (comprising kadastral maps, topographic maps, orthofoto's, ikonos imagery, soil maps …). Implementation of such a rasterDB on ArcSDE.
- Contributions: Reviewing and try to set a POC to show the possible implementation of the results of de TG discussions and proposals.

#12 - 05 Jun 2015 05:46 pm - Michael Lutz

Application from the pool of experts:

- Name: Simon Jirka
- E-mail: jirka@52north.org
- Affiliation: 52°North Initiative for Geospatial Open Source Software GmbH
- Expertise: I have contributed to the proposal for an extension of the Download Service TG to include the SOS standard. With regard to the WCS extension I would be highly interested to contribute this experience to ensure that the developed approach is in line with previous efforts. Furthermore, at 52°North we have investigated the combined usage of WCS and SOS. The idea of these activities was to put an SOS and WCS interface on the same data source and to use the functionalities of both interfaces for those purposes they are best suited for: WCS for serving coverages, and SOS for serving time-variant point data extracted from these coverages.
- Contributions: My main interest would be to contribute on best practice recommendations which service of the TG is best suited for which type of data. Such recommendations will be important with the increasing number of options how INSPIRE Download Services can be realised.

#13 - 08 Jun 2015 03:03 pm - Michael Lutz

Application from the pool of experts:

- Name: Andreas Krimbacher
- E-mail: andreas.krimbacher@zamg.ac.at
- Affiliation: ZAMG Zentralanstalt für Meteorologie und Geodynamik, Vienna, Austria
- Expertise:
  - Open source GIS professional and developer
  - OGC Web Services (WMS,WFS,WCS)
  - Responsible for the implementation of INSPIRE services at ZAMG
  - O&M
  - Inspire topics AC-MF, EF, ER
  - Coverage data management
- Contributions:
  - Examples, views and expirences from the meteorological community
  - review of the TG
  - testing the reference implementation
  - evaluation of software implementations for INSPIRE WCS 2.0 profile

#14 - 09 Jun 2015 03:41 pm - Michael Lutz

Application from the pool of experts:

- Name: JORDI ESCRIU
- E-mail: jordi.escriu@icgc.cat
- Affiliation: Institut Cartogràfic i Geològic de Catalunya (ICGC) – IDEC Support Centre (Regional Mapping Agency / SDI of Catalonia, SPAIN)
- Expertise:

- Facilitator of INSPIRE Thematic Cluster #3 (Elevation, Orthoimagery, Reference systems and Geographical grids), mainly dealing with raster / coverage data.
- Editor of the INSPIRE Data specifications for the Elevation; Close knowledge of the INSPIRE Data specifications for the Orthoimagery theme.
- Member of the corresponding national working groups for the implementation of INSPIRE in Spain (CODIIGE WGs).
- Analysis and application of the requirements from the INSPIRE Network Services technical guidelines to evaluate conformity of corporate geoservices.
- Analysis and application of ISO/OGC geographic information standards in my organization.
- Experience using WCS from my organization, providing access to the corporate Digital Elevation Models of my organization (DTM 15 metres / DTM 5 meters).
- Member of the INSPIRE and Quality Knowledge Exchange Networks of EuroGeographics (INSPIRE KEN and Q-KEN).
- Contributions:
- Canalize to the subgroup the inputs from INSPIRE Thematic Cluster #3 (requirements and needs, use-cases, technical issues, contrast aspects related to feasibility of the WCS technical guidelines, etc.).
- Promote feedback from the Cluster on specific issues and topics in order to orientate the outcomes of the subgroup, where necessary.
- Provide direct knowledge on the content of the Elevation and Orthoimagery Technical Guidelines, including the encoding-related sections.
- If necessary, support the editorial tasks of the Technical Guidelines to be delivered by MIWP-07b.

#15 - 16 Jun 2015 11:04 am - Benoit David

Application from the pool of experts:

Name: SARAFINOF Dimitri
E-mail: Dimitri.Sarafinof@ign.fr
Affiliation: IGN / France
Expertise: Good knowledge of INSPIRE specifications (data and network services), Involved in OGC (contributions to WCS SWG)
Contributions: contribution/review for update of the Download Services TG

#16 - 16 Jun 2015 11:20 am - Christina Wasström

Additional information of the already nominated Mauritz Bomark;

Contributions: Based on practical experiences, review and give input to coming suggestions for updating TG

#17 - 16 Jun 2015 01:48 pm - Michael Lutz
- Description updated

The kick-off meeting has now been fixed for Tuesday, 23 June 2015, 11:00-13:00 CEST.

#18 - 26 Jan 2017 02:21 pm - Michael Lutz
- Status changed from Proposed to Closed

The work of this sub-group has been completed.

Files

ToR_MIG_sub-group_download_service_for_coverages_MIWP-7b.pdf 450 KB	18 May 2015	Michael Lutz