



Opensearch & EOP O&M Improvements

40 BUILDING ON
YEARS OF
COMMITMENT

Jon Earl
May 2016
PDGS-STD-CGI-PPT-16-1378

© CGI Group Inc.

CGI

Experience the commitment®

Many Ongoing Activities

- ngEO (implementation)
- OBEOS (JSON-LD as one example of linked data - March 2016)

- OGC Position Statement (Sept 2014)
- JSON in OGC Standards (March 2015)
- O&M JSON Implementation – 15-100r1 Discussion Paper (Sept 2015)
- JSON subgroup of Architecture DWG (following March 2015)
- OGC Testbed 12 – JSON-LD from UML model (ongoing)

- etc.



Standardisation?

- Suggest create a JSON EO Profile for O&M, aligned with the ongoing activities taking place at the OGC and ESA and examine use for standard data access / catalogue scenarios:
 - How much complexity is useful to the developer?
 - How much of the full EO Profile of O&M do they need exposed in a JSON binding?
 - At what point should they receive full XML encodings of the metadata instead?



WMTS Browse?

Existing O&M EO Profile (OGC 10-157r4) allows for only:

- Direct Download
- WMS via HTTP KVP
- WCS via HTTP KVP
- A service supporting HTTP POST or SOAP

The relevant information is passed via the “fileName” element:

```
<eop:BrowseInformation>
<eop:type>QUICKLOOK</eop:type>
<eop:referenceSystemIdentifier codeSpace="EPSG">epsg:4326</
eop:referenceSystemIdentifier> <eop:fileName>
<ows:ServiceReference xlink:href="http://landsat-ds.eo.esa.int/metadata/LANDSAT_ETM/
2000/02/17/
LS07_RKSE_ETM_GTC_1P_20000217T141534_20000217T141603_004485_0003_0010_8F24.BP.PNG">
<ows:RequestMessage/> <!-- ows:RequestMessage is left blank if not POST/SOAP -->
</ows:ServiceReference>
</eop:fileName>
</eop:BrowseInformation>
```

WMTS Browse

Many possible variations, e.g. (based on OGC 07-057r7)

- Provide a HTTP KVP encoding of the smallest tile **containing** the product:

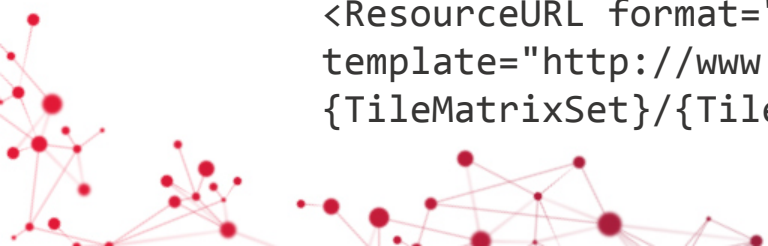
```
http://www.maps.bob/maps.cgi?  
service=WMTS&request=GetTile&version=1.0.0&layer=eto  
po2&style=default&format=image/  
png&TileMatrixSet=WholeWorld_CRS_84&TileMatrix=10m&T  
ileRow=1&TileCol=3
```

- Provide a RESTful encoding of the smallest tile **containing** the product:

```
http://www.maps.bob/etopo2/default/  
WholeWorld_CRS_84/10m/1/3.png
```

- Optionally, supplement with a template identifying how the WMTS is called:

```
<ResourceURL format="image/png" resourceType="tile"  
template="http://www.maps.bob/etopo2/default/  
{TileMatrixSet}/{TileMatrix}/{TileRow}/{TileCol}.png">
```



WMTS Browse

- Provide multiple browse images via separate browseInformation elements which together contain the product via either of these methods.
- Provide an alternative method of describing one or more browses, **across any WxS** – e.g. serve an OWS Context file (OGC 12-080r2) in either JSON (OGC 14-055r1) / ATOM (OGC 12-084r2) which describes any one of the WMS/WCS/WMTS services via the xlink:href attribute.
 - This is more flexible, and decouples the O&M Profile from the service: with the trade-off cost of additional complexity.
- We suggest an activity to investigate options and recommend a preferred approach.





Our commitment to you

We approach every engagement with one objective in mind: to help clients succeed

40
YEARS

CGI

Experience the commitment®