

HMA-TN-0002-Infoterra-UK

Linkage between WMS EOP extension and EOP GML and Catalogue metadata specifications

This technical note is in response to project Action 19, raised at the KO meeting, and PM-1 RID items 4, 6 and 8. It seeks to define the relationship between the WMS EOP extension and EOP GML and Catalogue ebRIM profiles.

Comparison of OGC 07-063r1 with OGC 06-080r4

Action 19 requires Infoterra UK to:

“Check whether WMS profile is consistent with GML application schema OGC 06-080 or requires further work”

This action is further explained by PM-1 RID time YC-6:

In OGC 07-063r1 (v0.3.0), clause 7.3.2, it is stated that "metadata about the product" is to be returned. Can we be precise which metadata is meant? Shouldn't we recommend OGC 06-080 metadata or ISO 19139. Now this remains completely open.

In response it should be noted that the reference in clause 7.3.2 to returning 'metadata about the product' refers only to the requirement for the acquisition time of the EO product to be returned in an ISO 8601 format with an XML MIME type. Both clause 7.3.2 and ATC 22 have been made more explicit to clarify this point. The use of ISO 8601 compliant time formats is consistent across the WMS EOP extension and the GML EOP profile (e.g. for gml:validTime values).

On the more general question of compatibility between the WMS EOP extension and the GML EOP profile, any formal linkage from the WMS EOP extension to OGC 06-080r4 would introduce dependency and coupling, and erode the robustness and maintainability of the WMS EOP extension. With respect to EOP band, geophysical data and spatial metadata layers, the WMS EOP extension provides the flexibility to reuse of the definitions and naming conventions for each EO product type (as defined in the product handbook). In other words, the WMS EOP extension simply mirrors the established names. If the ground segments are already using inconsistent naming conventions the issue is with the ground segments and should be addressed at the community level.

Comparison of OGC 07-063r1 with OGC 06-131r5

From the PM-1 RID table, items YC-4 and YC-8 raise concerns about compatibility between the WMS EOP extension and Catalogue Services Specification 2.0 Extension Package for ebRIM EOP Application Profile (OGC 06-131r5).

With reference to clause 7.2.1 of the WMS EOP extension, YC4 questions the use of: "layer names like "MER_RR__2P". A recommendation should be added that these names are identical to the parentIdentifiers used in OGC 06-131? Are these names to map exactly? If not, how can client software combine WMS and catalogue? A precise

recommendation is required.”

With reference to clause 7.3.5 of the WMS EOP extension, YC8 suggests that: “naming convention for layers should be aligned or refer to naming convention for parentIdentifiers in EO catalogues. How can clients make automatically the mapping between the two?”

Both of these RID items address two distinct issues:

1. How can catalogue entries for individual products be linked to specific product views in an EOP WMS?
2. Are the naming conventions for parentIdentifier (OGC 06-131r5) and Layer name (OGC 07-063r1) the same?

In response to issue 1, it should be noted that formally linking the catalogue metadata parentIdentifier (OGC 06-131r5) and WMS Layer name (OGC 07-063r1) will not enable clients to seamlessly display an EOP discovered through a catalogue search. In the WMS EOP extension, it is mandatory for a GetMap request to specify a TIME value in order to view a specific EOP. If a parentIdentifier / Layer name is requested without a TIME value then a service exception is thrown. Even if a TIME value is defined in the GetMap request, a WMS client would not be correctly configured to allow the user to dynamically browse the returned EOP view. For this, the WMS client needs the WMS capabilities or context of the parentIdentifier / dataset series Layer. The appropriate controls for selecting flag (bitmask) layers, geophysical parameter layers and different band (sample dimension) combinations can then be added to the GUI (see Figure 1 example below).

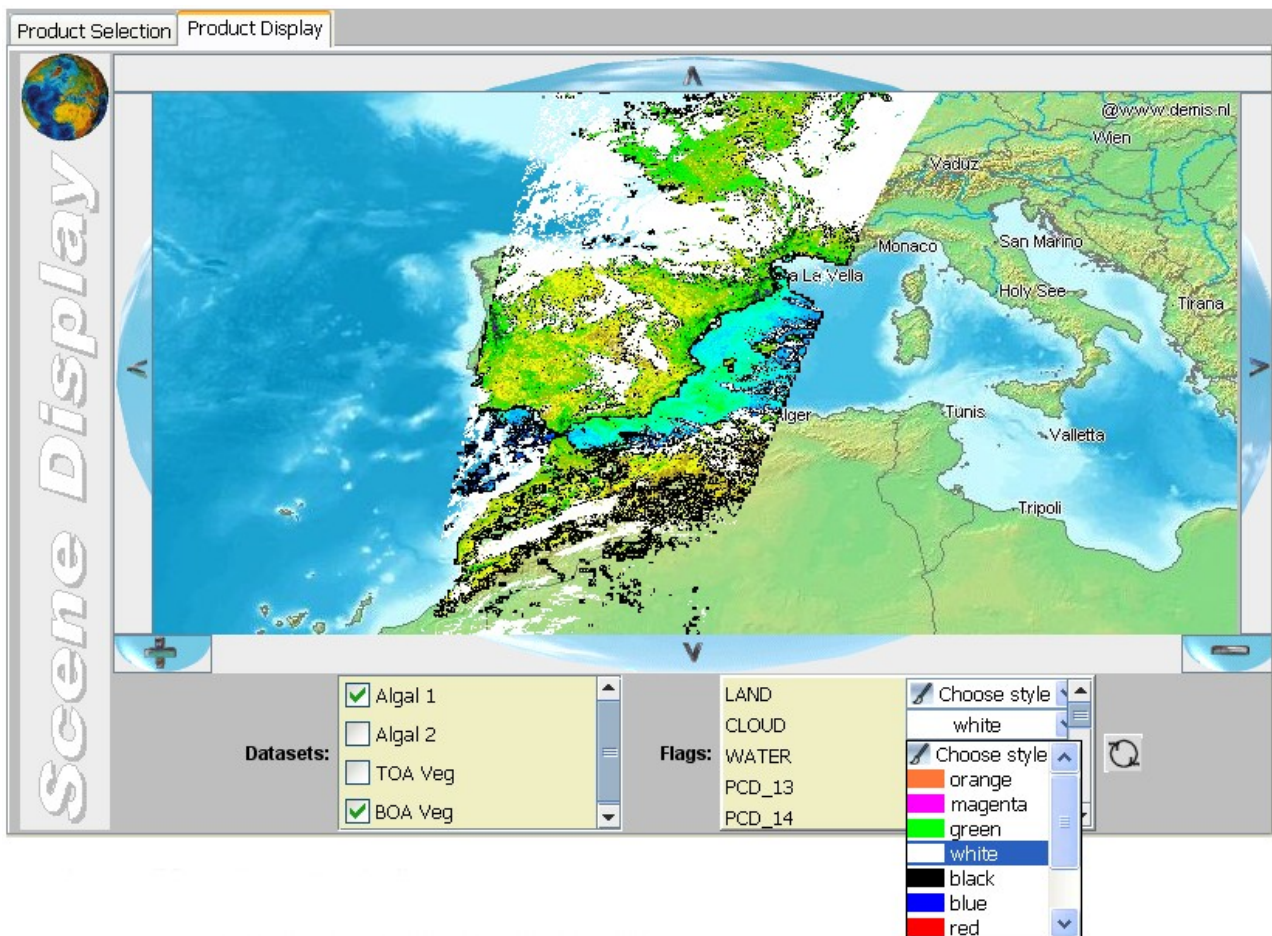


Figure 1 – EOP WMS client showing dataset series specific geophysical and bitmasked controls.

Figure 2 illustrates how information about the WMS capabilities / context for a given dataset series (WMS Layer) and the catalogue (discovery) metadata are used to configure the WMS client GUI and synthesis the WMS Get Map request.

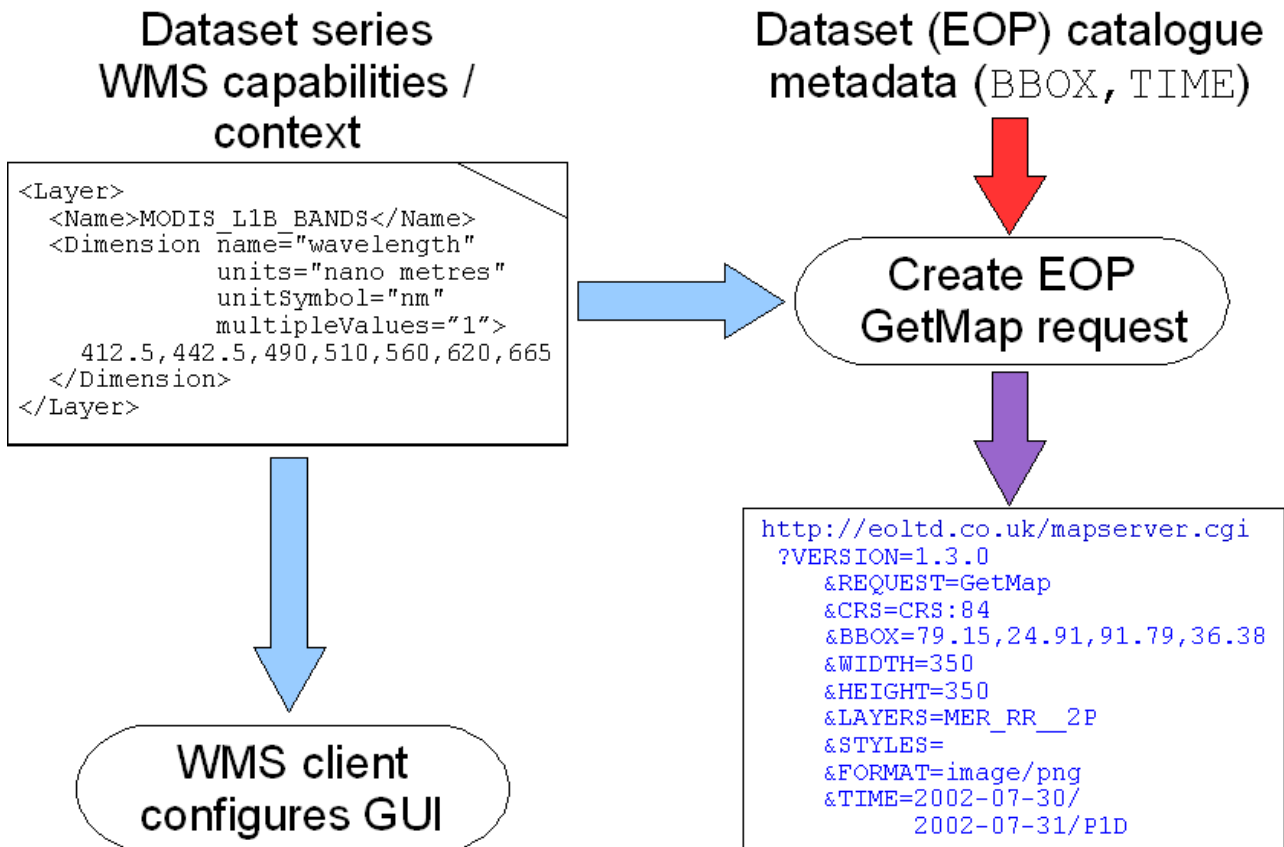


Figure 2 – data streams for EOP WMS Layer context and catalogue discovery metadata.

Note: the information within the WMC document combined with the spatial and temporal information for the specific EOP catalogue entry is sufficient to define a default WMS GetMap request.

Referring to OGC 06-131r5, the EOBrowseInformation -> fileName could be used to define either a GetCapabilities request URI or a URI for a Web Context Document specific to the dataset series WMS Layer.

In response to the second issue, regarding the parentIdentifier (OGC 06-131r5) and group Layer (OGC 07-063r1) naming conventions, both explicitly map to a 'dataset series' in the ISO 191xx sense. So, whilst there is no need to directly couple the default dataset series 'Layer' name in the WMS EOP extension to parentIdentifier in OGC 06-131r5, the two definitions are, *de facto*, synonymous.