OGC Seeks Public Comment on MetOcean Profile and Extensions to WCS 2.1

The Open Geospatial Consortium (OGC) is seeking public comment on the MetOcean profile and extensions to WCS 2.1. Public comment on these documents was also held in 2018, but the documents have been renamed and the schemas updated, so a second round of comment is sought. The Meteorological and Oceanography (MetOcean) community works with massive datacubes of content organized in 4D space and time. Extracting valuable information from these datasets requires efficient query and delivery of the content perfectly suited to the user's needs.

The MetOcean community relies upon the OGC Web Coverage Service (WCS) to search and deliver such content. The community has developed a new profile and two new extensions to WCS 2.1 to address MetOcean requirements. The MetOcean Profile fully exploits the multi-dimensional nature of WCS2.1, which is built on the new OGC Coverage Implementation Schema (CIS) 1.1. The GetCapabilities file size is reduced by almost two orders of magnitude, making discovery much easier.

As the WCS2.1 core provides only general metadata, the MetOcean Profile adds community-specific metadata to this core.

Additionally, the MetOcean Profile introduces the terms "Groups" and "CoverageCollections" as a way to both efficiently access the data, and structure the return of data. The main benefit of Groups is in creating a structure that reflects the organization of the intended use of data, rather than its underlying structure. This provides a hierarchical way of nesting services. The main benefit of CoverageCollections allows for the identification of collections of data for easier access to the data.

Retrieval of coverage data

Two extensions have also been developed to facilitate coverage data retrieval according to the operational requirements of those using MetOcean data. One extension specifies how to extract a corridor based on a trajectory from a multidimensional coverage. The other extension defines how to extract data contained within a polygon defined either by a set of points or the radius and position of a circle point.

Through the addition of community-based metadata, Groups & CoverageCollections, and the two new operations, the efficiency of both MetOcean data access and retrieval has been increased substantially.

The candidate MetOcean profile and extensions to WCS 2.1 is available for review and comment on the MetOcean profile and extensions to WCS 2.1 request page. Comments are due by 15 March 2019 and should be submitted via the method outlined on the request page.