



Profiling the OGC Web Feature Service For Climate Science Datasets.

D. Lowe and A. Woolf

Science and Technology Facilities Council, Rutherford Appleton Laboratory, United Kingdom

By describing climate datasets with feature types such as those defined by the Climate Science Modelling Language (CSML) and rendering those features in Geography Markup Language (GML), it becomes possible to deploy an OGC Web Feature Service (WFS) as a retrieval service for such data. The primary purpose of the WFS is to act as a filtering mechanism to allow for selection of features according to certain properties or constraints. However the latest version (2.0) of WFS, currently undergoing ISO standardization (ISO 19142), introduces a new concept of stored queries. The intention is that it can be used as a mechanism to define commonly used query filters, however the specification explicitly permits the use of executable code within stored queries. This provides a general flexible mechanism for defining and implementing operations on features or collections of features and hence makes it possible to perform useful tasks on climate features such as subsetting an atmospheric model on a particular pressure level or selecting a particular depth from a CTD profile. The very general nature of the mechanism however raises questions about the interoperable nature of such services. The burden of interoperability is pushed back from the WFS interface to the underlying data model. This talk reviews an implementation of the WFS with stored queries and considers the possible need for a Climate Science profile of WFS based on agreed feature models and operations.