Geophysical Research Abstracts
Vol. 15, EGU2013-2770, 2013
EGU General Assembly 2013

A resource oriented webs service for environmental modeling

Ioan Ferencik
Finland (ioan.ferencik@aalto.fi)

Environmental modeling is a largely adopted practice in the study of natural phenomena. Environmental models can be difficult to build and use and thus sharing them within the community is an important aspect. The most common approach to share a model is to expose it as a web service. In practice the interaction with this web service is cumbersome due to lack of standardized contract and the complexity of the model being exposed. In this work we investigate the use of a resource oriented approach in exposing environmental models as web services. We view a model as a layered resource build atop the object concept from Object Oriented Programming, augmented with persistence capabilities provided by an embedded object database to keep track of its state and implementing the four basic principles of resource oriented architectures: addressability, statelessness, representation and uniform interface. For implementation we use exclusively open source software: Django framework, dyBase object oriented database and Python programming language. We developed a generic framework of resources structured into a hierarchy of types and consequently extended this typology with recurses specific to the domain of environmental modeling. To test our web service we used cURL, a robust command-line based web client.