



Distributed meta-information generation and semantic search for environmental resources in TaToo

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The TaToo consortium has recently developed a set of services and web applications allowing distributed semantic annotation of third party environmental resources. Central concept of the TaToo project is a set of self-contained “TaToos” that are used as a base for semantically enhanced resources discovery and retrieval by the TaToo’s discovery service. “TaToos” have several interesting properties: (1) A TaToo is a piece of self-contained semantic information corresponding to one of the pre-defined ontologies; (2) it exists independently from the resource it describes; (3) a resource can be described by several TaToos; and (4) a TaToo is considered a resource and therefore can be annotated by another TaToo (“tag the tag”).

By completely decoupling the meta-information from the resource it describes, the TaToo team opened a possibility for completely decentralized annotations and quality assurance of the arbitrary web-enabled resources. Furthermore, the TaToos are generated, updated and if needed deleted using a tagging web service. This service can be invoked by humans, e.g. using the web based Tagging GUI available, but the ‘TaToos’ can also be generated automatically, e.g. based on the meta-information already present in the original data or otherwise deductable by the software .

At EGU 2011, we shall present the first release of the TaToo software, which is scheduled for public release in mid 2011, and discuss the capabilities, limitations and plans for improving the software based on the experiences with three TaToo pilot applications:

- in the “Climate Change Twin Regions” pilot, TaToos are used to improve the discovery of climate twins applications;
- In the “Agro-Environmental Management”, TaToos are used to annotate observations and models; and
- finally, in “Antropogenic impact and global climate change” pilot, the TaToos are used to annotate and evaluate quality of observations.