



## **PIDs, Types and the Semantic Web**

Ulrich Schwarzmann

Germany (uschar1@gwdg.de)

PID Information Types are becoming a crucial role in scientific data management because they can provide state (what) and binding (where) information about digital objects as attributes of the PID. This is a similar but much more flexible approach than the well known mime type characterization, because both of these types concepts allow to decide about preconditions for processes in advance and before touching the data. One aspect of this is the need for standards and correctness of the used types to ensure reliability for the processes operating on the digital objects. This requires registries and schemas for PID InfoTypes and suggests an automated schema generation process. Such a process in combination with data type registries will be described in more detail in the intended talk.

Another aspect of PID InfoTypes is its intrinsic grammar as subject-predicate-object triple, with the PID as subject, the type as predicate and its value (often again a PID) as object in this relation. Given the registration of types and the proposed syntactical rigidness of the value, guaranteed by the schema, together with the use of PIDs in subject and predicate, the type concept has the ability to overcome the fuzziness and lack of reliability of semantic web categories with its URL references and possibly changing locations and content. The intended talk will also describe this approach in more detail, discusses the differences to linked data and describes some necessary technological developments for the type concept to keep up with the possibilities currently provided by the semantic web.