Towards Interoperability for Observed Parameters: Position Statement of an Emerging Working Group

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ABSTRACT:

For decades, many communities have worked on the definitions of parameters, specifically scientific observation and measurement parameters. A well known example are the climate and forecast standard names (CF) [1]. Controlled vocabularies (e.g. EnvThes [2], Anaeethes [3], BODC Parameter Usage Vocabulary [4], ...) are often used for describing parameters in different domains. PANGAEA [5] as a multidisciplinary data publisher for environmental sciences holds around 375 thousand citable data sets which have to be described with consistent semantics; this can be really challenging when dealing with complex parameters. Inconsistencies among existing parameter definitions as well as syntactic and semantic heterogeneity in their representation in systems prevent the integration of data about parameters from different providers. For individual providers, the growing number and complexity of observation and measurement parameters referred to in published data urgently demands viable approaches for their representation and organization. To address these problems and find common approaches, a group of interested scientists involved in different national and international initiatives and research infrastructures (PANGAEA, LTER-Europe [6], GFBio [7], BODC [8], ENVO [9], LifeWatch Italy [10], ICOS [11], AnaEE [12], AquaDiva [13], ...) decided to organize themselves as an RDA Working Group (WG). Having met several times via conference calls to present each other's related work, it became clear that the problem has been recognized and tackled in various ways, reflecting the specific needs of data and semantic infrastructures of varying maturity. In this talk, we will describe the process of defining a common strategy with a clear output that will be beneficial for all involved communities, and beyond. This entails a consistent terminology used within the group, thorough SWOT analysis of the different methodologies in use (within and outside the group) and a synopsis of the current state. The ultimate aim of this undertaking is to elaborate a common concept for the definition of parameters and develop best practices illustrated on a number of use cases. We will highlight the problem, present and discuss the findings of the current working group, and provide an outlook for the planned work, in particular also a possible work plan for the RDA WG. The talk is an opportunity for this working group to reach out to other potentially interested parties.

KEYWORDS: Network, Baltimore, Ecology, Long-term

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