



OSCAR/Surface: Metadata for the WMO Integrated Observing System WIGOS

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The World Meteorological Organization (WMO) Integrated Global Observing System (WIGOS) is a key WMO priority underpinning all WMO Programs and new initiatives such as the Global Framework for Climate Services (GFCS). It does this by better integrating WMO and co-sponsored observing systems, as well as partner networks. For this, an important aspect is the description of the observational capabilities by way of structured metadata.

The 17th Congress of the World Meteorological Organization (Cg-17) has endorsed the semantic WIGOS metadata standard (WMDS) developed by the Task Team on WIGOS Metadata (TT-WMD). The standard comprises of a set of metadata classes that are considered to be of critical importance for the interpretation of observations and the evolution of observing systems relevant to WIGOS.

The WMDS serves all recognized WMO Application Areas, and its use for all internationally exchanged observational data generated by WMO Members is mandatory. The standard will be introduced in three phases between 2016 and 2020.

The Observing Systems Capability Analysis and Review (OSCAR) platform operated by MeteoSwiss on behalf of WMO is the official repository of WIGOS metadata and an implementation of the WMDS. OSCAR/Surface deals with all surface-based observations from land, air and oceans, combining metadata managed by a number of complementary, more domain-specific systems (e.g., GAWSIS for the Global Atmosphere Watch, JCOMMOPS for the marine domain, the WMO Radar database). It is a modern, web-based client-server application with extended information search, filtering and mapping capabilities including a fully developed management console to add and edit observational metadata. In addition, a powerful application programming interface (API) is being developed to allow machine-to-machine metadata exchange. The API is based on an ISO/OGC-compliant XML schema for the WMDS using the Observations and Measurements (ISO19156) conceptual model.

The purpose of the presentation is to acquaint the audience with OSCAR, the WMDS and the current XML schema; and, to explore the relationship to the INSPIRE XML schema. Feedback from experts in the various disciplines of meteorology, climatology, atmospheric chemistry, hydrology on the utility of the new standard and the XML schema will be solicited and will guide WMO in further evolving the WMDS.