OSCAR
Observation Systems Capabilities and Review Tool
A core element of the WMO Integrated Observing Systems (WIGOS) framework

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OSCAR and RRR

- Rolling Review of Requirements (RRR) process
  - Documentation of (Observing) Requirements
  - Documentation of (Observing) Capabilities
  - Critical Review (= gap analysis)
  - Statement of Guidance (= steps for improvement)
- OSCAR is the system to enable the RRR process.
OSCAR Today

- OSCAR developed by WMO/SPACE (Jerôme Lafeuille, Nils Hettich et al.) in collaboration with CEOS
- Web-based and available to the public (www.wmo.int/oscar)
- Supporting the needs of satellite community
- Supporting different application areas
OSCAR Tomorrow

- Web-based and available to the public (www.wmo.int/oscar)
- Supporting the needs of satellite community

- Supporting all observing systems (satellite and surface)
- Considering all application areas
- Joint-venture between WMO and MeteoSwiss
  - Seed funding from Swiss Federal Department of Foreign Affairs
  - Contributions from MeteoSwiss, WMO, and WIGOS Trust Fund (so far: Norway)
- Fully integrated 24/7 in operations of MeteoSwiss
  - National weather service of host country of WMO
  - State-of-the-art data warehouse with 24/7 ICT support
  - Expertise with metadata management
  - International reputation of supporting WMO
WMO and MeteoSwiss
Shared Responsibilities, Strong Partnership

• MoU between WMO and MeteoSwiss
• Specification of functional requirements of OSCAR
  → Business lead with WMO, technical lead with MeteoSwiss
• Implementation of OSCAR by MeteoSwiss in 2 parts
  • Part I: OSCAR/Surface, including requirements and analysis
  • Part II: OSCAR/Space (2015/Q3 onwards)
  → Technical lead with MeteoSwiss
• Operation and maintenance of OSCAR
  → Technical lead with MeteoSwiss
• Responsibility for content of OSCAR
  → Business lead with WMO
• Evolution of system through CR (~3 releases per year)
  → Joint lead
WIR Functional Architecture

WIS

WIR Portal

OSCAR

OSCAR/Analysis

OSCAR/Requirements

OSCAR/Surface Capabilities

GAWSIS

SORT

SORT

External data sources

«Vol A»

TP3

TP1 & TP2

NB: «Vol A» refers to the catalogue of surface and radio sonde stations

OSCAR in a nutshell | ICG-WIGOS-3, February 2014
J. Klausen, B. Calpini, P. Binder
Integration Architecture

- Multi-tier web application with interfaces to external sources
- State-of-the-art technologies (Oracle, JAVA, ArcGIS)
- Fully integrated into operations of MeteoSwiss
- Release plan and CR mechanism for evolution of system
Planning and Milestones

• Milestone Cg-17
  • Development of OSCAR/Surface
  • Functional migration of Requirements and Analysis parts
  • Web services interface to Requirements database

• Milestone EC-68 (OSCAR/Space)
  • Functional migration of OSCAR/Space incl. Analysis part
  • Full integration of all components
OSCAR and WIGOS Metadata

- “Capabilities” part of OSCAR is a natural candidate as a repository for certain WIGOS metadata (WMD).
- OSCAR targets all users interested in the status and the planning of WMO observing systems as well as data users looking to “make adequate use of observations”.

![Diagram showing the relationship between OSCAR, WMD, and Societal Impact]
Summary

• OSCAR is critical for implementation of WIGOS RRR
• Joint-venture between WMO and MeteoSwiss will result in a fully operational system with long-term perspective
• Milestone Cg-17 for OSCAR Requirements, Analysis and Surface Capabilities @ MeteoSwiss
• Milestone EC-68 for migration of OSCAR/Space to MeteoSwiss

• OSCAR is a natural candidate for long-term archiving of certain WIGOS metadata in support of “adequate use of data”
Thank you for your attention!

There are risks and costs to a program of action, but they are far less than the long-range risks and costs of comfortable inaction.
-- JFK