

Working Group 2

Operational data management systems

- More and more datasets are made available to large user communities using web technologies. This raises several issues:
 1. Interoperability
 - Between centres
 - Between disciplines
 2. Data catalogues
 3. Discovery mechanisms
 4. Metadata standards
- Interoperability, defined in ISO:
 1. Discovery
 2. Access
 3. Use

- **DISCOVERY:**
 - What is discovery? Browsing, searching,...
 - There seems to be not much experience with publishing data/metadata catalogues for the outside world
 - Waiting for outcome of SIMDAT/WIS
 - Experience: rather than publishing full feature catalogues, just list of products are available
 - Metadata should be in a form that can be used for automated discovery (ISO19115 for WIS)
 - Granularity: Different levels of catalogues -> hierarchical catalogues
 - Different levels of catalogues for different access groups (with possible redirection to other sites)
 - The motivation to publish data on the web is either commercial interest or the wish to help Research which should eventually lead to better applications.

- **DISCOVERY (cont.):**
 - GISC will provide discovery mechanisms for global data sets for all WMO programs
 - WMO are working on Metadata standards for data discovery (and catalogues).
 - INSPIRE is EU legal initiative which will enforce (GIS) standards for metadata (for discovery, access and use) in Europe
 - Multi-language support:
 - Use XML-XSLT
 - WIS supports multi-language approach through standardised XML metadata tags
 - Centres who publish data for global exchange will have to make the extra effort to translate metadata

- **ACCESS:**
 - Access method must be part of metadata. Users should not have to know how to get to the data.
 - One possible solution: service catalogues (also with service guarantees)
 - Access policy should be part of metadata
 - Standardisation of access interfaces (web services (XML/GML))
 - Web services probably not feasible for real-time data exchange
 - Automated batch approach might not work well for (large) archive data sets
 - Different transport mechanisms have to be offered
 - Subscription service is useful for real-time data exchange (but problematic for archive data sets (you need to discover future datasets))

- USE:
 - ISO standards (profile of series 191xx for WIS) should allow the exchange and use of data across disciplines (or XML based solution (OGC standard))
 - Who knows all the standards?
 - It is quite difficult to keep an overview
 - Every institute will need 1-2 persons who know the standards
 - Profile of ISO standards reduces effort. So does the provision of software written for the standards.
 - Conversion experts are needed to convert different standards
 - There is metadata that is not needed for discovery but only for use (e.g. documentation of data gaps)
 - Users need to receive this and other metadata together with the data to make sense of it