MOS 2011 Working Group Minutes

Topics

- Past discussions have focussed on graphical representation of data. Now attention has moved to data discovery and catalogues:
  - How do data producers advertise their data?
  - As a data consumer, how does one discover these catalogues?
  - How can these catalogues be presented to the end-user (GUI, usability etc.)?
  - What constraints exist (data quality, legal aspects, data policies, service level etc.)?
- At this workshop four years ago it was decided that the use of OGC standards would provide some of these answers.
  - What has been achieved since then?
  - Did these standards fulfil their promise?
  - What alternatives exist?

Available WMS servers and catalogues?

- Difficulties to find WMS services, even for testing.
- Use Google to find WMS catalogues
  - Not very fruitful
  - Many broken links
- Easy for popular free services to get swamped (e.g. NASA blue marble)
  - This make these services unreliable
- Advertising your data
  - WIS catalogues will be available in January 2012
    - Will contain list of datasets and services
  - Workstations need a built-in link to these catalogues (SRU/Z39.50)

OGC in meteorology: current status.

- OGC standards only used within organisations
  - Organisation have control of the whole stack
    - Forest fire data provided by WMS to fire services
    - Malaysian services using a purely web services based system
  - Next release of NinJo will include a WMS support

Why the slow (?) uptake

- Too few available services to allow combination of data (we have not reach critical mass, chicken-and-egg issue). The benefit cannot yet be seen.
- Lack of need: users seem to be happy as they are.
  - User do not know what exists
  - Problem is that users cannot discover servers
- Met. community will not change its working practices
  - Slow to move technical systems and users; current systems are fast and reliable;
  - But, users might move in order to get new products
- Marketing problem: need more communication, training.

Should we continue investing time and efforts in OGC standards?

- Mandated by INSPIRE
- There is demand from insurance companies to climatological data. The other big clients are aviation (SESAR and NextGEN) and defence
- WMS will provide faster to access to large data (e.g. EPS data)
  - WMS can be seen as a “data reduction” system
- We will see with web services what we have seen with web sites:
  - The web managed to scale, so will the WMS in due time.
  - Technologies will be developed to solve the issues we are currently facing

Quality of service

- Public web-services on the Internet are free.
  - They can suffer from DoS attacks. They can be down at any time
  - Products may change or disappear
  - Owner have no obligations towards they users. They cannot be relied on for operations
- Operational use of web-services will need SLAs between parties
- Users have to be ready if services are not available
- High availability can be achieved when centres have backups of each others' services
  - Aviation is planning such a thing (Washington/London).
  - WMS catalogue has built-in mechanism for giving a number of servers where the data is available
  - WIS catalogue should have this information
- May have to have a dedicated network in order to guarantee good service
- Monitoring will be needed

What does 'data quality' mean? How do you measure it? Difficult!

- Data quality work is on-going in WMO (WIGOS)
- Different providers could have different ways of describing their data quality (e.g. geographers qualify the quality of the data, the meteorological community give quality of the process.)
- Quality could also depend on type of use
- How do we notify the user if, for example, the quality of the data has changed?
- Can we trust the quality information given by the data provider?
- How to compare quality information from different providers?
- URL can give an indication of confidence of quality (e.g. ".gov")
- Usage can also increase confidence
  - What about asking other users?
  - This is solved on the Internet by using a user based rating system (Amazon, Expedia, Trip Advisor, iTunes, ….)

Conclusion

- We should continue investing efforts in OGC standards
  - More volunteers are required to speed up the process.
  - More focus should go to WCS & WFS. This will solve some limitations of WMS, e.g. styling and re-projection, and will extend the range of possible products.
- Operational systems evolve at a slow pace, more time is needed before we start seeing operational web services
- Most of the current technical difficulties will disappear with time, and solutions will be found by other communities
- Existing practices will continue to exists as they are (e.g. 'push' methods, in particular for critical data), because they are very reliable.
- Uptake of web-services will really start when new products are only available this way (especially the ability to provide faster access to large amount of information without transferring it over the network).
- Operational systems will require SLAs and backup procedures
- Finding reliable ways of providing users with data quality information is paramount
- Meteorological datasets and services must be publicized in WIS catalogues
- Forecaster workstations should provided access to these catalogues directly