OpenWIS Software for the WIS and INSPIRE

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The World Meteorological Organization (WMO) has been working for several years towards upgrading its global infrastructure to support all of its international programmes of work, both operational and research-based, to collect, share and disseminate information. The new infrastructure is called the WIS, the WMO Information System, and identifies three top level functions. These are:
• GISC: Global Information System Centre;
• DCPC: Data Collection and Production Centre;
• NC: National Centre.

All three functions contribute to the circulation of priority data, system wide security, monitoring and implementation of WMO data policies. GISCs and DCPCs allow the Discovery Access and Retrieval of data, products and services offered by WIS Centres, but GISCs offer a global view of this information and provide distributed and resilient access to critical data and products.

Météo-France, the UK Met Office, the Australian Bureau of Meteorology, the Korean Meteorological Administration, and Meteo France International have implemented the OpenWIS software, coupled with their existing systems, to perform the three functions required by the WMO Information System (GISC, DCPC and NC). In particular, the GISC functionality will be shared between the two partners (Meteo France and MetOffice) and will appear as a single GISC to other WMO GISCs.

OpenWIS is deployed in an operational environment using the existing private RMDCN Wide Area Network and also support access from the Internet.
The functional components of OpenWIS are:
• Data Service and its cache of essential data
• Metadata Service and its ISO19115 metadata catalogue (synchronisation with other catalogues compliant with OAI-PMH protocol)
• Security Service
• Monitoring and Control
• Portal
• External and internal Interfaces

Météo France operates disparate dissemination tools. OpenWIS provide a generic interface that Météo France has adapted, covering requests for dissemination and their monitoring.

OpenWIS interacts with data sources (e.g. archives or product creation system) to respond to ad hoc or subscription requests.

By the end of 2013, OpenWIS will provide service interfaces and metadatas that fit Inspire requirements.

Thanks to the Météo France OpenWIS portal, the clients can discover and retrieve, in different ways, all kinds of meteorological data coming from world producers.