

WMO Information System at Japan Meteorological Agency

What's WIS?

The WMO Information System (WIS) is a single coordinated global infrastructure of WMO for telecommunications and data management functions. It enhances the Global Telecommunication System (GTS) with modern technology standard elements to serve all purposes of WMO and related international programmes.

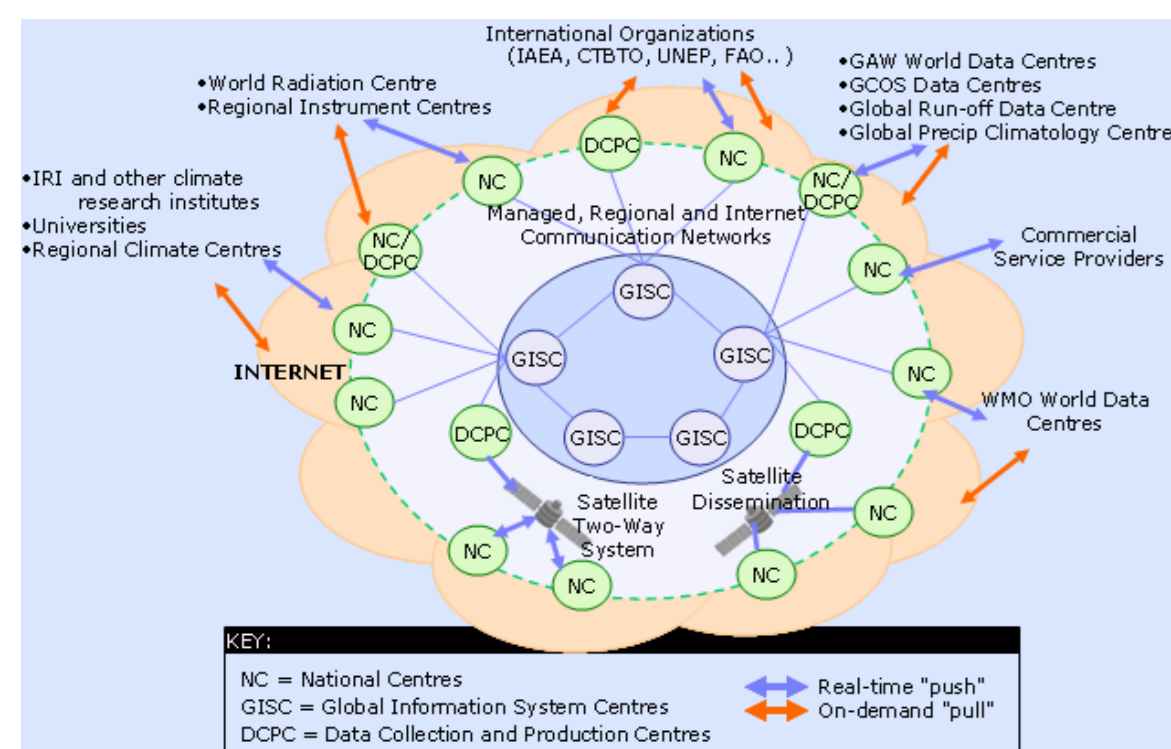


Structure of WIS

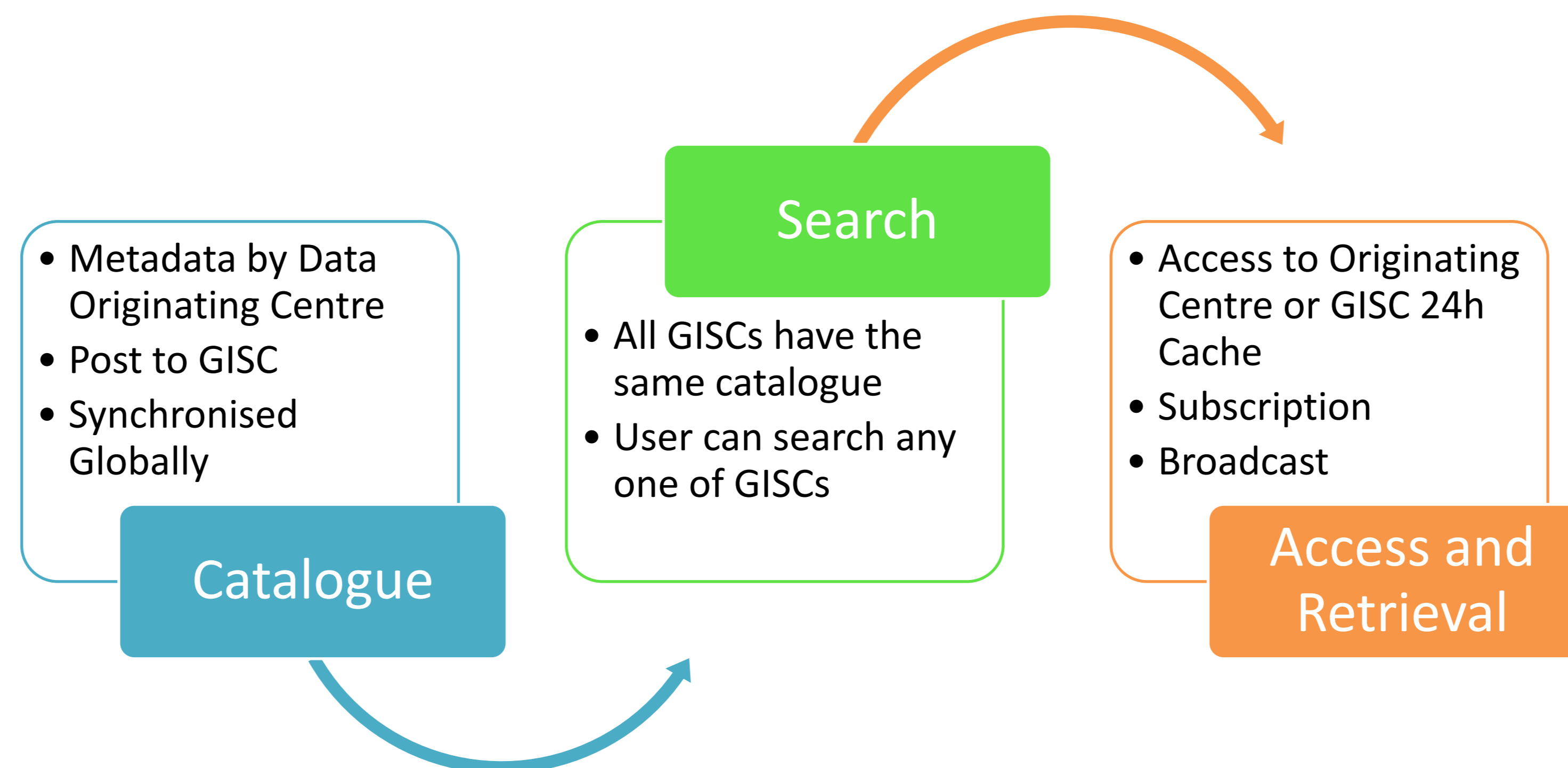
- GISC – Global Information System Centre
- DCPC – Data Collection and Production Centre
- NC – National Centre

WIS supports diversity of infrastructure

- Dedicated land-line
- Internet
- Satellite broadcasts



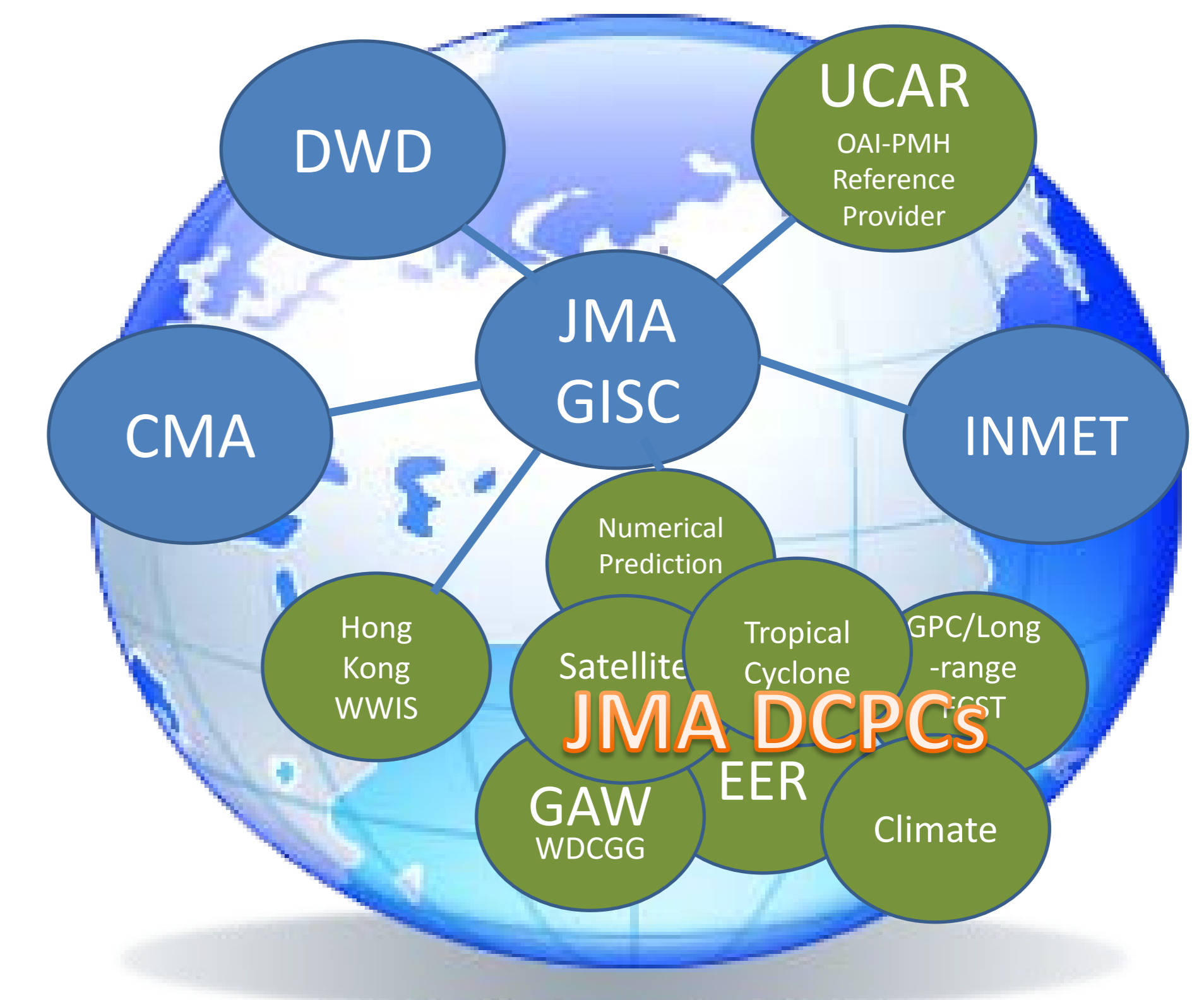
Data Discovery, Access & Retrieval



The data Discovery, Access and Retrieval (DAR) is a central new function of WIS that enables users to learn about location, properties, and access methods for all data and information products available on WIS.

All WIS centres are supposed to create/maintain metadata (element of data catalogue) to describe information they publish. WIS uses WMO Core Metadata Profile (currently version 1.1) on ISO 19115 geographical metadata standard. Collected metadata is available for search by all users. SRU (Search by URL) protocol is chosen to allow “mush-up” development of web-based application at all WIS user organisations.

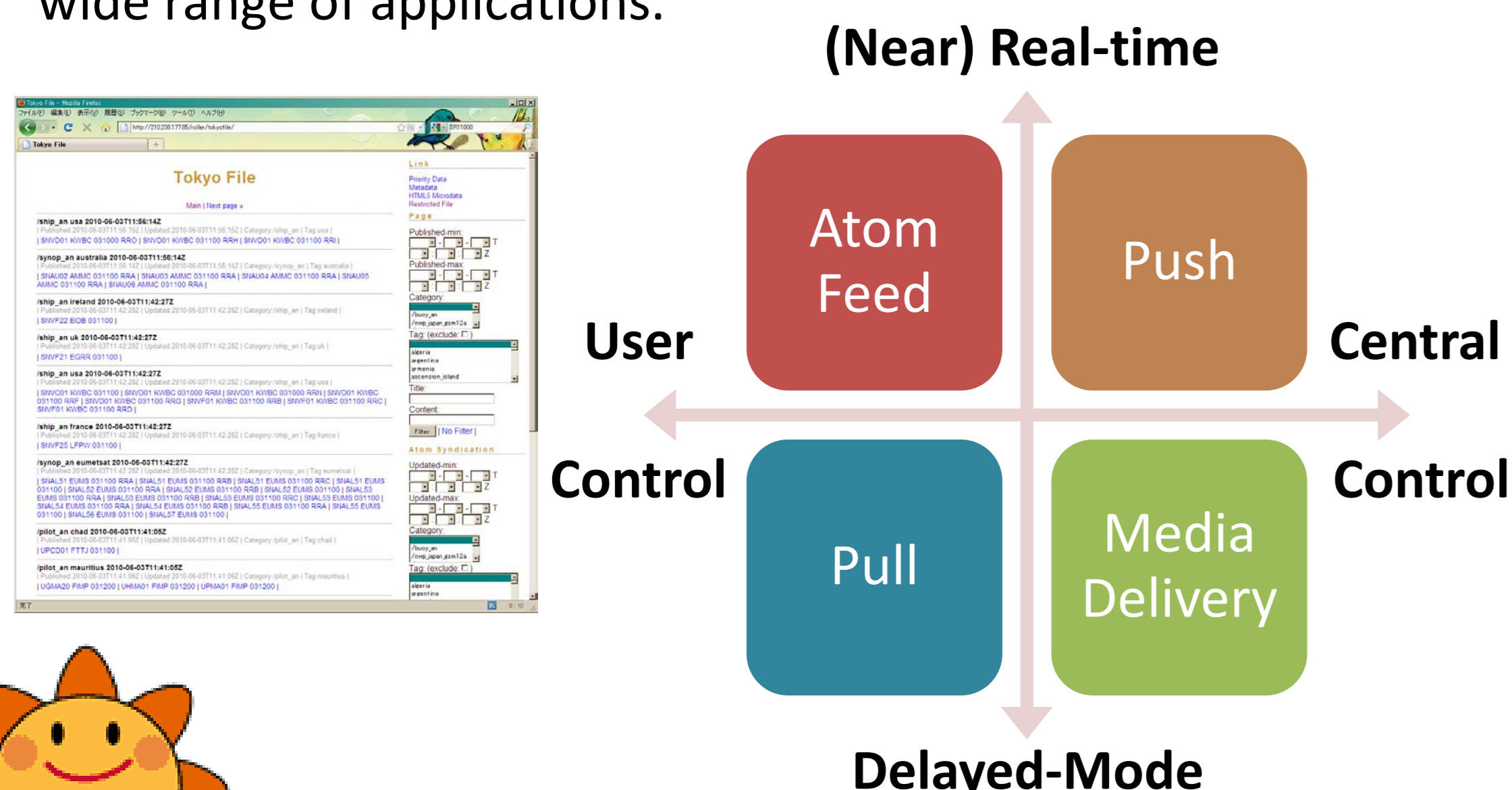
Development Cooperation



WIS development team in JMA is working in cooperation with China Meteorological Administration (CMA), Hong Kong Observatory (HKO), Deutscher Wetterdienst (DWD). Metadata Synchronisation is also established between UCAR reference site and INMET, Brasil.

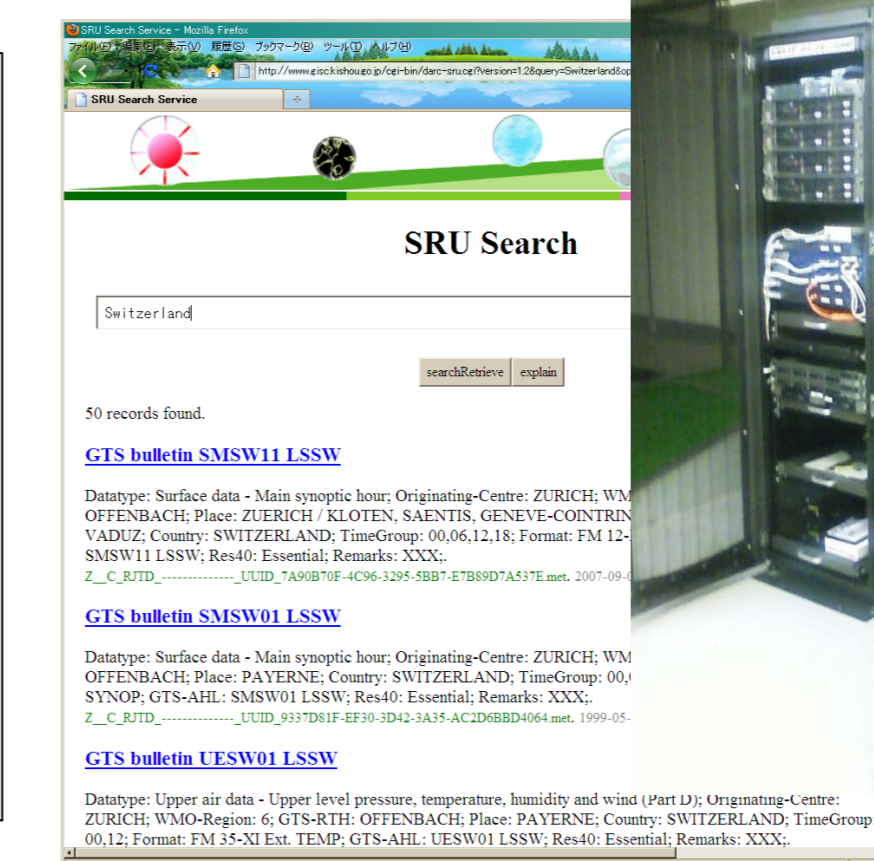
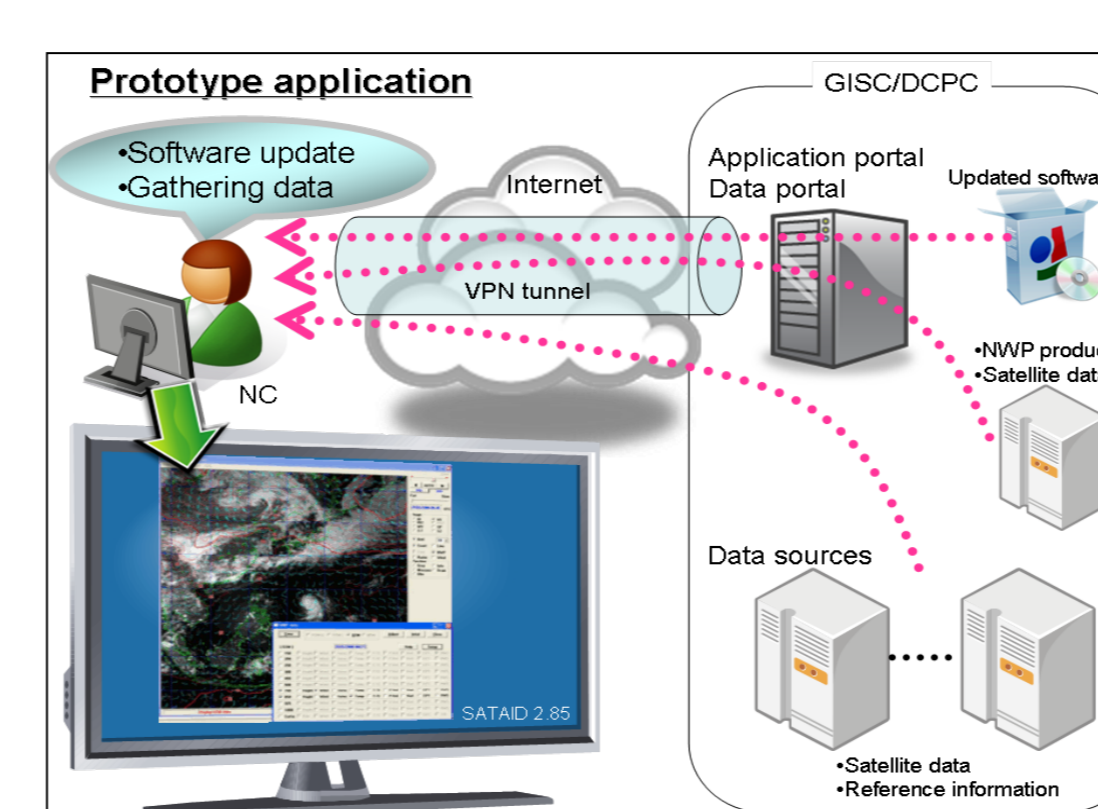
Blog-based Data Handling & Atom Feed

It is a great challenge how to manage near real-time data distribution for huge number of potential WIS users. There have been a long debate over “push and pull” protocol choice, but JMA is exploring the third way called Atom Feed, which is now commonly used for subscription of dynamic web such as weblogs. Low-cost user-controlled solution would be suitable for wide range of applications.



RA II & V – VPN Pilot Project

Since 2003, JMA has been taking a leading role in the initiative to demonstrate virtual private network (VPN) over the Internet for secure communication for relatively small centres. The project is expected to contribute the WIS implementation through 1) technical consulting body on VPN, 2) prototype of integrated data access and visualization, and 3) capacity building for participants in WIS pre-operation. Currently Web Data Ingest is under development in collaboration with CMA.



You can access our DAR Search and Blog-based Cache of GTS data. Please visit: <http://www.gisc.kishou.go.jp>

