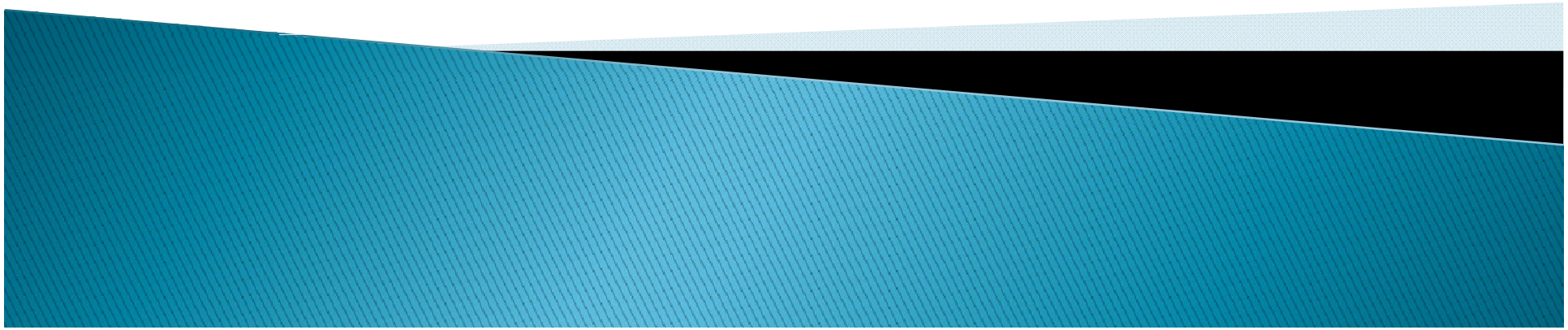
Data Catalogue of WMO Information System (WIS)

Yuka Fukui
Japan Meteorological Agency



1. Outline of WIS

WIS: ICT backbone of WMO (World Meteorological Organization)

Overarching Information System of

All WMO & Related Programmes

Two-part strategy

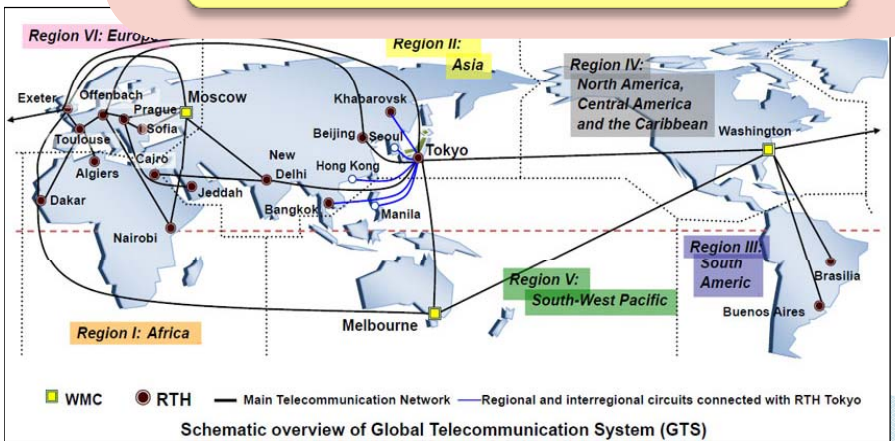
Data Catalogue

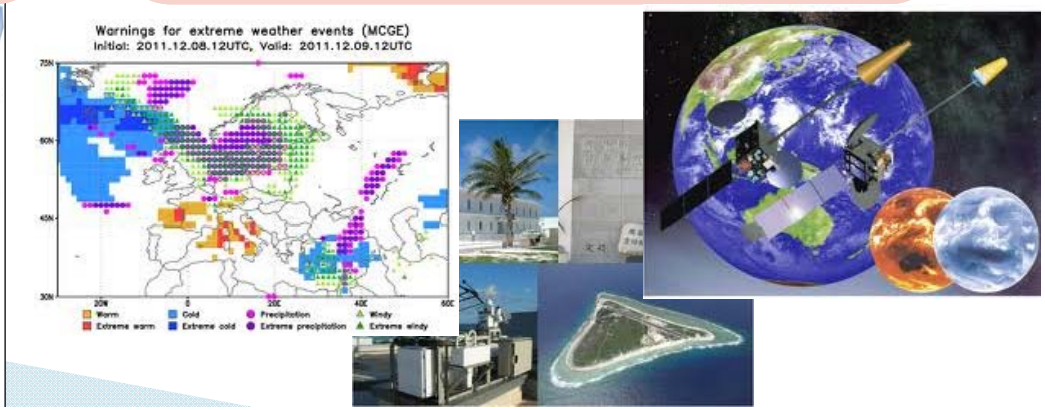
Global Data

- Traditional GTS
- Extension to Web

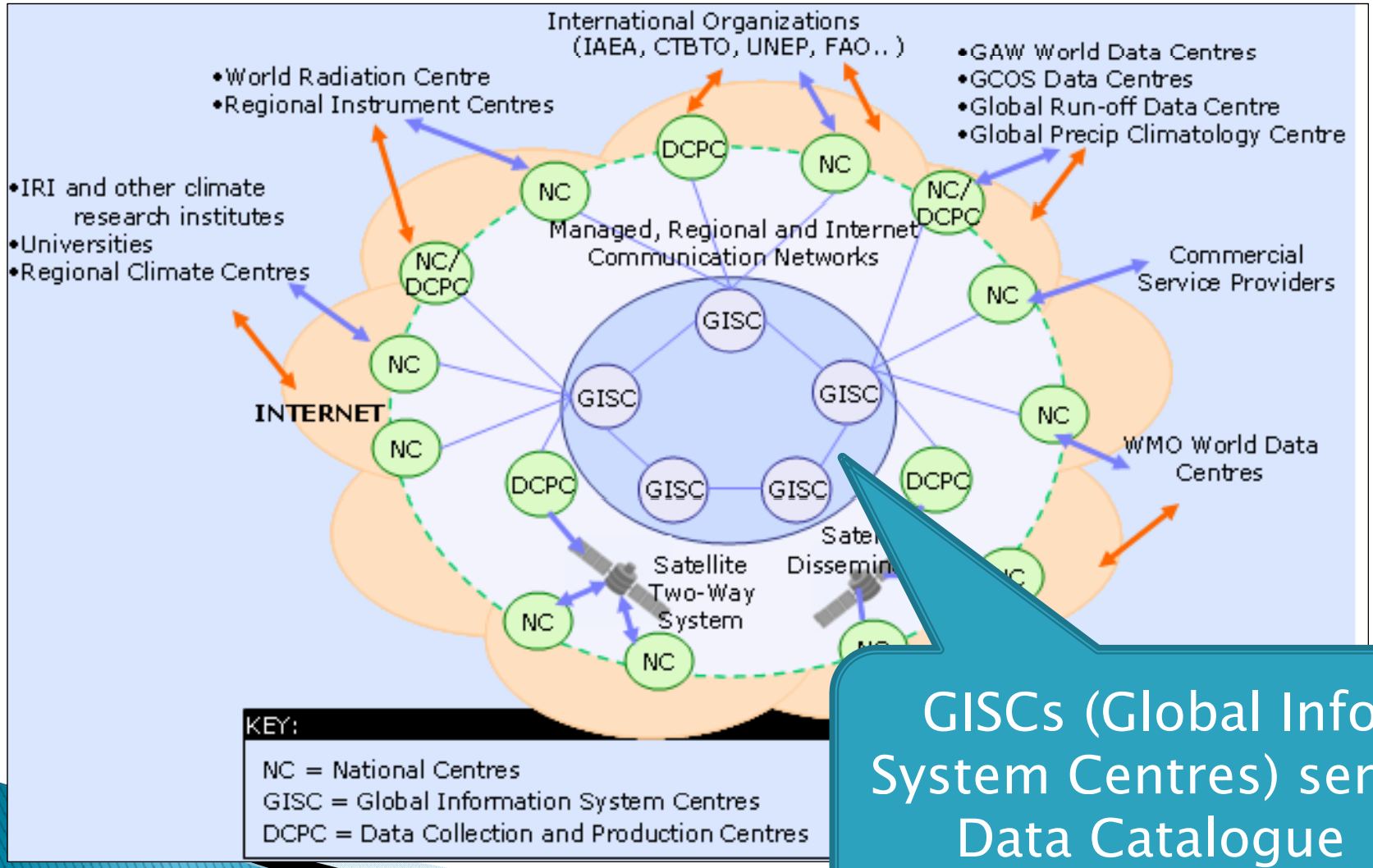
Specialized Data

- Programme Specific Info Systems





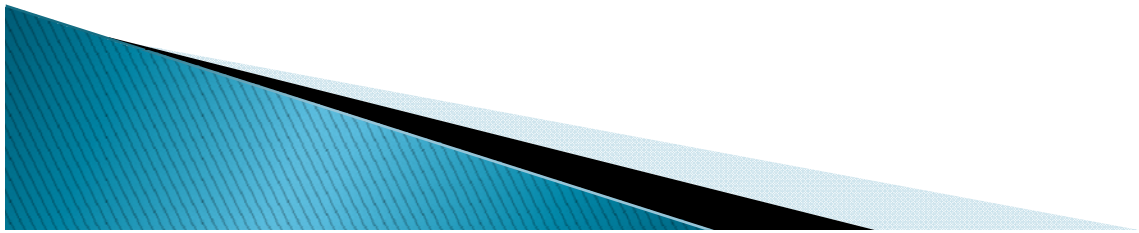
Reorganising structure



GISCs (Global Info System Centres) serve Data Catalogue

Current Designated GISCs

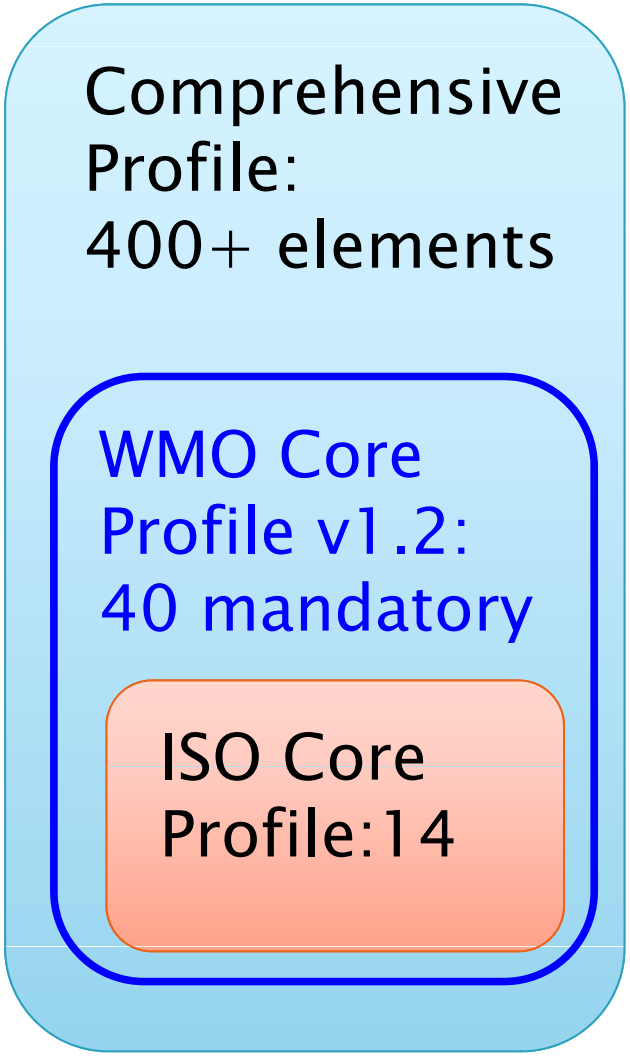
1. Beijing, China
2. Offenbach, Germany
3. Tokyo, Japan
4. Toulouse, France
5. Exeter, UK



2. Metadata Record Format

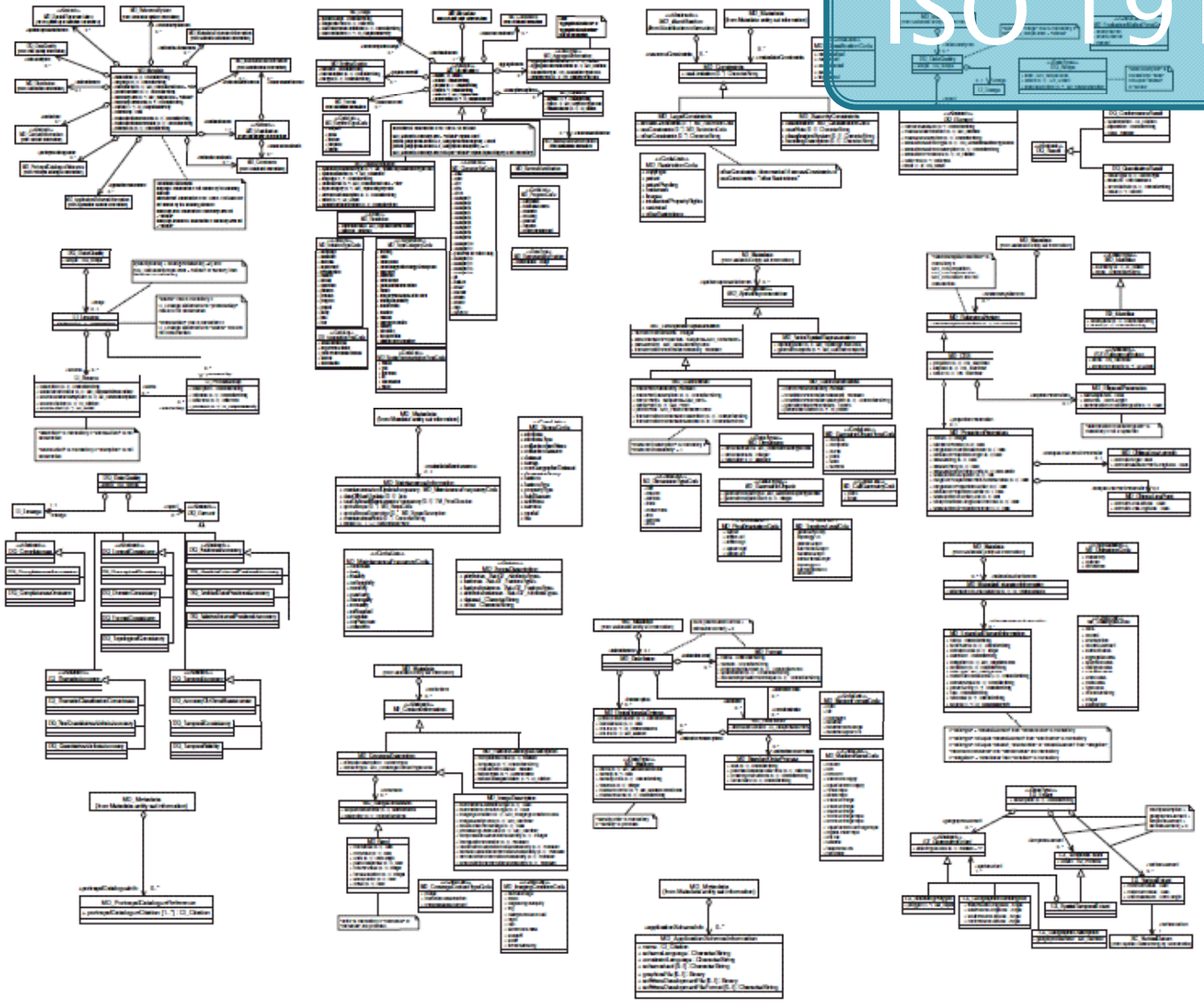
Based on ISO 19115

- Entire std too huge
  - About 400 elements
- ISO Core too small
  - 14 elements
- WMO developed own metadata profile



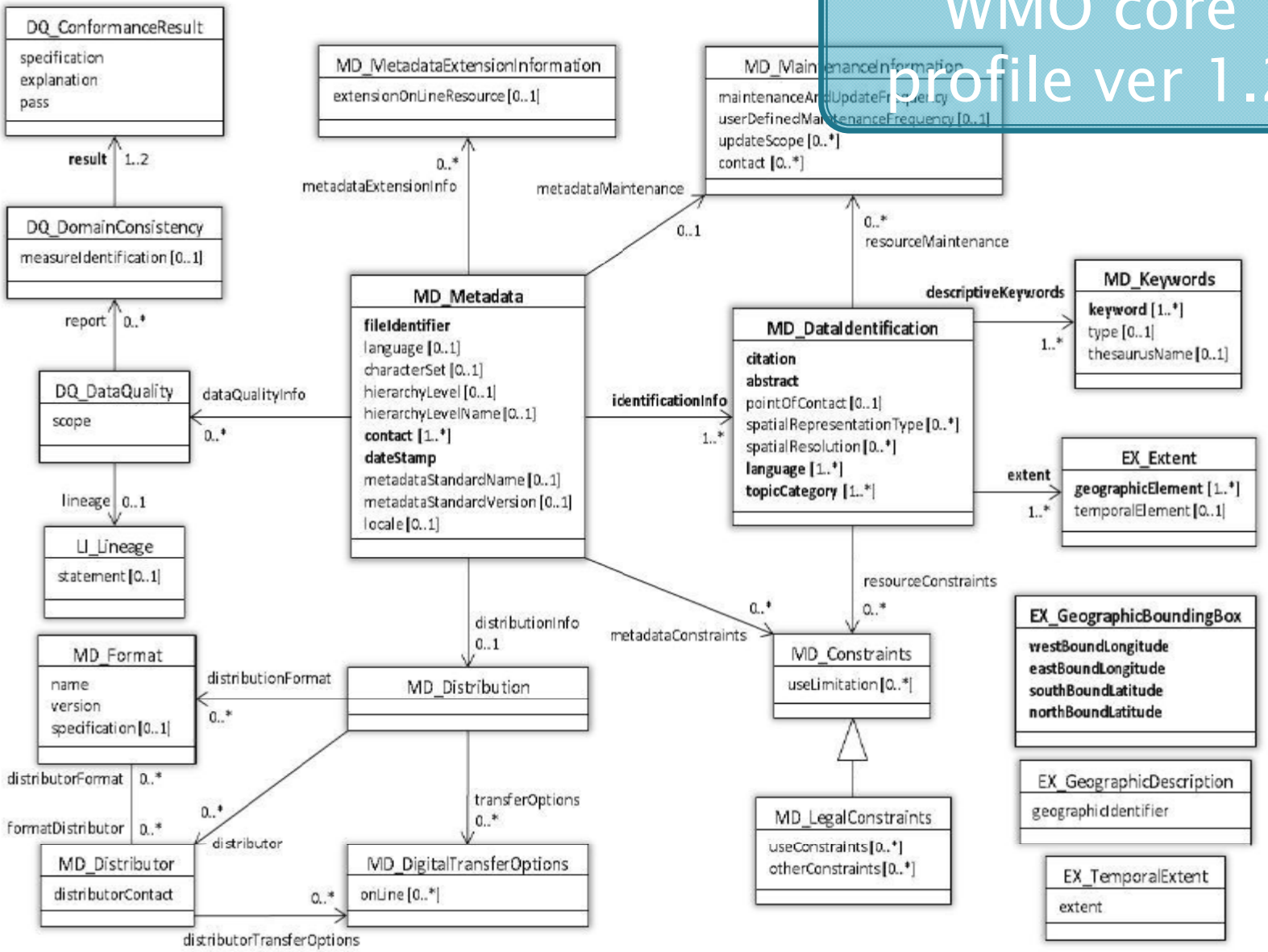
This huge is...

ISO 19115



… made this simple.

WMO core profile ver 1.2



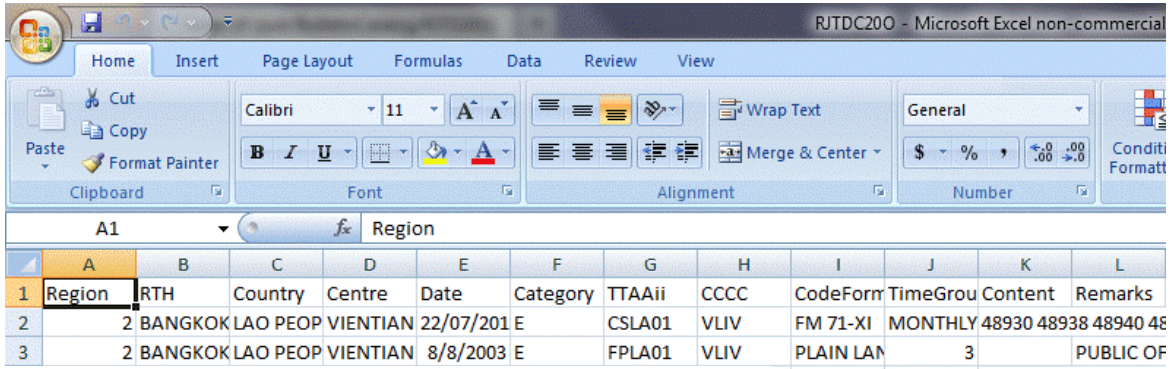
Typical Elements

- Metadata contact
- Dataset contact (center name, email, address)
- Metadata date
- Keywords (subject, theme, place)
- Title, abstract
- Bounding box
- Dataset Time (archive range, revised date, expiration)
- Update cycle & hours
- Format
- Dataset URL *or* GTS heading
- Data policy category

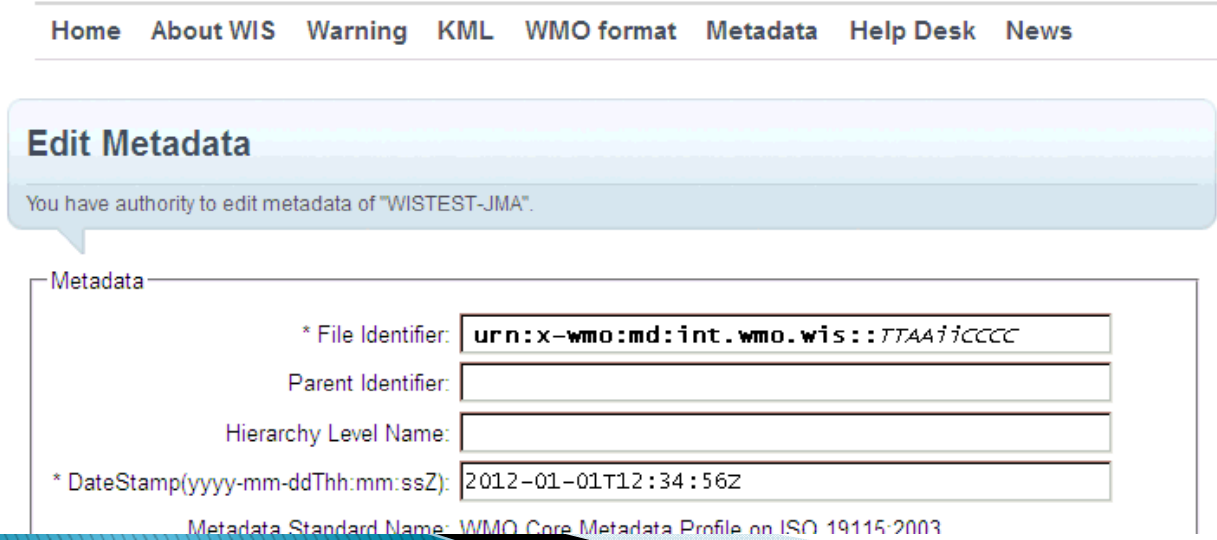
Assistance to create metadata

GISC Tokyo accepts:

- Tabular file
- Web input
- XML directly



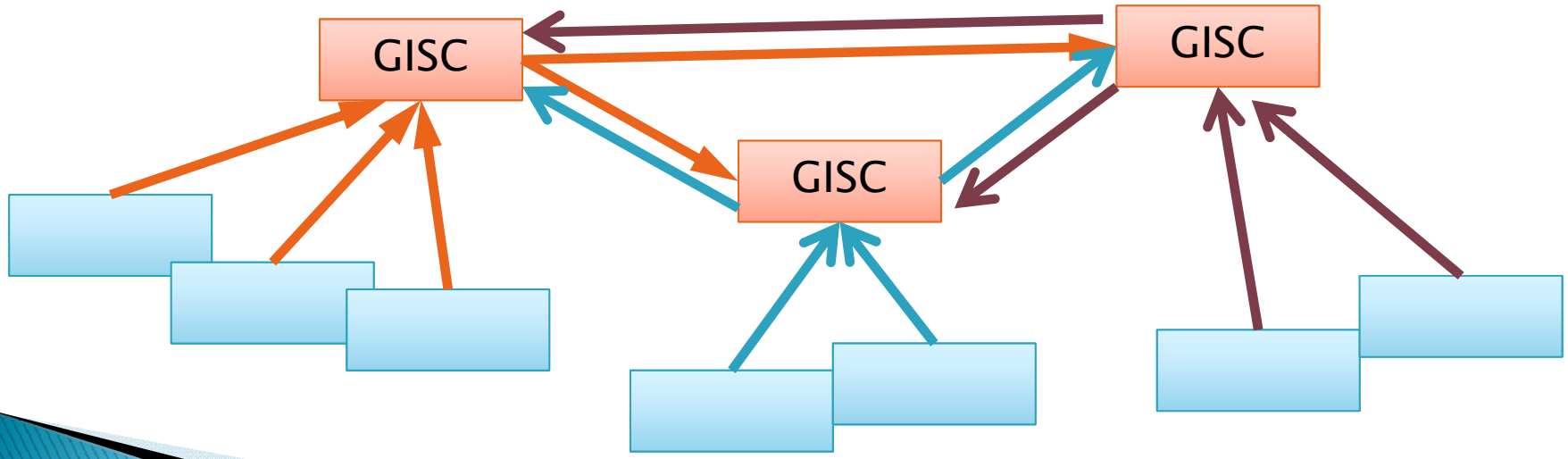
	A	B	C	D	E	F	G	H	I	J	K	L
1	Region	RTH	Country	Centre	Date	Category	TTAAii	CCCC	CodeForm	TimeGrou	Content	Remarks
2	2	BANGKOK	LAO PEOP	VIENTIAN	22/07/201	E	CSLA01	VLIV	FM 71-XI	MONTHLY	48930 48938 48940 48	
3	2	BANGKOK	LAO PEOP	VIENTIAN	8/8/2003	E	FPLA01	VLIV	PLAIN LAN	3		PUBLIC OF
									FM 12-XI	03,09	48921 48924 48925 48	
									FM 12-XI	15,21	48930 48940 48947 48	
									FM 12-XI	00,06	48921 48924 48925 48	
									FM 12-XI	12,18	48930 48940 48947 48	
									PLAIN LAN	3		PUBLIC OF
									PLAIN LAN	6		PUBLIC FO
									FM 12-XI	03,09	48001 48004 48008 48	
									FM 12-XI	15,21	48097	
									FM 12-XI	00,06,12	48001 48004 48008 48	
									FM 12-XI	18	48008 48053 48060 48	
									FM 32-IX	0	48094 48097 48108	
									FM 32-IX	0	48094 48097 48108	
									FM 71-XI	MONTHLY	48327 48354 48378 48	
									PLAIN LAN	3		PUBLIC OF
									PLAIN LAN	5		PUBLIC FO



3. Synchronisation of Catalogues among GISCs

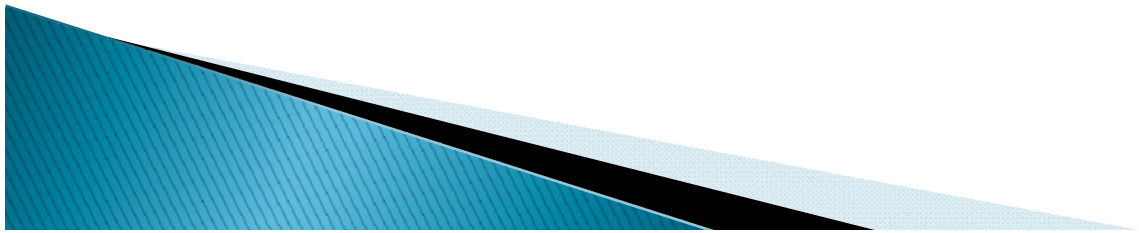
Confederated Catalogues

- Each GISC has associated centres
- Updates of metadata go to that GISC
- No central catalogue
- GISC synchronises each others



OAI-PMH

- Protocol to synchronize metadata
- Developed in Librarian community
- Open standard:
  - HTTP-based
  - CGI-like input, XML output
  - Specification http://www.openarchives.org/OAI/



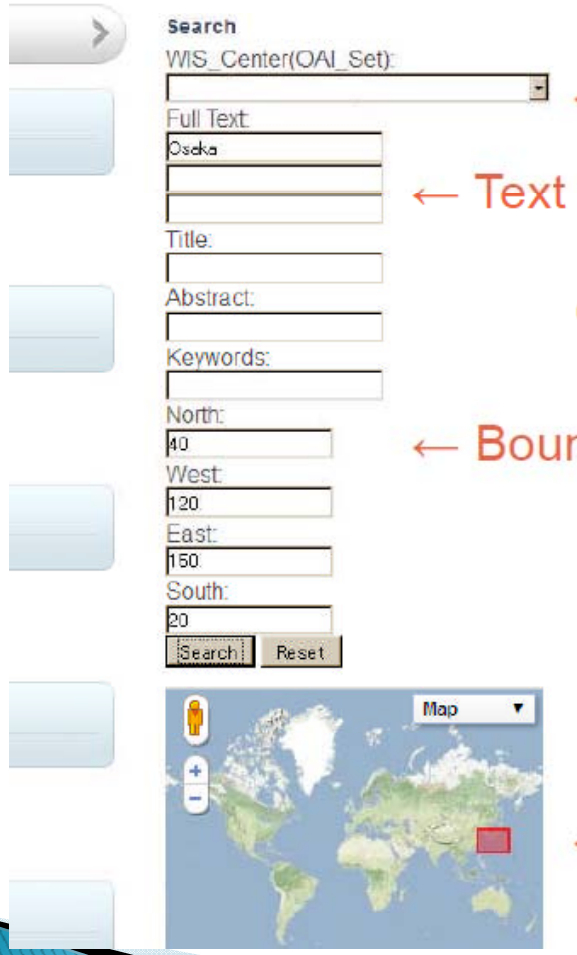
Now operational

- Beijing, Offenbach, and Tokyo operating catalogues
- Since January 2012

4. User interface to search catalogue

Rich “search” form for humans

http://www.wis-jma.go.jp/meta/search.jsp



← Metadata Source

← Text in metadata record: only in title, abstract, or keywords, or anywhere (full text)

← Bounding box: latitude & longitude ranges

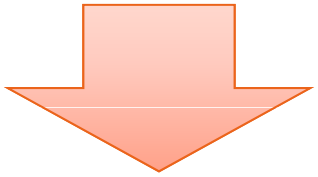
← Bounding box is displayed as you type

SRU for application

- Open standard: Specification available at http://www.loc.gov/standards/sru/
- Details similar to OAI-PMH
  - HTTP-based
  - CGI-like input
  - XML output
- Request example
  - http://www.wis-jma.go.jp/meta/sru.jsp?version=1.1&operation=searchRetrieve&query=Osaka+and+SYNOP

Simplest SRU application

```
<form method="GET" action=
  "http://www.wis-jma.go.jp/meta/sru.jsp">
<input type="hidden" name="version"
  value="1.1" />
<input type="text" name="query"/>
<input type="submit"
  name="operation" value="searchRetrieve" />
</form>
```



SRU index in Manual on WIS

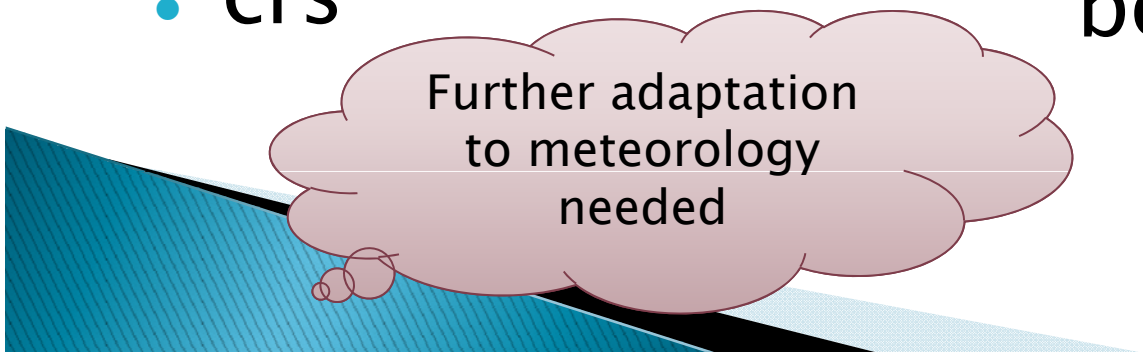
(1) Text

- author
- title
- abstract
- identifier
- keyword
- type
- crs

(2) Temporal

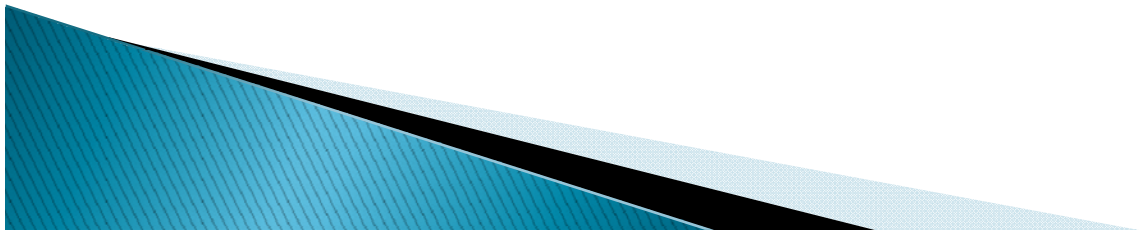
- creationDate
- modificationDate
- publicationDate
- beginningDate
- endingDate

(3) Geographical bounding box



Future Challenges

- Technical refinements
  - Metadata contents to support transition from traditional catalogue
  - URL convention of globally-distributed data
  - Seach index to better fit meteorological users
- Outreach
  - Really involve many people to create and use catalogue



Thank you!!

気象庁
Japan Meteorological Agency

http://www.jma.go.jp/jma/indexe.html
http://www.wis-jma.go.jp/