

Report of WG on Data and Information Systems

B. Richter and C. Noll

Importance of a GGOS Portal

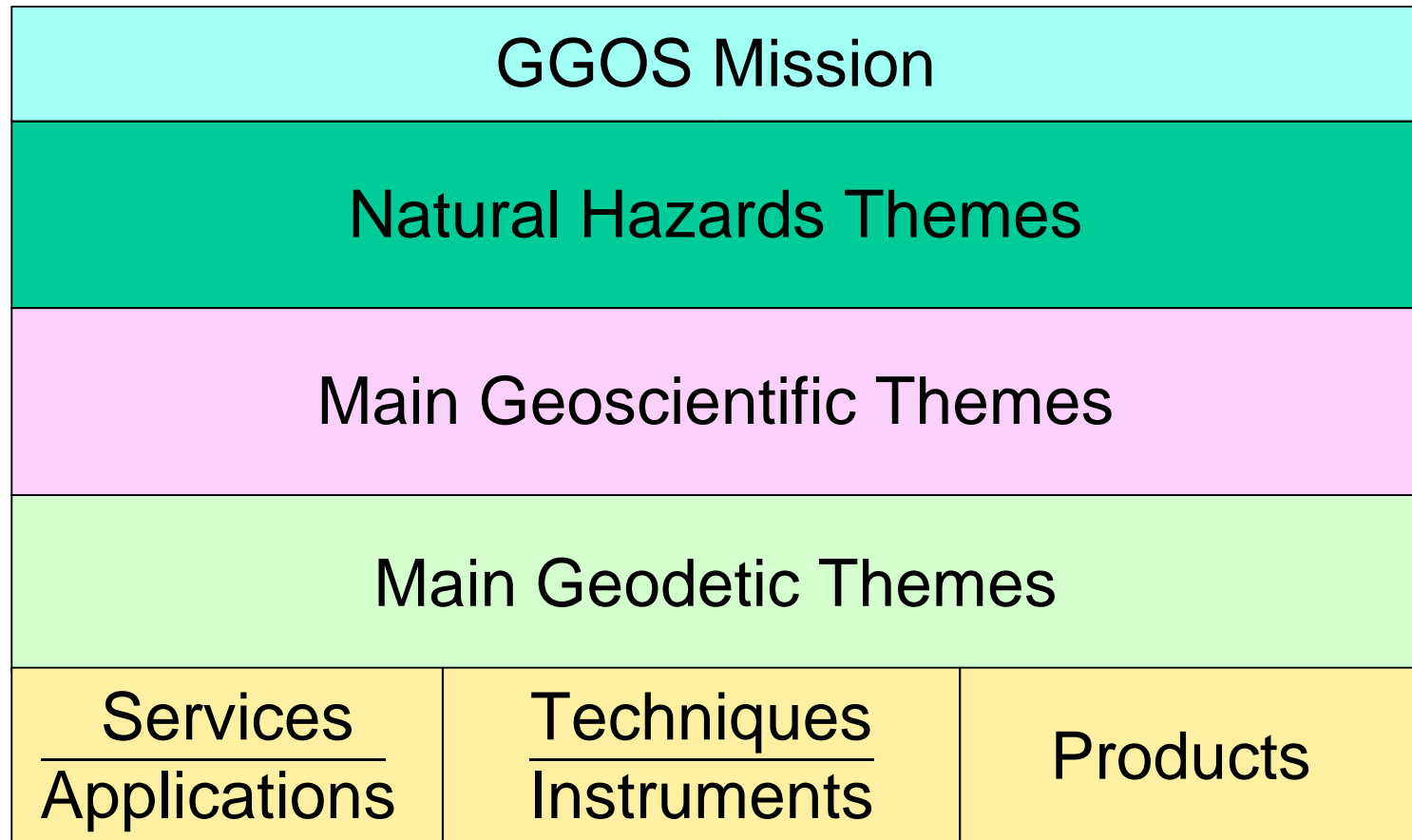
- The IAG Services already produce very important and valuable products to be promoted by GGOS
- Promotion of these products for Earth sciences and applications through an internet portal
- GGOS Portal:
 - One access point (entry door) for all geodetic products relevant in the frame work of GGOS (not to the products themselves, that are available at the individual services data centers)
 - Start with the burning questions of society and lead the way from there to the products, their characteristics, location, availability, latency, accuracy

Ad-hoc Discussion Group

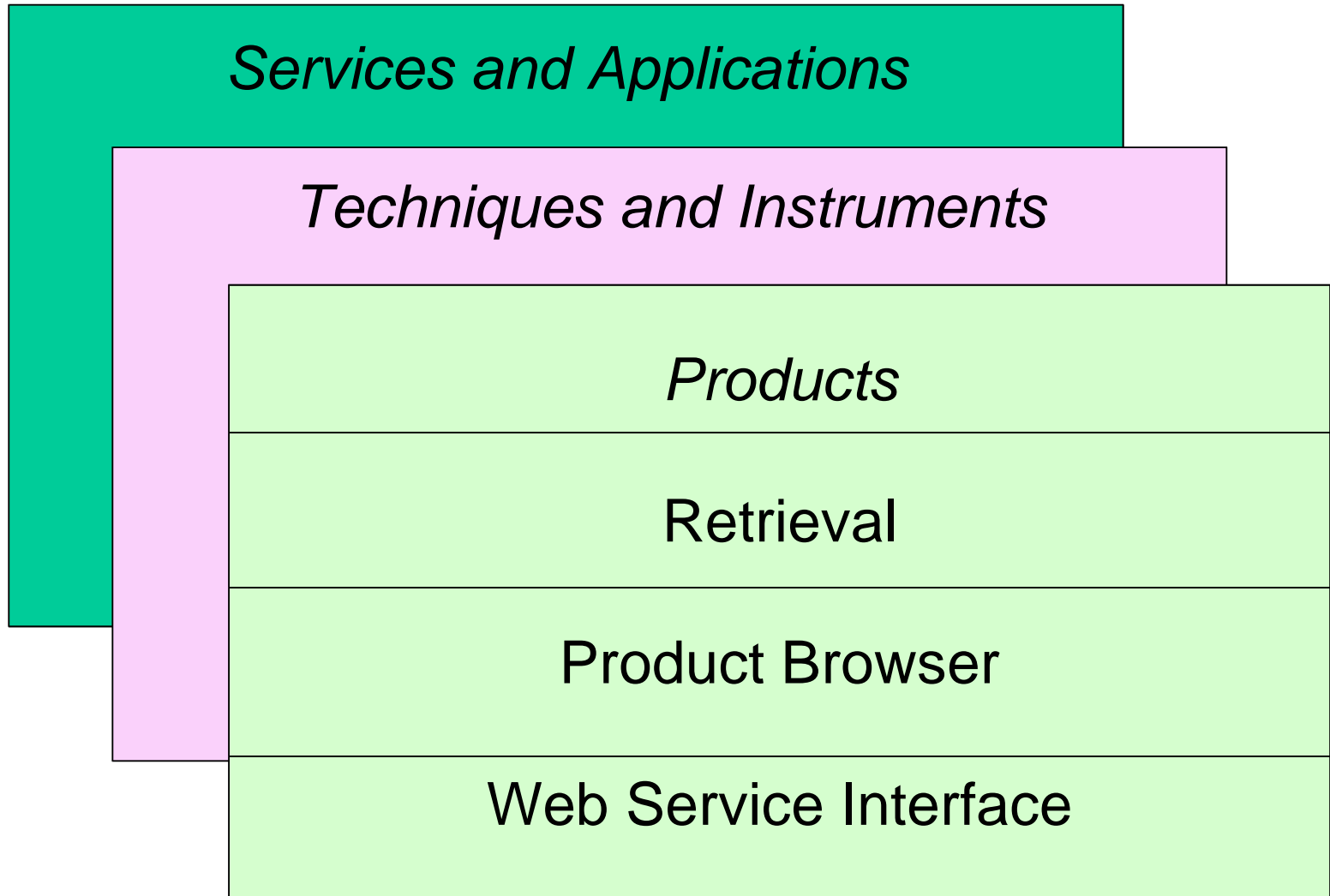
- Members:
D. Dransch, B. Ritschel, A. Helm,
M. Rothacher, B. Richter
- 2 meetings at GFZ
- Draft technical concept

GGOS-Portal

<http://www.ggos.org> => structure of home page,
multiple entries to serve all interests



GGOS-Portal: following levels (extract)

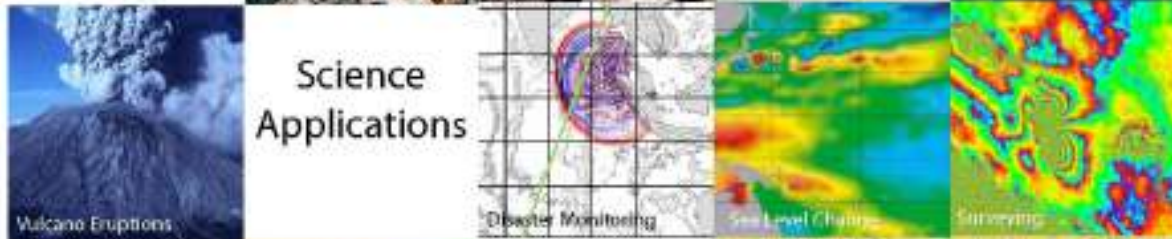


Global Geodetic Observing System

Natural Hazards



Science Applications



Geodetic Applications



Services
Techniques
Instruments
Products

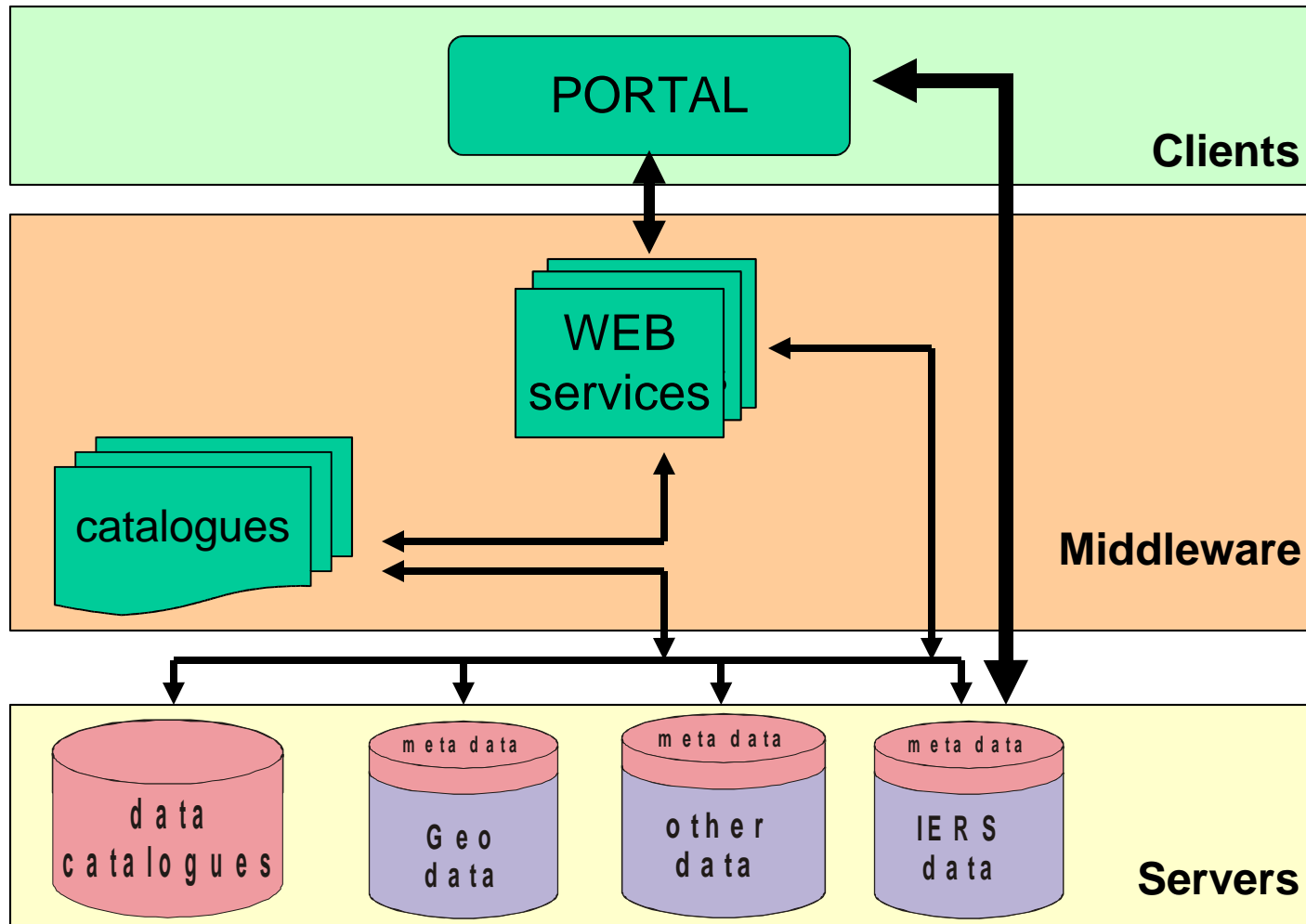


IDS
IGS
ILRS
IVS
IERS
IGFS



design
A. Helm, GFZ

Planned User Access

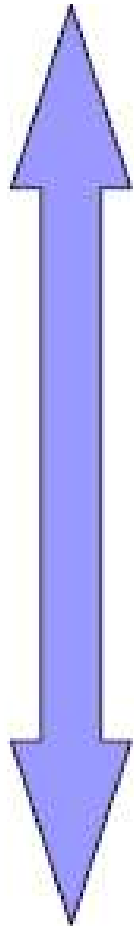


Collecting of Information

- **Choice of meta data catalogue**
 - Directory Interchange Format (DIF) developed by NASA (Global Change Master Directory), focused on science, used by Marine Environmental Data Inventory (MEDI) or at GFZ
 - ISO 19XXX standards
 - ★ISO 19115 Meta data
 - ★ISO 19119 Geographic information - services
 - ★ISO 19139 Data Exchange - XML schema implementation
- **Interoperability** by cross-mapping the different metadata standards
- **Clearinghouse middle ware** (catalogues, services)
- **Connectivity**
Application profiles (available for ISO 19115, ISO 19119)
- **WEB service capability**

From Interoperability to Connectivity

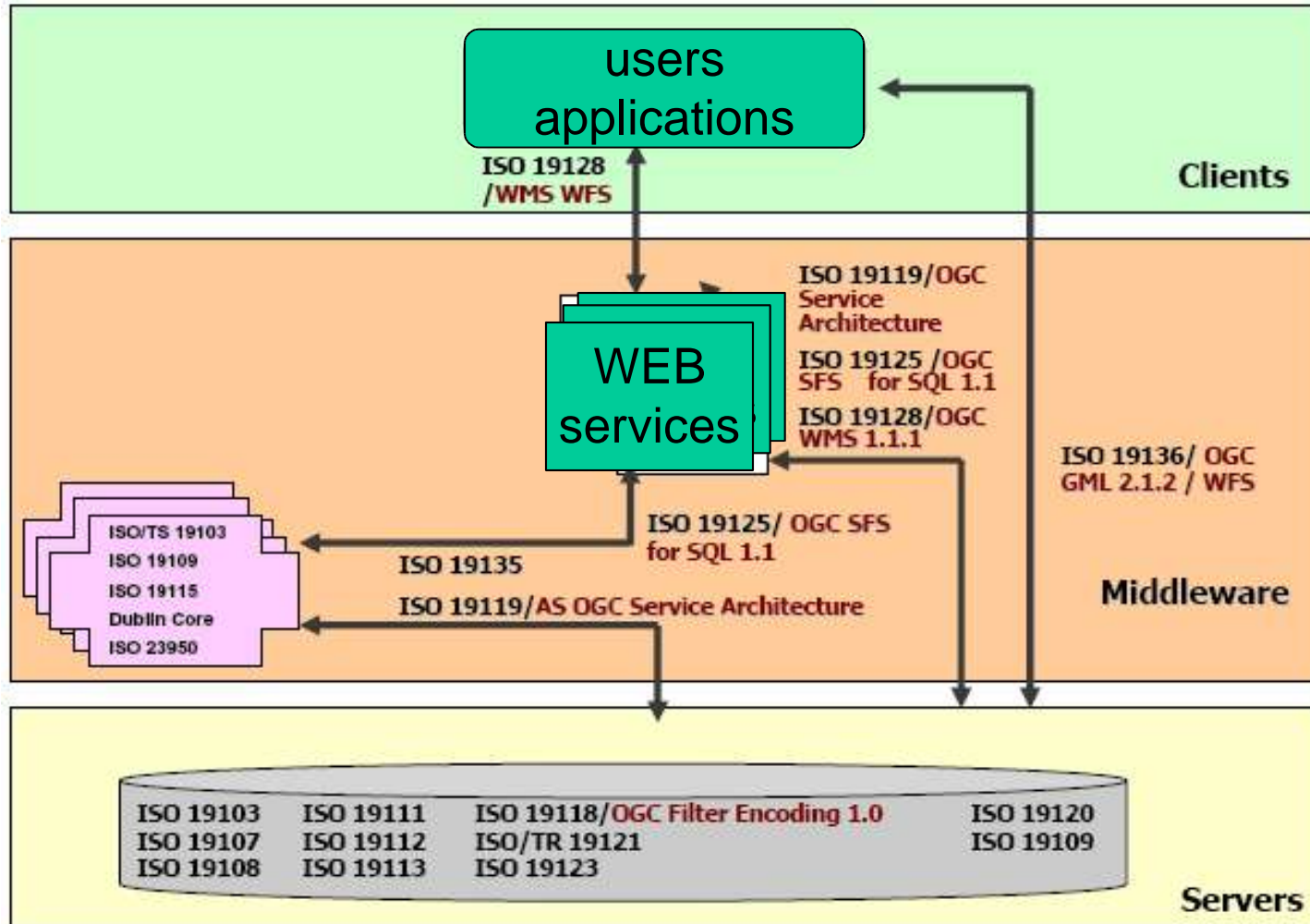
Interoperability



Connectivity

workflow-, process definition	WDL, XPDL
service integration	ISO 19119, WSFL
search for service	OGC Stateless Catalog, UDDI
data/service description	ISO 19115, ISO 19119, WSDL
services	OGC WFS, WMS, WCS,...
Device control protocol	HTTP/POST, HTTP/GET, SOAP , ISO 23950
Data schema and semantic	INTERLIS, OWL , RDF HTML, GML, UML ,...
data representation formats and coding	XML Schema , ITF, XML , GML, ASCII, JPEG, GIF, TIFF, PNG,...
communication protocol	TCP/IP, HTTP, SSL, SMTP

Example with ISO Standards



Pre-Requirements for Portal

- List of Products
 - partly available through e.g. INDIGO, IERS, ISDC, ...
- List of Instruments
 - partly available through e.g. INDIGO, ...
- List of Services, Institutions, ...
 - IGS, IERS, ...
- List of projects

Product Information

- Entry_Title: TOPEX/POSEIDON altimeter MGDR generation B (NASA/PO.DAAC); Product #068
- Group: Data_Set_Citation
- Group: Personnel
- Discipline: EARTH SCIENCE
Category: EARTH SCIENCE
Topic: ATMOSPHERE
Term: ATMOSPHERIC WATER VAPOR
Variable: PRECIPITABLE WATER
- Category: EARTH SCIENCE
Topic: OCEANS
Term: COASTAL PROCESSES
Variable: SEA SURFACE HEIGHT

Future work

- Result from the Ad hoc group will be incorporated in work group
- Discussion on meta data standards and portal layout
- Proposal for retreat