

jcommops



Technical Coordination at JCOMMOPS

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JCOMM, JCOMMOPS & GOOS

Mixed Commission
www.jcomm.info

Support Center
www.jcommops.org

Oceanography
www.ioc-unesco.org

Organisation des Nations Unies pour l'éducation, la science et la culture

Commission océanographique intergouvernementale

GOOS
www.ioc-goos.org



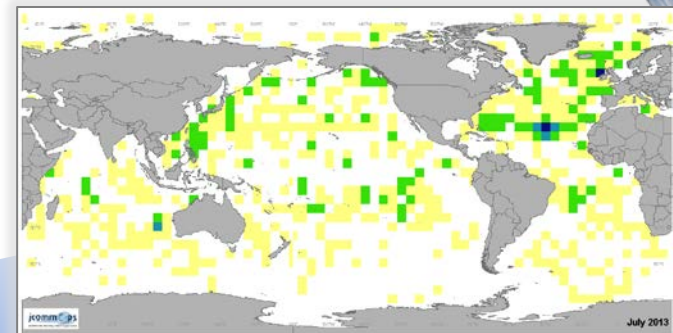
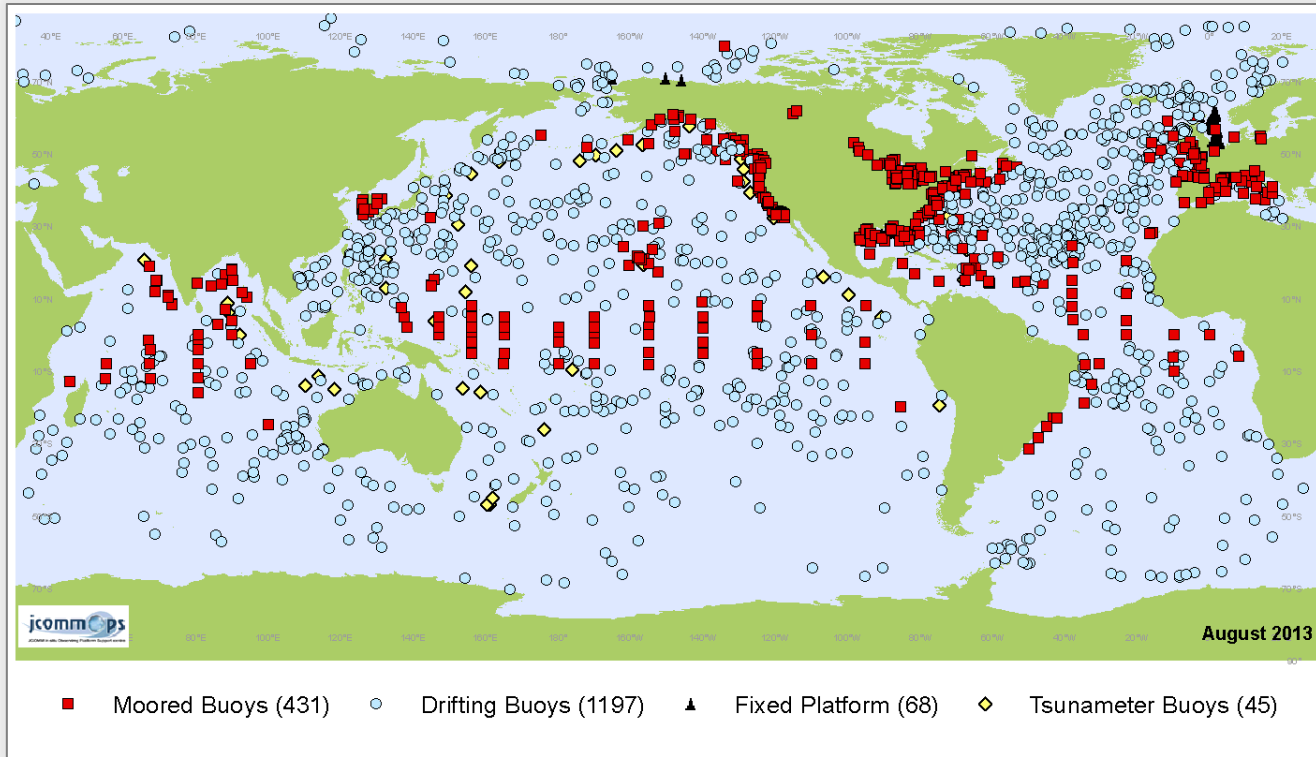
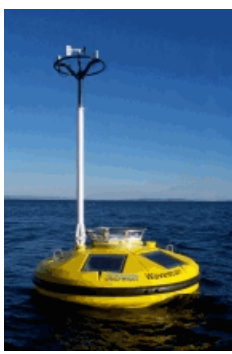
Mission

The **JCOMM Observations Programme Support Centre**, on behalf of GOOS and JCOMM, aims to:

- **monitor** and **evaluate** the performance of the networks (only meta data!)
- control the metadata **quality**
- assist in the **planning, implementation** and **operations** of the systems
- act as a **clearing house** and **focal point** on all programme aspects
- assist in **data distribution** on the Internet and GTS
- encourage **cooperation** between communities and member states
- relay user **feedback on data quality** to platform operators
- provide **technical assistance** and **user support worldwide**
- develop **synergies** between observing systems (GOOS)

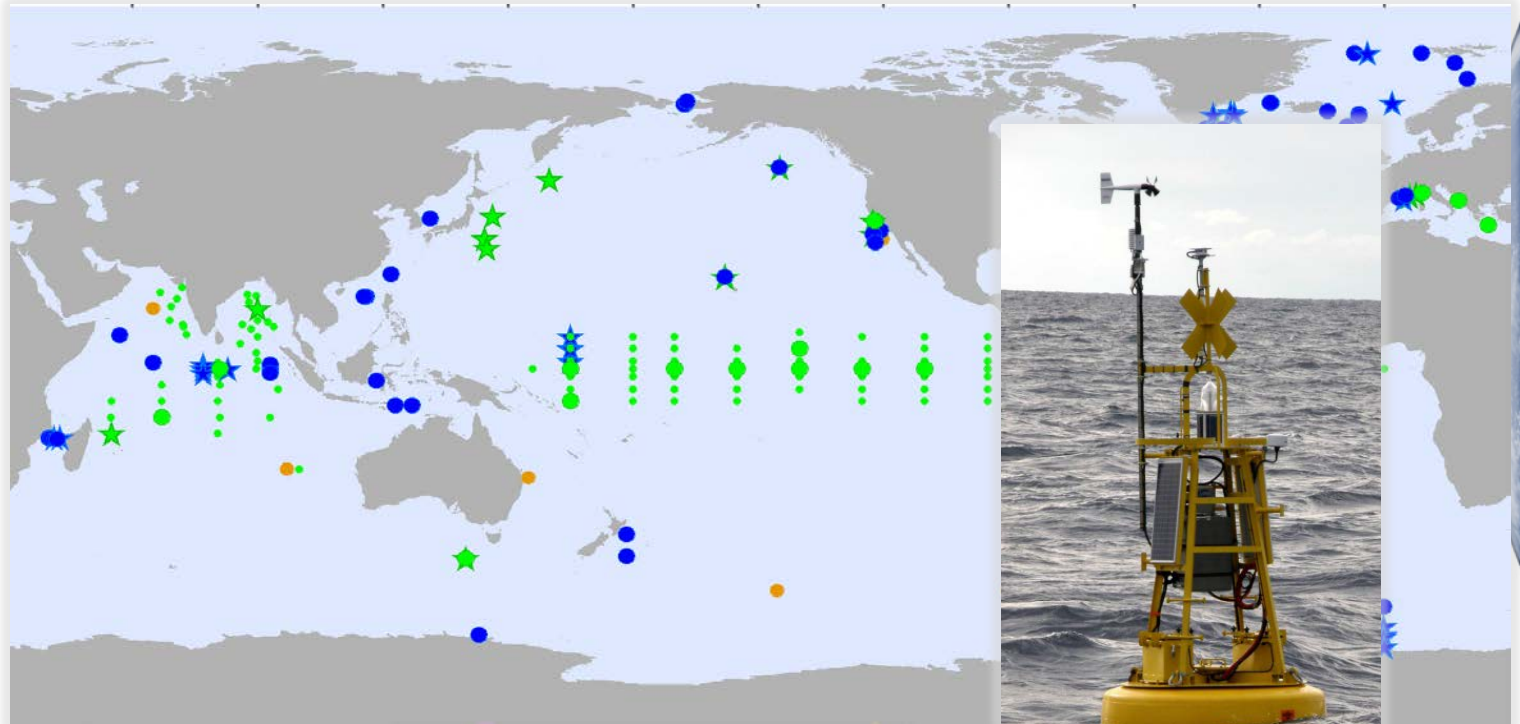
DBCP

Monitoring Buoys



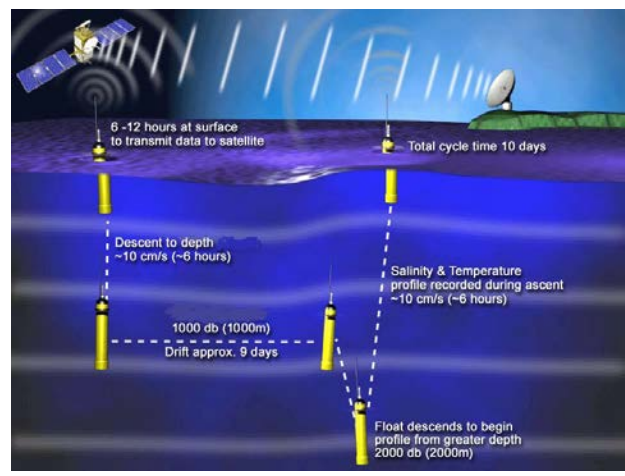
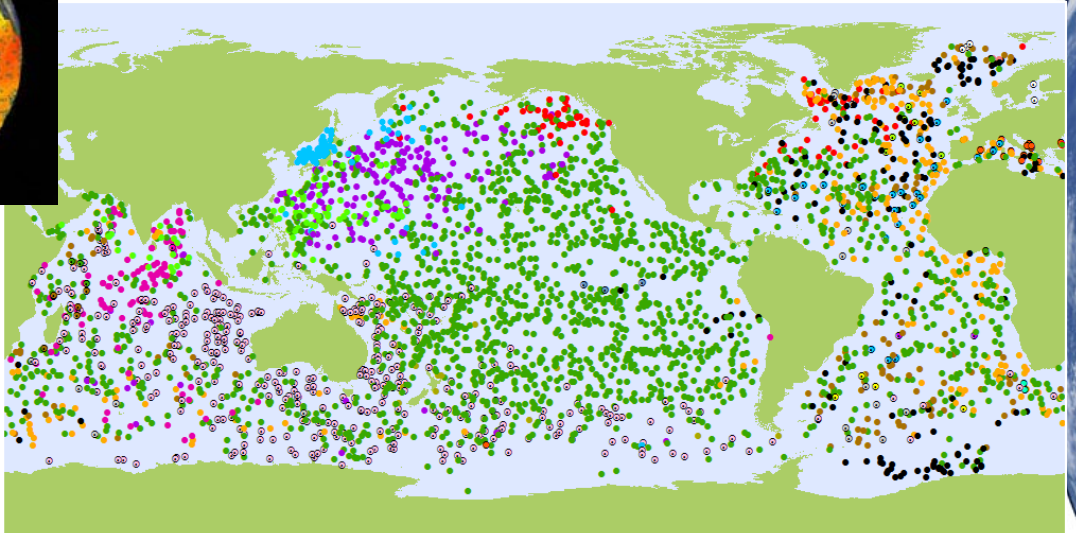
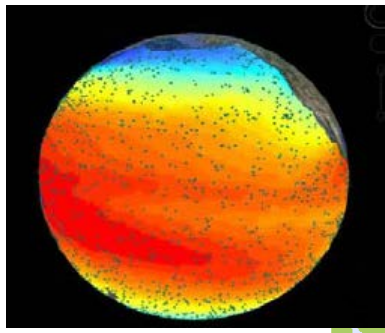
OceanSITES

“Putting Eyes in the Deep Ocean”



Argo

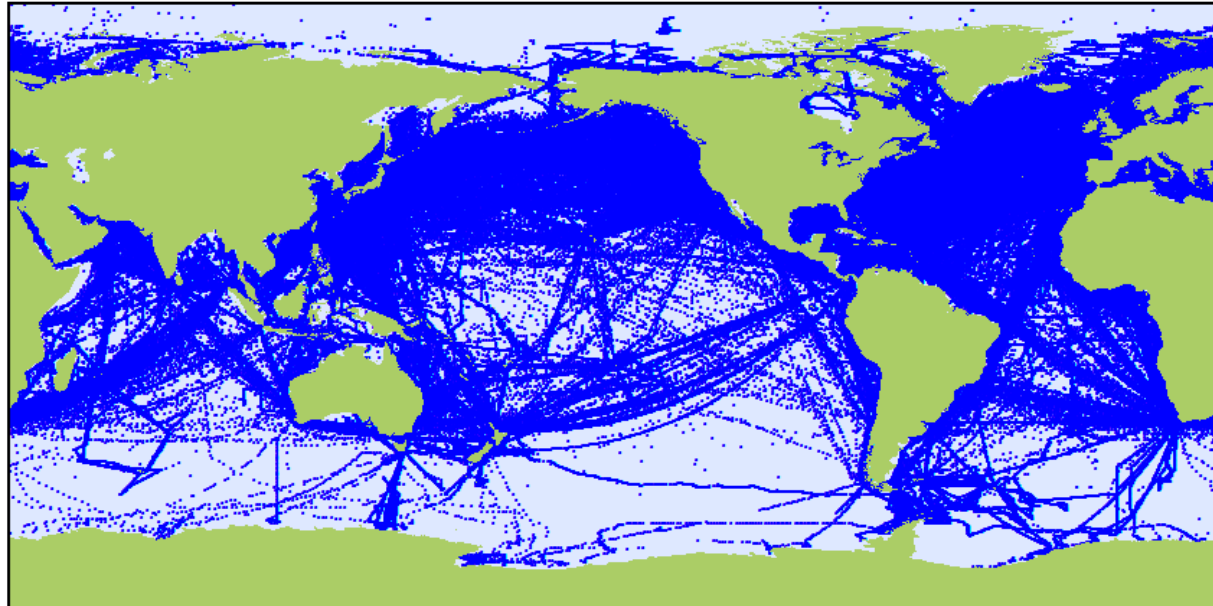
Profiling Oceans



- 366 Floats**
- | | | | | | | |
|-------------------|---------------|-----------------|----------------|--------------------|--------------------|-------------------------|
| ● ARGENTINA (4) | ● CANADA (83) | ● FRANCE (256) | ● IRELAND (10) | ● SOUTH KOREA (88) | ● NORWAY (2) | ● SRI LANKA (1) |
| ● AUSTRALIA (389) | ● CHINA (85) | ● GABON (1) | ● ITALY (19) | ● MAURITIUS (6) | ● POLAND (0) | ● TURKEY (2) |
| ● BRAZIL (2) | ● ECUADOR (3) | ● GERMANY (186) | ● JAPAN (208) | ● NETHERLANDS (20) | ● SOUTH AFRICA (2) | ● UNITED KINGDOM (132) |
| ● BULGARIA (3) | ● FINLAND (5) | ● INDIA (103) | ● KENYA (3) | ● NEW ZEALAND (12) | ● SPAIN (29) | ● UNITED STATES (1 973) |
- September 2013

Ship Observation Team

The Voluntary Observing Ships Scheme



Ship Observations Team

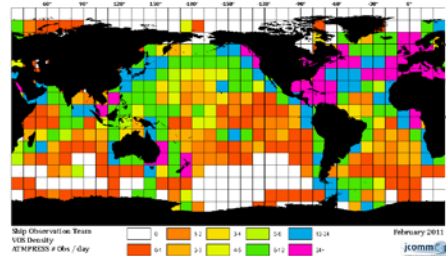
VOS (2258 / 2141074)

2013

(Active platform-IDs / number of observations in period)

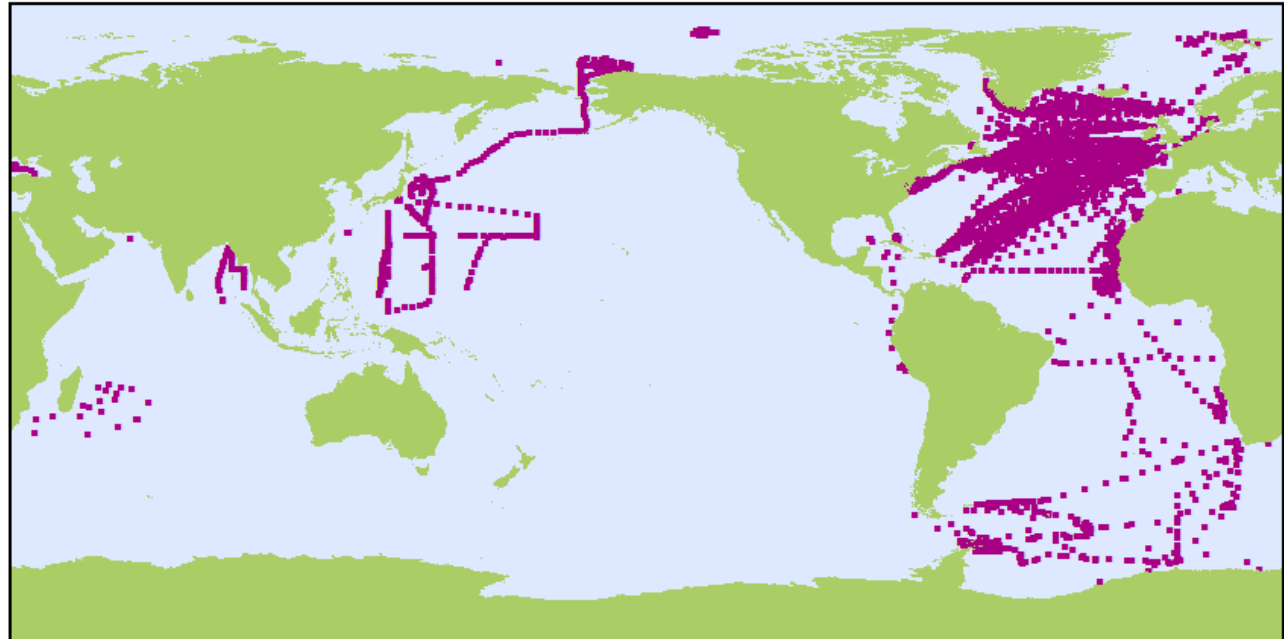
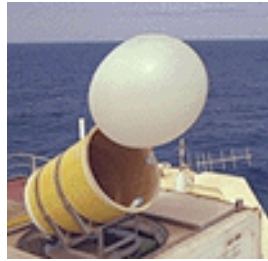


Duplicates: On a monthly basis, approximately 30000 Observations are on the GTS with real AND generic call sign 'SHIP'. All are counted here for the total VOS number.



Ship Observation Team

The Automated Shipboard Aerological Programme



Ship Observations Team

ASAP (24 / 5089)

2013

(Active platform-IDs / number of observations in period)

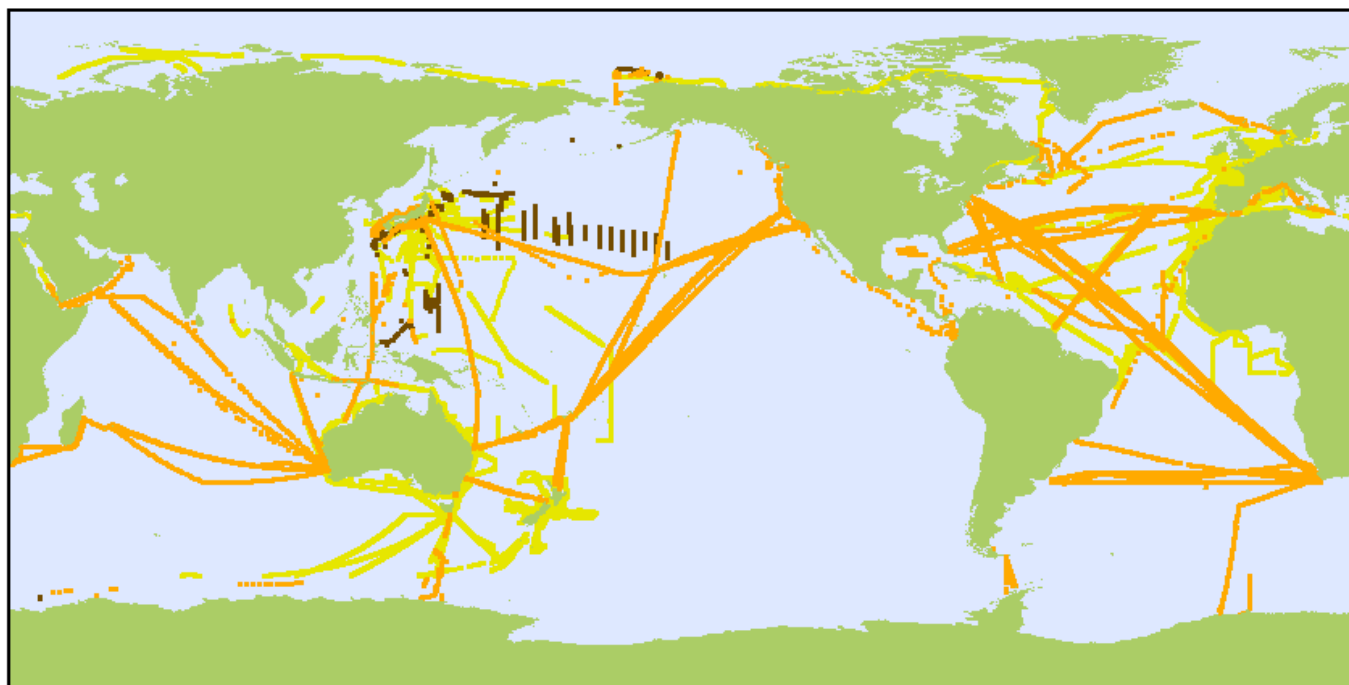


Ship Observation Team

The Ship-of-Opportunity Programme



XBT automatic launcher – loaded and ready



Ship Observations Team

SOOP (84)

2013

(Active platform-IDs and number of observations per type of instrument in period)

- XBT (13588)
- XCTD (573)
- TSG (910826)



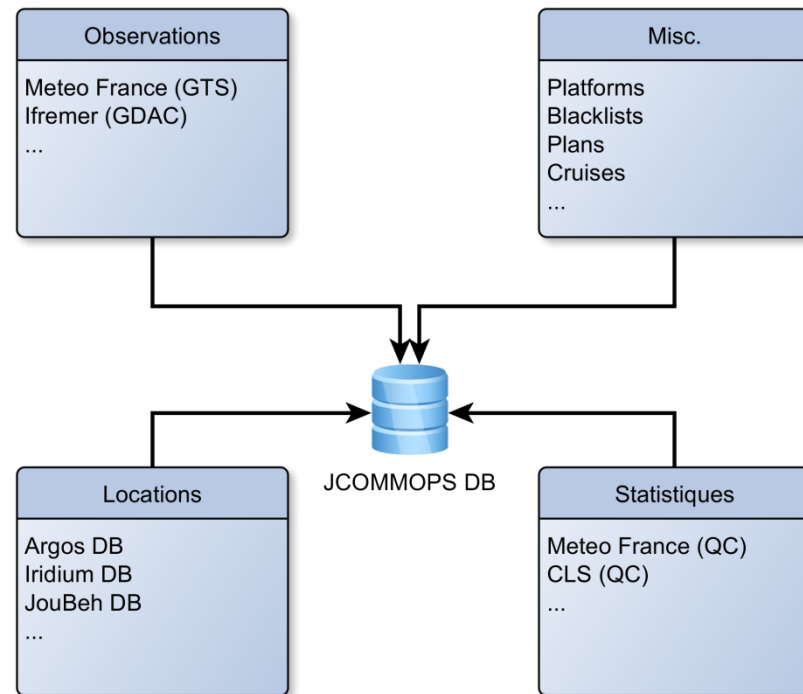
This map shows only in-situ data available on the GTS. A large number of TSG data are not available on the GTS anymore.



Managing Metadata

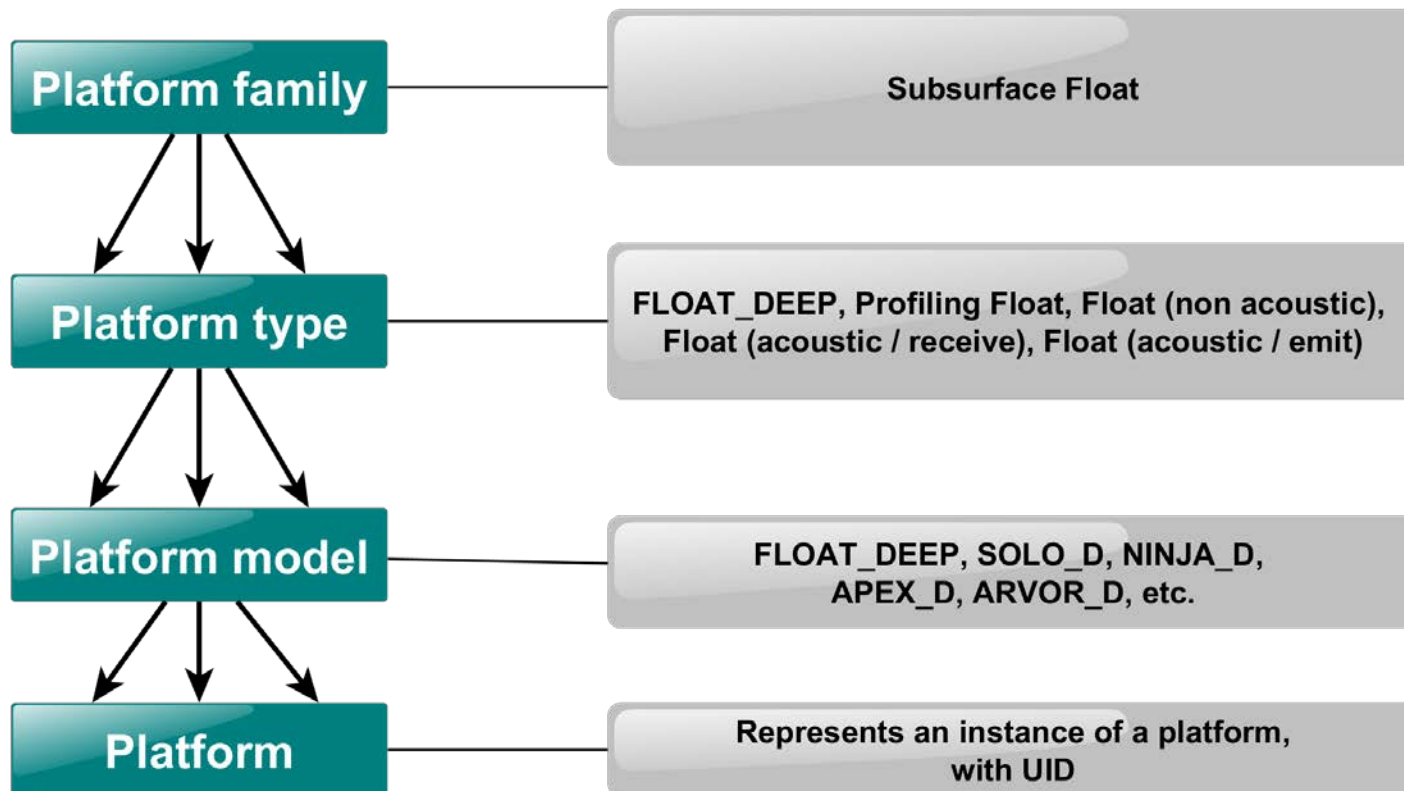
From where?

- Different operators
 - Different countries
 - Different sources
 - Different protocols
 - Different formats
 - Different frequencies
- Matching data requires hard working & interoperability



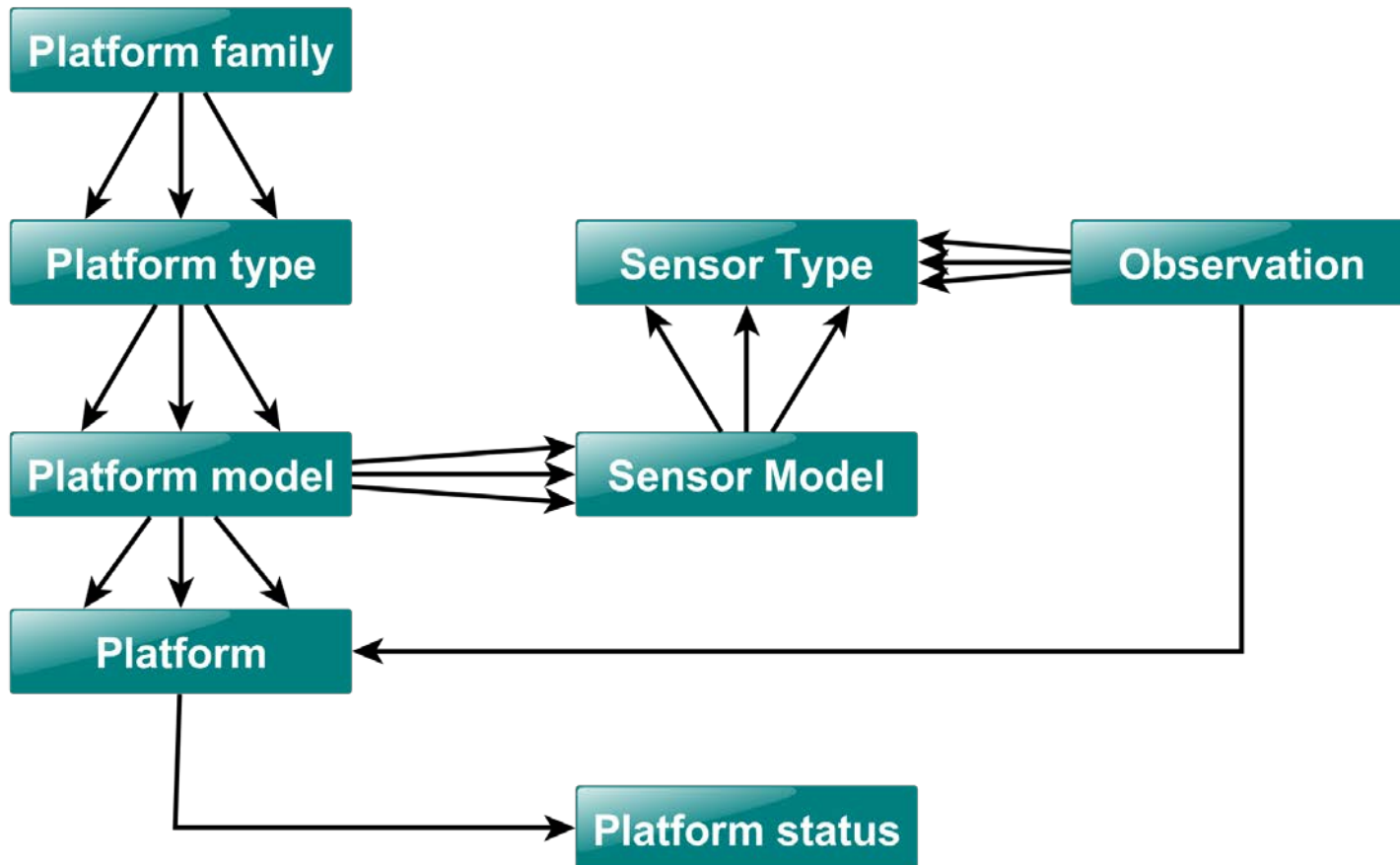
Managing Metadata

What metadata?



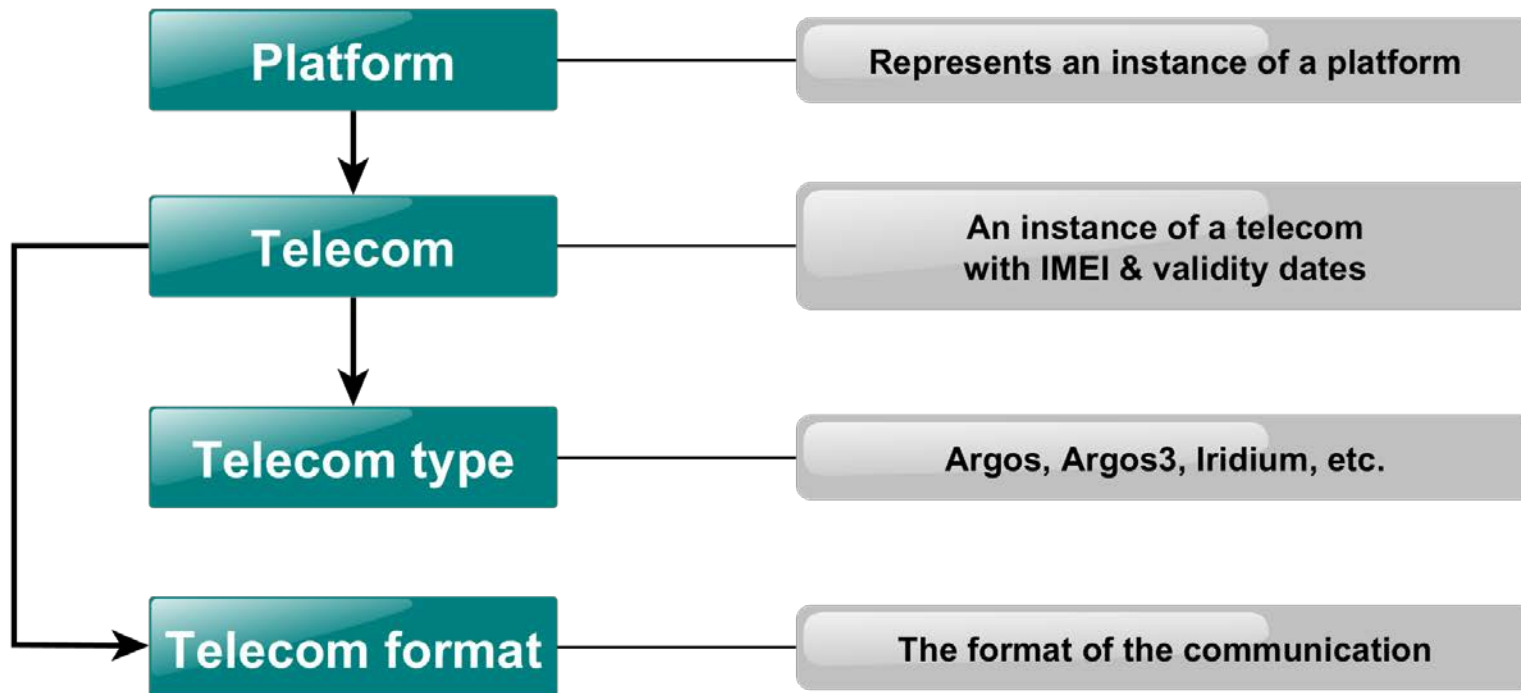
Managing Metadata

What metadata?



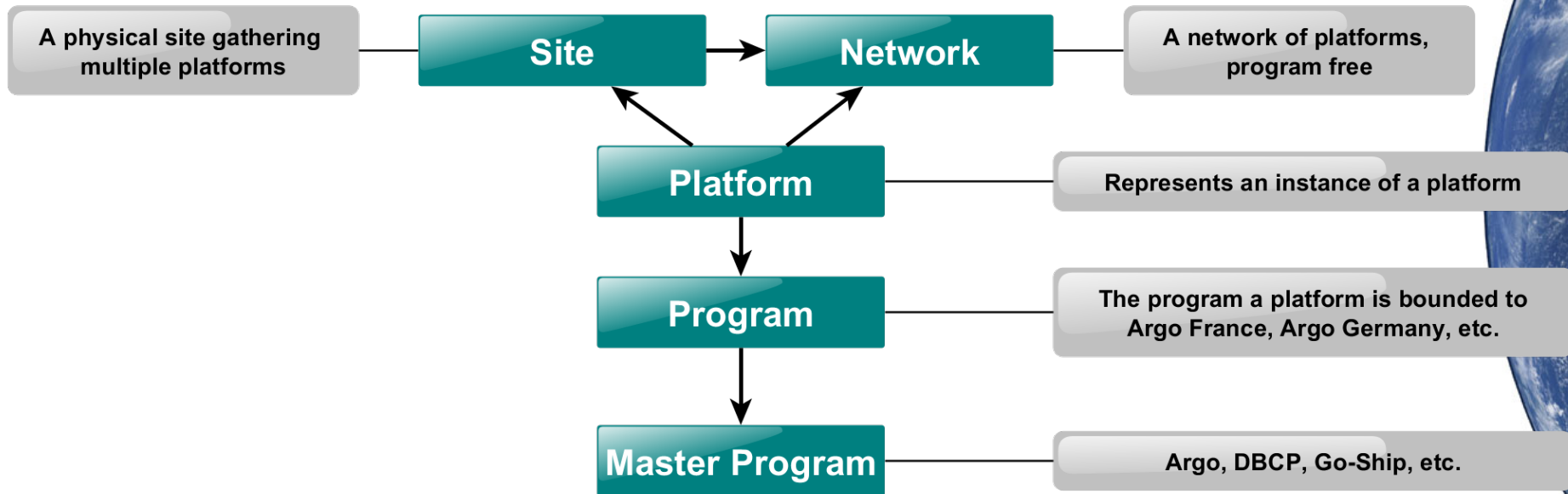
Managing Metadata

What metadata?



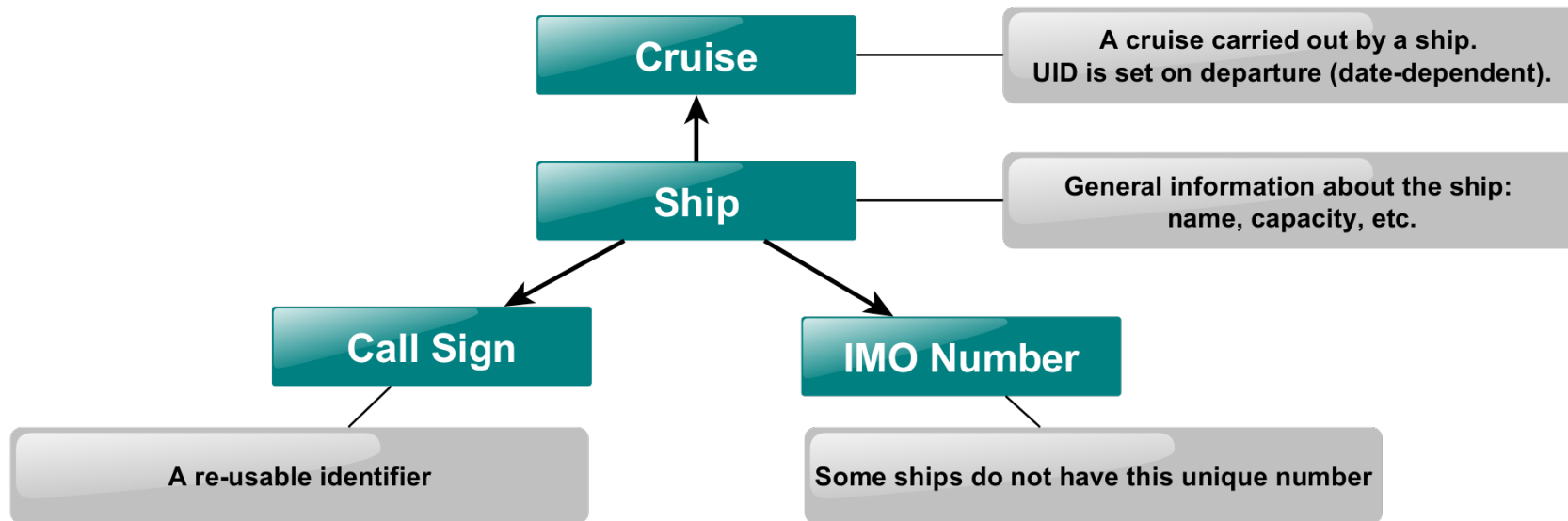
Managing Metadata

What metadata?



Managing Metadata

What metadata?



Interoperability

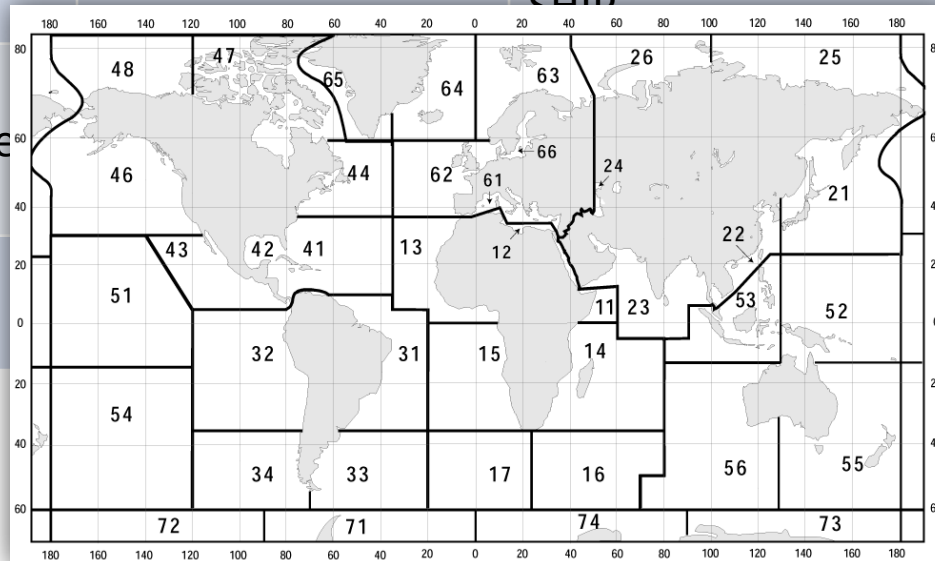
Strategy

- Integration issue
 - Unique identifiers are the main issue
- Platforms have identifiers based on WMO rules
 - 5 digits to 7 digits
- Ships are not well identified/defined
 - Manual work required

Interoperability

WMO rules sample

PTF TYPE	Format	Reporting code form	Reallocation
Drifting buoys	A ₁ b _w nnn	BUOY, BUFR, CREX	Yes, after 3 months
Drifting buoys (table driven codes only)	A ₁ b _w nnnnn	BUFR, CREX	No, unique numbers
Moored buoys	A ₁ b _w nnn	BUOY, BUFR, CREX, CHID	Yes, after 3 months
Moored buoys (table driven codes only)			No, unique numbers
Ocean sites			No, unique numbers



Interoperability Sharing

The screenshot displays the JCOMMOPS software interface with several key components:

- Query Panel:** A form for searching data by Ref, Family, Type, Model, Network, Status (ACTIVE), Country (China), and Program.
- Implementation Chart:** A bar chart showing data from 2013 to 2014, with a legend for categories like argo, obop, ocean, sot, and godship.
- Grid Table:** A table listing programs with columns for Ref, Status, Family, Type, Model, Program, and Country.

Ref	Status	Family	Type	Model	Program	Country
5901607	ACTIVE	Subsurface Float	Profiling Float	APEX	Argo CHINA	China
5901608	ACTIVE	Subsurface Float	Profiling Float	APEX	Argo CHINA	China
2901631	ACTIVE	Subsurface Float	Profiling Float	PROVOR	Argo CHINA SQA	China
2901632	ACTIVE	Subsurface Float	Profiling Float	PROVOR	Argo CHINA SQA	China
2901633	ACTIVE	Subsurface Float	Profiling Float	PROVOR	Argo CHINA SQA	China
- GIS Viewer:** A map showing global data distribution with a legend for Work, Operational, Analysis, and Ocean State.
- World Map:** A global map with a data popup for reference 2901489, showing details like Family (FLCAT), Ship name (Dayang-27), and Country (CHINA).
- Maps Menu:** A menu with options for APEX, PROVOR, and DBCP.
- News/Tweets:** A social media feed showing tweets from @jcommops.
- Implementation Legend:** A circular legend for categories like probable, confirmed, registered, active, and closed.

Available: march 2015

Interoperability

Sharing

- Process-oriented sharing
 - Export & import data
 - Fast & reliable
 - Easy to use

- GIS API: ArcGIS server
 - OGC compliance

- Data API: REST(ful)-style architecture
 - HTTP
 - Multiple formats
 - High compatibility





Case: Argo Program

30 countries, 100 programs



- 7-digit UIDs, allocated by JCOMMOPS (on behalf of the WMO)
- Argo reference tables
 - Co-designed with Argo data & science teams
- Ref. tables are still not harmonized with GTS system



Case: Ships & Cruises

- Ships: no reliable unique identifier
 - Call Sign: re-used, only for given time identification
 - IMO Number: unique, but not available for all the ships
- UID: IMO if possible, JCOMMOPS generated otherwise
- Platform UID: Call Sign + number
 - Data access issue
- UID allocated by JCOMMOPS

Context Actions

What we aim to do

- Harmonize vocabularies between programs, oceanographers, etc.
- Develop interoperability
- Encourage international cooperation between scientists & operational people
- Share our expertise to improve synergies
 - SeaDataNet subcontract
 - Sustainable cooperation



Context Actions

How we intervene

- Direct link with programs involved
 - Efficiency in improving the system
- Moving to Brest (Ifremer)
 - Get closer to the FR & EU community
- New employees
 - New coordinators
 - New full-time software engineer
- Encourage partnerships
 - ESRI Ocean
 - Google Ocean
- Standards compliance
 - Software standards (netCDF, JSON/geoJSON, etc.)
 - OGC standards (with ArcGIS server)
 - Operational GTS standards



Thank You

Contacts

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