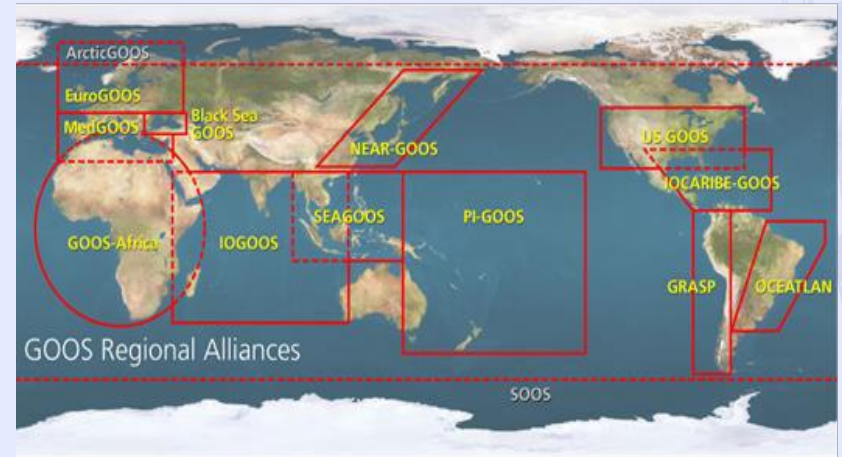
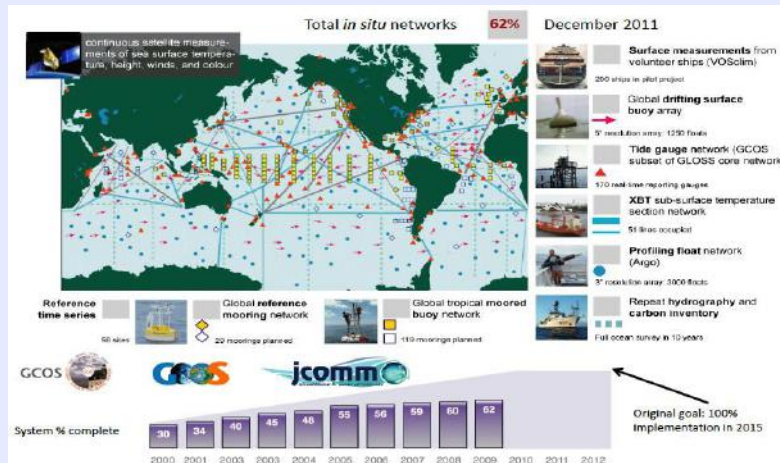


The background features a satellite dish on the left and a map of the Americas in shades of blue and purple on the right. The text is centered over the map area.

Update of the GEOSS-AP Ocean Data Networking System since Jan 2017.

Needs of ocean data networking

GOOS (Global Ocean Observing System)



Global part of GOOS is implemented by several components of surface buoy array, Argo floats and hydrographic ship-based observations for climate monitoring and forecasting, assessment, research, and global operational oceanography as well as Bio and Ecosystem monitoring. Data are collected by each component, shared and disseminated.








Coastal part of GOOS is implemented by member states and participating organizations usually cooperating through GOOS Regional Alliances for coastal ocean services.

NEAR-GOOS, SEA-GOOS, IO-GOOS, and PI-GOOS are major regional GOOS in the AP region

But the data collection in the AO region does not well achieved (due to jurisdictional issue), we have started from development of data inventory (portal) system (we don't care about data itself, and inventory only)

GEOSS-AP Ocean Data Networking System developed as of before Jan 2017

Data site of Asia Pacific countries:

- | | | | |
|---|--|---|--|
|  Japan | <ul style="list-style-type: none">• NEAR-GOOS Regional Real Time Data Base• NEAR-GOOS Regional Delayed Mode Data Base |  India | <ul style="list-style-type: none">• Indian National Centre for Ocean Information Services |
|  Australia | <ul style="list-style-type: none">• Coastal Data Portal• Coastal Research |  Thailand | <ul style="list-style-type: none">• Central Database System and Data Standard for Marine and Coastal Resources |
|  China | <ul style="list-style-type: none">• NEAR-GOOS Real Time Data Base• China Delayed Mode Database for NEAR-GOOS |  Vietnam | <ul style="list-style-type: none">• Not yet have Data site. Inquire by E-mail.• Vietnam's META-data is published in this web portal |
|  Korea | <ul style="list-style-type: none">• Korea Real Time Database for NEAR-GOOS• NEAR-GOOS Korea National Delayed Mode Data Base | | |

GEOSS-AP Ocean Data Networking System Web Portal:

Web data portal build via core framework(GYRE-System).

To encourage ocean research activities by searching the oceanographic data easily and speedily.

To give opportunities the countries which don't have the public data base site to disclose their meta information about their oceanographic data.



Background

One of the major missions of The Global Earth Observation System of Systems (GEOSS) is to deliver an extraordinary range of information to both the general users and to specialist decision makers. JAMSTEC have developed the "GEOSS-AP ocean data networking system" based on **TOKYO STATEMENT** adopted at 7th GEOSS-AP Symposium. The initial version of the system is aimed at sharing the metadata in GEOSS-AP countries, which consists of observation summary, positions, observed variables, period, and other information in conjunction with in-situ ocean observations.

Major purpose

Currently, oceanographic databases are created by countries, access to databases, data searching methods and data browsing methods are different.

In the future, in order to integrate various oceanographic data to get new knowledge, a current situation which each country separately stores oceanographic data is extremely dangerous.

First, by clarifying the location of oceanographic data in the Asia-Pacific region, access to oceanographic data is facilitated.

Next, registration of metadata enables crossover search.

This can be used for further research.

These efforts will contribute to accelerate data sharing, and encourage ocean research activities with a further view to contribute to mitigate possible weather and climate disasters in the Asia Oceania region.

GEOSS-AP Ocean Data Networking System Web Portal:

<http://www.jamstec.go.jp/geossap/>

GEOSS-AP Ocean Data Networking System

This site has been established based on TOKYO STATEMENT adopted in 7th GEOSS-AP Symposium.

About GEOSS

The Global Earth Observation System of Systems will provide decision-support tools to a wide variety of users. As with the Internet, GEOSS will be a global and flexible network of content providers allowing decision makers to access an extraordinary range of information at their desk.

This system of systems will proactively link together existing and planned observing systems around the world and support the development of new systems where gaps currently exist. It will promote common technical standards so that data from the thousands of different instruments can be combined into coherent data sets. The 'GEOSS Portal' offers a single Internet access point for users seeking data, imagery and analytical software packages relevant to all parts of the globe. It connects users to existing data bases and portals and provides reliable, up-to-date and user friendly information – vital for the work of decision makers, planners and emergency managers. For users with limited or no access to the Internet, similar information is available via the 'GEONETCast' network of telecommunication satellites.

THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS

INFORMATION FOR THE BENEFIT OF SOCIETY

What is Blue Planet?

"Oceans and Society: Blue Planet" is the over-arching Marine Task within the Group on Earth Observations (GEO). GEO is an intergovernmental body dedicated to the effective use of Earth observation (in situ or via remote sensing) for societal benefit. It is comprised of 90 member nations, the European Commission and 77 Participating Organizations, including POGO, GOOS and CEOS.

Mission Statement

"Oceans and Society: Blue Planet" seeks, through the mobilisation of expert knowledge, to raise public awareness of the role of the oceans in the Earth system, of their impacts (good and bad) on humankind, and of the societal benefits of ocean observations; to coordinate the various marine initiatives within GEO and develop synergies between them; and to

Web data portal is build via core framework.

Goal is to promote ocean research activities by searching the oceanographic data easily and speedily, and to give space to the countries/institutes to disclose their meta information on their oceanographic data.

Core framework:(update)

Simplify server configuration management and content update system for rapid development.

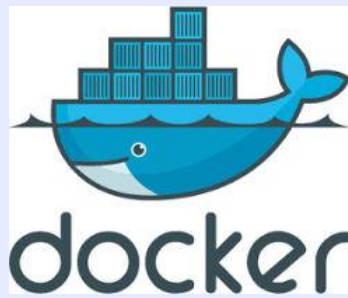
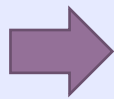
This system is a free and open source framework. In the first version(~2015) we will create a web server (nginx) for the virtual machine (Oracle Virtual Box).

Configuration of the operating system and Web server managed by “chef”. Version control of the configuration file managed by “git”.

In the current version(~2016), we use “Docker”.



(~2015)



(~2016)



Link to



(2017 ~ Under construction ?)

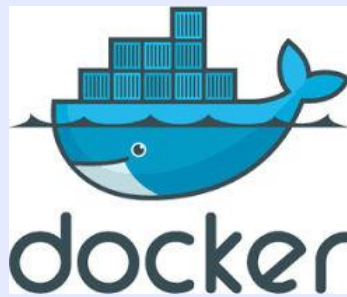
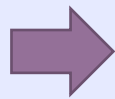
Advantage of Core framework update

	Machine Resource	Boot-up
VirtualBox	Large	Slow
Docker	Small	Quick

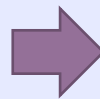
Compared to VirtualBox, Docker runs with less machine resources and can be boot-up quickly, which is expected to improve development speed. Furthermore GeoNetwork and OpenDataCube have docker images, so development works will be easier.



(~2015)



(~2016)



Link to

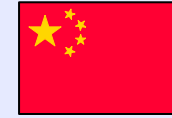


(2017 ~ Under construction)

Data site of Asia Pacific countries:(update)



Australia



China

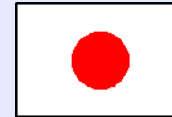


India



Indonesia

New after 9th
sympo!!



Japan



Korea



Malaysia

New after 9th
sympo!!



Thailand



Vietnam

Future works:

- *JAMSTEC mission:*

- ① Improvement of the system (speed, user friendship etc)
- ② Data information arrangement
- ③ Outreaching

- *Collaborative mission*

- ① More data information (various parameters) from wide variety of instruments
- ② Promotion of discussion on the unified data information format through GEOSS-AP
- ③ Data analysis for weather/climate research