telescience WG Report

Fang Pang Lin

Shinji Shimojo

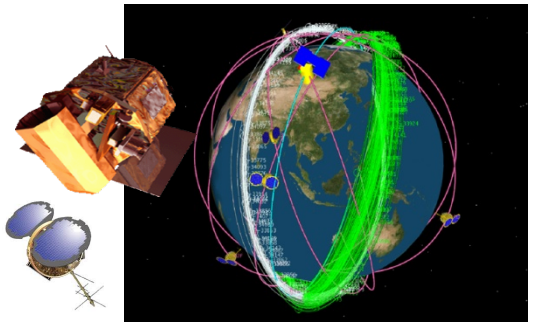
Pragma 25

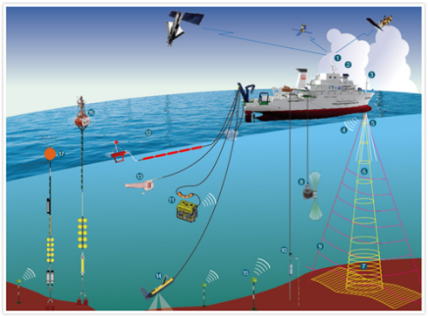
Structure

- Day 1
  - information exchange
  - Discussion for collaborative project.
- Day2
  - SDN session with Resources
  - Joint with GeoScience WG

Day1

- Jason Haga, “JGC Haiku Project”
- Fang-Pang Lin, “Fish4Knowledge”, “OLAP not OLTP”
- Yoshiyuki Kido, “SDN usage in SAGE”
- Xiaohan Liu (CNIC), “e-science” Environment monitoring system in China, Flux
- Mohd Bazil Ab Karim, “Distributed Parallel file system”





	OLTP System Online Transaction Processing (Operational System)	OLAP System Online Analytical Processing (Data Warehouse)
Source of data	Operational data; OLTPs are the original source of the data.	Consolidation data; OLAP data comes from the various OLTP Databases
Purpose of data	To control and run fundamental business tasks	To help with planning, problem solving, and decision support
What the data	Reveals a snapshot of ongoing business processes	Multi-dimensional views of various kinds of business activities
Inserts and Updates	Short and fast inserts and updates initiated by end users	Periodic long-running batch jobs refresh the data
Queries	Relatively standardized and simple queries Returning relatively few records	Often complex queries involving aggregations
Processing Speed	Typically very fast	Depends on the amount of data involved; batch data refreshes and complex queries may take many hours; query speed can be improved by creating indexes
Space Requirements	Can be relatively small if historical data is archived	Larger due to the existence of aggregation structures and history data; requires more indexes than OLTP
Database Design	Highly normalized with many tables	Typically de-normalized with fewer tables; use of star and/or snowflake schemas
Backup and Recovery	Backup religiously; operational data is critical to run the business, data loss is likely to entail significant monetary loss and legal liability	Instead of regular backups, some environments may consider simply reloading the OLTP data as a recovery method

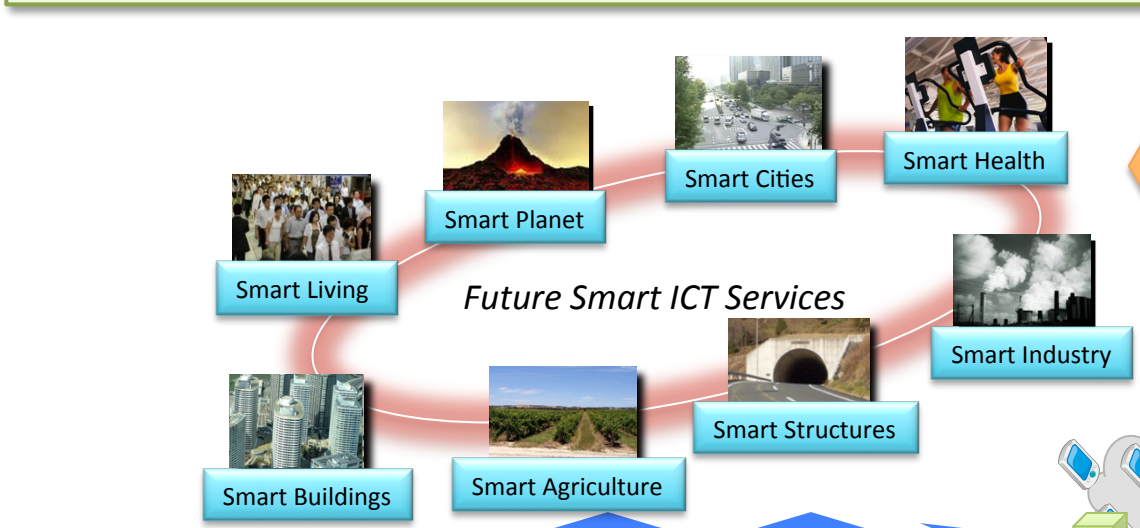
source: www.rainmakerworks.com

On Line Analytic Process (OLAP) based stores

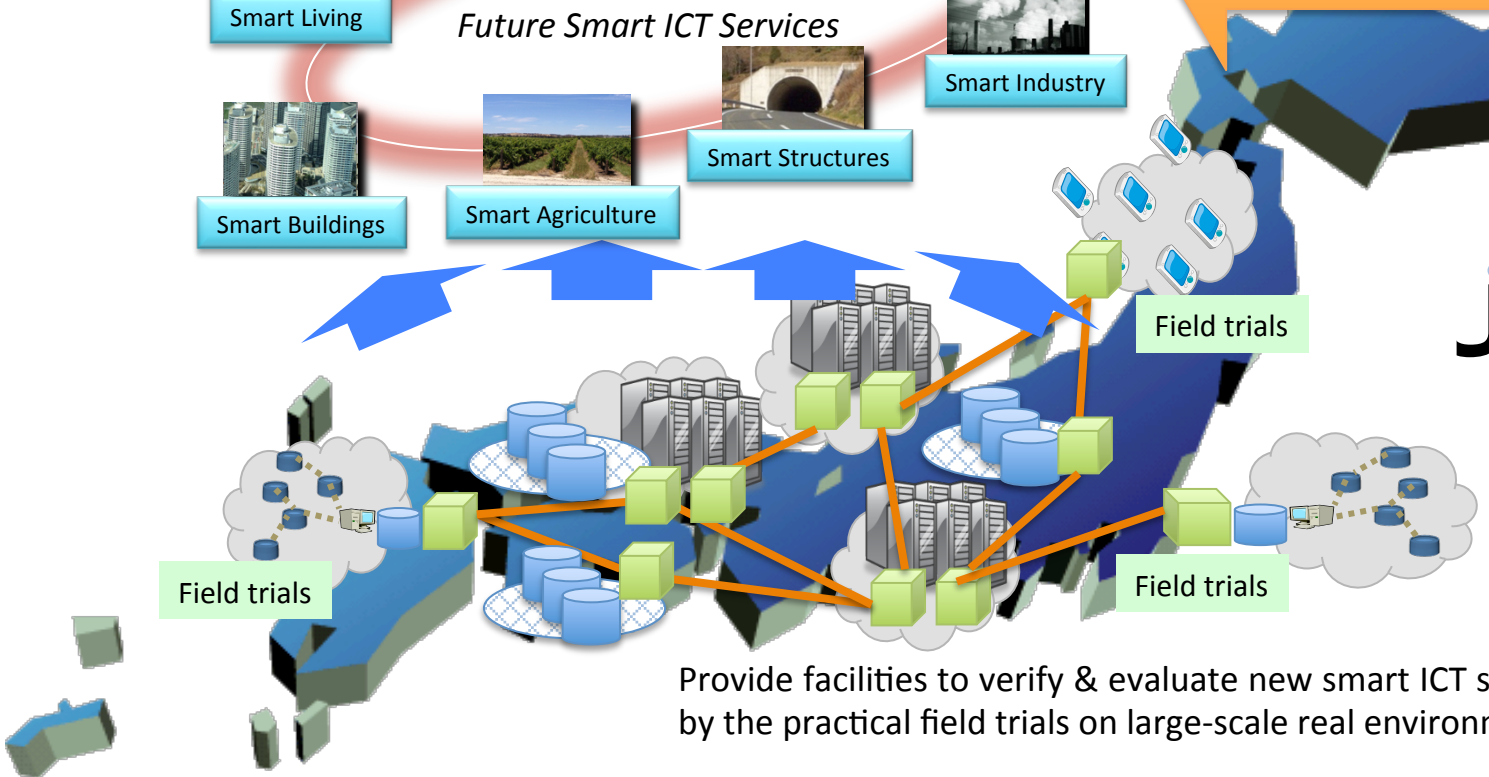
- Most current model stores are build based on the assumption of Transaction Needs.
- The store we need nowadays should be for Analytics.
- System has to be Real time & Intelligent .

An Overview of JOSE(Japan-wide Orchestrated Smart/Sensor Environment)

Provide a Japan-wide *open* testbed consists of a large number of wireless sensors, storage and computation resources in distributed data centers connected via high-speed network with SDN feature to establish technologies for practical *large-scale smart ICT service* platform for future smart society
(Starts from Apr. 2014)



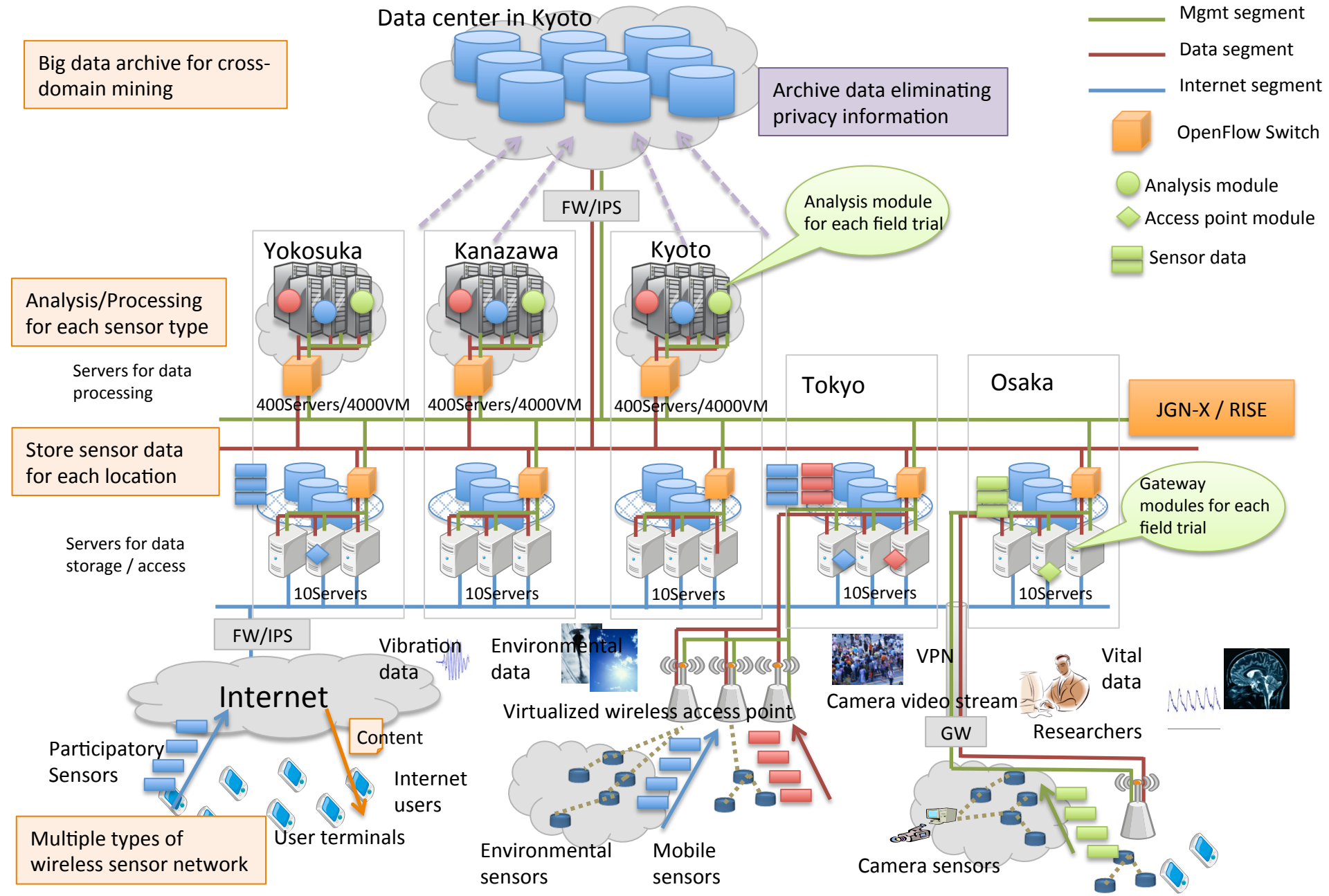
Examples of new technologies to verify:
- Analysis method of real world situation
- M2M/IoT/sensor network algorithms
- Large-scale stream processing methods
- Large-scale network/storage algorithms



JOSE
Japan-wide orchestrated smart/sensor environment
JGN-X

Provide facilities to verify & evaluate new smart ICT service technologies by the practical field trials on large-scale real environment

System overview of JOSE



Discussion with GeoScience

- Disaster mitigation/management system is an OLAP system
- Visualization helps people to collaborate.
- We need architecture, tools, and experiences.
- SEAIP meeting will be next step.

Southeast Asia Joint Discovery (2-6, Dec)

SEAIP
Southeast Asia International
Joint Research and Training Program
東南亞國際合作高速計算應用與網路共同研究暨培訓研習會

- Welcome 2013
- About SEAIP
- Important Dates
- Sponsorship
- Agenda
- Registration
- Invited Speakers
- Venue
- Visa Application
- Accommodation

Welcome to SEAIP 2013

Agenda | Registration | Imporatant Dates

Dear Colleagues,

On behalf of the National Center for High-Performance Computing (NCHC), it is our great pleasure to welcome your participation in SEAIP 2013!

Taiwan is also known as "Formosa" which means "Beautiful Island." Included in Taiwan's 19 major cities and counties are bustling metropolises like Taipei, Taichung, and Kaohsiung. Also, Taiwan's fifth largest city, Hsinchu, has one of the highest densities of hi-tech enterprises in the entire world! Natural wonders such as Hualien County's splendid ocean views and magnificent mountain scenery and Kaohsiung's port views are not to be missed! This beautiful island, full of cultural, natural, and hi-tech wonders, promises a very