

Telescience/ Geoscience:

Sorntheep Vannarat, Shinji Shimojo,
Fang-Pang Lin

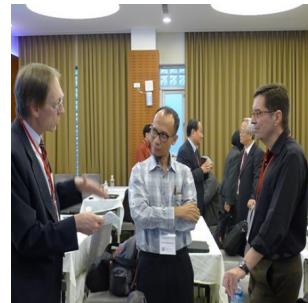
Pragma 28
2015 04

Update from NECTEC

- Continue working on Raja Island
 - installed two lines of sensors on the east and the west sides of the island
 - simulation study of current patterns in the Indian Ocean and around the island
 - developing a data management system based on Erium
- Applying sensors for disaster from flood and cold
 - about 100 sensor stations deployed in Chiangmai area
 - project hosted by Disaster Prevention Department
 - developed a data management and warning system



2014
CLOUD 雲端計算與物聯網
COMPUTING &
Internet of Things

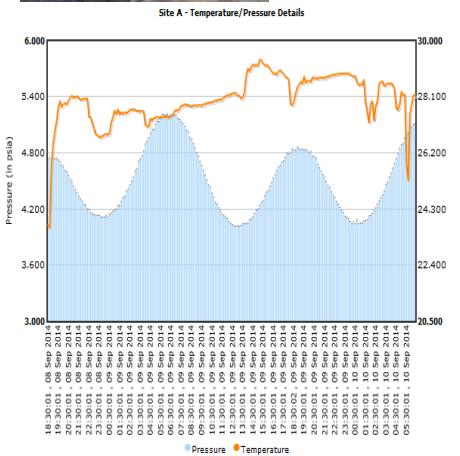
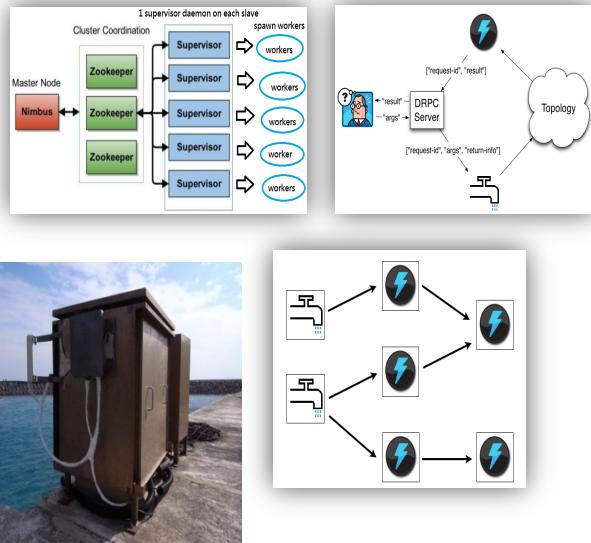


SEAIP 2014: 10th Anniversary
December 1-5@Tainan & Kaohsiung
~80 people attended
12 countries attend
Topic extended to **Big Data & IoT**
Jointly w/ PRAGMA Institute

We hope to do it again this year same week at Keelung! DO JOIN US....



Storm for Data Streaming in Underwater Monitoring



Apache Storm to Analytics for real time

1. Underwater CCTV video processing – anomaly detection to help monitoring operational management in harsh environment.
 - Fish4Knowledge in the future.
2. Temperature/pressure Statistics

We will test it on PRAGMA ENT!

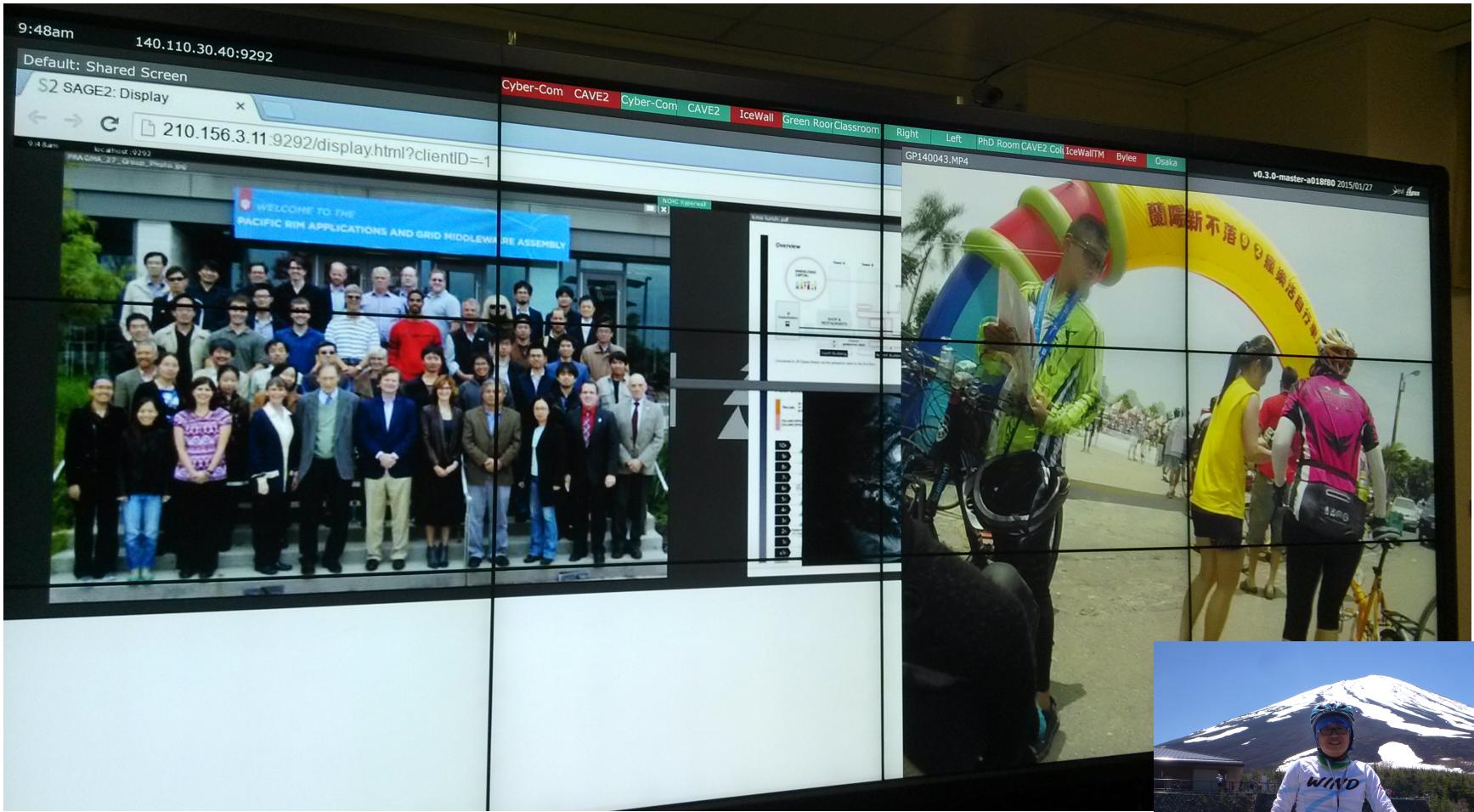
Network Intensive Application Demo Session

- Disaster Mitigation by realtime analysis of TSUNAMI using federated supercomputers
 - Shinji Shimojo, Susumu Date, Yoshiyuki Kido, Masaharu Shimizu, Engr. Morsalin Uz Zoha (Osaka University), Hiroaki Kobayashi, Shunichi Koshimura, Ryusuke Egawa, Ryota Hino, Kenji Oizumi, Yusaku Ohta (Tohoku University), Akihiko Musa (Tohoku Univdrsy/NEC), Yoichi Murashima (KOKUSAI KOGYO CO. LTD)
- Demonstration of Meteorological Big Data Visualizations on TDW
 - Ken T. Murata, Eizen Kimura, Jin Tanaka, Takatoshi Ikeda, Eiji Kawai, Shinji Shimojo, Kohei Ichikawa, Yoshiyuki Kido, Susumu Date, Kentaro Ukawa, Kazuya Muranaga, and Takamichi Mizuhara
- Satellite Image Trasmission
 - Ichikawa, Whey Fone



Thanks to SAGE2 and
Pragma ENT

Connected to NCHC

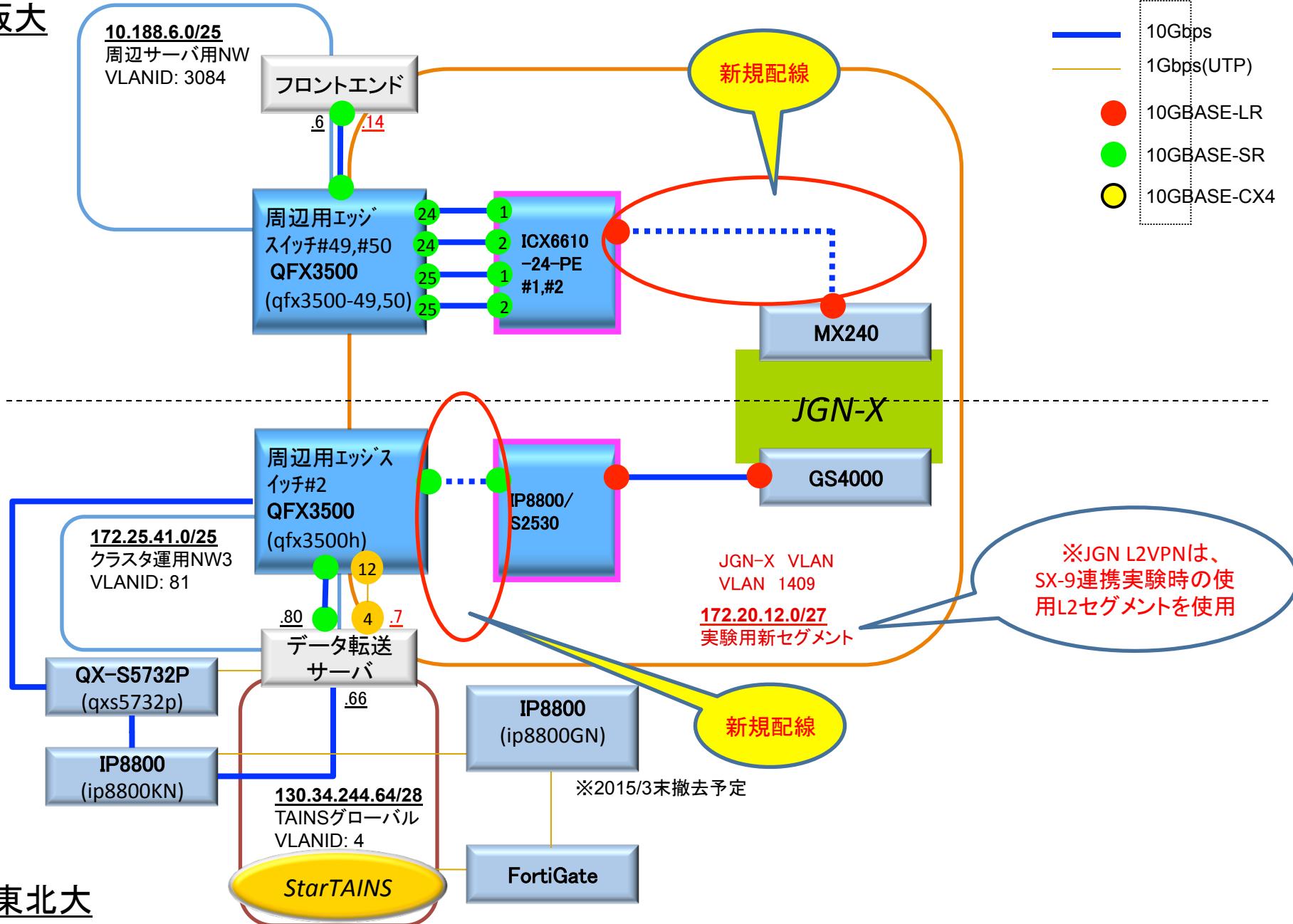


Thanks to Whey Chon and BY Lee@NCHC

G空間津波浸水予測 阪大連携ネットワーク構成

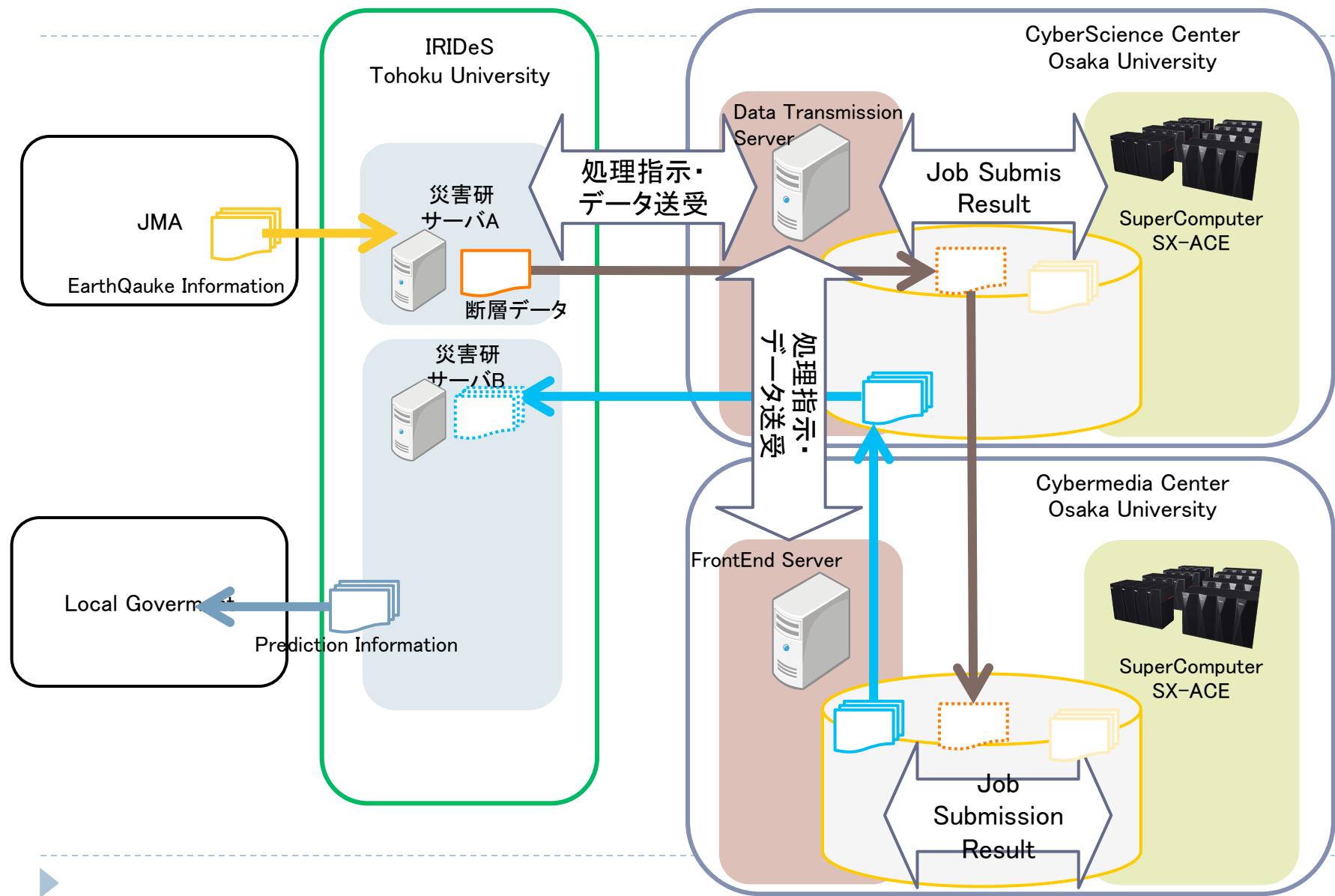
2015/4/2

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System Configuration





*FEderated interoperable SmarT ICT services
deVelopment And testing pLatforms*

下條真司

Things we will discuss

- Updates
- What is the role of infrastructure for your application ? Ex. Pragma-ENT, Resources
- System Issues
 - Policy enforcement
 - Dynamic Change in System Configuration with Network
 - Federation on International Network

Knowledge/Experience to be shared

- Raja Island (Sornthep)
- Satellite Image Transfer (Whey-Fone)
- Stream Data processing for sensors (Fang-Pang)
- Terra Green Network – Citizen science for mapping trees. (Jung-Hwang)
- Sensor Network development in ASTI (Julian)

NECTEC

East side

อ่าวซ่อนแผล เกาะราชา จังหวัดภูเก็ต

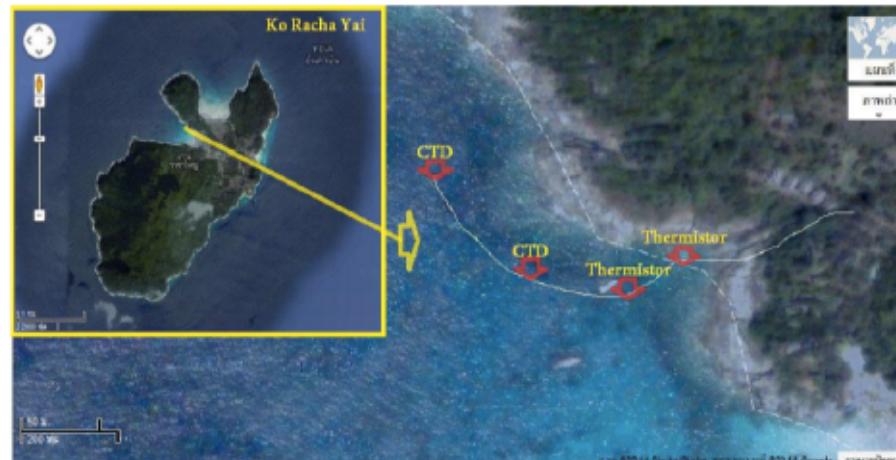


รูปที่ 6.1 จุดที่เกลี่ยเป็นจุดที่ติดตั้ง CTD ตัวปัจจุบัน ส่วนจุดไก่คือจุดที่มีการลงปาการังเทียนธูปโครงการอุกกาศ

ตารางที่ 6.1 รายการอุปกรณ์ที่ได้ทำการติดตั้งที่อ่าวซ่อนแผล เกาะราชา จังหวัดภูเก็ต

ลำดับ	ชื่ออุปกรณ์	Model	Part No.	Serial No.	ความลึก (เมตร)
1.	CTD #01	37IMP	37IMP.11000	37-10592	12
2.	CTD #04	37IMP	37IMP.11000	37-10593	16
3.	Thermistor #02	39IM	3971922	39IM1992-6464	4
4.	Thermistor #03	39IM	3971922	39IM1992-6465	8
5.	IMM	IMM RS232/LLS	90554.1	700-1922	-
6.	IMM Test Coupler	801588 E-DROP	DN 41440		-
7.	CR1000 Wiring Panel	-	-	99620	-

West side

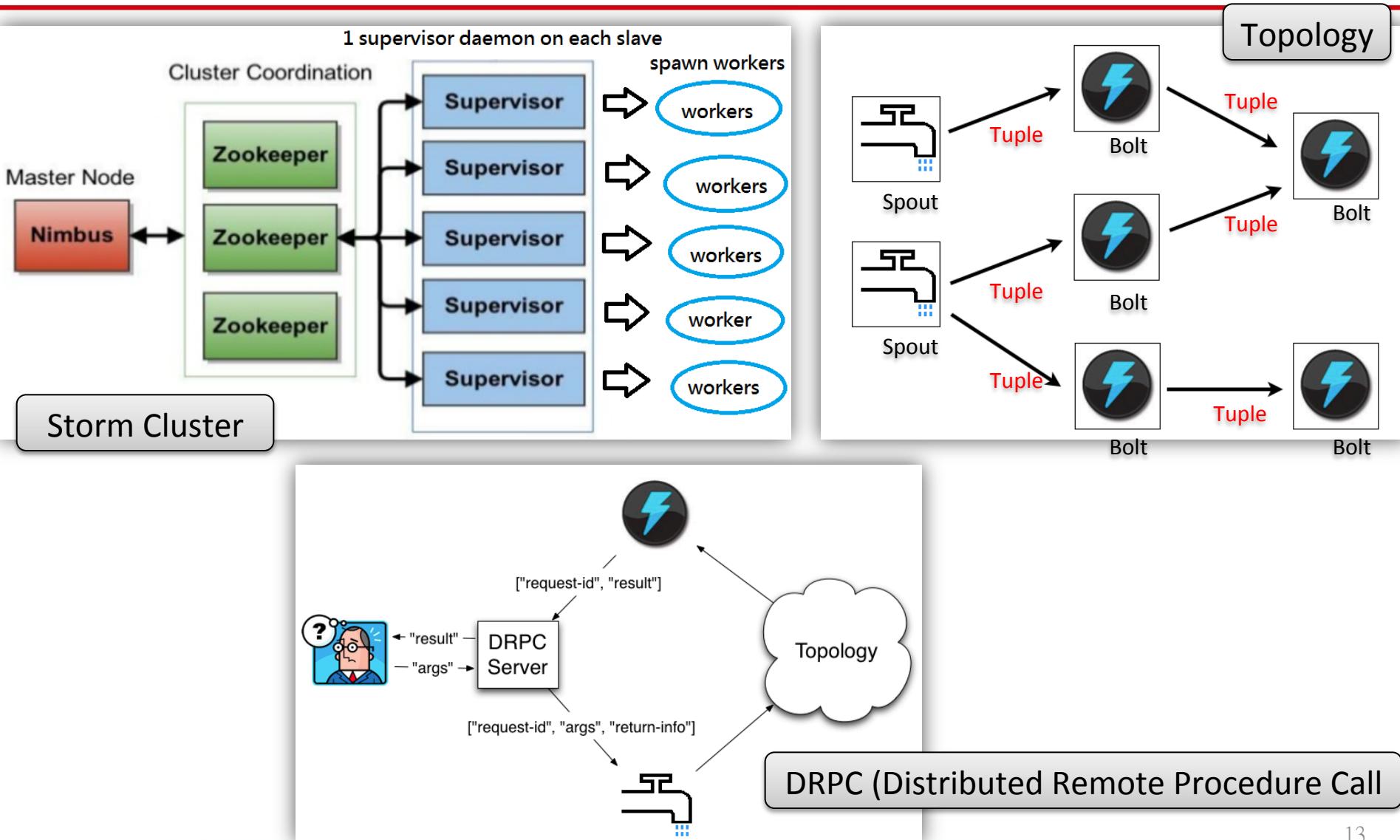


รูปที่ 6.5 จุดไก่ส่งบริเวณน้ำตื้นได้ติดตั้ง Thermistor #01 และ #02 ส่วน CTD #07 และ #08 ติดตั้งบริเวณที่ลึก

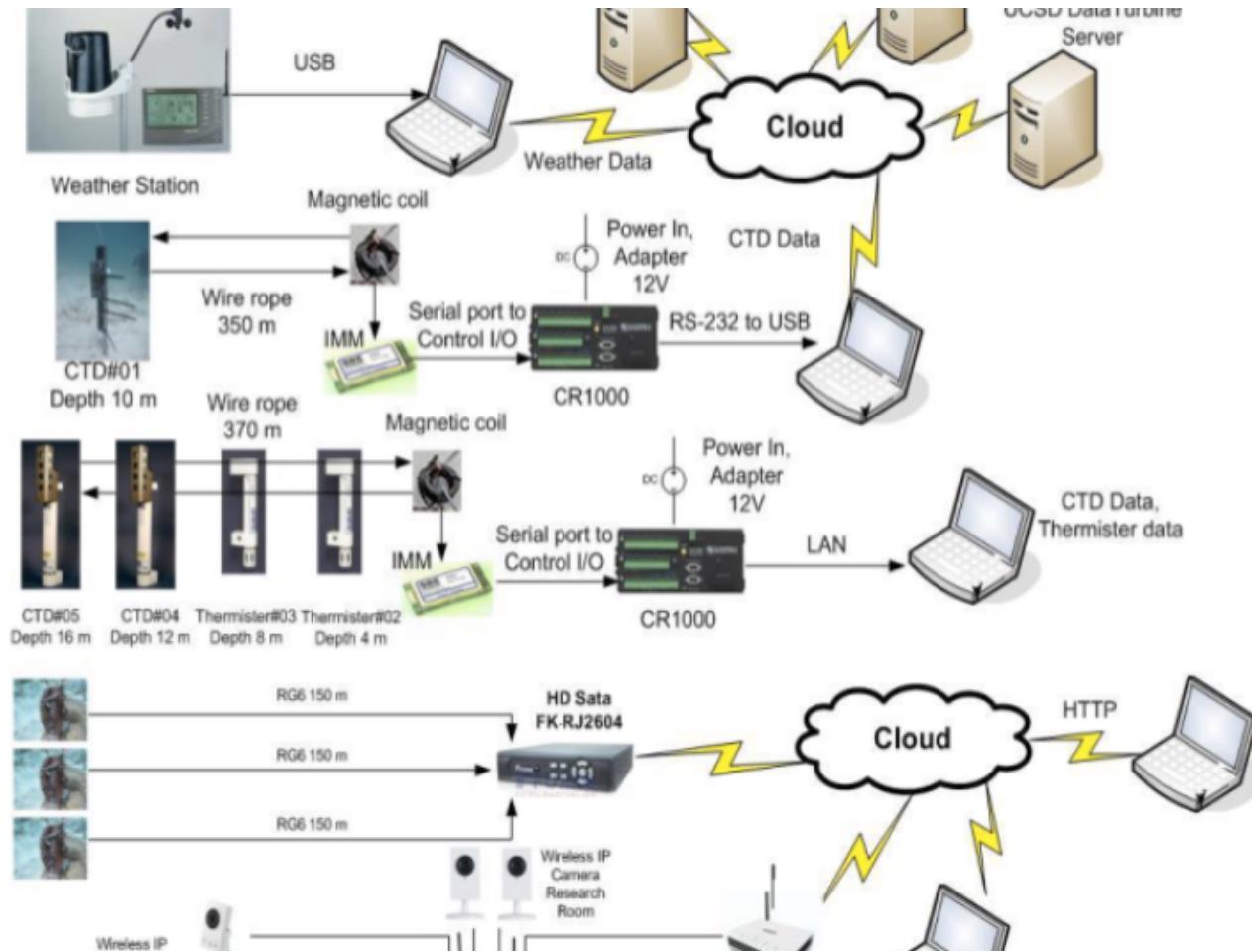
ตารางที่ 6.2 รายการอุปกรณ์ที่ได้ทำการติดตั้ง อ่าวปะกง เกาะราชา จังหวัดภูเก็ต

ลำดับ	ชื่ออุปกรณ์	Model	Part No.	Serial No.	ความลึก (เมตร)
1.	Thermistor #01	39IM	3971992	6467	8
2.	Thermistor #02	39IM	3971992	6468	4
3.	CTD #07	37IMP	37IMP.11000	37-10594	10
4.	CTD #08	37IMP	37IMP.11000	37-10595	10

Storm Cluster, Topology and DRPC



NECTEC



Requirement for Resources

- Co-existence of stable and robust resources and breakable resources
- Security and System Configuration Issues
 - Specially important that entire system can be configured repeatedly in software defined.
 - Security issue can be considered separately when we use network virtualization.
- There is a new streaming computational model coming to intention to treat realtime sensor data processing.
- Balance of requirements for data stream, computational power and communication should be carefully considered and arranged.