4th Project Meeting: ASEAN Forum on Software Defined System for Disaster Mitigation and Smart Cities
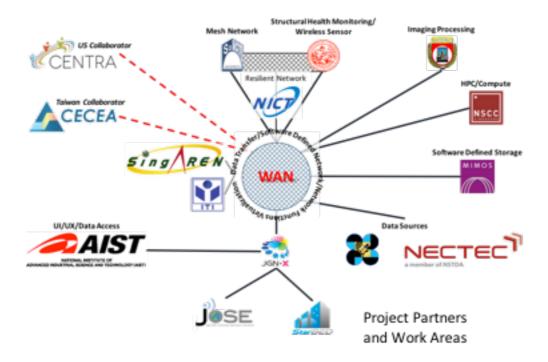## 4th to 8th December 2017, Taiwan

Background

The "ASEAN Forum on Software Defined System for Disaster Mitigation and Smart Cities" is one of the eight projects approved this year by the ASEAN IVO steering committee. The project activities among others aims to:

- Develop a Software Defined System architecture blueprint for disaster mitigation, crisis communication, and emergency management that can monitor and report disaster events in near-realtime.
- Investigate programmability aspects of IoTs technologies, networking, and edge/cloud computing platforms.
- Conduct field testing of potential use cases using NICT's existing testbeds such as JGN-X, Starbed, and JOSE.
- Organise workshops with ASEAN members to disseminate R&D results.
- Dialogue with PRAGMA (NSF, US), CENTRA (NSF, US), and CECEA (Taiwan) on similar R&D challenges to accelerate project activities.

A quick overview on each project member's contribution(s) can be illustrated in the following diagram.

Purpose of the Meeting in Taiwan

The objective of this meeting is to allow all members to meet face-to-face and discuss in details updates and more importantly any necessary realignment for the sub-projects after the third meeting in Kuala Lumpur.

Agenda

Day 1: 12/4
9:00am – 5:00pm   PRAGMA Institute

Day 2: 12/5
9:00am – 12:00pm   SEAIP Opening and Discussions
12:00pm – 1:00pm   Lunch
1:00pm – 5:00pm   ASEAN IVO Project Meeting (Break: 3:00pm – 3:20pm)

Day 3: 12/6
9:00am – 12:00pm   SEAIP Institute Updates and Discussions
12:00pm – 1:00pm   Lunch
1:00pm – 5:00pm   ASEAN IVO Project Meeting (Break: 3:00pm – 3:20pm)

Day 4: 12/7
9:00am – 10:30am   SEAIP Discussion on Collaboration Sustainability
10:30am – 10:50am   Break
10:50am – 12:00pm   ASEAN IVO Project Meeting
12:00pm – 1:00pm   Lunch
1:00pm – 3:30pm   ASEAN IVO Project Meeting and Wrap-up
3:30pm – 3:50pm   Break
3:50pm – 5:00pm   Reporting

Day 5: 12/8
9:00am – 12:00pm   SEAIP Discussions
12.00pm – 1:00pm   Lunch
1:00pm – 5:00pm   Open Discussions and Closing

Meeting Participants

No.	Name	Affiliation
1	Mr Jing Yuan LUKE	MIMOS, Malaysia
2	Prof Shinji SHIMOJO	Osaka U, Japan (self-funded)
3	Dr Jason HAGA	AIST, Japan (self-funded)
4	Dr Kanovate Tungpimolrut	NECTEC, Thailand
5	Dr Udon Lewlomphaisarl	NECTEC, Thailand
6	Dr Chalermpol Charnsripinyo	NECTEC, Thailand (self-funded)
7	Mr Ridnarong PROMYA	NECTEC, Thailand (self-funded)
8	Prof Truong Thi Dieu Linh	HUST, Vietnam (SEAIP-funded)
9	Dr Nguyen Binh Minh	HUST, Vietnam (SEAIP-funded)
10	Dr Dzung V. Dinh	VNU, Vietnam
11	Mr Lam Dinh PHAM	VNU, Vietnam
12	Dr Meo Vincent C. CAYA	MAPUA, Philippines (SEAIP-funded)
13	Dr Febus Reidi G. CRUZ	MAPUA, Philippines (SEAIP-funded)
14	Prof Myint Myint Sein	UCSY, Myanmar
15	Ms Phyo Pa Pa Tun	UCSY, Myanmar (SEAIP-funded)
16	Ms K Zin Phyo	UCSY, Myanmar (SEAIP-funded)

Outcomes

Sub-Project 1: Visualization of Distributed Environmental Data
1. WAN based software defined storage (using Ceph) completed and currently running on JOSE/JGN-X with data from ASTI.
    a. Several technical issues were observed and resolved during JOSE's VMs maintenance.
2. Sample data from AirBox data deployed in Malaysia were imported into the storage.
3. NECTEC proposed new data set using satellite imageries pending actual system deployment possibly towards end of 2017.
4. Based on updates from SDN-IP peering, the project connectivity chart will be updated since NECTEC and ASTI will be using SDN-IP to connect to the JGN-X/RISE and TWAREN respectively.
    a. Further discussion with Prof Shimojo and Dr Yamanaka are needed to see how the distributed storage running on JOSE can be accessed.
5. Discussed with Dr Jason HAGA on using his visualization (SAGE2) code on using data stored for visualization.

Sub-Project 2: SDN-IP Peering for IoT Data Transmission
1. NECTEC completed connection directly to JGN-X/RISE.
2. ASTI completed connection to TWAREN.
3. HUST in progress and solved technical issues with team from NCHC during the event.

Sub-Project 3: SDN/NFV Infrastructure for Disaster Mitigation and Smart Cities
1. All local testbeds completed. In progress to with others.
2. VNU team is working on connectivity to JGN-X/RISE as well as studying on OpenDayLight's MQTT support for IoT support.

Others:
Team discussion also spend substantial time with Prof Shimojo on how to leverage and collocate next project meeting together **CENTRA 3** that will be hosted by **NICT** in **May 2018**. Ideas on demo during the CENTRA 3 are discussed including Data visualization from the Wide Area Network Storage (sub-project 1) as well as IoT over SDN/NFV. Further discussion with Prof Shimojo and Goto-san's team as well as CENTRA 3 steering committee are expected.

During discussion on future collaboration and project sustainability, 2 new ideas were spawned. Based on lessons learnt so far from our current project, NECTEC will lead and proposed 2 new ASEAN IVO project for the coming 2018 Call for Proposal. The projects are "Enhancing Smart CCTV Platform solution for Smart Secured Society" (based on existing smart city project in Chiang Mai, Thailand) and "Cloud Container Service Platform for Environment Protection Applications". These 2 projects will include existing members from our current project as well as new members from other ASEAN countries.

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Activities Photos