



Internet Education and Research Laboratory
(intERLab)
and
AP* Secretariat

by
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www.interlab.ait.asia

APStar Retreat
7 September 2020

intERLab Activities

- AP Internet Information Center
 - APStar Secretariat
- Internet Infrastructure HRD (trainings)
- e-Education
- Research (technical research and conference)



AP Internet Information Center

AP Internet Information Center



[AP Organizations](#)
[AP Retreats/ Meetings](#)
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THE COMMUNITY OF ASIA PACIFIC INTERNET ORGANIZATIONS

Next AP* Retreat



Upcoming Events of Asia Pacific Internet Organizations - 2011, 2012, 2013, 2014

APStar Retreat	20 February 2011	Hong Kong
APNIC 31	24-26 February 2011	Hong Kong
ICANN 40	19-19 March 2011	LED
IEIF 80	27 Mar - 2 Apr, 2011	Prague, Czech Republic
MENOG 8	01-02 April 2011	LED
ARIN XXVII	10-14 April 2011	San Juan, Puerto Rico
RIPE 62	16-21 May 2011	Amsterdam, Netherlands
LALNIC XIV	22-20 May 2011	LED
18th Euro IX Forum	30 May - 01 Jun 2011	Catania, Sicily, Italy

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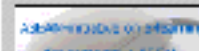
Asia Pacific Internet Association



Asian Pacific Regional Internet Conference on Operational Technologies



Asian Virtual Institute of Science and Technology



www.apstar.org





Internet Infrastructure HRD

Internet Infrastructure HRD

2020 Workshop (1)

**POSTPONED
2021**

- BGP Peering Workshop, May 20-22
 - Philip Smith (NSRC) with Viraphand Samadi (AIT) and Kittinan Sriprasert (BKNIX)
- IS-IS design and best practices for Service Provider networks
- BGP protocol, attributes and policy control
- BGP scalability (including Route Reflectors and Communities)
- BGP Best Practices, including Aggregation
- BGP multihoming techniques (redundancy and load balancing)
- BGP Communities as used by Network Operators
- Peering Best Practices

Internet Infrastructure HRD

**POSTPONED
2021**

2020 Workshop (2)

- **Cyber Security Workshop (DNS Focused)**

Willem Toorop and Ralph Dolmans (NLnet Labs)

12-14 November, 2020 (tentative)

- NS concepts , BIND (DNS server) and Resolver (DNS client) , DNS debugging tools, troubleshooting, and techniques Reverse DNS , RNDG , Access control lists , TSIG , DNS security extensions (DNSSEC)
- DNS and IPv6, Secure DNS dynamic updates, DNS DDoS prevention with response rate limiting, DoT/DoH tradeoffs, DNS firewalls with RPZ , Passive DNS, DNS Security Analysis Threat Detection using passive DNS

IoT Workshops @ interERLab

<https://interlab.ait.ac.th/sea-hazemon-tein-workshop/>

**POSTPONED
2021**





E-Education

E-Education

- intERLab VClass learning platform by intERLab has been chosen for on-line courses by one of the ERASMUS MUNDUS (EU) project for interactive remote classrooms/labs for Manufactory
- VClass for the public during the lockdown
- useful for lengthy meetings





HRD through Academic & Research

Research Activities

- IoT and Future Internet Architecture (HAZEMON II)
- Air Quality Monitoring (Asia@Connect)
- Post-disaster networking – DUMBO
- Community Network
- Annual Academic Conference **Postponed**
 - AINTEC (2-4 December, 2020), Hiroshima, JAPAN <<https://interlab.ait.ac.th/aintec2020/>> **2021**
 - Hosted by the WIDE project

Future HRD?

- Less network engineering students – shortest of infrastructure engineers foreseeable
- More HRD through joint projects should be encouraged ****

New Curriculum on IoT at AIT

- Master degree curriculum

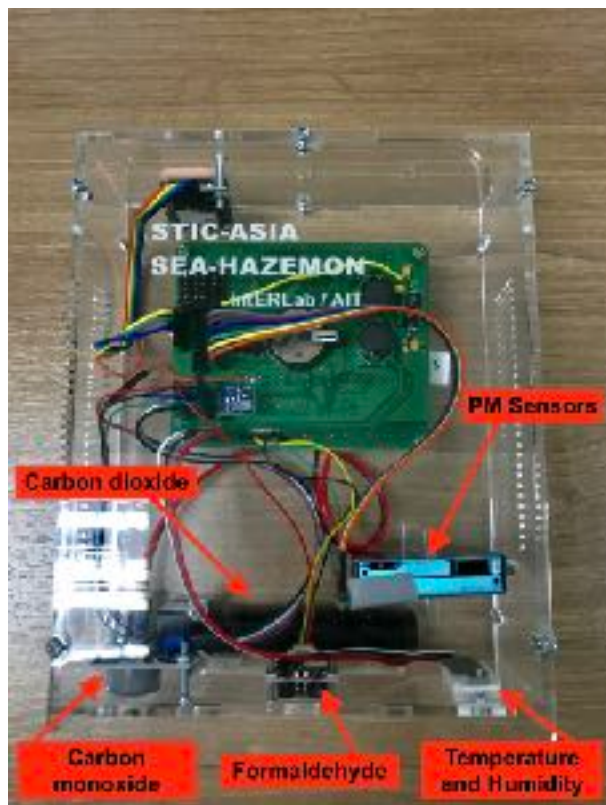
- Networking
- Data Science
- System Engineering

Commenced
Hybrid mode

- August semester at AIT, Thailand

SEA-HAZEMON@TEIN

- Collaborations with R&E networks TEIN and APAN
- IoT application for Air Pollutions focussing on PM2.5 and CO₂
- Investigating how to detect fire from the data obtained



Low Cost IoT sensors technology

Specification

- UDOO Neo with 1GHz ARM Cortex-A9 (Linux based single board computer)
- Various types of pollution related sensors
 - Particulate Matter (PM1, PM2.5, PM10)

Deployment on TEIN



TARGET AREAS:



Vehicles Pollution



Industrial Pollution



Bio mass burning

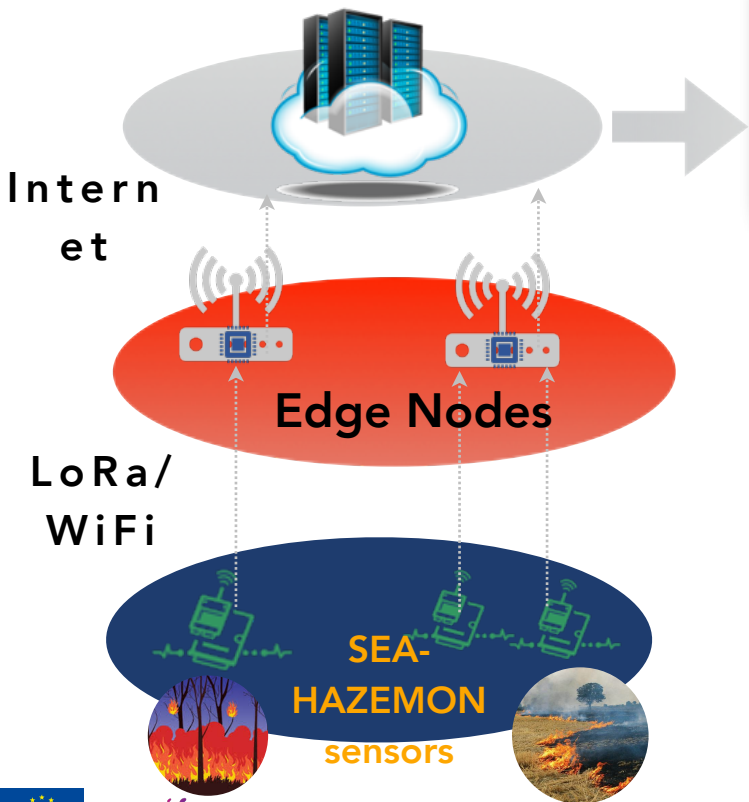


Forest Fire

SEA-HAZEMON@TEIN with Edge Computing



SEA-HAZEMON@TEIN Cloud

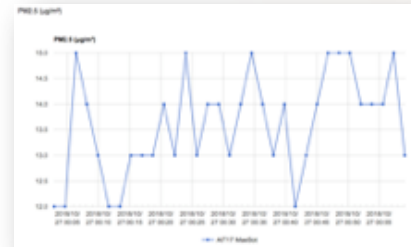
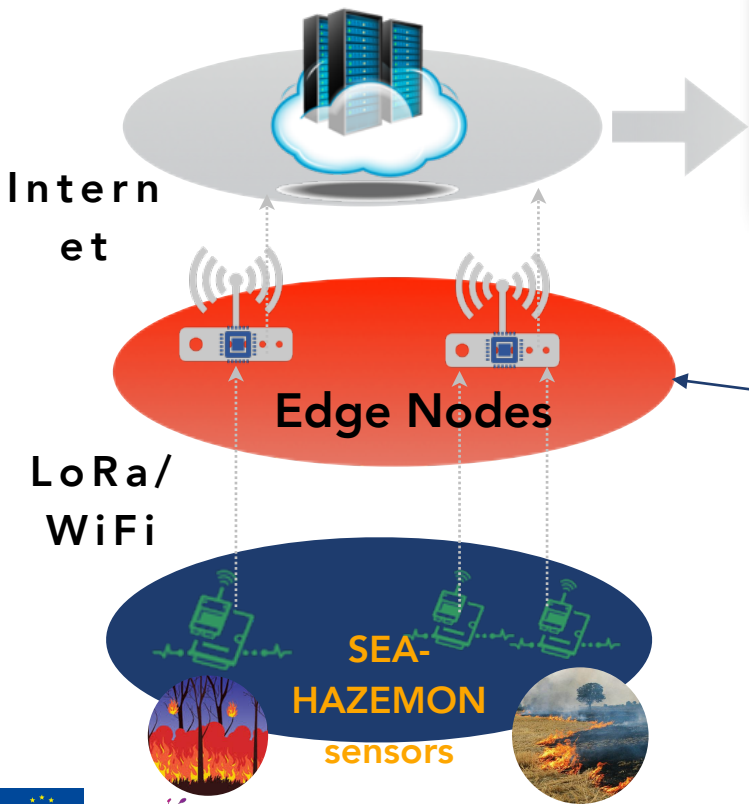


Global Data Analytic and Visualisation

SEA-HAZEMON@TEIN with Edge Computing



SEA-HAZEMON@TEIN Cloud



Global Data Analytic and Visualisation



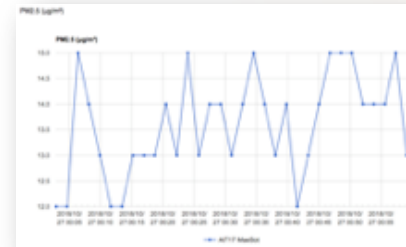
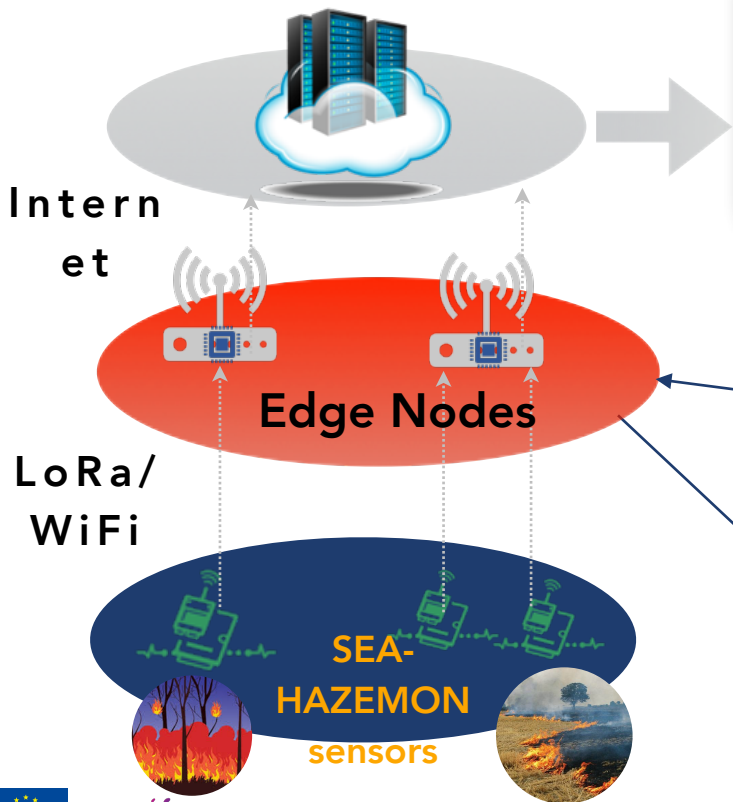
PM 2.5
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Avg in the past 1 Hour
Location: interERLab, AIT
Last Update: 19 February 2019 01:19 pm
STIC-ASIA IoT SEA-HAZEMON Project

Accessing local information

SEA-HAZEMON@TEIN with Edge Computing



SEA-HAZEMON@TEIN Cloud



Global Data Analytic and Visualisation

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STIC-ASIA IoT SEA-HAZEMON Project

Accessing local information
Automatic alerts to forest fire authority

HotSp

Impacts on Asi@Connect Community



• Capacity Building

- Involvement of scientists and researchers from all partners provides opportunities for interactions improving research and technical competencies.
- Training/capacity development to Asi@Connect partners through research internships and collaborations.
 - Internet of Things workshop on Air Quality: September 2019, Bangkok
 - Data Analytic worksop on Air Quality: March 2020, TBA

• Social/Development Contribution

- Providing health hazard warnings to the local communities as well as alerting officials in case of forest fires.



AP* Secretariat

- APIA or APNIC had been providing travel support for secretariat staff to facilitate the AP* meetings
- At Chiangmai meeting (September 2019), it was agreed that big organisations in AP (APNIC, ISOC, ICANN, APTLD(tbd), APNOG...) will help fund the operation USD2,500.- per year
- Nothing was done due to staff recruitment at AIT.

- Proposed to skip 2020
- Contribution and proper operations by 2021.



Thank You