



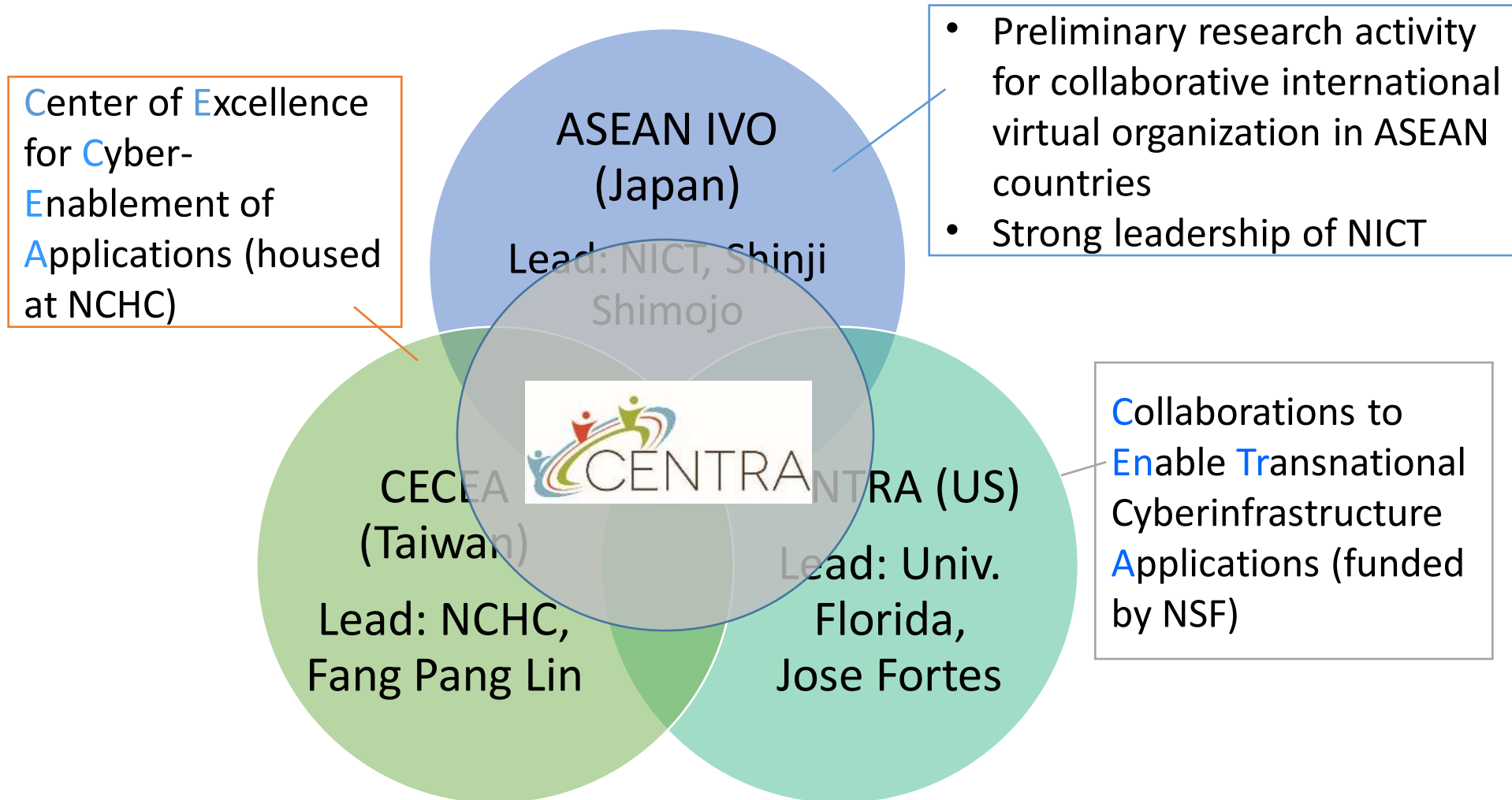
Telescience WG Update

Shinji Shimojo

Fang-Pang Lin

PRAGMA 30, Manila, 28-29 Jan 2016

CENTRA Partners (timely convergent work + vision)



ASEAN IVO 2016 (due Feb. 15)

accelerate Research and Development in the field of ICT and encourage collaboration between institutions and between countries

1. ICT Solutions to the Challenges surrounding Urbanization

Keywords: urban mobility, smart cities, IOT, cloud computing, big data, digital security, infrastructure resilience, green ICT, etc.

2. Social Renovation in Rural Areas and/or Urban Areas

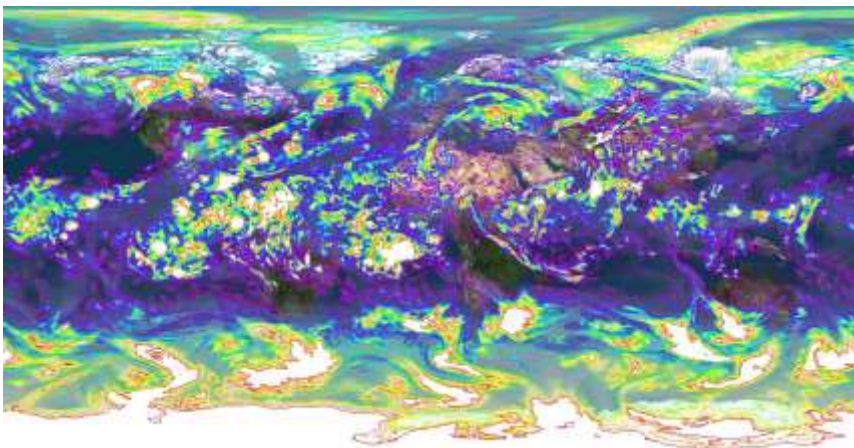
Keywords: agriculture, education, healthcare, disaster management, rural infrastructure, content delivery, low-cost networks, etc.

Why Software Definition?

- Adapt to uncertainty
 - Adapt to environment/situation
 - Adapt to human nature
- Deploy, Observe and Improve/evolve
- Monitor, Analyze, Plan and Execute
- Therefore, IT systems used for disaster management should have
 - Adaptability, Resilience and Agility
- All of which can benefit from software-defined IT

Air pollution Warning

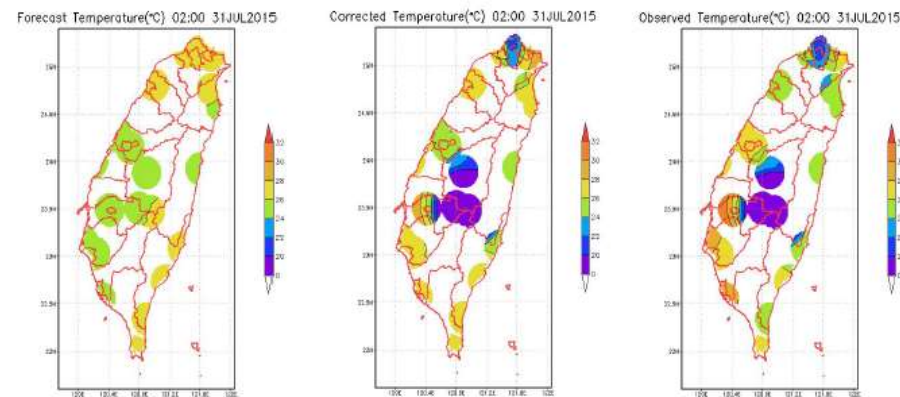
Integrate Simulation and Monitoring



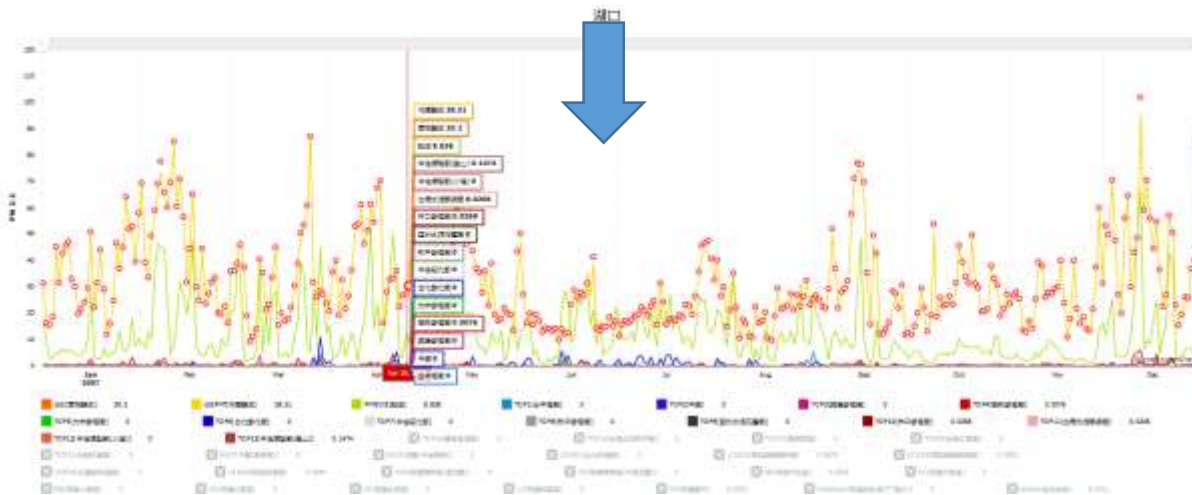
Global modeling:45 days prediction



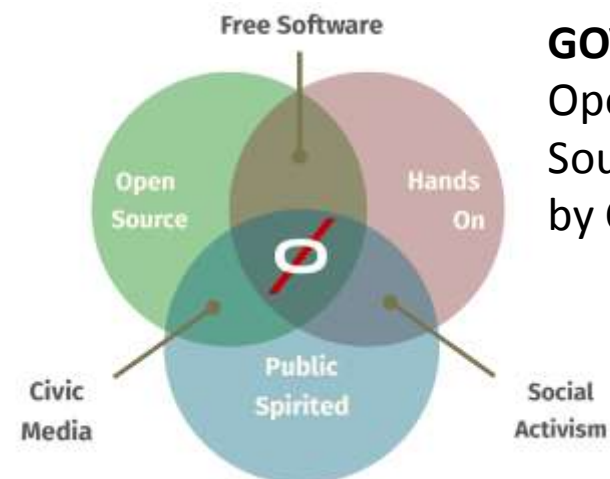
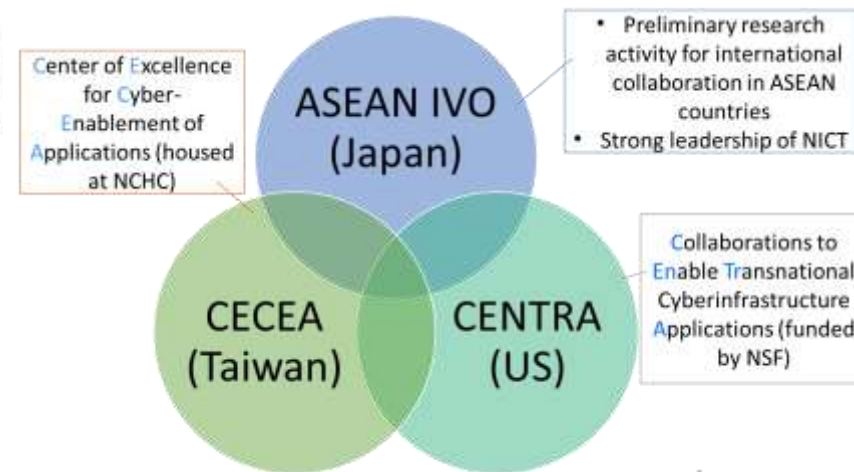
Web-services and alert notification



Coupling with local models



Monitoring on major pollutant sources



GOV ZERO:
Open Data/Open Source Movement
by Civic Hackers

<g0v.tw>

PRAGMA-APAN-CENTRA

Disaster Management Workshop

27 Jan 2016, Manila



NSF Visioning Workshop on Smart and Connected Communities, Seattle, 13-14 Jan 2016



Envision a Long-term
Research and Education
Agenda for Smart and
Connected Communities

By growing an international
multidisciplinary, multi-
sector research and
education community

NICT & NCHC attended...

Source: NSF CPS

Smart and Connected Communities

- Central Government:
 - Intelligent Taiwan Project (digital opportunities)
 - **Open Data** Initiatives
- City Governments:
 - Pursuing **ICF** (Intelligent Community Forum) Smart Cities Award
 - Top 1: **Taipei (2006), Taichung(2013)**
 - Top 7: Taoyuang(2009, 2014), New Taipei(2013,1014), Hsinchu(2013)
 - Smart 21: **Taichung (2014)**
- Industry:
 - Founded **TSSA** (Taiwan Smart City Solution Alliance) at 2014 and organized annual **Smart Cities Summit & Expo** at Taipei since then.
 - Focus on **IoT** applications



source:NASA Earth at night



Opportunities

- Community Activities

- CENTRA collaboration
 - CENTRA Kickoff meeting March 31 – April 1, 2016 (Jose)
 - ASEAN IVO meeting (Luke)
 - SEAIP 2016 Dec 2-6, 2016 (FP)
- PRAGMA alignment
 - PRAMGA 30 (ASTI), PRAGMA 31 (Thammasat University)
- APAN alignment (?)

- Joint Research & Development

- CI & Data Sharing
- Applications Focus
 - Disaster Management
 - Environmental Simulation and Monitoring
 - Smart and Connected Communities
- Cross Domains/Cross Working Groups development in Software Defined Systems