Bioscience and Telescience Updates

Jason Haga,
Fang-Pang Lin, Shinji Shimojo

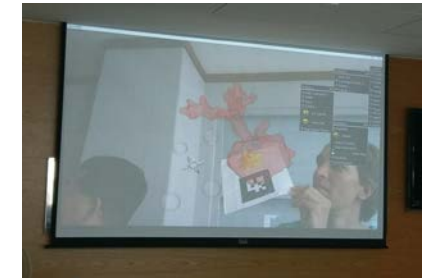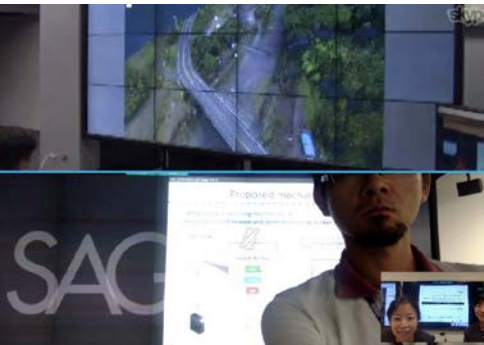PRAGMA 33, Oct 16, 2017

Bioscience Activities

- PRAGMA Data Identity Service
  - Rice genomics analysis
  - Moving to RaPID test-bed at Indiana University
- Starting some visualization work for bioscience

Telescience Activities

- TPVizNet2017, July 21-24, Taiwan
  - Checkpoint for CENTRA Visualization Alliance activity
  - SAGE2 Tutorial session
  - Discussion on SAGE2 applications
  - Smart museum discussion with NMMST in Keelung
    - Plan to install a SAGE2 wall
- AIST visualization wall is now on publically available network
  - Developing several SAGE2 native applications
  - VR application demo at PRAGMA booth in eResearch
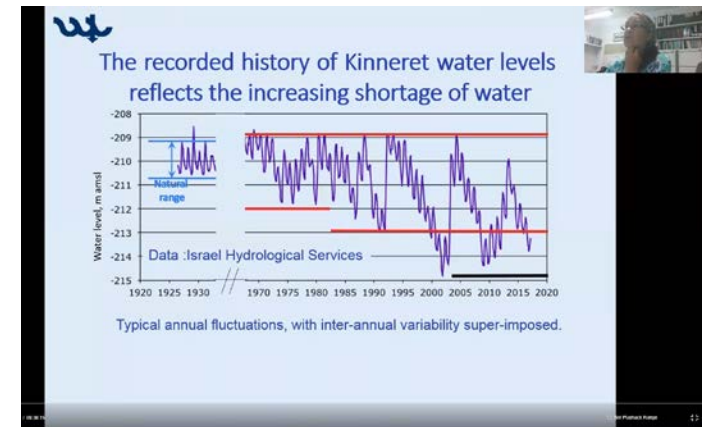 - Partnering with Monash eResearch center

TPVizNet (SAGE2 Alliance) – July 24-28

- Insitutes involved: U. Floria, UCSD, Osaka U, NMRI, AIST,HLRS, KISTI, NMMST, NMMBA, NCHU, NCTU, NPUST, NTUT, NCKU, NCHC
- Use SAGE 2 to connect infra, apps and people
- Test SDN-IP network
- Incubate new ideas & finding new resources

An Experimental Virtual Workshop:
GLEON 18.5 ~ 12-14 Sep

- Experimental Cross-Continent Workshop to enhance the collaboration in the community.

- 3-day Zoom meeting with 90 minutes of Webinar and 90 minutes 2-3 Working Group Break-up Sessions. Totally ~60 people from 4 continents, 8 working groups participated.

- Meeting rating ~4.4/5.

- 30% cannot attend next physical meetings. Most people consider this is a good alternative for physical meetings. Well documented using Youtube.

- Future work: Coupling w/ SAGE2+SDN

Webinar Presentation from Dr Tamar Zohary, Israel Oceanographic and Limnological Research on *Managing a drought-impacted lake*
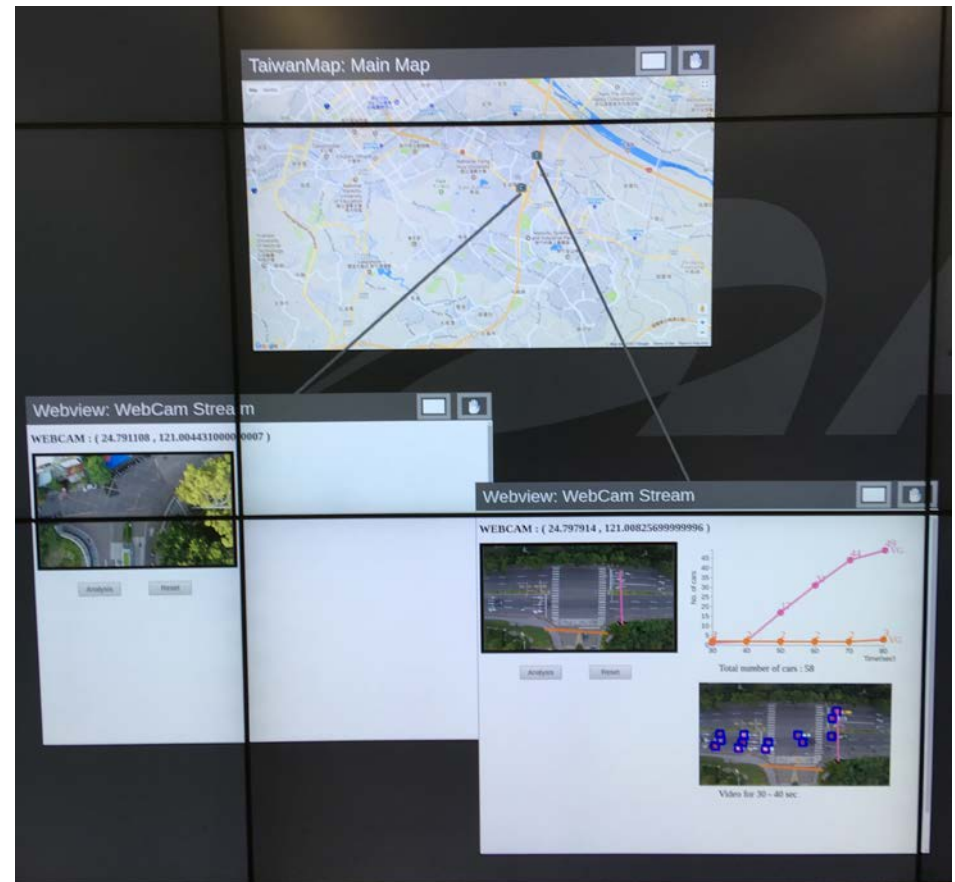

8 Working Groups Reporting back at Day 3 from America, Europe, Asia and Australia & New Zealand

Traffic Monitoring App with Machine Learning
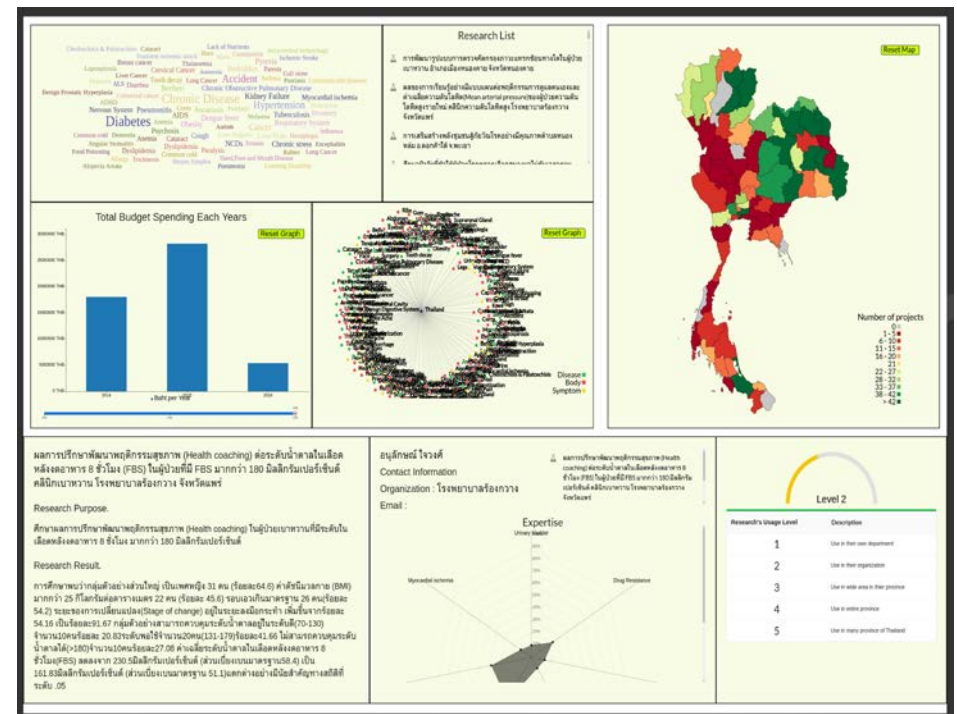## Jimmy (Ching-Yu) Liu, Chih-Wei Yi Jason H. Haga

- Goal: Develop a SAGE2 compatible application for traffic monitoring with machine learning
  - Stream live webcam video into SAGE2 app
  - User can set virtual gates for analysis
  - Video with gate is sent to ML server
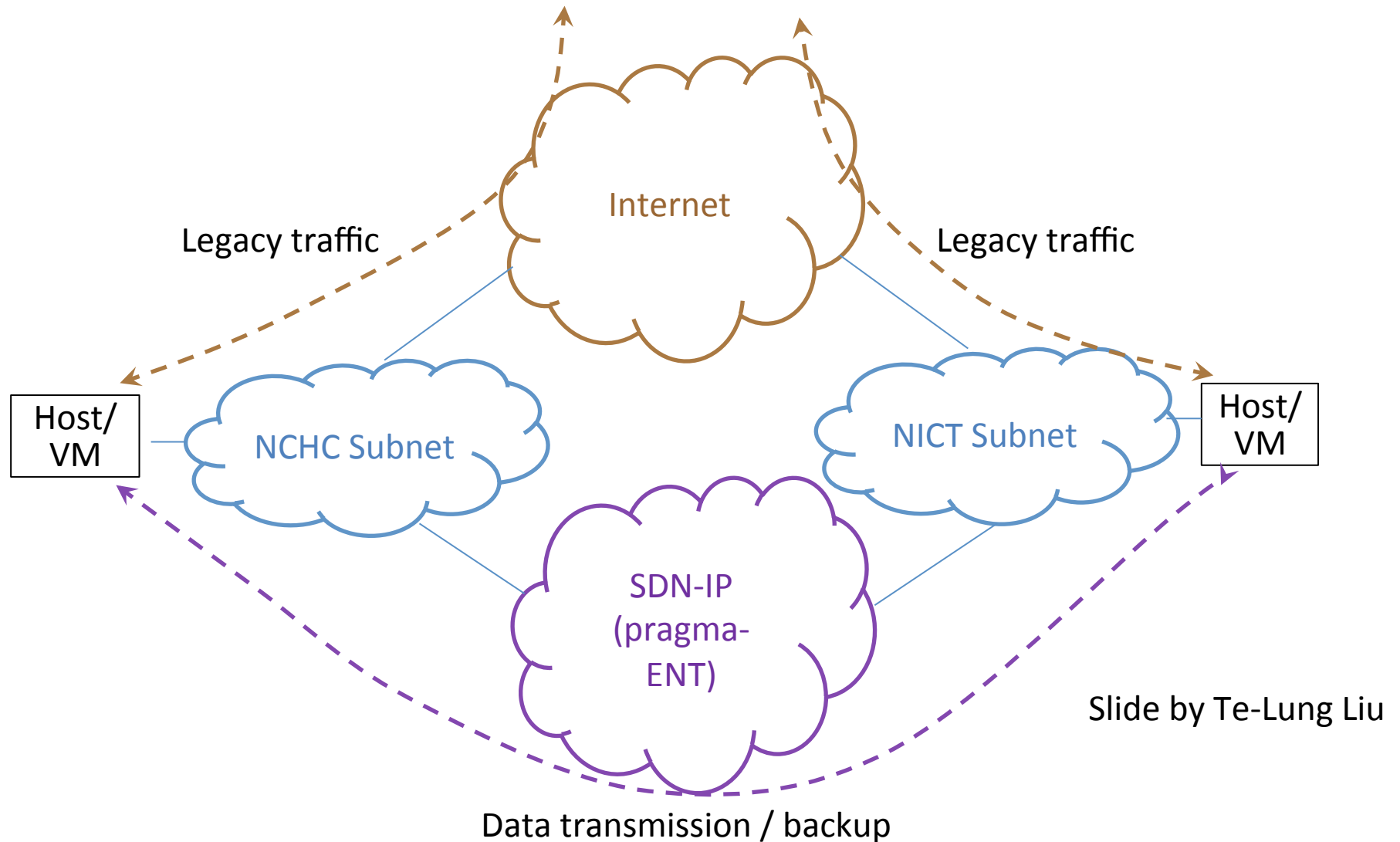 - Results are streamed back to SAGE2 app

MedThaiSAGE

Jason H. Haga, Jarernsri Mitrpanont, Jirayu Roungsuriyaviboon, Thada Sathapornwatanakul, Wudhichart Sawangphol, Dylan Kobayashi

- Goal: Develop a large-scale visualization application for medical research project data (routine to research)
  - Traditional visualizations in a single application
  - Interactive linking between data
  - InCIT2017

MedThaiSAGE Demo Tuesday
PRAGMA Wide Mentoring Tuesday

Plans to connect TD via SDN-IP

Slide by Te-Lung Liu

Upcoming meeting:
SEAIP 2017

- Date: 4-8 December
- Venue: Taichung (NCHC@Science Park w/ 1.73 P[ ] Machine), Sun-Moon Lake
- Theme: AI for Smart and Connected Communities
- Funding: 30 quota for participants from SE Asia & S Asia.
- Agenda: PRAGMA, CENTRA,. Day 1-Tutorials, Day 2-5. Research updates and discussions.
- Possible topics: AI Cyberinfrastructure, CPS systems.

Biosciences WG

- Nurul
- Brain science data (fMRI, EEG, EMG, etc) at university hospital
    - Data repository setup
    - Aggregation of data
    - Visualization in future to showcase the data in repository