



## **Workshop on Decision Support for Monitoring and Mitigation of Natural Disasters (Landslides, Mudflows, and Floods) in Southeastern Asia via the Cyber-enabled Collaboration, Analysis, Navigation and Observation Environment**

### **Purpose**

Visualization is important for modern communication, research and education. This is especially valuable for researchers situated at distributed centers in Pacific Rim countries when carrying out data intensive applications. One important area of research is in the area of natural disaster management and environmental restoration, specifically landslides. Immersive data environments such as the Cyber-enabled Collaborative Analysis, Navigation, and Observation Environments (CyberCANOE) are powerful tools that can be leveraged to create better insight and understanding of heterogeneous data and can be a valuable tool for institutes in the Asia Pacific. In this context, we are holding a kickoff workshop for our TEIN funded "LandSage: Decision support for monitoring and mitigation of natural disasters (landslides, mudflows, and floods) in Southeastern Asia via the Cyber-enabled collaboration, analysis, navigation and observation environment (CyberCANOE)" project. We hope that this initial workshop will help to better define the goals and deliverables of this project. The longer-term goal is to aid you in constructing CyberCANOE Visualization systems on your campus, provide training on the use of state of the art cyber-infrastructure-enabled visualization hardware and software, and develop jointly reusable visualization tools for cyber-enabled landslide monitoring and mitigation.

**Organizers:** Jason Leigh of the University of Hawaii, Jason Haga of AIST, and Bill Chang of the University of Hawaii.

### **Dates**

October 29, 30, 31 (half day)

### **Location**

5th floor, Demo Room  
AIST Tsukuba Central 1  
1-1-1 Umezono, Tsukuba, Ibaraki 305-8560 JAPAN



## Agenda

### Day 1 (October 29, Mon)

- 10:00 – Welcome Remarks by someone significant (asking Sekiguchi to say something)
- 10:15 – Opening Remarks from meeting co-organizers and review of LandSage project goals
- 10:30 - CyberCANOE basic training
  - Document uploaded
  - Shared desktop
  - General interface control
- 12:00 – Group photo & Lunch (bento delivered)
- 1:30 – Research presentations by each organization (10 min each maximum) using SAGE2.
- 3:00-3:30 – Coffee/juice/snack break (delivered at 2:30)
- 3:30 - CyberCANOE training continued
  - Hardware/software and networking requirements, and limitations, cost, ... security issues
  - Additional features
  - Overview of usage scenarios: presentation, brainstorming, data exploration, interactive classroom
- 5:00 – Adjourn for group dinner

### Day 2 (October 30, Tues)

- 10:00 – Data Exploration Example in SAGE2.
  - Potree.org - Point Cloud / remote sensing visualization
  - SAGE RDI - SAGE River Disaster Information
  - MedThaiSAGE - Medical research project data
  - HAVEN - Hawaii Advanced Visualization Energy Nexus
- 11:00 – Data vis design crash course (Part 1)
  - General visualization rules
  - Cultural considerations
  - Identify audience/target users
  - Identify questions to be answered
- 12:00 – Lunch (at AIST restaurant)
- 1:00 – Tour of Science Square Tsukuba
- 2:00 – Brainstorming session on General Uses of SAGE2 (Part 1)
  - Participants reflect on how they might use SAGE2
- 3:00-3:30 – Coffee/juice/snack break (delivered at 2:30)
- 3:30 - Brainstorming session on Land Slide Monitoring and Mitigation (Part 2)
  - Requirements from Hung
  - Data management
    - formatting, access, storage, etc.



- sensor data sources
  - Network requirements
    - access, speeds, security, etc.
  - Other country specific requirements
  - Identify audience/target users
  - Identify questions to be answered
  - Brainstorm about how each participant can get involved in a theme surround landslide management / monitoring.
- 4:30 - 5:00 - Summary of the brainstorms by each organization
    - Home institution use?
    - Landslide mitigation focus area?
    - Different focus?
  - 5:00 - Adjourn for group dinner.

### **Day 3 (October 31, Wed)**

- 10:00 – Review summaries from yesterday (and any revisions).
- 11:00 – Future goals/work plan
  - Discuss next steps.
  - Discuss timeline / milestones for possible CyberCANOE deployments.
- 12:00 – Lunch (bento delivered)
- 1:00 – Any unfinished business
- 2:00 - Adjourn workshop

