



PRAGMA 30

Progress Update

2016.01.28





Additional PRAGMA 29 Events

International Workshop on Building Collaboration in Biodiversity Informatics



D2I



**Special Issue in preparation in
Concurrency and Computation:
Practice and Experience**



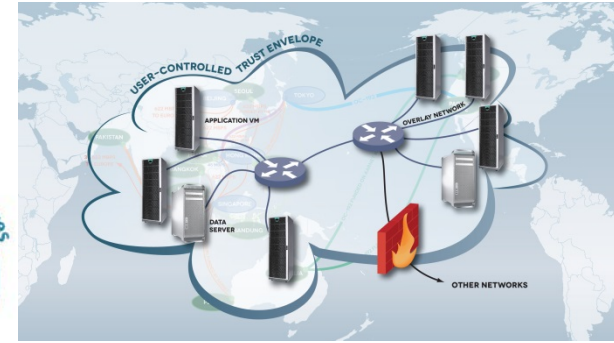
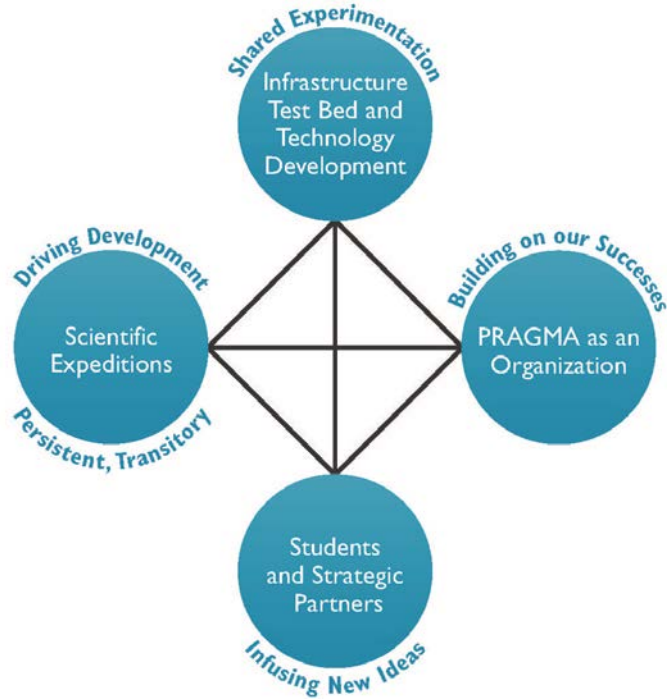
Enabling the Long Tail of *Team* Science



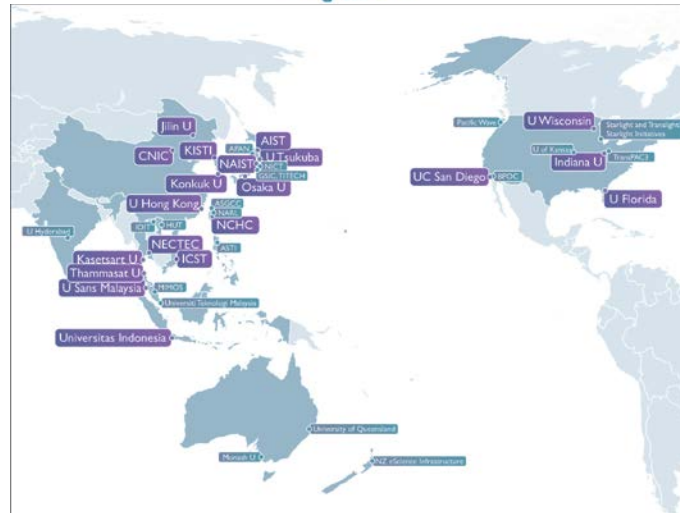
Virtual Scientific Expeditions



PRAGMA Students



Trust Envelop



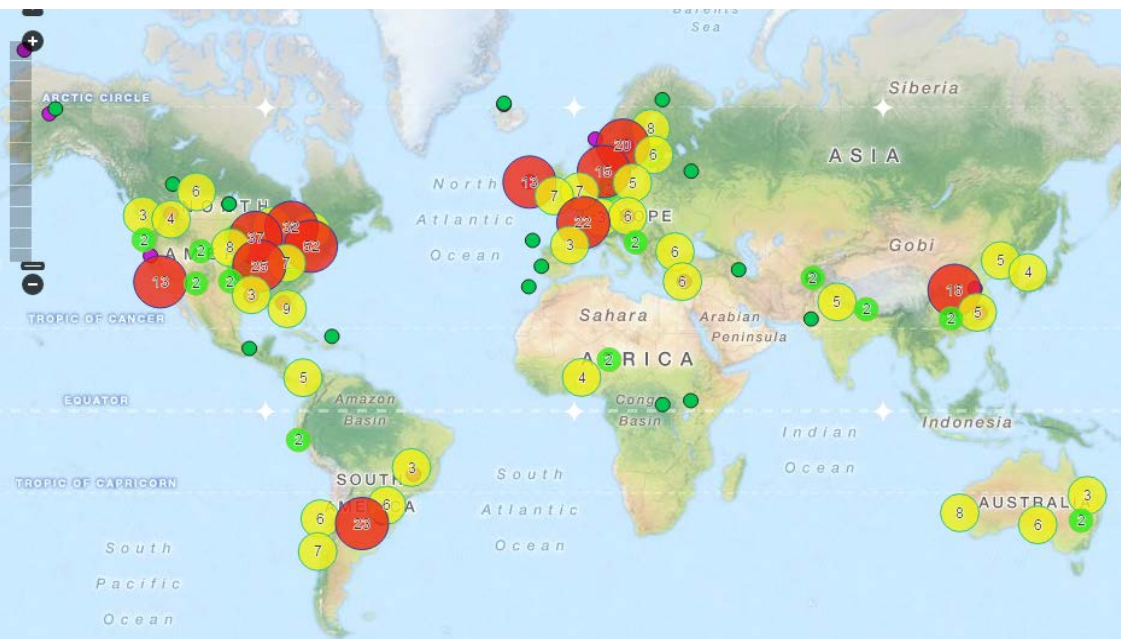
PRAGMA Member Sites



PRAGMA Community

GRAPLER: A Lake Ecology Distributed Collaborative Environment Integrating Overlay Networks, High-throughput Computing and Web Services

- An early PRAGMA Expedition (2003-2004)
 - After PRAGMA 5 (Hsinchu)
 - Put buoy in lake in Taiwan's mountain
 - GLEON Research And PRAGMA Lake Expedition (GRAPLE)
 - Improve our understanding and predictive capacity of the water quality consequences and threats to our freshwater resources
- Improve access to resources for modeling, working with community



*Participants: U Wisconsin, Virginia Tech
U Florida, GLEON, Others*

Virtual Biodiversity Expedition

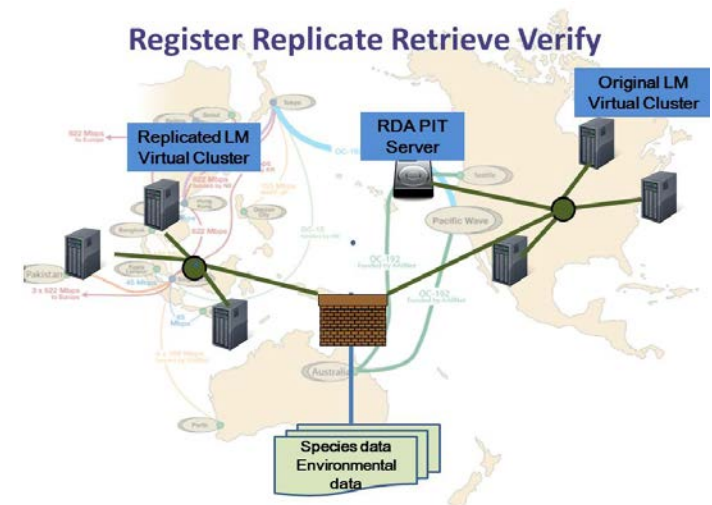
Developing and Deploying Lifemapper Infrastructure to Understand Forces Driving Biodiversity

- Science: Biodiversity on Mt. Kinabalu
- Software: Lifemapper
- Technical focus:
Deploying
computational model
remotely; use on
sensitive / licensed data
- Demo at meeting

Participant: *University of California, San Diego;*
University of Kansas, Indiana U,
University of Florida, RDA



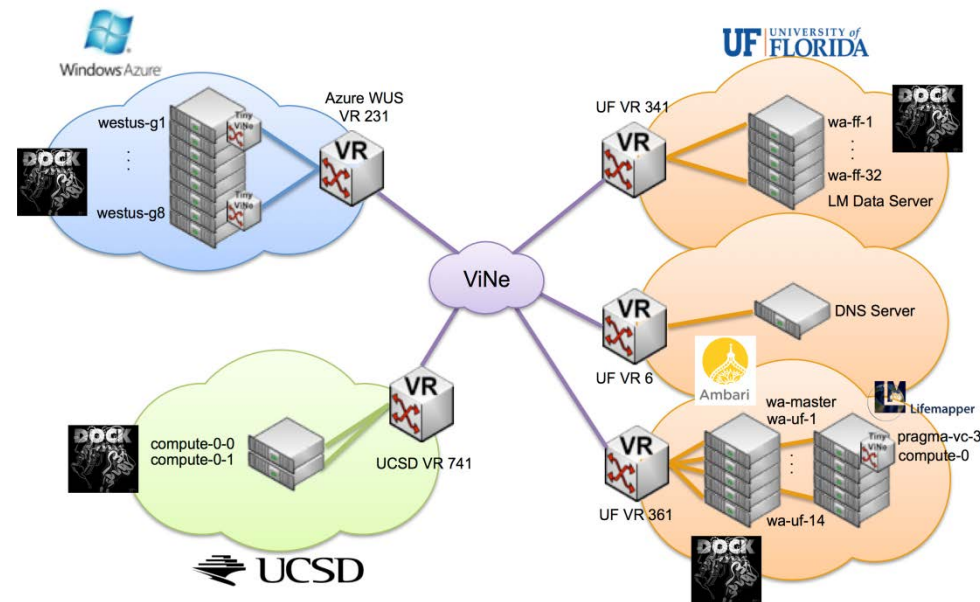
Mt Kinabalu, Sabah, Malaysia
Biodiversity in Extreme Environments



Biosciences

Focusing Infrastructure Efforts to Combat Infectious Diseases

- Virtual Screening
 - Multicloud Environment for virtual screening
 - unified natural products database, starting from Professor Shigehiko Kanaya's (NAIST) KNApSACk Family
- Genomic Analysis
 - Create a platform for genomics analysis using Galaxy



Multicloud, courtesy
A. Matsunaga

PRAGMA Experimental Network Testbed (ENT)

A Resource for the PRAGMA Community

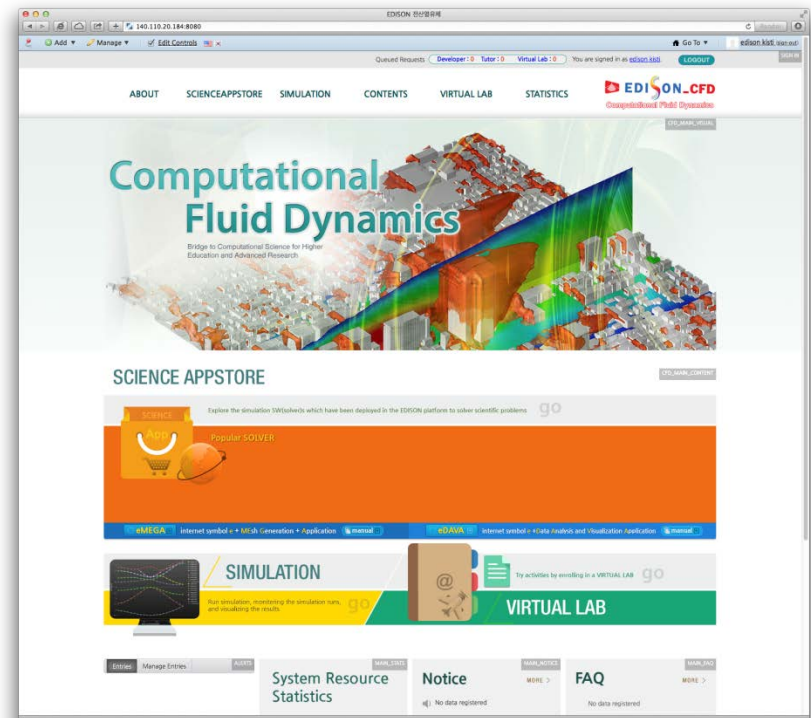
- An international SDN/OpenFlow testbed for use by PRAGMA researchers and collaborators
 - provides complete freedom to access and configure network resources



Cyberlearning

Propagating EDISON and Computational Science from KISTI to NCHC

- EDISON: EDUcation-research Integration through Simulation On the Net.
 - A simulation based Cyber-Learning system
 - In Korea, 28,000 users from more than 150 universities
 - Five Computational Science disciplines
- Challenges Overcome:
 - system configurations, firewalls, account management, computing resources, and graphic user interface (GUI) for Chinese



Edison CFD site at NCHC

Showing Progress Between Meetings and Introducing New Activities: Demos!

- Exclusive Routing System for Disaster Response Vehicle, Elvira Yaneza, XU
 - Distcloud Distributed File System for Resilient Global Services, Ikuo Nakagawa, Osaka
 - Toward Flexible and Efficient Computing Resource Service by SDN-enhanced Job Management System Framework, Yasuhiro Watashiba, and many others, NAIST and Osaka
-
- Extending PRAGMA-ENT for End Users using IPOP Overlay Networks, Kohei Ichikawa, NAIST, Kyuho Jeong, Renato Figueiredo (UF)
 - Building a persistent PRAGMA Cloud testbed, Shava Smallen, UCSD
-
- New discoveries in the GLEON-PRAGMA Lake Expedition: modeling advances and scaling up, Renato Figueiredo, UF, Paul Hanson, Cayelan Carey
 - RDA-PRAGMA Sprint - Biodiversity Model Replay, Quan Zhou, IU; Aimee Stewart, Nadya Williams, Jason Haga, Beth Plale

Thanks to Kevin Dong and Shava Smallen who took responsibility for demos

Sharing Ideas from PRAGMA and non-PRAGMA Students and Researchers: Posters

- Organized by PRAGMA Students
- Invited APAN fellows and local students
- Total of 22
- Visit posters
- Vote – with stickers in your registration
 - Top three will present on Friday

Thanks to Pongsakorn U-chupala, Quan Zhou, Meilan Jiang, and Chawanat Nakasan
who took responsibility for the posters



Joint APAN and PRAGMA Meetings Opportunity for Collaborations

- ASEAN IVO (NICT) Meeting (Tuesday)
- APAN Cloud Computing WG Meeting (Tuesday)
- Disaster Management Workshop (Wednesday)
- APAN Speaker (Thursday)
- Joint Plenary (Thursday)
- PRAGMA Steering Committee (Friday)



Asia-Pacific Advanced Network



Partner Projects: Share Vision, Common Approaches, Contemporaneous Funding

Center Of
Excellence on Cyber
Enablement of
Applications
(housed at NCHC)

NICT

IOT testbeds
(Japan)

- Preliminary research activity for international collaboration in ASEAN countries
- Collection of testbeds



(Taiwan)

US
CENTRA



Collaborations to
Enable Transnational
Cyberinfrastructure
Applications (funded
by NSF)

ASEAN International Virtual Organization (IVO)

- Tuesday, January 26
- Organized: NICT (Shinji Shimojo)
- Goal: With partners discuss collaboration opportunities for software defined system in urban computing, environmental monitoring and disaster mitigation
- Participants from: Philippines, Malaysia, Thailand, Vietnam, Hong Kong, Japan, Taiwan, Florida



Cloud Computing WG Joint Meeting

- Tuesday January 26
- Organized by APAN Cloud WG (Shigetoshi Yokoyama, Eric Yen) and PRAGMA Resources (Phil Papadopoulos, Yoshio Tanaka)
- Five talks APAN, five talks PRAGMA
 - PRAGMA
 - Overview
 - Biodiversity Expedition
 - Room Scheduler
 - ENT
 - Change of Traditional HPC Centers
 - APAN Cloud WG
 - KEONET Open Science Cloud (GIST, KISTI)
 - Overlay Cloud (NII)
 - OpenStack Clouds (NCI)
 - Federating Regional Clouds for Open Science



Disaster Management Workshop

- Wednesday January 27
- Organized by ASTI, PRAGMA, CENTRA, CECEA, ASEAN IVO (NICT) and APAN
- Six Sessions, 11 speaker, Panel, Student presentations
 - Disaster Monitoring and Management Technology and Practices
 - IT Support of Disaster Management
 - Resilient IT Infrastructure
 - Disaster Information Management and Citizen Engagement
 - Interactions



Scheduled Meetings to Develop US CENTRA – CECEA – ASEAN-IVO

Dec. 7—11
2015

SEIAP 2015, hosted by CECEA (Taiwan)

Jan. 27—29
2016

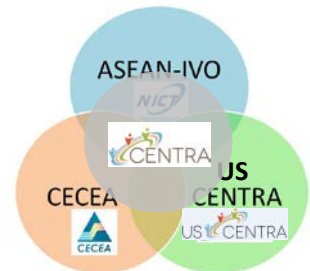
PRAGMA/APAN meeting (on 27th Joint Meeting for Disaster Management Workshop); ASEAN IVO meeting

Mar. 2016
(planned)

CENTRA Workshop, hosted by CENTRA (US)

Steering Committee Topics

- Hosting PRAGMA 32:
 - Proposal by U Florida, last week of March or first week of April 2016
- CENTRA/CECEA/ASEAN-IVO
 - Synergies and relationship with PRAGMA
- APAN
 - Building on joint meetings, how do we advance a closer, mutually beneficial partnership



Thank You

Chair

- Denis Villorente

Program Committee

- Fang-Pang Lin, NCHC
- Shinji Shimojo, Osaka
- Jose A Fortes, U FL
- Jason Haga, AIST
- Beth Plale, Indiana U
- Kevin Dong, CNIC
- Ruth Lee, KISTI
- Renato Figueiredo, U FL
- rattanat@gmail.com, Thammasat U
- Heru Suhartanto, U Indonesia
- Weicheng Huang, NCHC
- Smallen, Shava, UCSD
- Aimee Stewart, U Kansas
- Pongsakor U-chapala, NAIST
- Philip Papadopoulos, UCSD
- Kohei Ichikawa, NAIST

Demos

- Kevin Dong
- Shava Smallen

Posters

- Pongsakorn U-chapala
- Quan Zhou

Local Committee

- Alvin Retamar (Overall APAN 41 LOC co-chair)
- May Cayaban (Overall APAN 41 Coordinator)
- Emma Juco (Hotel bookings)
- Pinky Manio (Venue arrangements)
- Mitz Montanez (Registration)
- Charmaine Centino (PRAGMA 30)
- Glenda Baldonado (PRAGMA 30)
- Kath Crisostomo (PRAGMA 30)
- Alvin De Gracia (Network and technical concerns)