

12-15 April
2017
Gainesville
FLORIDA

PRAGMA 32

Internet of People and Things



Welcome

Thanks to PRAGMA 32 Organizers

Thursday April 13, 2017

University of Florida

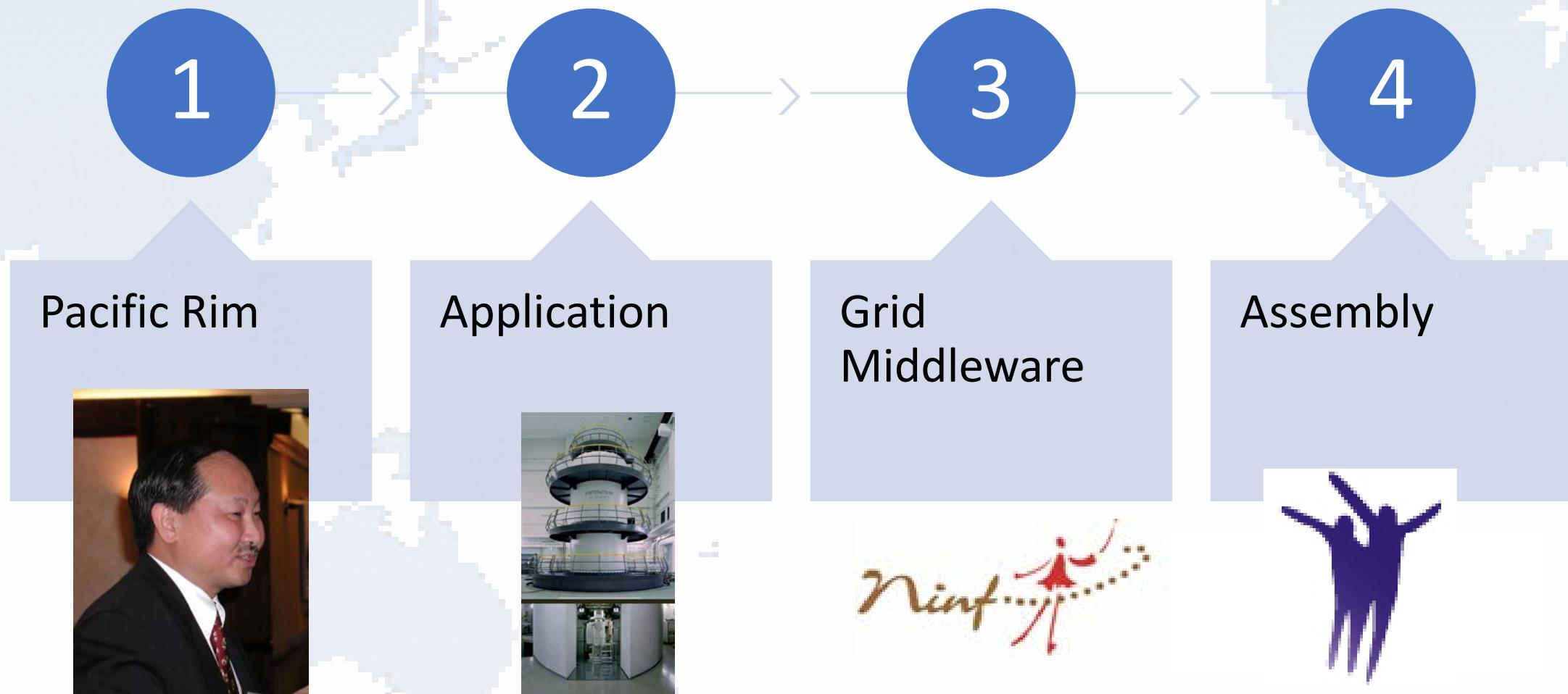


PRAGMA 2024

Building on Fifteen Years of Experience in Preparing for the Future



Proposed Establishment of Pacific Rim Application and Grid Middleware Assembly (PRAGMA)



From Three Workshops

San Diego (UCSD) Seoul (KISTI) Fukuoka (AIST & Osaka)

March 2002
Beach

Establish Community

July 2002
Banner & Flute

January 2003 – with APAN
Bath House

Sustain Collaborations

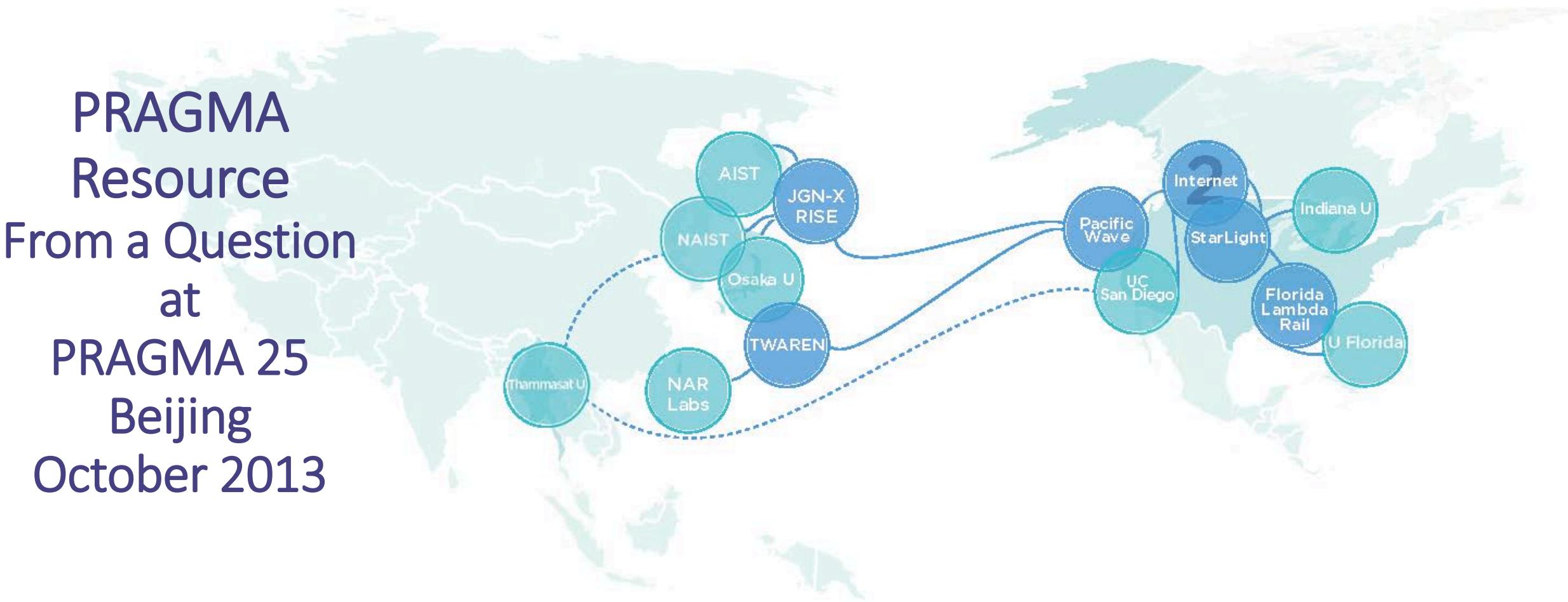


To 15 years of collaborative success

Successes We Can Point To

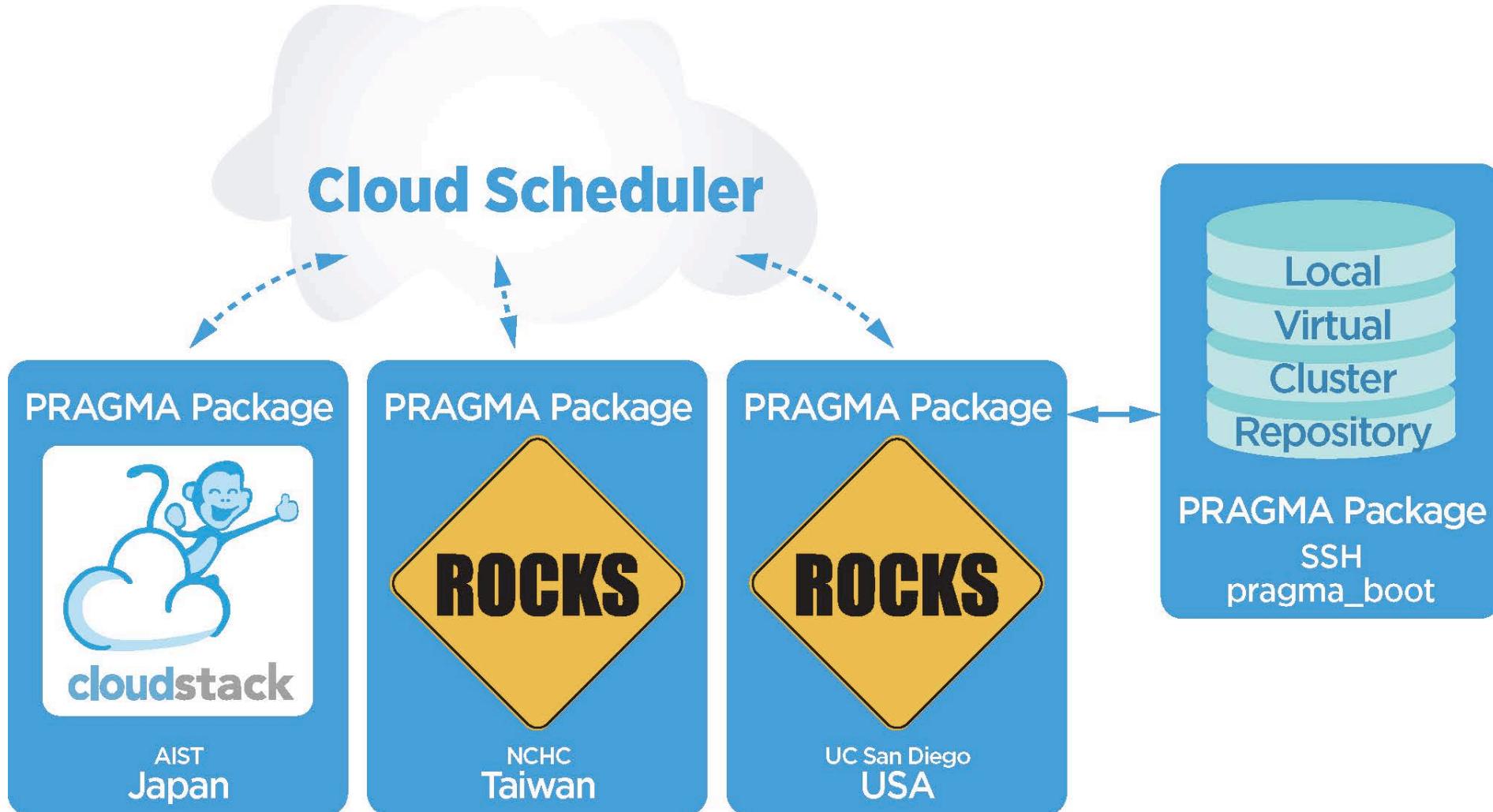
- Global Resources
- Software
- Science
- New Activities
- Publications

PRAGMA
Resource
From a Question
at
PRAGMA 25
Beijing
October 2013



PRAGMA Experimental Network Testbed (ENT) (2016)

PRAGMA
Resource
Transition to
Cloud Started at
PRAGMA 17
Hanoi
October 2009

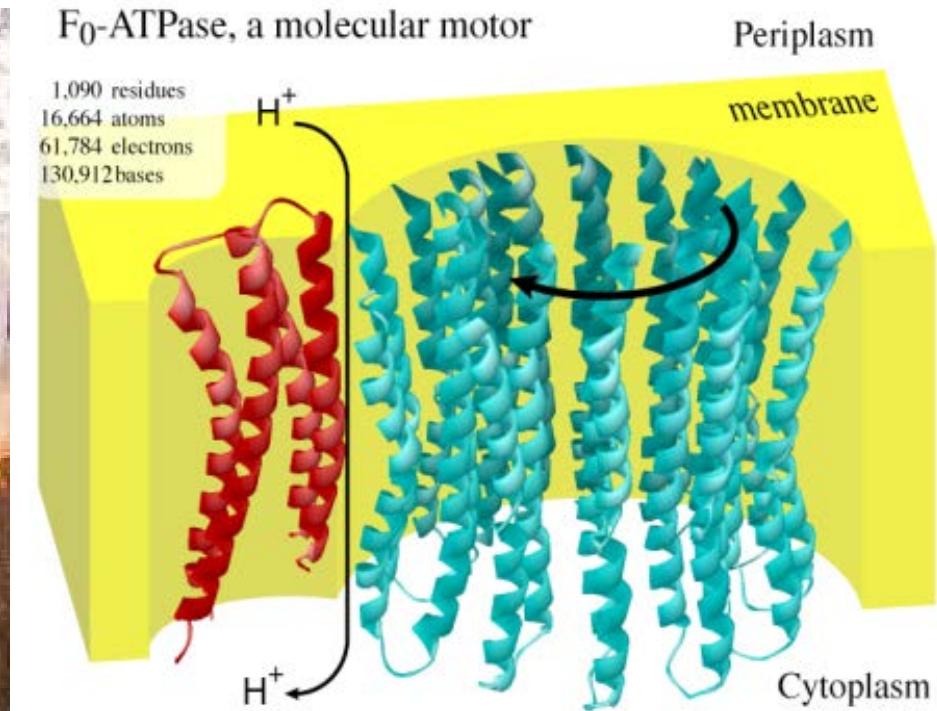


PRAGMA Cloud Scheduler architecture (2016)

Scientific Explorations Drive Software Improvements and Advance Science



Savannah Burn (2006)
& Nimrod
Monash Led



OSG Grid Interoperability Experiment (2007)
& Ninf-G
AIST Led

PRAGMA Workshops Identified and Started Sprint Activities – Driven by Science

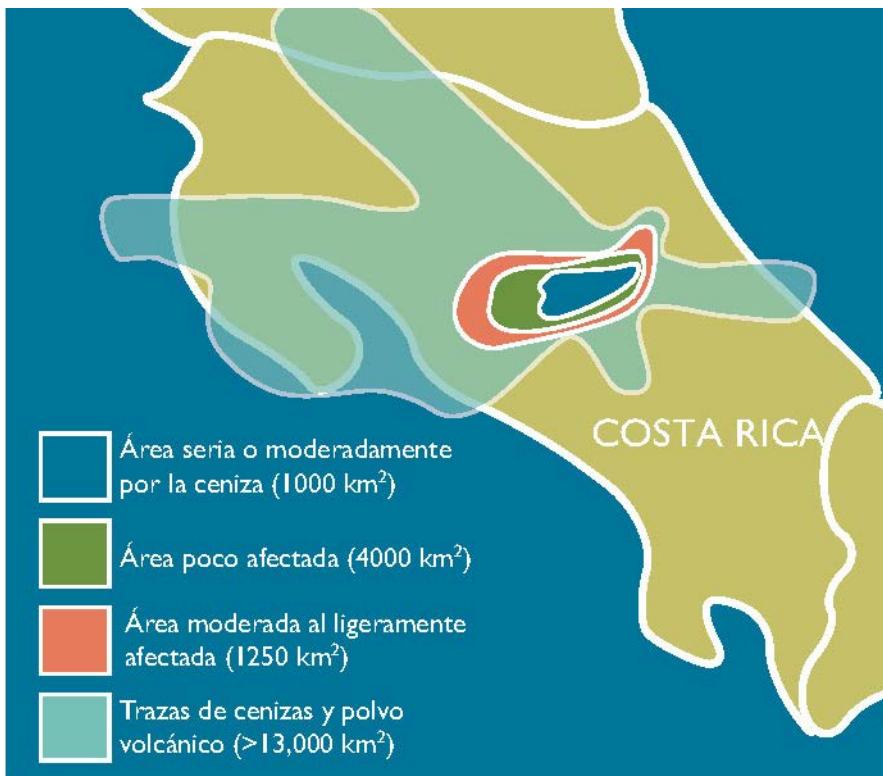
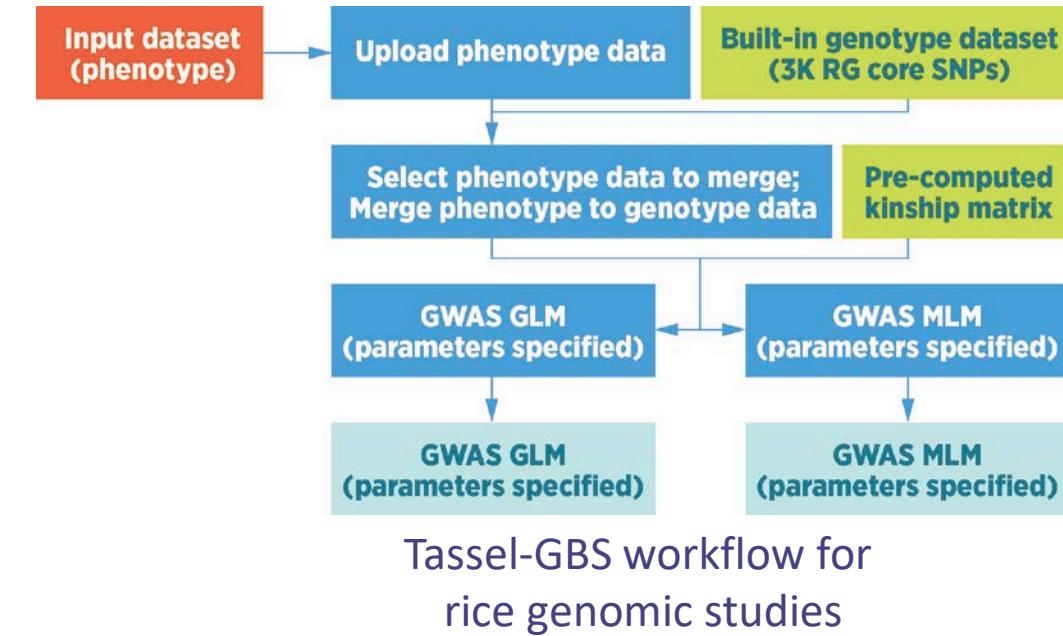


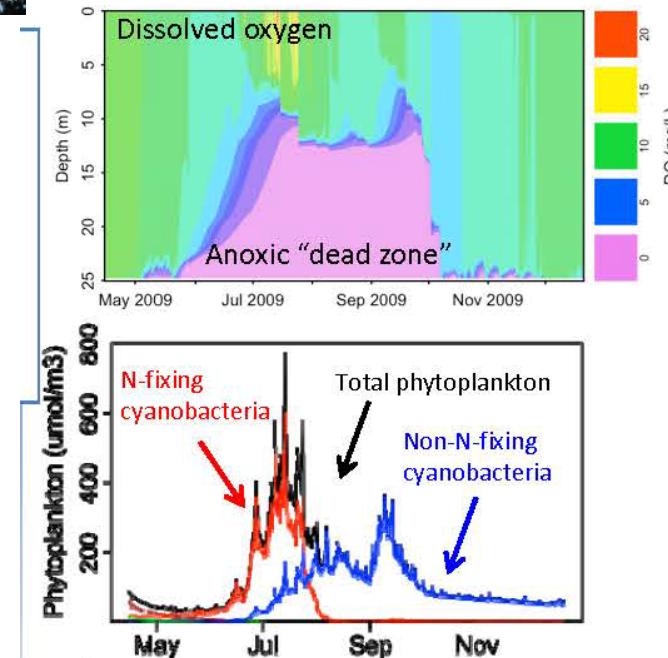
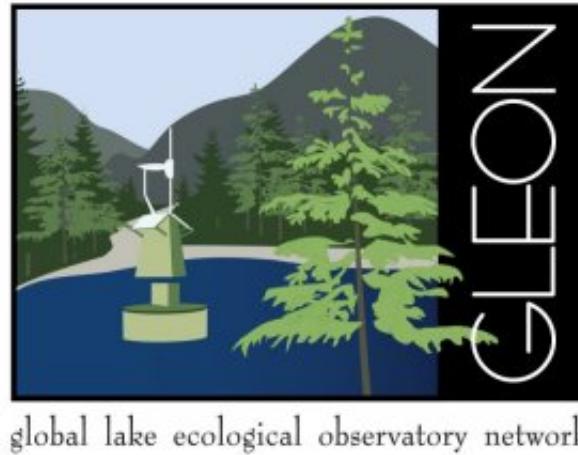
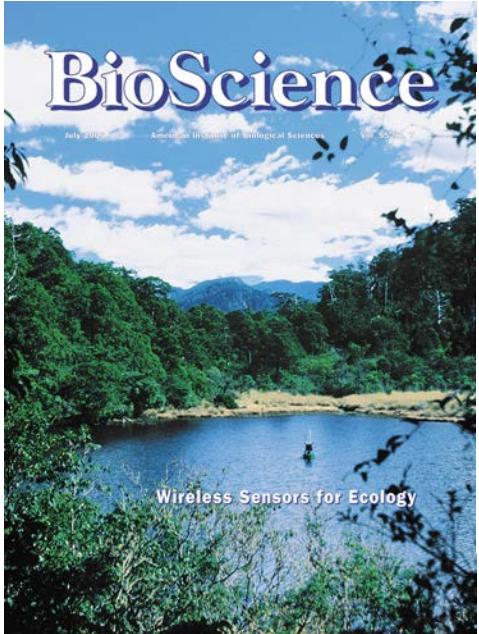
Fig. 1. Irazú volcano location and ash distribution during 1963-1965

Distribution of ash from the Irazu volcano (2010)
PRAGMA 18 San Diego & Amazon EC2 Award



Improving Workflow and Data Provenance for Rice Genome Work (2016)
PRAGMA 30 Manila

PRAGMA Expedition Global Approach to Lake Ecology



GRAPLER
General Lake Model
HTCondor
IP over P2P (IPOP)
R

PRAGMA Virtual Expedition Biodiversity and Lifemapper

Actively Seeking
Biodiversity
Researchers



New Organizations and Events

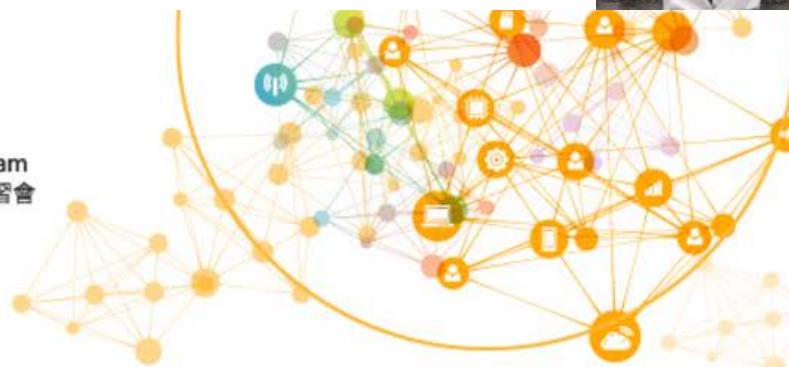
New Ideas Dissemination



Collaborations to
Enable Transnational
Cyberinfrastructure
Applications



 SEAIP
Southeast Asia International
Joint-Research and Training Program
科技部東南亞國際共同研究暨培訓研習會



Dec.05~09 2016
CLOUD COMPUTING &
Internet of Things 雲端計算與物聯網

Smart and Connected Communities



Engaging Communities

Received: 17 January 2017 | Accepted: 21 February 2017

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SPECIAL ISSUE PAPER

PRAGMA-ENT: An International SDN testbed for cyberinfrastructure in the Pacific Rim

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³National Institute of Advanced Industrial Science and Technology, Japan

⁴National Institute of Information and Communications Technology, Japan

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Summary

The Pacific Rim Application and Grid Middleware Assembly (PRAGMA) is an international community of researchers that actively collaborate to address problems and challenges of common interest in eScience. The PRAGMA Experimental Network Testbed (PRAGMA-ENT) was established with the goal of constructing an international software-defined network (SDN) testbed to offer the necessary networking support to the PRAGMA cyberinfrastructure. PRAGMA-ENT is isolated, and PRAGMA researchers have complete freedom to access network resources to develop, experiment, and evaluate new ideas without the concerns of interfering with production networks.

In the first phase, PRAGMA-ENT focused on establishing an international L2 backbone. With support from the Florida Lambda Rail, Internet2, PacificWave, Japan Gigabit Network, and Taiwan Advanced Research and Education Network, PRAGMA-ENT backbone connects openflow-enabled switches at University of Florida, University of California, San Diego, Nara Institute of Science and Technology (Japan), Osaka University (Japan), National Institute of Advanced Industrial Science and Technology (Japan), and National Applied Research Laboratories (Taiwan).



International Workshop on Building Collaborations in Biodiversity Informatics





PRIUS: Pacific Rim International UniverSities, Osaka

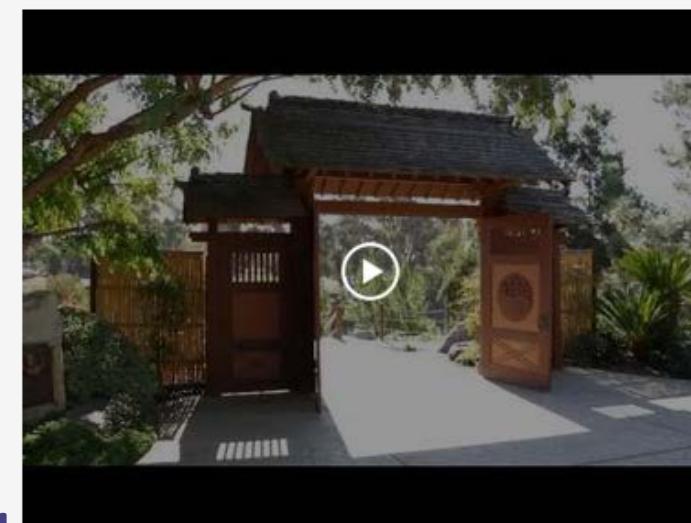


New Idea
Generators!
Builders of
Collaboration

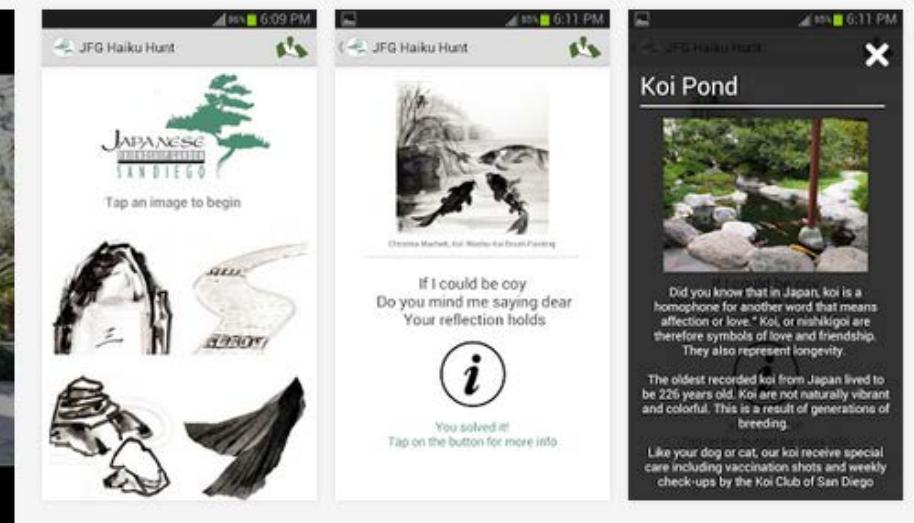


JFG Haiku Hunt

2014 Honeysett
& Din Award



Jesus Rios: NICT, Balboa Park Online Collaborative,
Information Services International-Dentsu, Ritsumeikan University, UCSD

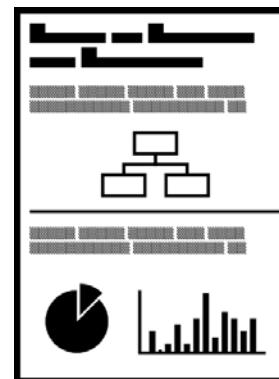


PRAGMA Students

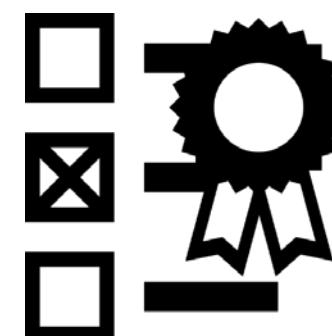
Future Leaders



Lightning
Talks



Poster
Presentation

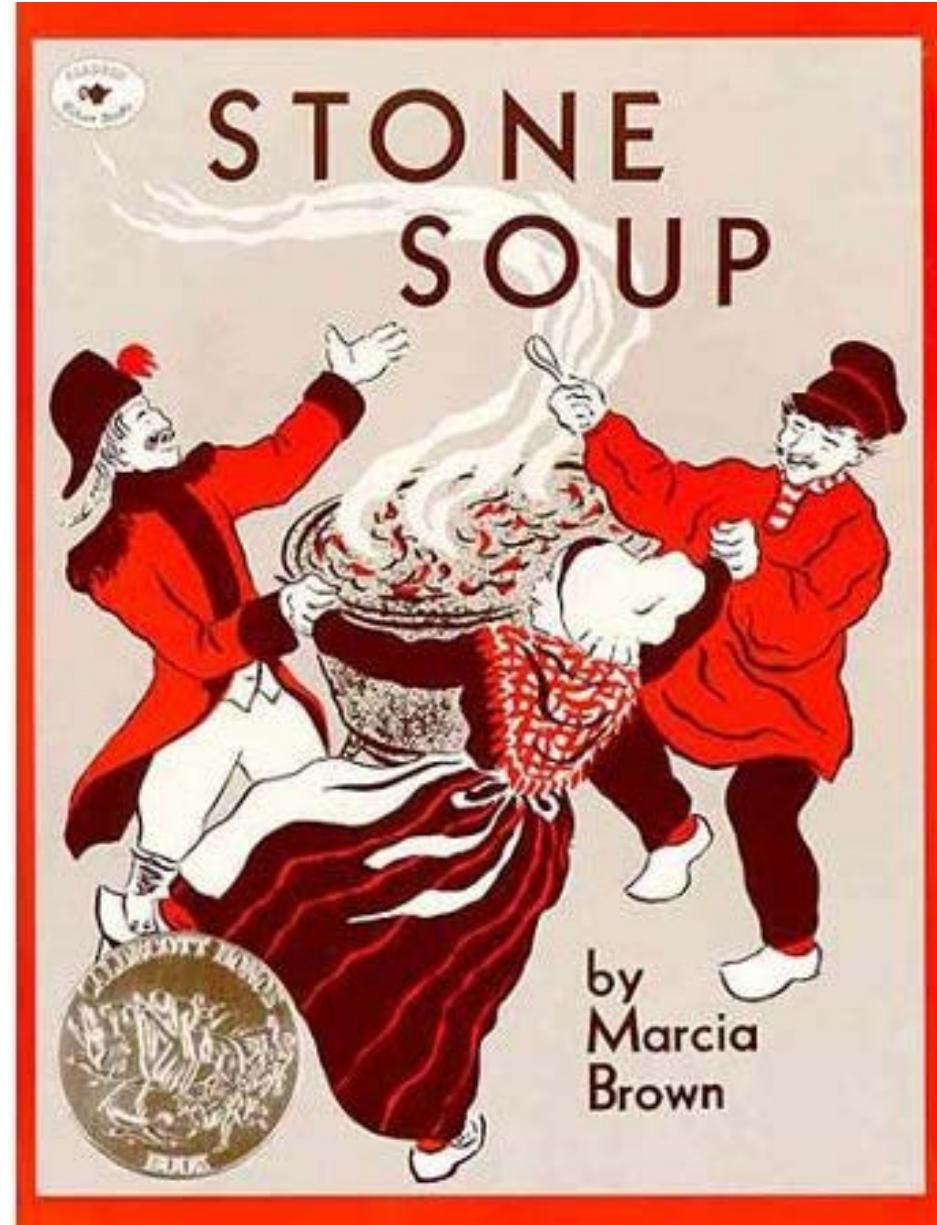


Poster
Voting

Student
Exchanges

Successful Collaborations

Contributions,
Benefits,
and Much More



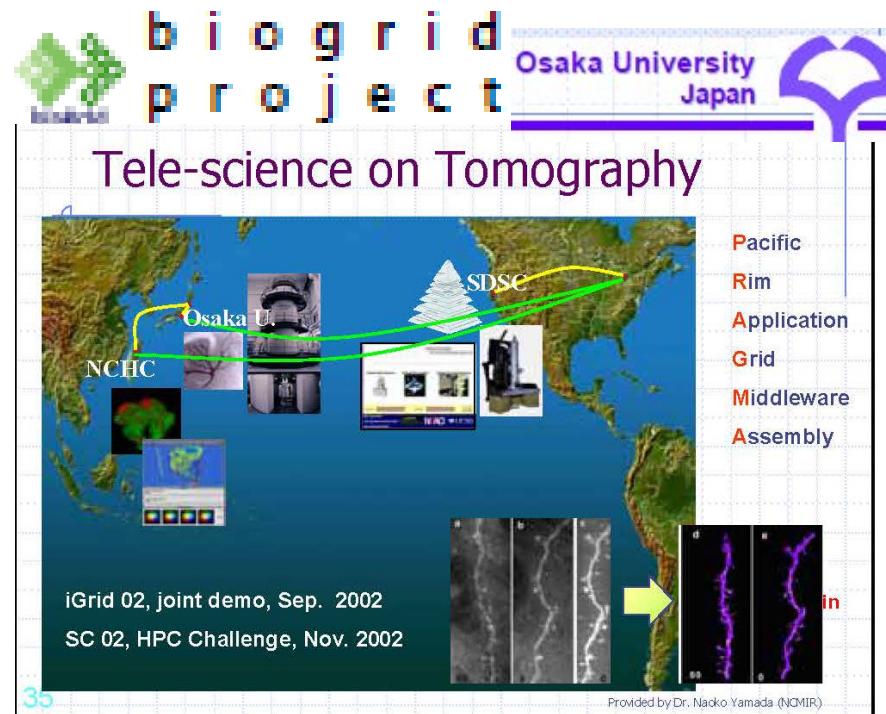
Contributions

- Resources
- Software
- People
- Workshops
- Host visitors
- Questions
- Ideas

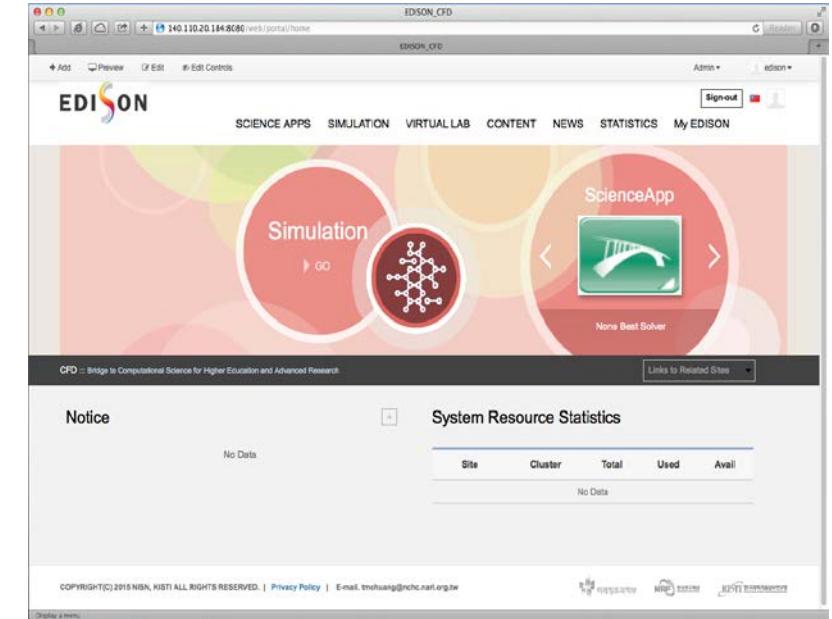
Benefits

- Access to larger resources
- Improved SW (testing, use)
- New local infrastructure
- Scientific insights
- Higher institute prestige
- Professional advancement
- Increased funding
- Publications
- Knowledge of trends
- New: Ideas, Collaborations, Opportunities, Work

Benefiting Ongoing and New Activities



GEO Grid: Federating Geospatial Data and Integrating Services



EDISON portal site deployed at NCHC



iEco Award Korea

Shared Benefits

- Unique facilities (testbeds)
- Trusted forum for ideas
- Network of collaborators and mentors
- Shared “brain trust”
- Action group

Successful Collaborations

Other Dimensions

- Framework, Culture, Identity
- Trust
- Participation
- Commitment

(Accepted 25 February 2003)
(First Revision 25 August 2003)
(Second Revision 11 Feb 2004)
(Third Revision 16 August 2004)
(Updated 4 May 2005)
(Fourth Revision 5 September 2005)
(Updated 21 Dec 2005)
(Updated 5 August 2006)
(Updated 24 November 2006)
(Updated 24 March 2007; revised 30 March 2007; updated 1 October 2007; updated 2 April 2008)
(Updated 15 February 2013)



Framework

- PRACTICES

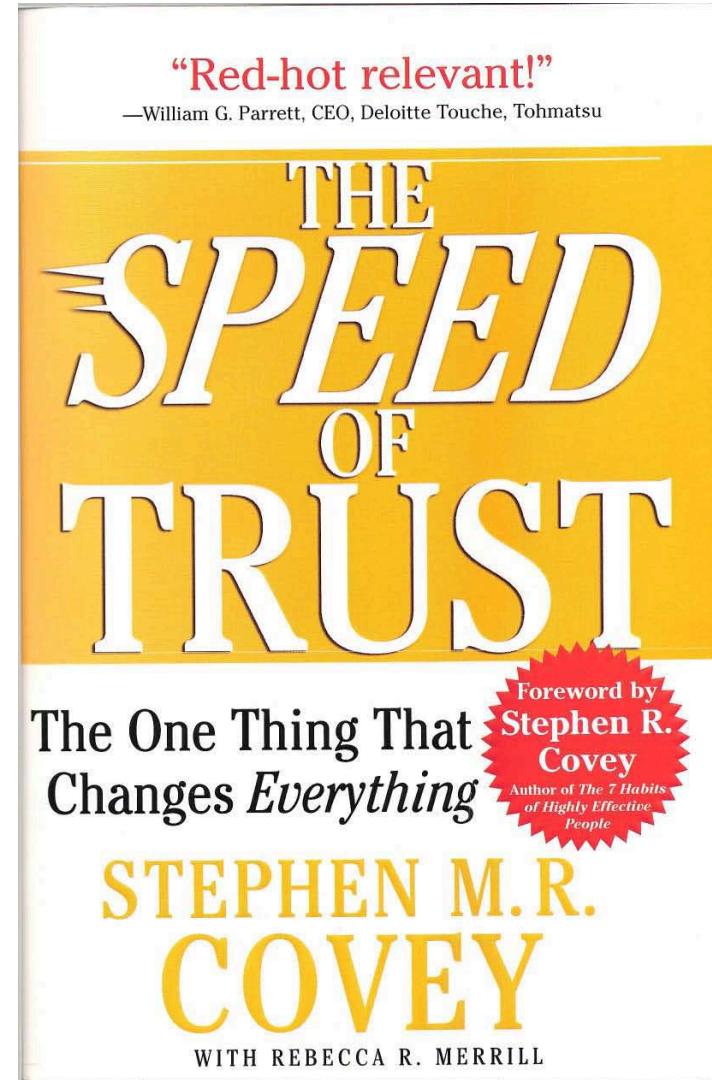


- OPEN, WELCOMING and RESPONSIBLE

OPERATING PRINCIPLES AND PROCEDURES
FOR THE
PACIFIC RIM APPLICATION AND GRID MIDDLEWARE
ASSEMBLY
FORUM



Trust Important in Collaborations



Trust enables

- Open discussions
- Sharing ideas
- Addressing issues
- Hosting/sending students
- Responding rapidly to needs
- Asking questions

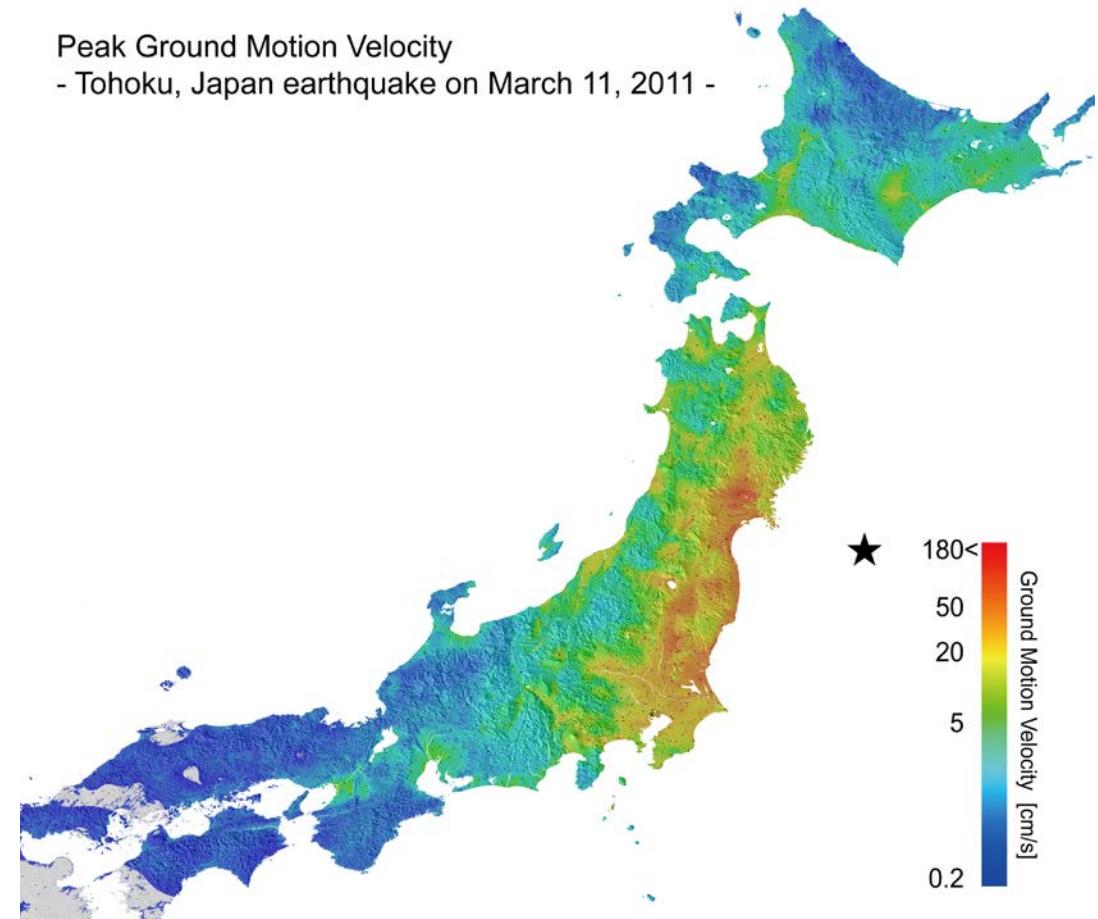
Trust Framework Allows for Rapid Response

NCHC SARS Task Force 2003



AIST GEO Grid Disaster Response Task Force 2011

Peak Ground Motion Velocity
- Tohoku, Japan earthquake on March 11, 2011 -



Key Questions – Point the Way



Strengthen PRAGMA Students

Launch PRAGMA

Address SARS

Make Grid Useful

Launch GLEON

Structure PRAGMA

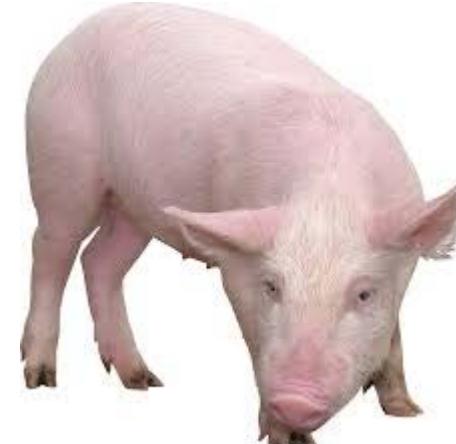


Commitment by Leadership and Participants is Critical for Successful Collaborations

In a Breakfast of Scrambled Eggs and Bacon



Involved



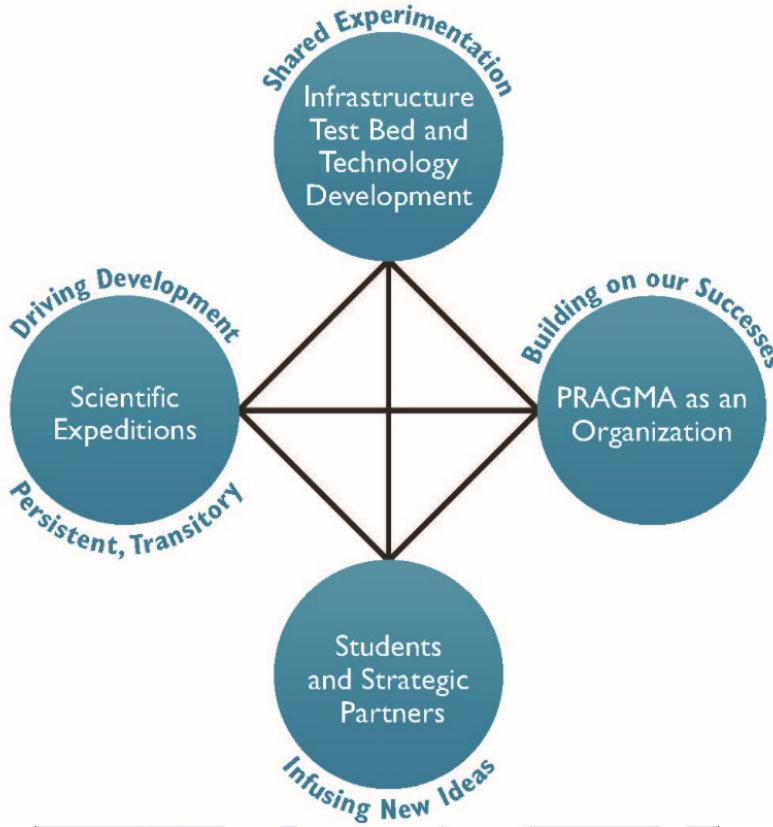
Committed



Virtual Scientific Expeditions



PRAGMA Students



PRAGMA Member Sites



Trust Envelop



PRAGMA Community

PRAGMA at 2024

One Person's View of Possible Future Activities

**PEOPLE &
COMMUNITIES**

APPLICATIONS

**TECHNOLOGY
EVOLUTION**

**COLLABORATION
FRAMEWORK**

Student Opportunities

Mobility and Leadership

SHARED VISION

New Communities

Engaged and Developed

PARTICIPATION

Science Achievements

Covers of Journals

Unique to PRAGMA

COMMITMENT

Integrated Testbed

Sensors, Data, Networking
Compute, Visualization

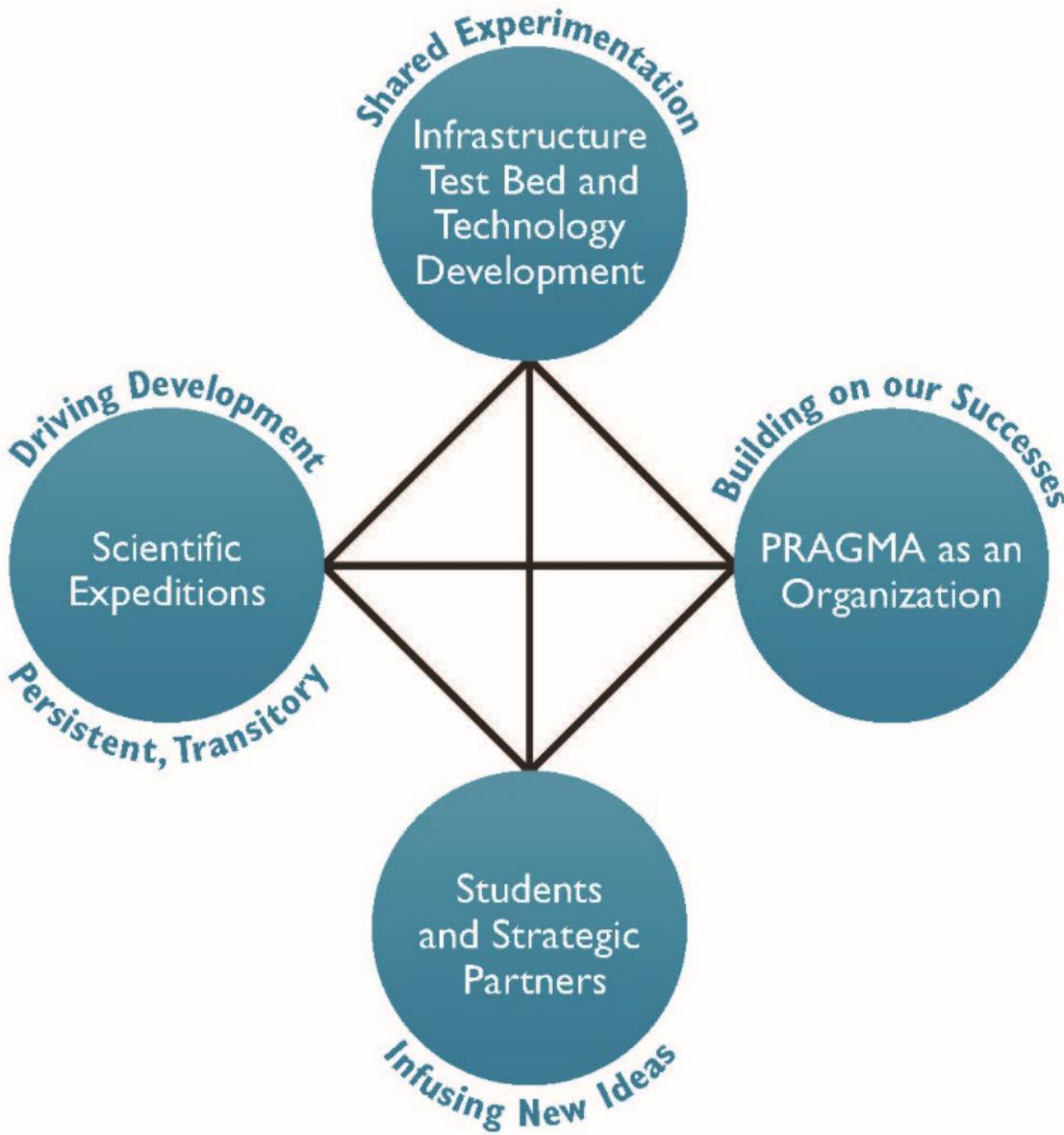
Evolved Leadership

Projects, Working Groups,
Steering Committee

Trust and Open Sharing

Remain Key Pillars

PRAGMA Today and Tomorrow



Commit!
Participate!

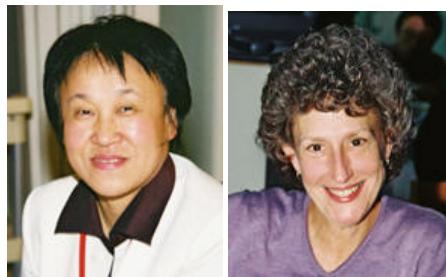
- Resources
- Software
- People
- Workshops
- Host visitors
- Questions
- Ideas

Acknowledgements

- Organizers of PRAGMA 32 (4GSH)
- Contributors to Talks: Success, Benefits, Contribution
- Steering Committee
- All those who asked questions!
- Phil Papadopoulos and Teri Simas
- And all of you
- And all of your funders



15 Years of Service on the Steering Committee



And 14 other members



- Satoshi Sekiguchi
- Yoshio Tanaka
- Whey-Fone Tsai
- Fang-Pang Lin
- Shinji Shimojo
- Habibah Wahab
- Philip Papadopoulos
- David Abramson



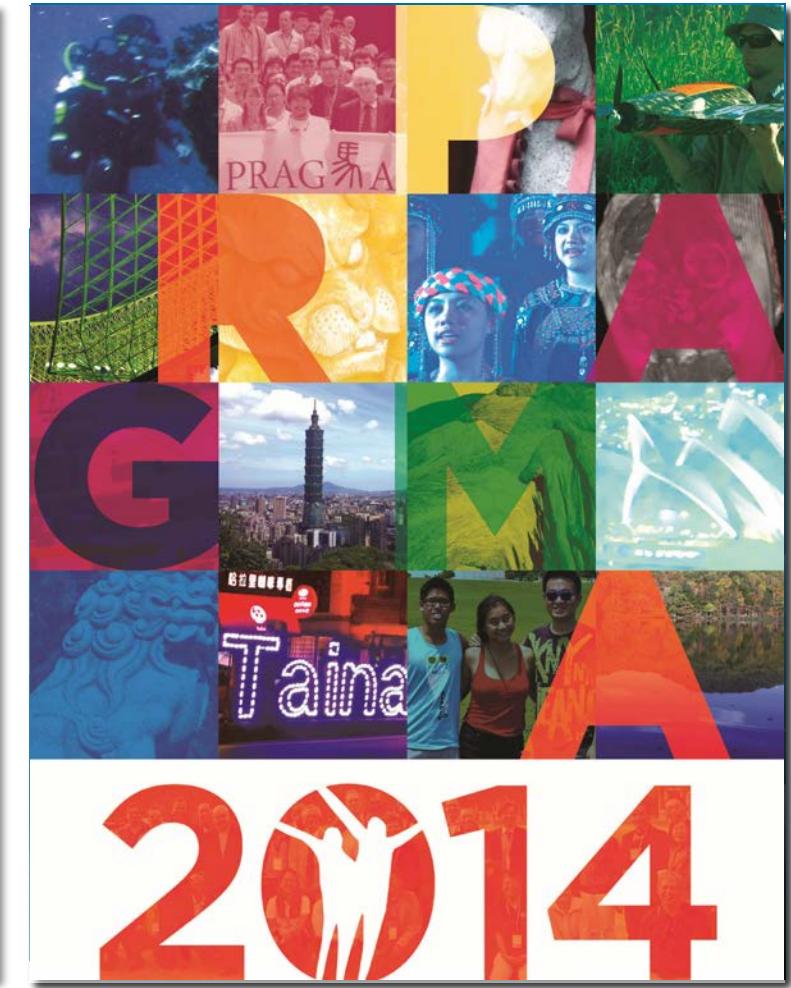
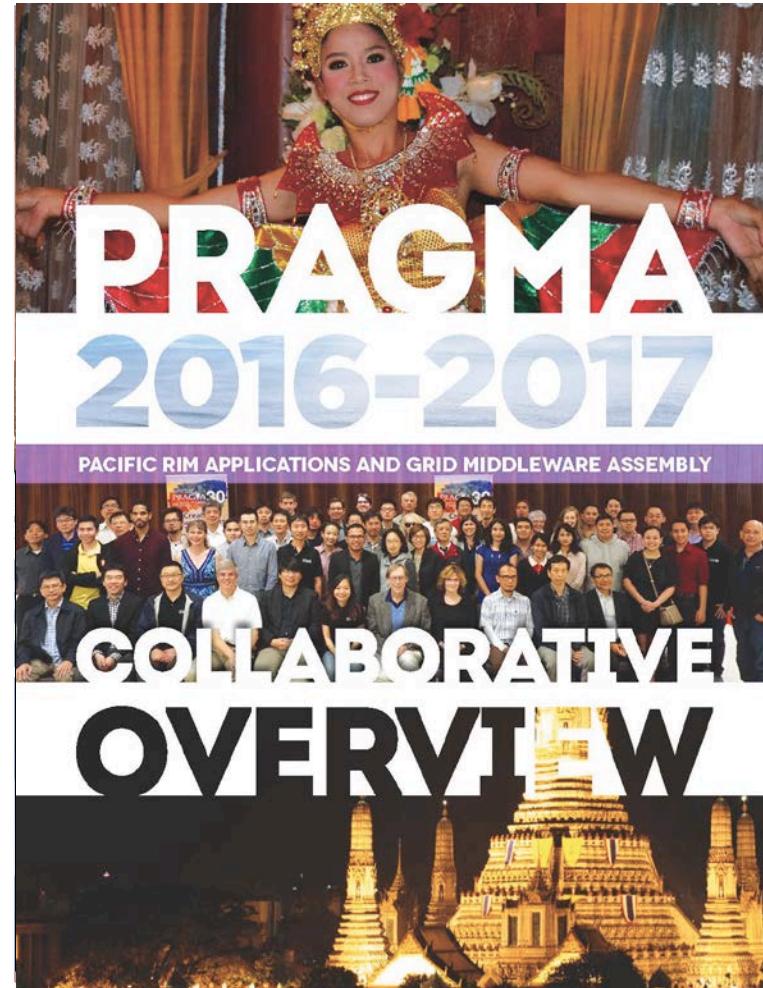
Input to Talk: Success, Benefit, and Contribution

- ABRAMSON David
- AGARWAL Arun
- BROWN Maxine
- CHANG Bill
- CHO Kum Won
- DONG Kevin
- FIGUEIREDO Renato
- FORTES Jose
- HAGA Jason
- HANSON Paul
- ICHIKAWA Kohei
- JIANG Meilan
- LEE Jysoo
- LEE Sangsan
- NAKASON Chawanat
- NAN Kai
- PLALE Beth
- RATTANATAMRONG Prapaporn
- SEKIGUCHI Satoshi
- SHIMOJO Shinji
- TANAKA Yoshio
- TSAI Whey Fone
- ZHENG Cindy

(Almost) Final Comments

- We help each other do whatever is needed to make every year a success
 - Cindy Zheng
- I wish PRAGMA a bright future and hope it continues to light other corners of the world and thus bridge and build into a Global Family
 - Arun Agarwal, Dean, School of Computer and Information Science, U Hyderabad

Highlighting PRAGMA's Achievements



Art Designed by Jennifer Matthews
PRAGMA, GLEON and CENTRA Logos



Personal View Top Successes

