**List of Institutions, Partners, and Sponsors**

*PRAGMA is an institution- and people-based organization governed by a Steering Committee that invites new members, determines locations of workshops, and sets overall direction. More information about Steering Committee members (denoted with an asterisk \* in the listing below) may be found at* [*www.pragma-grid.net/about/committee*](http://www.pragma-grid.net/about/committee)*.*

**Active Members**

*A key component of PRAGMA is active involvement by participation in workshops, contributing resources, hosting workshops, and/or promoting and supporting student and researcher exchanges. The following institutions have contributed to PRAGMA activities in the past year.*

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MONASH UNIVERSITY (Monash): David Abramson\*, [*david.abramson@monash.edu*](mailto:david.abramson@monash.edu)*, Paul Bonnington, paul.bonnington@monash.edu*

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UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD): including the California

Institute for Telecommunications and Information Technology (Calit2), San Diego Supercomputer Center (SDSC), Center for Research in Biological Systems (CRBS), National Center for Microscopy and Imaging Research (NCMIR), National Biomedical Computation Resource (NBCR); Peter Arzberger\*, *parzberg@ucsd.edu*; Philip Papadopoulos\*, *phil@sdsc.edu*; Tom DeFanti, *tdefanti@ucsd.edu*;Teri Simas, [*simast@sdsc.edu*](mailto:simast@sdsc.edu)*, Rommie Amaro, ramaro@ucsd.edu*

University of Florida (UF), in particular the Advanced Computing and Information Systems Laboratory and the Florida Museum of Natural History: Jose Fortes, [*fortes@acis.ufl.edu*](mailto:fortes@acis.ufl.edu); Renato Figueiredo, [*renato@acis.ufl.edu*](mailto:renato@acis.ufl.edu): and Reed Beaman, *rbeaman@flmnh.ufl.edu*.

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University of Wisconsin (UW), in particular the Center for Limnology: Paul Hanson, *pchanson@wisc.edu*.

**Networking Members**

*Networking partners provide access to expertise to improve the efficiency of the resources groups in running distributed experiments and applications.*

ASIA-PACIFIC ADVANCED NETWORK (APAN): Seishi Ninomiya, *snino@isas.a.u-tokyo.ac.jp*; Kento Aida, *aida@nii.ac.jp*

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TransPAC3, INDIANA UNIVERSITY: Jennifer Schopf, *jmschopf@indiana.edu*;

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**Other Members**

ACADEMIA SINICA GRID COMPUTING CENTRE (ASGC): Simon Lin,

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CENTER for High Performance Computing, Hanoi University of Science and Technology (HUT): Huu-Duc Nguyen,

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More information about each of the PRAGMA Institutional Members can be found at

[www.pragma-grid.net/about/institutions](http://www.pragma-grid.net/about/institutions).

**Additional Organizations Active in PRAGMA**

BALBOA PARK ONLINE COLLABORATIVE ([www.bpoc.org](http://www.bpoc.org)), is a nonprofit organization that provides technical support to more than 20 art, science, and cultural organizations in San Diego. It has contributed resources to the PRIME program to foster a culture of innovation and collaboration among nonprofit organizations through technology, with a focus on Balboa Park. (see *Highlight on the San Kei En Project*).

BIODIVERSITY INSTITUTE, UNIVERSITY OF KANSAS (biodiversity.ku.edu), and its researchers and students conduct research on seven continents in areas such as biodiversity informatics, systematics, and ecology and evolutionary biology. They have contributed to the biodiversity expedition through participation in workshops, in the use of Lifemapper software and deployment of its computational engine on PRAGMA Virtual Clusters.

Lan Zhou University (LZU; www.lzu.edu.cn) has contributed resources to the PRAGMA Grid, and representatives from the university have attended the PRAGMA 12, 13, 17, 18, 19, and 22 workshops. They are currently providing resources and are participating in the PRAGMA Cloud, and have authored a VM, demonstrated at PRAGMA 23.

Nara Institute of Science and Technology (NAIST; <http://www.naist.jp/en/>) has been participating in PRAGMA activities through the Resources Working Group, and has been experimenting with OpenFlow technology. Furthermore, NAIST has hosted PRIME students (see section on *Students*).

National Applied Research Laboratory (NARL; www.narl.org.tw/en) was established in 2003 to consolidate nine national laboratories into a single nonprofit organization. Its goal is to construct, operate, and maintain the large-scale R&D facility and platform in support of academic research and foster the necessary manpower in various advanced fields as determined by national policy. NCHC is one of the laboratories in NARL. NARL has provided leadership in the GEO Working Group, and can bring to bear several other laboratories at NARL for PRAGMA collaborations.

National Institute for Information and Communication Technology (NICT; <http://www.nict.go.jp/index.html>), is an incorporated administrative agency that conducts general research and development on information technology supporting the ubiquitous society of the future. NICT supported students in the PRIME program in from 2009 through 2013 and has participated in the activities of the Telescience Working Group through support of the high-definition video conferencing testing.

University of Queensland’s Research Computing Centre (<http://www.rcc.uq.edu.au/>) has recently become involved in PRAGMA through David Abramson’s move there. David remains actively involved in PRAGMA and PRIME, supporting two UCSD students from June to August 2013 (see Section on PRIME) and sending students to PRAGMA sites (see MURPA QURPA section).

UNIVERSITI TEKNOLOGI MALAYSIA (www.utm.my) researchers have been involved in the “Biodiversity Expedition” and in the workshops on biodiversity.

**PARTNERS**

GLEON, the Global Lakes Ecological Observatory Network, is a grassroots network of limnologists, ecologists, information technology experts, and engineers who uses the network of people, sensors, and data to understand issues such as eutrophication or climate change at regional to global scales. GLEON, established based on an early PRAGMA expedition to place sensors on a lake in Taiwan in 2004, has grown to a network of more than 400 members and has developed new knowledge and insights, created new data products and developed a very successful Graduate Student Association. There are several ties between GLEON and PRAGMA, including shared personnel, learning from the GLEON GSA to develop PRAGMA Student group, the shared Scientific Expedition on Lake Eutrophication, and the joint hosting of a workshop on Big Data in Taiwan in December 2012. For more about GLEON, see gleon.org.

Network Startup Research Center (NSRC, [www.nsrc.org](http://www.nsrc.org)) has longstanding experience in running hands-on networking training workshops and providing engineering assistance at both the campus and national network levels. They have worked in more than one hundred countries throughout the world over the past 20+ years. NSRC has been working with PRAGMA recently

in the area of Southeast Asia, supporting researchers from Myanmar to attend PRAGMA 24 and collaborating with PRAGMA and IU on the Lower Mekong Initiative to help enable more international science education.

**PRAGMA SPONSORS**

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CMC/Osaka University is supported by JGN-X of the National Institute of Information and Communications Technology (NiCT), Japan.

CCS’s (at U Tsukuba) PRAGMA participation is partially supported by the JST CREST "Development of System Software Technologies for post-Peta Scale High Performance Computing."

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HUT receives support from the Hanoi University of Science and Technology and Ministry of Science and Technology, Vietnam.

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KISTI receives major funding from MOST through the K e-Science and Ministry of Information and Communication (MIC) through Korean Grid Infrastructure Implementation and Middleware Development Project (K\*Grid).

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NECTEC receives its funding through Thailand’s National Science and Technology Development Agency (NSTDA).

TransLight/StarLight receives major funding from NSF (OCI-0962997).

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USM’s grid activities in Malaysia are funded mainly through E-science and USM Central Funding.

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