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OPERATING PRINCIPLES AND PROCEDURES

FOR THE

**PACIFIC RIM APPLICATION AND GRID MIDDLEWARE
ASSEMBLY**

FORUM

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

A number of institutions in the Pacific Rim have decided that a coordinated international scientific effort is needed to enable users throughout the Pacific Rim to take advantage of grid technologies for the advancement of e-Science applications.

The staffs of these institutions have agreed to establish the Pacific Rim Application and Grid Middleware Assembly forum (designated hereafter as PRAGMA). The main aims of PRAGMA are to establish sustained collaborations and to advance the use of grid technologies in advanced scientific applications among a community of investigators working with leading institutions throughout the region and around the world.

Two workshops have been held to take initial steps to establish the PRAGMA forum. The first took place in San Diego, California, United States of America on 11-12 March 2002, and the second was held on 10-11 July in Seoul, South Korea.

As an outcome of these workshops, these Operating Principles and Procedures expresses the rules of operation of PRAGMA as a form of technical and scientific international cooperation.

Paragraph 1

DEFINITIONS

1. Grid

Grid is a new Information Technology (IT) concept of "super Internet" for high-performance computing: worldwide collections of high-end resources — such as supercomputers, storage, advanced instruments and immersive environments. These resources and their users are often separated by great distances and connected by high-speed networks. The Grid is expected to bring together geographically and organizationally dispersed computational resources, such as CPUs, storage systems, communication systems, real-time data sources and instruments, and human collaborators.¹

2. Pacific Rim

Pacific Rim includes all countries with borders on the Pacific Ocean.

3. Participant

Any one of several means of participation: Institutional Member, Member, Observer, Affiliate, or Subscriber.

4. Institutional Member

An *Institutional Member* is an institution, organization, consortium of institutions or research center with some staff that has expressed its support for and intentions to observe the provisions of these Operating Principles and Procedures and acknowledged that some of its staff may become members. It is expected that these institutions, organizations, or consortium of institutions to be universities or university-based, publicly funded or not-for-profit research institutions.

5. Member

A *Member* is an individual who has expressed his/her intention to observe the provisions of this Operating Principles and Procedures document.

6. Other Types of Participation

There are three other types of association with PRAGMA.

- (a) Observer: An *observer* (institution) is an institution, organization, consortium of institutions or research group with some staff that has expressed support for PRAGMA but is unable to fulfill the requirements for institutional membership. The term observer will be extended to staff

¹From <http://www.aei.mpg.de/~manuela/GridWeb/info/grid.html>, also Foster and Kesselman).

from an observer institution. Involvement as an observer is for a fixed period of time, with the anticipation that the observer will eventually become a Member. An observer should be sponsored by at least one Member or Institutional Member.

- (b) Affiliate: An *affiliate* (institution) is an institution, organization, consortium of institutions or research group with some staff that has expressed support for PRAGMA that does not meet the eligibility for institutional membership. The term affiliate will apply to staff from an affiliate institution.
- (c) Subscriber: A *subscriber* is an individual who is interested in the mission and/or particular activities of PRAGMA whose only participation is via subscribing to the open e-mail discussion, such as pragma-discussion and paying the relevant fees relevant to non-members.

7. Related Organizations

- (a) Asia Pacific Grid, designated hereafter as ApGrid (<http://www.apgrid.org>)
- (b) Asia Pacific Advanced Network designated hereafter as APAN (<http://www.apan.net>)
- (c) Asia-Pacific Economic Cooperation Telecommunications and Information designated hereafter as APEC TEL (<http://www.apectelwg.org/apec/main.html>).
- (d) Global Grid Forum, designated hereafter as GGF (<http://www.globalgridforum.org>)

Paragraph 2

UNDERSTANDINGS

1. PRAGMA is an international forum founded with the overall aim to establish sustained collaborations and advance the use of grid technologies in advanced scientific applications among a community of investigators working with leading institutions around the Pacific Rim.
2. PRAGMA is open to all institutions and their staff in the Pacific Rim that align with the goals of PRAGMA.
3. The involvement of an Institutional Member in PRAGMA is subject to the goodwill and the applicable laws and regulations of that institution, organization, consortium or institutions or research group.
4. This document is not legally binding and will have no effect as a legal or political precedent.
5. The Steering Committee of PRAGMA will strive to reach decisions by consensus
6. This document will be made public via dissemination resources such as the web.

Paragraph 3

OBJECTIVES

1. Mission

The mission is to establish sustained collaborations and to advance the use of grid technologies in applications among a community of investigators working with leading institutions around the Pacific Rim.

PRAGMA will work closely with established activities that promote grid activities or the underlying infrastructure, both in the Pacific Rim and globally.

2. Activities

To fulfill our mission, the Members will conduct the following activities:

- (a) Encourage and conduct joint projects that promote the development of grid facilities and technologies in Pacific Rim countries,
- (b) Share resources to ensure project success,
- (c) Conduct multi-site training in the use of grid technologies and methodologies,
- (d) Exchange of researchers between participants and promote exchange more broadly,
- (e) Meet and communicate regularly,
- (f) Collaborate with and participate in major regional and international activities sponsored by such organizations as APAN, ApGrid, APECTel, and GGF,
- (g) Disseminate and promote knowledge of using the grid among domain experts and scientists,
- (h) Disseminate proceedings and summary of PRAGMA events and meetings on the world wide web,
- (i) Provide and raise resources for PRAGMA members by raising level of awareness and funding for grid activities (or Provide and raise resources for PRAGMA activities).

3. Outcomes

Through PRAGMA activities, the Members expect to achieve the following outcomes

- (a) Advances in scientific applications,
- (b) Contributions to the development of international grid efforts,
- (c) Increased interoperability of grid middleware in the Pacific Rim and throughout the world,
- (d) Increased productivity and effectiveness in the use of the Grid by researchers and scientists in the Pacific Rim,

- (e) Increased multi-lateral scientific collaboration on the grid in the Pacific Rim,
- (f) Increased grid activities within Pacific Rim,
- (g) Created grid testbeds for regional e-science projects.

4. Involvement of the Members

Each Member should seek to:

- (a) Promote the mission and expected outcomes of PRAGMA (paragraph 3.1 and 3.3),
- (b) Participate actively in the formulation and implementation of activities (paragraph 3.2),
- (c) As appropriate, make other contributions in grid technology to support PRAGMA activities and mission

5. Cooperation and Coordination

The Members intend to encourage cooperation amongst themselves in the implementation of PRAGMA and in developing joint activities in areas of mutual interest with other appropriate bodies (e.g., APAN Grid Working Group, ApGrid, APEC TEL, GGF) to avoid duplication and to benefit from existing resources and expertise.

Paragraph 4

THE STEERING COMMITTEE

1. Role and Purpose

The Steering Committee will be the means by which representatives of the Institutional Members will make collective decisions on matters relating to PRAGMA.

2. Establishment

The Steering Committee will come into existence when two-thirds of the initial members of the Steering Committee (Annex II) and their institutions have agreed to abide by this Operating Principles and Procedures document subject to the provisions of Paragraph 8.

3. Composition

The Steering Committee will consist of individual Members who are staff of Institutional Members. The initial members of the Steering Committee are given in Annex II and consist of individual Members from the Founding Institutional Members.

For reasons of size of Steering Committee meetings, there would *normally* be no more than two members from any Institutional Member, who may attend the Steering Committee meeting, and be part of the ‘pragma-governance’ alias.

4. Committee Members

Steering Committee members are required to attend Steering Committee meetings either in person or through a nominated delegate.

5. Changing Composition of Steering Committee

Members from Institutional Members not represented on the Steering Committee may be added. The process will be determined by the Steering Committee with issues of contribution to the processes of the Steering Committee being paramount. In order to maintain a manageably sized Steering Committee, a super-majority vote is necessary to secure a new Steering Committee member.

Steering Committee Members may be removed via voting if the Institutions they represent are no longer members, or if the Committee Member no longer attends

the meetings regularly or contributes substantially to the mission and activities of PRAGMA.

For Institutional Members who are represented on the Steering Committee, representation may change, initiated by the representative, with a suggested replacement by another active individual Member of PRAGMA.

6. Voting

- (a) The Steering Committee should strive to work by consensus. Except where mandated that a decision must be made by consensus the following applies. If consensus cannot be reached after reasonable attempts have been made, then approval by a super-majority of those members present and voting is required.
- (b) Each Institutional Member represented on the Steering Committee will have one vote.
- (c) A super-majority vote is the affirmative vote of a two-thirds majority of the members present and eligible to vote.
- (d) If a decision requires choosing between multiple alternatives, the voting process that will consist of a series of votes, such that during any round the alternative with the smallest number of votes will be removed from further consideration. The process will terminate when any alternative gets the super-majority vote.
 - i. For clarification, in the case of selecting a site to host a meeting, there could be several proposals; in the case of deciding membership for new institutions, the alternatives might be admit, do not admit, defer.
- (e) A member can be present in one of the following ways: face-to-face, by telephone, videoconference, or other practical means determined in advance by the Steering Committee.

7. Responsibilities

The Steering Committee may:

- (a) Review at each meeting any nominated applications (please see Paragraph 7 and Annex IV pertaining to “Nominations”) by any organization seeking to become Member, Observer or Affiliate, (see Paragraph 7.1 on process).
- (b) Refine processes and definition of membership and participation in the Steering Committee.
- (c) Determine and maintain relationships to other related activities (e.g. APAN and APAN Working Group, GGF, ApGrid, APEC TEL, and key application projects).
- (d) Review and select at each meeting any application to host a future PRAGMA Workshop (see Annex IV)

- (e) Review and approve plans (topics, agenda, participants (number, non-PRAGMA participants)) for preparation for the workshops. It will also be updated on any registration fees for the workshops.
- (f) Review progress on activities between PRAGMA workshops.
- (g) Review all activities of PRAGMA and recommend directions for the advancement of PRAGMA mission and goals.
- (h) Set concrete milestones for PRAGMA.
- (i) Consider rules for removal of Members, Observers and Affiliate and Steering Committee Members (e.g. lack of participation, misrepresentation)
- (j) Consider plans for publicity of PRAGMA, including logos, common flyers and press releases.
- (k) Carry out the other functions conferred upon it by this Operating Principles and Procedures document, including any Annexes or modifications hereto.
- (l) Set policies pertaining to the operation of the entire PRAGMA.

8. Procedures

The Steering Committee may establish such subsidiary bodies and rules for procedure as are required for its proper functioning.

The Steering Committee will select a Chair and a deputy-chair, who will serve a (renewable) term: Chair of three years, deputy-chair – up to three years (to be decided at time of appointment). The Chair and deputy-chair will be responsible for

- (a) Conducting the meetings,
- (b) Setting the agenda (with input from member of the committee),
- (c) Calling meetings on a regular (as needed) basis,
- (d) Producing reports of the committee activities,
- (e) Supplying the PRAGMA membership with regular updates,
- (f) Supporting the administrative activities of the committee (but excluding travel and associated costs of members),
- (g) Documenting successes,
- (h) Publishing an annual report.

9. Meetings

Meetings of the Steering Committee will be held in conjunction with PRAGMA workshops and at other times as needed. The agenda for the meeting will be circulated no later than two weeks prior to the meeting by the Chair, after soliciting topics for discussion.

From time to time the agenda of the meeting will be enhanced by the involvement of others outside of this group, who will be invited by the Chair after discussions with the Steering Committee.

A meeting of Steering Committee members shall be designated as an official PRAGMA Steering Committee Meeting if the number of the committee members present is more than two thirds of the total number of the Steering Committee Members.

A member can be present at such meetings in one of the following ways: face-to-face, by telephone, videoconference, or other practical means determined in advance by the Steering Committee.

Any decisions taken at an official Steering Committee Meeting should be transmitted to any Steering Committee member not present at the meeting.

Paragraph 5

INTELLECTUAL PROPERTY

1. Applicable Law

Nothing in this document should be read to alter the scope and application of Intellectual Property Rights and benefit sharing agreements as determined under relevant laws, regulations and international agreements of the Participants.

2. Attribution

PRAGMA will seek to ensure that individual and resource contributions to PRAGMA activities are acknowledged in publications and presentations.

3. Jointly Developed Software

PRAGMA will seek to promote open access to software and data produced by joint efforts of the Members, subject to international and institutional restrictions and due attribution.

4. Technology Transfer

PRAGMA will seek to promote the public dissemination of PRAGMA activities and results.

Paragraph 6

FINANCE AND HOSTING

1. Costs Borne by Members

Members bear the costs of their own participation in PRAGMA, including the costs of formulating or transmitting reports, travel costs, and other expenses related to attendance by their representatives at meetings of the Steering Committee and other PRAGMA functions, events, and activities.

2. Hosting PRAGMA Meetings

The Host Site is responsible for

- (a) All local arrangements (meeting rooms, setting up blocks of hotel rooms, arranging for food, arranging for local transportation from airport to hotel (i.e., letting participants know how to get from airport to hotel, not necessarily paying for transportation), and at least one cultural or distinctly unique local event). The host site may but is not required to support non-members, i.e., observers and affiliates.

The Workshop Chair from the host site will be assisted by a workshop co-chair (who will Chair the subsequent workshop) and a workshop programcommittee, who collectively will set the Workshop agenda. The Workshop Chair will inform the Steering Committee of progress at appropriate meetings.

Paragraph 7

ADDING, WITHDRAWAL, OR REMOVING PARTICIPANTS

1. Process for Adding Members, Observers, and Affiliates.

The Steering Committee will be responsible for the growth of PRAGMA, and in particular the adding of Members, Observers, and Affiliates. The Steering Committee will add members who can contribute to the mission and activities of PRAGMA, thus balancing growth with demonstrated contribution to and success of PRAGMA.

New Members (Institution or Individual), Observers and Affiliates are added by invitation from the Steering Committee. The process includes

- (a) **Identification** of potential participants by Steering Committee Members. Nomination of potential participants should come from at least three existing members of the steering committee. Nominations will enhance the likelihood of a bona fide application and ultimate acceptance at the end of the application process.
- (b) **Endorsement** by a majority of the Steering Committee to extend an invitation to attend a PRAGMA workshop to the potential participants.
- (b) **Notification** to the entire Steering Committee of the intent to invite, with a reasonable period of time to hear from all members (e.g., two weeks). This notification should include name of the invited institutional members, observers or affiliates, initial staff to be involved, existing or potential collaborations with PRAGMA members.
- (c) **Invitation** to attend the Workshop by the Steering Committee Chair or designee. The invitation would request that the invitee to make a presentation about potential involvement at a PRAGMA workshop and to submit an application as a Member, Observer or Affiliate to join PRAGMA to the Steering Committee.
- (d) **Review** of the application by the Steering Committee at a subsequent Steering Committee Meeting (possibly via VTC). A representative of the institute or organization applying to join as a member may be required to appear in front of the Steering Committee to present and justify its applications.
- (e) **Vote** of the Steering Committee to convey membership or observer / affiliate status.

Note:

- Acceptance as an Institutional Member does not imply involvement in or representation on the Steering Committee.
- Identification and invitation to participate in PRAGMA can be done via e-mail, VTC or other means of distributed

communication. The final decision on acceptance of a new participant would be made face-to-face.

- Each case will be distinct, and the final decision on specifics can be discussed by the Steering Committee.
- The Operating Principles and Procedures will be sent as part of the invitation package.
- Individual members of a new Institutional Member can be approved at the time of Institutional Membership.
- Observers are accepted as participants for a fixed period of time.
- A subscriber can self-register his/her interest in obtaining mailings from the pragma-discussion group.

PRAGMA Membership Application Content:
(updated 15 February 2013)

Name of Institution, including name of point of contact with e-mail address, list of other staff and their e-mail address at the institution who would be participating and in what capacity, institutional url, logo of institution, and permission to use logo in PRAGMA publications.

Note: For individual membership, only the name of the individual would be given here.

Statement of Interest to join PRAGMA, including statement as to how the mission of PRAGMA will be advanced by this new membership as well as how the institution would benefit from involvement in PRAGMA.

Prior Experience in Applications and Middleware, including (as appropriate): involvement with PRAGMA activities or members; other experience in multi-institutional activities; experience in other cloud related activities; a list of applications (with international collaborating institutions) that can benefit from grid technologies.

Brief Statement of Rationale for Joining PRAGMA, including resources that would be contributed to PRAGMA (specifying initial configuration and availability of resources); statement of how applicant would want to be involved with PRAGMA (e.g., applications, middleware development). Note, more information about PRAGMA's recent activities can be found at <http://www.pragma-grid.net/about.php> .

Indication of Intentions to observe the provisions of this Operating Principle and Procedures document (see <http://www.pragma-grid.net/images/operating-principles.pdf>).

Special Circumstances: Articulation of any special factors to be considered by the Steering Committee.

2. Process for Removing Participants

There are two ways in which Participants will be removed: Self-initiated or Steering Committee initiated:

Self-initiated Removal: Members, Observers or Affiliates may remove themselves from PRAGMA by stating their intention in writing to the Steering Committee with an effective date.

Steering Committee Initiated Removal: The Steering Committee will review participation of Participants on an annual basis. If there has been no participation for a year or more, or if there has been misrepresentation on the part of the Participant or a violation of the principles of this document, or if the Participant is no longer contributing in any way to the mission and activities of PRAGMA, the Steering Committee may decide to remove a Member, Observers or Affiliate and will notify that entity in writing, with an effective date. The Steering Committee has to vote and obtain a super-majority in order to remove an existing member.

Paragraph 8

OTHER MATTERS

1. Establishment of PRAGMA

The Operating Principles and Procedures outlined in this document come into effect when two-thirds of the initial members of the Steering Committee have agreed in writing to this Operating Principles and Procedures document ('Establishment Date is 25 February 2003').

2. Duration

Except as provided below, PRAGMA will be set up for an initial 5-year period from the Establishment Date (25 February 2003). Extension is allowed as long as a super-majority of the Steering Committee votes for the proposed extension.

3. Termination

The Committee members may terminate this Operating Principles and Procedures document at any time by a unanimous decision.

4. Modifications

Except where otherwise specified, this Operating Principles and Procedures document and any Annexes thereof may be modified at any time by the Steering Committee (subject to applicable laws of Institutional Members).

Annex I

LIST OF FOUNDING INSTITUTIONAL MEMBERS

Participants (as of 1 October 2002) consist of

- Australian Partnership for Advanced Computing (APAC) and its partners
- Bioinformatics Institute of Singapore (BII), part of A-Star (Agency for Science and Technology and Research)
- Computer Network Information Center (CNIC), Chinese Academy of Sciences
- Global Scientific Information and Computing Center, Tokyo Institute of Technology (Titech)
- Grid Technology Research Center, National Institute of Advanced Industrial Science and Technology (AIST)
- Korea Institute of Science and Technology Information (KISTI)
- National Center for High-Performance Computing (NCHC), National Science Council
- Research Center for Ultra-High Voltage Electron Microscopy and the Cybermedia Center, Osaka University
- STAR TAP/StarLight initiative, supported by National Science Foundation and organized by the University of Illinois at Chicago, Northwestern University and Argonne National Laboratory
- Thai Social/Scientific Academic and Research Network (ThaiSARN-3), National Electronics and Computer Technology Center (NECTEC)
- TransPAC initiative, supported by NSF at Indiana University
- Universiti Sains Malaysia
- University of California, San Diego (UCSD), including the San Diego Supercomputer Center (SDSC), the California Institute for Telecommunications and Information Technology (Cal-IT)², a joint venture of UCSD and University of California Irvine), Center for Research on Biological Structures (CRBS), and the National Laboratory for Advanced Networking Research (NLANR, supported by NSF)
- University of Hyderabad

Annex II

LIST OF INITIAL MEMBERS STEERING COMMITTEE

- Australia Partnership for Advanced Computing and its eight partners: *John O’Callaghan, David Abramson or Bernard Pailthorpe*
- Bioinformatics Institute of Singapore: *Larry Ang*
- Computer Network Information Center, CAS: *Baoping Yan, Kai Nan*
- Global Scientific Information and Computing Center, Tokyo Institute of Technology: *Satoshi Matsuoka*
- Grid Technology Research Center and Tsukuba Advanced Computing Center, National Institute of Advanced Industrial Science and Technology: *Satoshi Sekiguchi, Yoshio Tanaka*
- Korea Institute of Science and Technology Information: *Sangsan Lee, Jysoo Lee*
- National Center for High Performance Computing: *Whey-Fone Tsai, Fang-pang Lin*
- Research Center for Ultra-High Voltage Electron Microscopy and the Cybermedia Center, Osaka University: *Shinji Shimojo*
- STAR TAP/StarLight initiative, supported by NSF and organized by the University of Illinois at Chicago, Northwestern University and Argonne National Laboratory: *Maxine Brown*
- Thai Social/Scientific Academic and Research Network (ThaiSARN-3), National Electronics and Computer Technology Center: *Royol Chitradon, Piyawut Srichaikul*
- TransPAC initiative, supported by NSF at Indiana University: *Jim Williams, Rick McMullen*
- Universiti Sains Malaysia: *Habibah Wahab*
- UCSD: SDSC, Cal-(IT)², CRBS, NLANR: *Peter Arzberger, Philip Papadopoulos*

Annex III

LIST OF CURRENT MEMBERS AND PARTNERSHIPS

Institutional Members

- Academia Sinica Computing Centre, *6 June 2003*
- Advanced Science and Technology Institute, *12 March 2008*
- BeSTGRID New Zealand *25 September 2007*
- Bioinformatics Institute of Singapore (BII), part of A-Star (Agency for Science and Technology and Research) *25 February 2003*
- Center for Computational Science, University of Tsukuba, *23 October 2003*
- Centro de Investigacion Cientifica y de Educacion Superior de Ensenada (CICESE) *28 March 2006*
- College of Computer Science and Technology (CCST), Jilin University (JLU) *22 October 2005*
- Computer Network Information Center (CNIC), Chinese Academy of Sciences, *25 February 2003*
- CSE-Online (*25 September 2007*)
- Global Scientific Information and Computing Center, Tokyo Institute of Technology (Titech), *25 February 2003*
- Grid Technology Research Center, National Institute of Advanced Industrial Science and Technology (AIST), *25 February 2003*
- High Performance Computing Center (HPCC) of Hanoi University of Technology (HUT), *12 March 2008*
- Ho Chi Minh City University of Technology (HCMUT), *12 March 2008*
- Institute of High Performance Computing (iHPC) *28 March 2006*
- Kasetsart University, *6 June 2003*
- Konkuk University, *22 March 2007*
- Korea Basic Science Institute, *17 September 2004*
- Korea Institute of Science and Technology Information (KISTI), *25 February 2003*
- Malaysian Institute of Microelectronic Systems (MIMOS) *28 March 2006*
- Monash University, Monash e-Science and Grid Engineering Lab (*25 September 2007*)
- National Agricultural Research Center, National Agricultural Research Organization, (NARC), *18 May 2004*
- National Center for High-Performance Computing (NCHC), National Science Council, *25 February 2003*
- National Center for Supercomputing Applications, *23 October 2003*
- National Grid Office, Singapore, *17 September 2004*
- Pacific Northwest Gigapop, *4 May 2005*
- Research Center for Ultra-High Voltage Electron Microscopy and the Cybermedia Center, Osaka University, *25 February 2003*

- STAR TAP/StarLight initiative, supported by National Science Foundation and organized by the University of Illinois at Chicago, Northwestern University and Argonne National Laboratory, *25 February 2003*
- Thai National Grid Center, *17 October 2006*
- Thai Social/Scientific Academic and Research Network (ThaiSARN-3), National Electronics and Computer Technology Center (NECTEC), *25 February 2003*
- TransPAC initiative, supported by NSF at Indiana University, *25 February 2003*
- Universiti Sains Malaysia, *25 February 2003*
- University of California, San Diego (UCSD), including the San Diego Supercomputer Center (SDSC), the California Institute for Telecommunications and Information Technology (Cal-IT)², a joint venture of UCSD and University of California Irvine), Center for Research on Biological Structures (CRBS), and the National Laboratory for Advanced Networking Research (NLNR, supported by NSF), *25 February 2003*
- University of Hyderabad

Affiliate Members:

- Asia-Pacific Advanced Network, Organizational Affiliate, *5 August 2003*
- Cray Inc, Industrial Affiliate, *14 August 2003*

Previous Members

- Australian Partnership for Advanced Computing (APAC) and its partners, *25 February 2003 [Disbanded October 2007]*

Annex IV

PARTICIPATION PROPOSITIONS

1. Membership Propositions for Institutional Members

Institutional Members

- Institutions, Organizations, Consortium, Research groups

Structure:

- No requirement on the Institutional Members

Commitments (agreed to by institutional members):

- Endorsement of the principles, operating procedures and activities of PRAGMA (as per Operating Principles and Procedures document).
- Acknowledge that some staff will attend workshops, etc.
- Acknowledge that one of its staff may be on the Steering Committee.
- Agree to the use of its name and logo by PRAGMA for publicity purposes.
- Acknowledge that VTC or similar facilities may be used by PRAGMA activities.
- Acknowledge that some of its computing facilities may be used in PRAGMA projects under its OWN terms and conditions.
- Agree to host or co-host PRAGMA workshop.

Benefits:

- Increased profile of the organization
- Increased publicity of its research efforts
- Strengthened collaboration for its researchers
- Hosting meetings, to connect local researchers with international efforts
- Support from other members to raise awareness and potential of grid, as well as help in leveraging and raise funds
- Guaranteed minimum number of slots at PRAGMA workshop.

Obligations:

- The obligations of an Institutional Member will be limited to the commitments listed above. In particular there will be:
 - No financial obligation or commitment up-front for becoming a Institutional Member (this does not preclude discretionary financial support for the Workshop).
 - No legal obligation or commitment for becoming an Institutional Member.
 - No Intellectual Property obligation or commitments raised by becoming an Institutional Member.
 - No obligation to provide its resources to PRAGMA activities by being a Institutional Member.
 - No obligation for the operation of the Forum (e.g., voting for representatives on the Steering Committee).

Premise:

- Institutional Membership in PRAGMA will be under the terms and conditions of the home organization and the terms and conditions of employment of its staff.

Joining and Leaving:

- An organization becomes an Institutional Member via a nomination by three Steering Committee Institutional Members and an invitation to join from the Steering Committee and by expressing its support for the PRAGMA Forum and by acknowledging that some of its staff will participate in PRAGMA activities.
- An institution or organization withdraws from being an Institutional Member by notifying PRAGMA of its withdrawal, by having none of its staff registered as a Member, or by having none of its staff participant in meetings over an extended period (usually three meetings). The withdrawal of an organization as an Institutional Members will be done in writing and requires an effective date.

2. Membership Proposition for Individuals:

Members:

- Individuals

Structure:

- Steering Committee has representatives from Members of Institutional Member organizations.
- An initial committee is identified from Founding Institutional Members

Commitments (agreed to by individuals):

- Endorsement and adherence to principles, operating procedures and activities of PRAGMA (as per Operating Principles and Procedures document).
- Labor (best efforts by involvement in working groups aligned with PRAGMA activities).

Benefits:

- Access to shared resources for PRAGMA activities
- Access to expertise, tools, and training
- Visible links to other members
- Involvement in workshops (subject to Institutional Membership commitments)
- Support from other members to raise awareness and potential of grid technologies, not to mention help in leveraging and raising funds
- Increased collaboration with other researchers
- More opportunities for research and individual (team) goals

Obligations:

- The obligations shall be limited to the commitments above.
- **Premise:**
 - This allows us to get in the best individuals to help develop applications and necessary underlying middleware.

Joining and Leaving:

- An individual becomes a member via a nomination by three Steering Committee Institutional Members and an invitation to join from the Steering Committee, by expressing its support for the PRAGMA Forum, and by acknowledging that he/she will participate in PRAGMA activities.
- An individual withdraws from being a member by notifying PRAGMA of its withdrawal. The withdrawal of an individual as a member will be done in writing and requires an effective date.

3. Observer Proposition for Organizations and Institutions

Observers

- Institutions, Organizations, Research groups

Structure:

- No requirement on the Observers

Commitments (agreed to by Observers):

- Endorsement of the principles, operating procedures and activities of PRAGMA (as per Operating Principles and Procedures document)
- Acknowledge that some staff will attend workshops etc
- Agree to the use of its name and logo by PRAGMA for publicity purposes
- During time as Observer, work towards building resources and preparing application as Institutional Member

Benefits:

- Increased profile of the organization
- Increased publicity of its research efforts
- Strengthened collaboration for its researchers
- Hosting meetings, to connect local researchers with international efforts
- Support from other members to raise awareness and potential of grid, as well as help in leveraging and raise funds
- Guaranteed minimum number of slots at PRAGMA workshop

Obligations:

- Pay for all fees and activities and costs related to PRAGMA, unless waived.
- Follow the commitments listed above. (See Institutional Member's Responsibility).

Premise:

- Observer Institutions in PRAGMA will be under the terms and conditions of the organization and the terms and conditions of employment of its staff.

- Observer status allows PRAGMA to build capacity in institutions that wish to become part of the larger grid community.

Joining and Leaving:

- An organization becomes an Observer via a nomination by three Steering Committee Institutional Members and an invitation to join from the Steering Committee, by expressing its support for the PRAGMA Forum, and by acknowledging that some of its staff will participate in PRAGMA workshops.
- An Observer withdraws by notifying PRAGMA of its withdrawal, or by having none of its staff participant in meetings over an extended period (usually three meetings). The withdrawal of an organization as an Observer will be done in writing and requires an effective date
- Note: Observer status is conveyed for a fixed period of time with the understanding that the Observer will be seeking to become an Institutional Member (the status can be extended upon mutual agreement). However, if the status is not extended and if no application for membership is made, the Institution will lose its Observer status along with the benefits.

4. Affiliate Propositions for Organizations and Institutions

Affiliates

- Institutions, Organizations, Research groups

Structure:

- No requirement on the Affiliates

Commitments (agreed to by Affiliates):

- Endorsement of the principles, operating procedures and activities of PRAGMA (as per Operating Principles and Procedures document)
- Acknowledge that some staff will attend workshops etc
- Agree to the use of its name and logo by PRAGMA for publicity purposes

Benefits:

- Increased profile of the organization
- Increased publicity of its research efforts
- Strengthened collaboration for its researchers
- Support from other members to raise awareness and potential of grid, as well as help in leveraging and raising funds
- Guaranteed minimum number of slots at PRAGMA workshop.

Obligations:

- Pay for all fees and activities and costs related to PRAGMA, unless waived
- Follow the commitments listed above. (see Institutional Member Responsibilities).

Premise:

- Affiliate status in PRAGMA will be under the terms and conditions of the organization and the terms and conditions of employment of its staff.
- Affiliate status allows PRAGMA to engage sectors of the economy that would not otherwise be able to contribute to PRAGMA.

Joining and Leaving:

- An Affiliate participates in PRAGMA via a nomination by three Steering Committee Institutional Members and an invitation to join from the Steering Committee, by expressing its support for the PRAGMA Forum, and by acknowledging that some of its staff will participate in PRAGMA activities.
- An Affiliate withdraws from PRAGMA by notifying PRAGMA of its withdrawal, or by having none of its staff participant in meetings over an extended period (usually three meetings). The withdrawal of an Affiliate will be done in writing and requires an effective date.

5. Subscriber:

Subscriber:

- Individuals

Structure:

- None

Commitments:

- None

Benefits:

- Access to pragma-discussion mailings

Obligations:

- Pay for all fees and activities and costs related to PRAGMA, unless waived.

Premise:

- This allows us to get to disseminate activities about PRAGMA more broadly.

Joining and Leaving:

- An individual becomes a subscriber by requesting addition to pragma-discussion list.
- An individual withdraws from being a subscriber by asking for e-mail address to be removed from pragma-discussion list.

Annex V

PROCEDURE FOR SELECTION OF PRAGMA MEETING HOST SITE

Summary of Proposal and Selection Procedure

Purpose of this document: To outline a procedure and criteria for proposing and selecting the host site of a future PRAGMA workshop that will give maximum benefit to the PRAGMA effort. The anticipated timeframe for the consideration of a future workshop is no more than eighteen months in the future of the next scheduled PRAGMA workshop.

Eligible Institutions: Institutions who have participated in previous PRAGMA activities are eligible to host a future workshop.

Application Schedule: Letters of intent and proposals to host a workshop should be sent to secretariat@pragma-grid.org at least four weeks prior to next scheduled PRAGMA workshop.

Contents of Proposal: Proposals should contain the following information: proposed agenda, location, date and duration, indications of costs covered by host site, and other circumstances surrounding the desire to host the workshop at the proposed time. Note, in order to maximize impact of workshop and minimize travel, collocating the PRAGMA workshop with related activities will be seen as a major benefit. A maximum of five pages is recommended for the proposal.

Review of Proposal: The proposals will be reviewed by the Steering Committee of PRAGMA. The selection will follow the rules adopted by the Steering Committee. The ultimate criteria for site selection will be advancement of the PRAGMA mission and goals. Other criteria will include the ability to host a successful workshop, the proposed timing and relation to other activities, and the proposing institutions commitment to the workshop. Finally, preference will be given to institutions who have not yet hosted a PRAGMA workshop.

Final decision: The final decision will be reached on the second day of a PRAGMA workshop at which the application is reviewed. Short presentations from each applying institution will be made on the first day of the workshop, with a decision made by the second day. The final decision will be reached by vote of the Steering Committee, following the rules adopted by that committee.

For further information: Please contact the chair of the Steering Committee or any of its members.

Background (July 2002)

The Pacific Rim Application and Grid Middleware Assembly (PRAGMA) was formed to establish sustained collaborations and advance the use of the grid technologies in applications among a community of investigators working with leading institutions around the Pacific Rim. Applications are the key focus of PRAGMA, with the intent of using applications to bring together the key infrastructure and middleware necessary to advance the goals of the application.

The inaugural PRAGMA meeting was held in March in San Diego, California, USA and hosted by UCSD and SDSC. The meeting was co-organized by Philip Papadopoulos and Sangsan Lee, with the assistance of many other individuals. The second workshop was held in Seoul, Korea on 10-11 July 2002, hosted by KISTI, and was coordinated by Sangsan Lee and Yoshio Tanaka and a small coordinating group. This meeting was held immediately prior to the Korean Grid Forum (12 July 2002). The Third PRAGMA Workshop will be held 23 – 24 January 2003, in Fukuoka, Japan to be held concurrently with the APAN meeting; the 4th PRAGMA Workshop will be held in Melbourne, Australia 4 –5 June 2003 in conjunction ICCS2003 Meeting (3-4 June 2003); the 5th PRAGMA Workshop will be held in Taiwan during in October 2003 (specific date to be determined by January 2003).

Proposals are sought to host PRAGMA meetings two in advance of the meeting at which the application will be considered. For example, the location of the fourth meeting was resolved at the second meeting in July in Seoul, Korea. This ensured a smooth transition of leadership to organize the third meeting since the chair of the fourth meeting is the co-chair of the third meeting.

Below are guidelines to be considered by interested parties in hosting this meeting. Applications should be submitted to secretariat@pragma-grid.org by at least four weeks prior to a PRAGMA meeting (see web site for dates). The criteria for review are listed below. Questions should be directed to the chair of the Steering Committee or any member of that committee.

Content of the Proposal

The proposal should include the following information with a recommended five-page limit.

Statement of intent to host the workshop together with statement as to how the goals of PRAGMA will be advanced by this workshop.

Content of workshop (agenda), including (but not limited to):

- What applications to be highlighted?
- Will tutorials be offered, and if so, on what topics?
- Will there be special groups involved in the workshop?

Logistics: Proposal needs to address

- Who will be the local Chair?
- What is the structure of the planning committee, if any?
- Where the meeting will be held?
- When will the meeting be held?
- How long (duration) will the workshop last?
- What is the tentative agenda? This should include
 - o What arrangements are anticipated for housing people?
 - o What arrangements are there for informal discussions, say over meals, receptions?
- What the host site will cover in terms of expenses for meeting
- Will other funds be sought? If so, is hosting of meeting contingent upon receiving other funds?
- What if any extramural activities (visits to local cultural sites) are planned?
- Is the proposed location near a large or easily accessible international airport?
- What are the meeting room availability and capacities, eg. Is there the ability to have breakout rooms? What is the size of the plenary rooms?
- Will there be wireless access for participants?
- Is there the opportunity for “reduced cost housing” or “guest house” housing?

Budget:

- What is your approximate budget for workshop?
- What funds are available now?
- What are sources of funding?
- Are you seeking additional funding sources
- Do you plan to levy a fee for some attendees?

Collocation Issues:

- Will the workshop be collocated with other meeting, e.g. APAN, networking meeting, national or international meetings, other (application meeting)?

Special Circumstances: Articulation of any factors to be considered by the group.

Background Material

The following material will be made available on the PRAGMA website (<http://www.pragma-grid.org>):

- UCSD’s NSF Proposal to Host PRAGMA, including
 - o Summarized Budget from inaugural PRAGMA Workshop in March 2002
- Korean Proposal
- Steering Committee Participant List

Annex VI

GUIDELINES FOR PRAGMA TO SUPPORT CONFERENCES

The following are criteria for PRAGMA to apply in considering “supporting” an event (e.g., conference, workshop).

The event should:

- Be aligned with the mission of PRAGMA and focus on grid technologies and applications;
- Foster cooperation between the PRAGMA members;
- Obtain support from PRAGMA only through in-kind contributions (and have no financial cost to PRAGMA or its members for the support provided by PRAGMA);
- Have benefits for PRAGMA members (for example activities such as listing of PRAGMA as a “supporter” of the meeting on the web site and in printed material, providing reduced rates of attendance for PRAGMA members, allowing space for a PRAGMA booth or materials);
- Involve PRAGMA members.

It is envisaged that PRAGMA would not support an event by providing funds. In other words, it would not be a sponsor for an event.

The decision to support an event will be made by the Steering Committee (or a designated subgroup).

It is expected that the organizers of the event would submit a brief description of the event addressing the five points listed above. This would be circulated (electronically) for approval by the Steering Committee.

If support for an event is approved by the Steering Committee, PRAGMA would list the event on its website and circulate a message to PRAGMA members about the event.

Annex VII

GUIDELINES FOR PRAGMA TO SUPPORT PROPOSALS

(approved 18 May 2004)

The following are criteria for PRAGMA to apply in considering supplying a “letter of support” for a proposal for funding.

The proposed work should:

- Be aligned with the mission of PRAGMA and focus on grid technologies and applications;
- Foster cooperation between the PRAGMA members;
- Obtain support from PRAGMA only through in-kind contributions (and have no financial cost to PRAGMA or its members for the letter of support provided by PRAGMA);
- Have benefits for PRAGMA members (for example activities that would enhance the functioning of PRAGMA members site resources);
- Involve interested PRAGMA members in a collaborative activity

It is envisaged that PRAGMA would not support a proposal by providing funds.

The decision to support a proposal will be made by the Steering Committee.

It is expected that the requester of the letter would submit an executive summary of the proposed activity, address the five points listed above, and state any expectations on specific PRAGMA members for access to resources or use of staff. This would be circulated (electronically) for approval by the Steering Committee.

It is expected that the request would be made at least a week before it was needed.

If support for the proposal is approved by the Steering Committee, a letter will be drafted for signature by the Chair or Deputy Chair, and whenever possible circulated to the Steering Committee prior to sending to the requester.

Annex VIII

INDUSTRIAL AFFILIATE MEMBERSHIP

Premises in Considering Industry Participants:

1. PRAGMA is an academic, working organization, made up of participants primarily from academic / non-profit research organizations who have agreed to work together.
2. PRAGMA can benefit from involvement of active industrial members (companies), provided that the member conforms to the PRAGMA operating principles and procedures.
3. Affiliate Membership was designed with Industrial Partners in mind
4. As with any participant, there must be an invitation from the PRAGMA Steering Committee (see application process below).
5. Unique concerns about industry participation include:
 - a. Changing the academic / research environment that PRAGMA has established;
 - b. Changing the collegial environment that PRAGMA has established;
 - c. Using PRAGMA name to market goods (form of endorsement), either at workshops or in general.
 - d. PRAGMA appearing to endorse one vendor or solution over another.
6. Strategic nature of industry participants
 - a. One criterion for selecting industry partners is the extent of focus and impact on grid computing.

Application and Review Process:

- Process is same as for Institutional Membership (invitation by Steering Committee, application submitted by potential participant, review by Steering Committee, and approval where appropriate);
- Application information would be the same as required of Institutional Participants, with exceptions of
 - Include clear statement about limitation in workshop participation (say n people per industry). The limitation of number of people is intended to retain the academic feel of the workshops. Participation by sales and marketing people should be discouraged, and discussed in the application process.
 - Duration of affiliation for 1 year (renewable if both sides agree to it). This limitation will allow PRAGMA to launch its affiliation with industry, and allow PRAGMA to modify its involvement based on our experience.
 - Industrial Affiliates would outline tangible commitments in application, including: resources for demos; expertise in grid application development, people to solve problems; support of workshops. See application form below for more examples.

- Individuals from Industrial Affiliates would have to pay for the costs of attending (local organizers could waive this if funds exist, at the discretion of the local organizers).
- Industrial Affiliates would include in the application form
 - A clear statement about use of PRAGMA name and logo
 - Agreement to get prior approval of Steering Committee (or designee) for press releases.
- In particular, PRAGMA would be able to
 - List Industrial Affiliate on web page (just as with other institutional members)
 - Call upon resources for demonstrations (as with Institutional Members) or organizations of workshops, tutorials, training sessions, etc
- In return for being accepted by PRAGMA as an Industrial Affiliate, the Affiliate would be
 - Able to list themselves as PRAGMA Industrial Affiliate Member
 - Involved in projects
 - Involved in workshops

Membership Application Form for Industrial Affiliates (differences from regular Institutional Membership highlighted for the case of review):

Name of Institution and initial individual members, including name of point of contact and other staff at the institution who would be participating and in what capacity.

Statement of Interest to join PRAGMA, including statement as to how the mission of PRAGMA will be advanced by this new membership as well as how the institution would benefit from involvement in PRAGMA.

Prior Experience in Grid and Science Applications and Grid Middleware, including (as appropriate): involvement with PRAGMA activities or members; other experience in multi-institutional activities; experience in other grid related activities (e.g. GGF, ApGrid, APAN, APEC TEL); a list of meritorious applications (with international collaborating institutions) that can benefit from grid technologies.

Brief Statement of Rationale for Joining PRAGMA, including a statement of how applicant would want to be involved with PRAGMA (e.g., applications, middleware development).

Tangible Commitments to PRAGMA, such as resources that would be contributed to PRAGMA (specifying initial configuration and availability of resources) or other types of support, such as

- Sponsoring workshop, tutorial, training, seminar expenses
- Sponsoring publication of annual report

- Sponsoring fellowships for exchange
- Sponsoring PRAGMA members at own facilities
- Sponsoring material for training
- Sending experts to work on projects, conduct training, seminars, workshops etc
- Loan of equipment for demonstrations
- Supporting booths at major conferences (e.g. SC, ApGrid, APAN, ...)
- Other

Indication of Intentions to observe the provisions of this Operating Principle and Procedures document.

Special Conditions: The application should acknowledge and explicitly address the following special conditions:

- Duration of Affiliate Membership is one year from date of acceptance, but renewable based on request and experience
 - There is limited participation in workshop by members of the Affiliate;
- Obligations of Industrial Affiliate members is the same as those of Affiliates, in Annex IV: Participation Propositions.
- Give a clear statement of use of PRAGMA name and logo, reflecting the nature of the relationship as an Industrial Affiliate Member;
- Agree that all press releases issued by the member relating to PRAGMA are to be approved by the PRAGMA Steering Committee.

Annex IX

WORKING GROUPS AND LEADS

Accepted 5 September 2005

1. Role and Purpose

Working Groups are vehicles for PRAGMA members to make progress in targeted areas.

2. Formation

Work Groups can be formed initially in an *ad hoc* fashion. If there is sufficient interest by the participants for ongoing meetings and for carrying out projects between meetings, its activities can be made part of PRAGMA's planning process at meetings and of PRAGMA's dissemination material, such as the PRAGMA Annual Report.

Formal designation of a Working Group is made by the Steering Committee (see 5 below).

3. Criteria for Creating or Continuing a Working Group

The criteria for creating a working group include

- Topic aligns with PRAGMA's mission and will enhance PRAGMA's efforts to carry out its mission;
 - Note: Interaction with other existing working groups (e.g. resources working group) would be considered favorably.
 - Note: It is expected that the proposed area and projects would be new to PRAGMA.
- Involves participants from at least three PRAGMA Institutional members, with the potential to engage members from other institutions;
- There is at least one concrete project involving these members that would result in a demo at a meeting, software improvement, or publication, and the potential for other projects to be developed into a longer-term activity;
- At least one participant is willing to commit time to lead the working group
 - . Note – it may be appropriate for a working group to have co-leads.

4. Responsibility of Working Group Lead

Lead of Working Group responsible for

- Organizing breakout group meetings at PRAGMA workshops
- Reporting on progress between meetings
- Summarizing activities at meetings
- Interacting with other working groups

- Providing input to the Annual Report
5. Process for Formalizing a New Working Group and Designating Lead of Working Group

To launch a new working group, the members of the new group would need to submit to the Steering Committee a short request to start a working group, providing a name of the working group, addressing the criteria above (3 above), and listing participants and proposed lead. Working groups would formally be recognized upon approval by the Steering Committee of the request.

In designating a lead for an existing and continuing working group as well as for a proposed working group, the Chair of the Steering Committee would consult with the group, and based on those discussions, make a recommendation to the Steering Committee for approval. Appointments to lead a working group would be for a two year period, renewable by agreement between the working group and the steering committee.

The Steering Committee will review annually the activities and outcomes of each working group to ensure each group meets the criteria above (3) and has tangible outcomes. It is anticipated that active and productive working groups will continue to retain their designation as a PRAGMA Working Group. It is also anticipated that working groups will evolve and certain groups will be deemed not to meet the criteria by the Steering Committee and would then lose that designation.

Annex X

COMPOSITION OF THE STEERING COMMITTEE

Accepted 22 March 2007

Abstract: This document outlines the motivation and process for institutions to renew their appointments or to rotate on or off of the Steering Committee. It also states principles to guide the evolution of the committee.

Background

The Current Operating Principles and Procedures were accepted on 25 February 2003. At that time there were 13 member institutions of PRAGMA. Currently, there are 14 Steering Committee Institutions and 29 member institutions or affiliates. Furthermore, as part of PRAGMA's broader mission, to build sustained collaborations, it must grow a new generation of leaders. Finally any successful organization must harness the best talent it has.

Initial Composition of the Steering Committee in Paragraph 4.3: "The Steering Committee will consist of individual Members who are staff of Institutional Members. The initial members of the Steering Committee are given in Annex II and consist of individual Members from the Founding Institutional Members."

Changes have occurred (documented in an appendix): These changes, both at the institutional level and at the individual level, indicate that PRAGMA is dynamic.

Procedure to add members to the Steering Committee: The current Operating Principles and Procedure states (see details below) in Paragraph 4.5: "Members from Institutional Members not represented on the Steering Committee may be added. The process will be determined by the Steering Committee with issues of contribution to the processes of the Steering Committee being paramount."

Founding Members: Founder members are founding members forever and will be so noted.

Renewal and Rotation of Members of the Steering Committee

Principles for Membership of the Steering Committee:

The key principle is the extent of the contributions that an individual has made and can make to the Steering Committee.

Other principles that guide the evolution of the Steering Committee membership are

- Continued success of PRAGMA and the operation of the Steering Committee
- Representation of the member institutions,
- Preserve or enhance regional diversity

- Limited size² for both effectiveness and efficiency
- Retain PRAGMA ‘memory’ while engaging new energy and talent from institutional members
- Ensure direct link between Steering Committee and working groups, by having a steering committee member either as co-lead of a working group or as a key member of the working group.

Appointment Term

Each member will serve for two years.

Renewal or Rotation Process

Six months prior to the end of its two year appointment, an institution may express its interest in continuing on or in rotating off the Steering Committee.

If an institution wishes to remain, it should state its intention and provide the other members of the Steering Committee with a list of previous, current, and future activities and contributions to PRAGMA.

If the institution wishes to rotate off, it may recommend a replacement. Any institutional member may also nominate a PRAGMA institutional member to assume the seat of the vacating institution.

The Steering Committee will renew current members or appoint new members based on the principles stated above.

Initialization: To ensure stability on the steering committee, approximately half of the current members will be given one year extensions, and the others will be given two year extensions. The selection will be based on the principles, with a specific proposal from the Chair and approval of the Steering Committee.

Institutions Hosting a PRAGMA Workshop

PRAGMA Workshops are strategic activities of PRAGMA. To ensure the best possible outcome for a workshop, those institutions who host a PRAGMA workshop will be invited to join the Steering Committee for a two year period, starting a year before the workshop being hosted and continuing to one meeting after the hosted workshop. Subsequently, that institution will be allowed to express its interest in continuing or rotating off. A decision to continue on the PRAGMA Steering Committee will be made by procedures described above.

Appendix: Changes that have already taken place on the Steering Committee

² The current size of 14 institutional members is considered reasonable although at the upper end for effective discussions.

Institutional Change: U Hyderabad was officially added as a member on 4 May 2005 (PRAGMA 8, Singapore). This addition was in recognition that U Hyderabad had been a founding member yet had not found the resources to participate until PRAGMA 4, and it was hosting PRAGMA 9.

- Arun Agarwal became an official member of the Steering Committee on 4 May 2005 (PRAGMA 8, Singapore)

Individual additions and changes: As stated in Paragraph 4.5:

“For Institutional Members who are represented on the Steering Committee, representation may change, initiated by the representative, with a suggested replacement by another active individual Member of PRAGMA.” These changes include

- Sangsan Lee, KISTI departs KISTI after PRAGMA 3
- Larry Ang, BII, departs BII after PRAGMA 6
- Kum-Won Cho, KISTI, added 4 May 2005 (PRAGMA 8, Singapore)
- Chalernpol Charnsripinyo, NECTEC, added 4 May 2005 (PRAGMA 8, Singapore)
- Kishore Sakharkar, BII, added 4 May 2005 (PRAGMA 8, Singapore), leaves after PRAGMA 9
- Arun Krishnan, BII added between PRAGMA 6 and 7, leaves after PRAGMA 8
- Susumu Date, CMC/Osaka, added 22 Oct 2005 (PRAGMA 9)