



Asia Pacific  
Advanced Network

Connecting People, Cultures, Research and Education

## Nimal Ratnayake

Director / APAN Secretariat, Former Member / APAN Board  
University of Peradeniya, Sri Lanka

## About APAN

APAN (the Asia Pacific Advanced Network) refers to both the organization representing its members, and to the network infrastructure that connects the research and education networks of its member countries/economies to each other and to other research networks around the world. APAN Ltd is a not-for-profit Association incorporated in Hong Kong which is the legal entity for APAN. The members are the entities representing research and education network interests in the economies of countries/economies of Asia and Oceania.

APAN is also a key driver in promoting and facilitating network-enabled research and education activities. These include research collaboration, knowledge discovery and sharing, tele-health and natural disaster mitigation.

APAN was established by the community of the region, looking to support research and education across the region through the use of advanced network infrastructure and associated IT resources. This was the starting point around 20 years ago, and remains true today. The members of APAN recognized the importance of the application community in shaping its infrastructure and services, in a way that other NREN regionally in the world are only approaching today.

# History of APAN

March 1996

Need for High-End Internet for researchers in Tsukuba, Japan

June 1996

APAN was proposed at APII Test-Bed Forum in Seoul, Korea

3rd June 1997

APAN established as a non-profit consortium under an MOU

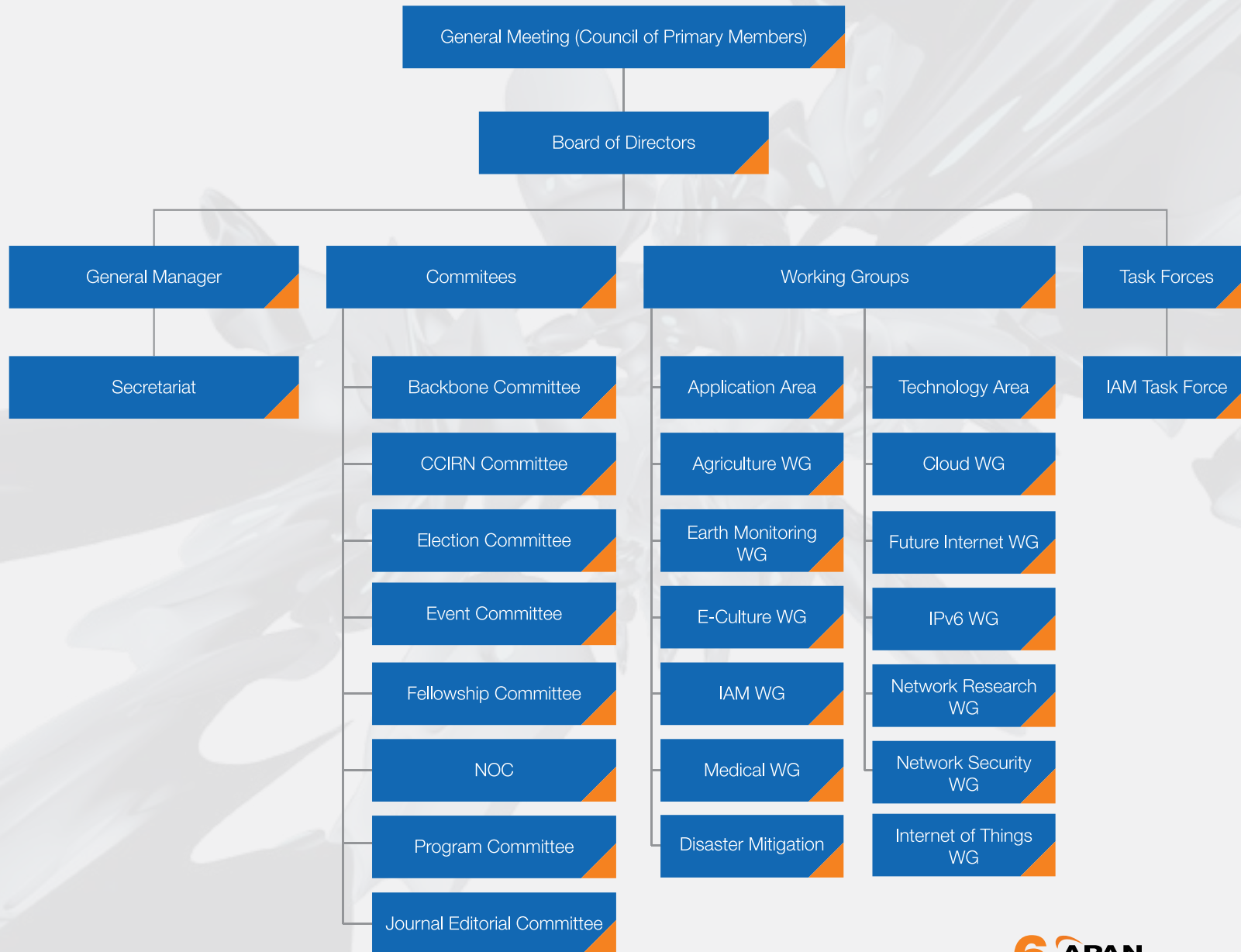
8th August 2009

APAN was incorporated in Hong Kong as a non-profit company limited by guarantee (or known as an association)

The Internet was born and grew up by the massive efforts of researchers, with the fiscal support of government agencies. Commercial Internet providers now enjoy the business success, but it is well known that new technologies are continually required to meet tomorrow's demands of the customers. Researchers are faced with tomorrow's demands at first, and often make the initial effort to overcome the difficulties. Thus the necessity for high-end Internet for researchers in Asia Pacific region was recognised originally at the APEC Symposium in Tsukuba, Japan in March 1996, and the Asia Pacific Advanced Network (APAN) was proposed at APII Test-bed Forum in Seoul, Korea in June 1996. Energetic meetings were held with the attendance of the delegates from North America, Europe and Australia for one year, and then the APAN Consortium was formed under a Memorandum of Understanding in June 1997. Its role was to promote advanced research in networking technologies and the development of high-performance broadband applications to support research and education.



# APAN Organisation Structure



# APAN Board of Directors



## Simon C. Lin

Chairman of APAN

Project director at ASGC

Pioneers of international research network (TW)

### Biodata:

Dr. Lin obtained his PhD from Edinburgh in Theoretical Physics pioneered the first international research network from Taiwan in 1991, afterwards, he continued leading the major international Internet link upgrade of the Research and Education (R&E) networks of Taiwan. In 1998, he built the first and only R&E optical fiber network in Taipei City. Currently Academia Sinica has 2x10G direct connection to USA and Europe as well as 10 G to Hong Kong and 2.5 G to Japan. Hi research interests span in the fields of Big Data and Analytics, Grid and Cloud Computing, Computational Sciences, Statistical Physics and Field theory



## Sunyoung Han

### Board of Director

Professor at Konkuk University  
Dean at College of IT, Konkuk  
Chair of KOREN (2009-2014)

### Biodata:

Prof. Sunyoung Han received the B.S. degree in computer science from Seoul National University, and M.S. and Ph.D. degree in computer science from KAIST, Seoul, Korea, in 1977, 1979 and 1988, respectively. His research interests include Software Defined Networking, Future Internet, Mobile Internet, IP Multicasting, and Real-time Distributed Communication Systems.



## Yasuichi Kitamura

### Board of Director

Joined APAN since 1996

Board member since 2013

### Biodata:

Yasuichi Kitamura received both the bachelor's degree of electric engineering in 1984 and the master's degree of electric in 1986 from Waseda University, Tokyo, Japan. He also received the doctor degree of engineering in 2010 from Kyushu University, Fukuoka Japan.

He joined APAN in 1996 and he has been working for operating the Tokyo exchange point of APAN. He is studying for monitoring the network and composing some small processing for applying the simple small jobs.



## Jie (Jennifer) An

Board of Director

### Biodata:

Ms. Jie An is the manager of CERNET International Relations as well as a senior engineer of CERNET Center at Tsinghua University. Her research activities and interests include natural language processing, communication and media. She is the chair of APAN Program Committee and the chair of APAN-CN. She was the chair of APAN Fellowship Program, chair of APAN Education Working Group, secretary of APAN Network Research Workshop and APAN IPv6 Task Force. She was the secretary of APNG, the information officer of CCIRN.



## John Kan



**Name:** John Kan

**Designation:** Chief Information Officer

**Affiliation:** A\*STAR

**Email:** john\_kan AT a-star.edu.sg

Dr John Kan is A\*STAR's Chief Information Officer, and is also concurrently the Chief Data Analytics Officer and Deputy Chairman of A\*STAR's Computational Resource Centre. He is also the President of Singapore's SingAREN Network. He has more than 20 years of experience in the InfoComms and Telecomms Industry in Singapore and the region, working with various "C" Level and equivalent level contacts in MNCs, Governments, Regulatory Agencies and Local Companies. Prior to joining A\*STAR, he held Senior Management appointments in Teletech Asia, OpentextVignette, Siemens, Silicon Graphics, Datacraft Asia, Singapore Technologies, AT&T and MINDEF. He is also a Member of the ITMA, Singapore International Chamber of Commerce and the Singapore IT Federation, and serves in NGO and VWO organisations in Singapore.

**Last Updated:** 2016 Aug 12



## Gerrit Bahlman

### Board of Director

Director of Information Technology, Hong Kong Polytechnic University

### Biodata:

Gerrit holds postgraduate qualifications from Canterbury University in New Zealand and has taught and held senior management roles in Education; worked as a consultant in information technology and in international aid with the New Zealand Ministry of Foreign Affairs. He has been involved in the strategic planning, development, management and design of teaching and learning, research, communications and administrative support systems and structures in Universities since 1986. He is a Governor of TEIN\*CC; a Board Member and Director of JUCC/HARNET; the founding Director of the JUCC Leadership Institute and was awarded the 2016 Hong Kong CIO of the Year Award.



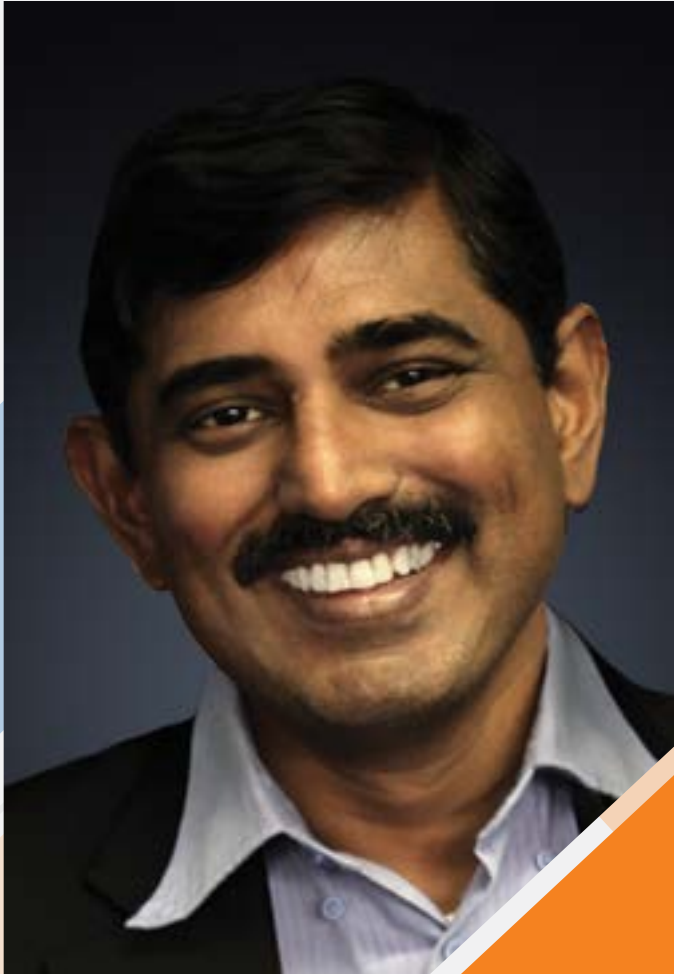
## Panjai Tantatsanawong

Board of Director

Associate Professor and Dean of Graduate School, Silpakorn University, Bangkok, Thailand

### Biodata:

Dr. Panjai Tantatsanawong obtained his Doctoral degree in Computer Science from Asia Institute of Technology (AIT), in Thailand, in the year 2000. His major area is in networking and software engineering. He received his M.S. degree in Computer Science from Chulalongkorn University, Bangkok, Thailand in 1992 and B.S. degree in Public Health from Mahidol University, Bangkok, Thailand in 1984, respectively. Currently, he is an Associate Professor at the Department of Computing, Faculty of Science and Dean of the Graduate School, Silpakorn University, Bangkok, Thailand. He has publications in national and international conference proceedings.



## Professor Dr. Sureswaran Ramadass

Former Chair, Current APAN Treasurer, Emeritus Chair

Professor, International University of Malaya-Wales (Malaysia)

Chief Scientist, NLTVC

Advisor, International Telecommunication Union (ITU)

Head of AI3-MY

Founder of Certified Network Engineering IPv6 Professional Certification (CNE6, CSE6, CNP6)

### Biodata:

Prof Sures was the Founding Director of the National Advanced IPv6 (Nav6) Center in Malaysia. During his tenure, Nav6 became the top performing department in the Universiti Sains Malaysia. He is currently the Emeritus Chair of the IPv6 Forum Education Program. He is also the inventor of the RSW protocol

He continues to supervise Msc and PhD students in the area of Advanced Internet Communications. He is also a research fellow of WWRF (World Wireless Research Forum) and was awarded the National Academic Laureate for Innovation and Commercialisation by the Government of Malaysia and winner of the Prime Minister's Innovation Award.





## Dr Markus Buchhorn

APAN General Manager

### Biodata:

Dr Buchhorn is a former astrophysicist, a former university IT Director, a former Director of Services for a university partnership providing specialised ICT infrastructure for research, and now works internationally as a consultant on the use and management of technology in research and education. He has spent over twenty years in this sector, and was one of the early leaders of APAN from 1997.

# Secretariat



**Dr. Nimal Ratnayake**  
APAN Secretariat Director



**Mr. Nishantha Weerakoon**  
APAN Secretariat Manager

# People of APAN



Professor Jianping Wu  
Former Chair and Board Advisor



Professor Shigeki Goto  
Co-Founder, Former Chair  
and Board Advisor



Professor Michael McRobbie  
Co-Founder



Professor Kilnam Chon  
Founder and Emeritus Chair



Professor Tan Tin Wee  
Co-Founder



Professor Dae Young KIM  
Emeritus Chair



George McLaughlin  
Board Advisor



P.T. Ho  
Company Secretary

# APAN Network Topology by Project



As of February 8th, 2013



# APAN Network Topology by Funding Source



Asia Pacific  
United States  
Europe

# Past APAN Conferences

- **APAN | 1996**  
Seoul  
Tokyo
- **APAN | 1997**  
Tokyo  
Singapore
- **APAN | 1998**  
Tsukuba  
Seoul
- **APAN | 1999**  
Osaka  
Canberra
- **APAN | 2000**  
Tsukuba  
Beijing
- **APAN | 2001**  
Hawaii  
Penang
- **APAN | 2002**  
Phuket  
Shanghai
- **APAN | 2003**  
Fukuoka  
Busan
- **APAN | 2004**  
Honolulu  
Cairns
- **APAN | 2005**  
Bangkok  
Taipei
- **APAN | 2006**  
Tokyo  
Singapore
- **APAN | 2007**  
Manila  
Xi'an
- **APAN | 2008**  
Hawaii  
Queenstown
- **APAN | 2009**  
Kaohsiung  
Kuala Lumpur
- **APAN | 2010**  
Sydney  
Hanoi
- **APAN | 2011**  
Hong Kong  
New Delhi
- **APAN | 2012**  
Chiang Mai  
Colombo
- **APAN | 2013**  
Hawaii  
Daejeon
- **APAN | 2014**  
Bandung  
Nantou
- **APAN | 2015**  
Fukuoka  
Kuala Lumpur
- **APAN | 2016**  
Manila

# APAN Memberships

Memberships Type	Description
<b>Primary (voting) Member</b>	There is only one Primary Member from each economy. A Primary Member is an entity, organisation or consortium that typically coordinates advanced research and education network provisioning within an economy. Primary Members are intended to comprehensively represent that economy's interests in the fulfilling the objectives of APAN, and they have voting rights in the APAN Council.
<b>Associate Member</b>	An Associate Member is an entity, organisation or consortium that has common interests in the objectives of APAN, and typically coordinate advanced research and education network provisioning within an economy or geographical area. There may be multiple Associate Members from each economy.
<b>Affiliate Member</b>	An Affiliate Member is an entity, organisation or consortium that has common interests in the objectives of APAN, and typically represent a community that benefits from the use of the advanced research and education networks.
<b>Liaison Member</b>	A Liaison Member is a peer entity/organisation/consortium that represents the common interest of a research or education community in advanced networking and applications.
<b>Industry Member</b>	An Industry Member is a corporate entity with common interests in the objectives of APAN. They may have an interest in working with other APAN Member categories, specific communities or economies in researching and developing new products and services.

## Primary Members

[Australia's Academic and Research Network](#), Australia  
[APAN China](#), China  
[APAN Japan](#), Japan  
[APAN Korea](#), Korea  
[APAN Malaysia](#), Malaysia  
[APAN Taiwan](#), Taiwan  
[Advanced Science & Technology Institute](#), Philippines  
[Education & Research Network of India](#), India  
[Hong Kong Academic & Research Network](#), Hong Kong  
[Lanka Education and Research Network](#), Sri Lanka  
[National Agency for Science and Technology Information](#), Vietnam

[Nepal Research and Education Network](#), Nepal  
[Pakistan Educational and Research Network](#), Pakistan  
[Research and Education Advanced Network New Zealand](#), New Zealand  
[Singapore Advanced Research and Education Network](#), Singapore  
[Thailand Research and Education Network](#), Thailand

## Associate Members

[Institute Teknologi Bandung](#), Indonesia  
[Pacific Wave](#), USA  
[TransPac/Indiana University](#), USA

## Affiliate Members

[WIDE](#), Japan

# Working Groups

APPLICATION AREA

## Area Directors



Koji Okamura

### Agriculture Working Group

#### Chair

Takuji Kiura

#### Co-Chair

Kei Tanaka

J. Adinarayana

Ye-Nu Wan

### e-Culture Working Group

#### Chair

Faridah Noor Mohd, Noor

#### Co-Chair

Goo BonCheol

Andrew Howard

### Disaster Mitigation Working Group

#### Chair

Denis F. Villorente

#### Co-Chair

Eric-Yen



Suhaimi Napis

### Identity & Access Management Working Group

#### Chair

Motonori Nakamura

#### Co-Chair

Suhaimi Napis

### Medical Working Group

#### Chair

Shuji Shimizu

#### Co-Chair

Ho-Seong Han  
Rungsun Rerknimitr

### Earth Monitoring Working Group

#### Chair

Chris Elvidge

#### Co-Chair

Damrongrit Niammuad



# TECHNOLOGY AREA

## Area Director



Jongwon Kim

### Cloud Working Group

#### Chair

Jongwon Kim

#### Co-Chair

Eric Yen,  
Shigetoshi Yokoyama

### Future Internet Working Group

#### Chair

Hans Addleman

Eiji Kawai

### IPv6 Working Group

#### Chair

Yan Ma

#### Co-Chair

Navaneethan C. Arjuman

### Network Research Working Group

#### Chair

Yoshiaki Kasahara

#### Co-Chair

Teck Chaw Ling

### Security Working Group

#### Chair

Yoshiaki Kasahara

#### Co-Chair

Yasuichi Kitamura

### Internet of Things Working Group

#### Chair

Eui-Nam Huh

#### Co-Chair

Basuki Suhardiman, Borhanuddin Bin  
Mohd Ali, Yuuichi Teranishi  
Ridnarong Promya, Tokihiro Fukatsu  
Reza Khoshdelniat

# Fellowship

## Fellowships Objectives

The objective of the APAN Fellowship Program is to promote “Global collaboration” through applicants’ participation in APAN meetings, which is held twice yearly. It is hoped that the meeting would provide them with the right environment to “network” with other researchers. It is also intended that the participants will promote Global Collaboration among their local community after the meeting.

Fellowships are offered on a competitive basis, chosen from participating economies in APAN. Specifically, students (graduates and undergraduates) are encouraged to apply, although young researchers may be accorded sponsorship. Applicants whose papers are accepted for presentations have favored status. The Fellows maintain contact through Facebook after the meetings.

## Fellowship Coverage

1. Registration – access to all sessions/ workshops/ tutorials.
2. Food- Lunches, Tea Break (During conference) and social events.
3. Local Transportation -Transport Allowance (to and from Airport - accommodation site).
4. Accommodation on twin sharing basis at a designated hotel.





**12-17 February 2017**  
**India Habitat Centre, New Delhi**

