APNIC

Annual Report 2010

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Executive **Council**

Chair – Maemura Akinori
General Manager, Internet Development Department, Japan Network information Center (JPNIC).
Serving until March 2012.

Hyun-Joon Kwon
Head of IP Address Management Department, National Internet Development Agency of Korea.
Serving until March 2011.

Secretary – Ma Yan
Executive Committee Member, China Education and Research Network (CERNET).
Serving until March 2012.

Che-Hoo Cheng
Associate Director (Infrastructure), Information Technology Services Centre, The Chinese University of Hong Kong.
Serving until March 2012.

Treasurer – James Spenceley
CEO, Vocus Group Limited.
Serving until March 2011.

Paul Wilson
Director General, APNIC, Ex-officio.

Jian Zhang
General Manager, APTLD.
Serving until March 2011.

Director General – **Paul Wilson**

Near the end of 2010, the Internet Assigned Numbers Authority (IANA) allocated four /8 IPv4 address blocks, two each to ARIN, the North American Regional Internet Registry (RIR) and RIPE NCC, the European RIR. This left seven /8s remaining in the unallocated pool. When the unallocated address pool reached five /8 blocks, a global distribution policy, which reached consensus in all regions, came into force and each RIR received one final IPv4 address block to distribute in the respective regions.

This was not only an important moment in the Internet's history, but also a special milestone for the Asia Pacific Internet community, which triggered the global policy leading to IPv4 exhaustion. It is only a matter of time before APNIC and the other RIRs are only able to distribute IPv6 addresses.

Now, more than ever, it is time for Asia Pacific enterprises to deploy IPv6. There are many examples of organizations that are leading the way. It is gratifying to see that major ICT enterprises already responding to the challenge. Survey results suggest that 37% of organizations are ready for immediate IPv6 deployment. Still, this means 63% are not ready.

APNIC, with its IPv6 Kickstart program, has streamlined the IPv6 request process, especially if you already have IPv4 addresses. Since the launch of Kickstart more than 400 Members from 35 different economies have received IPv6 addresses under the program.

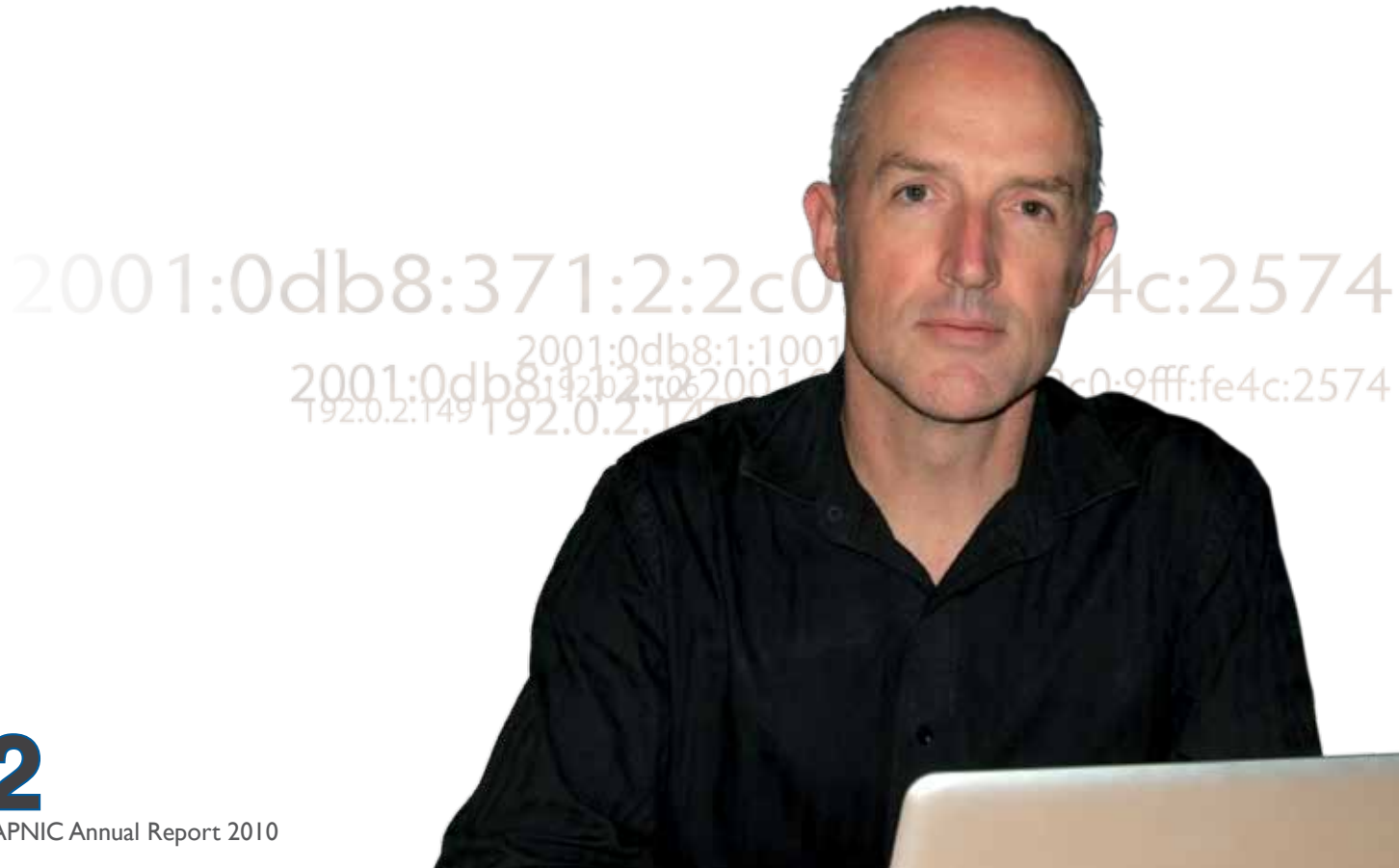
Member-based organizations naturally evolve and adapt to the needs of their members, and APNIC regularly asks its Members about their expectations. The results of the 2011 Member and Stakeholder Survey were reported at APNIC 31 during the APNIC Member Meeting on 25 February 2011. The outcome of this survey will help shape our plans for the next two years.

One result which followed the 2009 Member and Stakeholder Survey was a revision of the APNIC Operational Plan, which categorizes APNIC activities into four key objectives: Delivering Value; Supporting Internet Development; Collaboration and Communication; and Corporate Support.

These objectives reflect the needs and expectations of all our Members and Stakeholders. They shape APNIC's vision of the future. As you will see, this year's Annual Report reflects these four objectives and outlines the events and achievements in each category over the past year.

Please enjoy the 2010 Annual Report.

Paul Wilson
Director General



EC Chair – **Maemura Akinori**

It is my great honour, as Chair of the Executive Council to deliver the EC letter for the 2010 APNIC Annual Report.

Since this Annual Report is for 2010, a decadal year, I would like to begin the letter by comparing the current situation with that of a decade ago.

In 2000, the number of global Internet users was 400 million. In 2010, this number had grown by five times to 2 billion. In this decade, this growth in the user base has seen the Internet penetrate into the very fabric of society, and people have come to rely on it much more than ever. For APNIC, it was also a decade of growth. Membership has grown by five times, and the budget, by ten times.

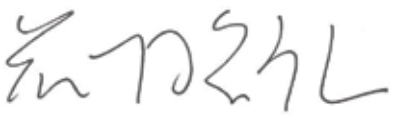
By 2010, APNIC had reached a turning point. At APNIC 30 on the Gold Coast, Australia, APNIC had, as a specific part of the Meeting agenda, its largest discussion ever regarding corporate governance. This reflects the accountability that APNIC has in order to be fully trusted by its membership and the broader community, particularly in light of the huge growth that the Internet, and in turn, APNIC has seen over the past decade.

A pivotal coinciding event that will shape the way we conduct our business from 2011 is the exhaustion of IPv4 address space. Even though it has been anticipated for several years, APNIC has been making a big effort to encourage the community to prepare for it. APNIC must ensure that it carefully manages the remaining IPv4 addresses as the community itself has dictated and ensure that it makes the required changes necessary so that it functions effectively in the new business environment it faces.

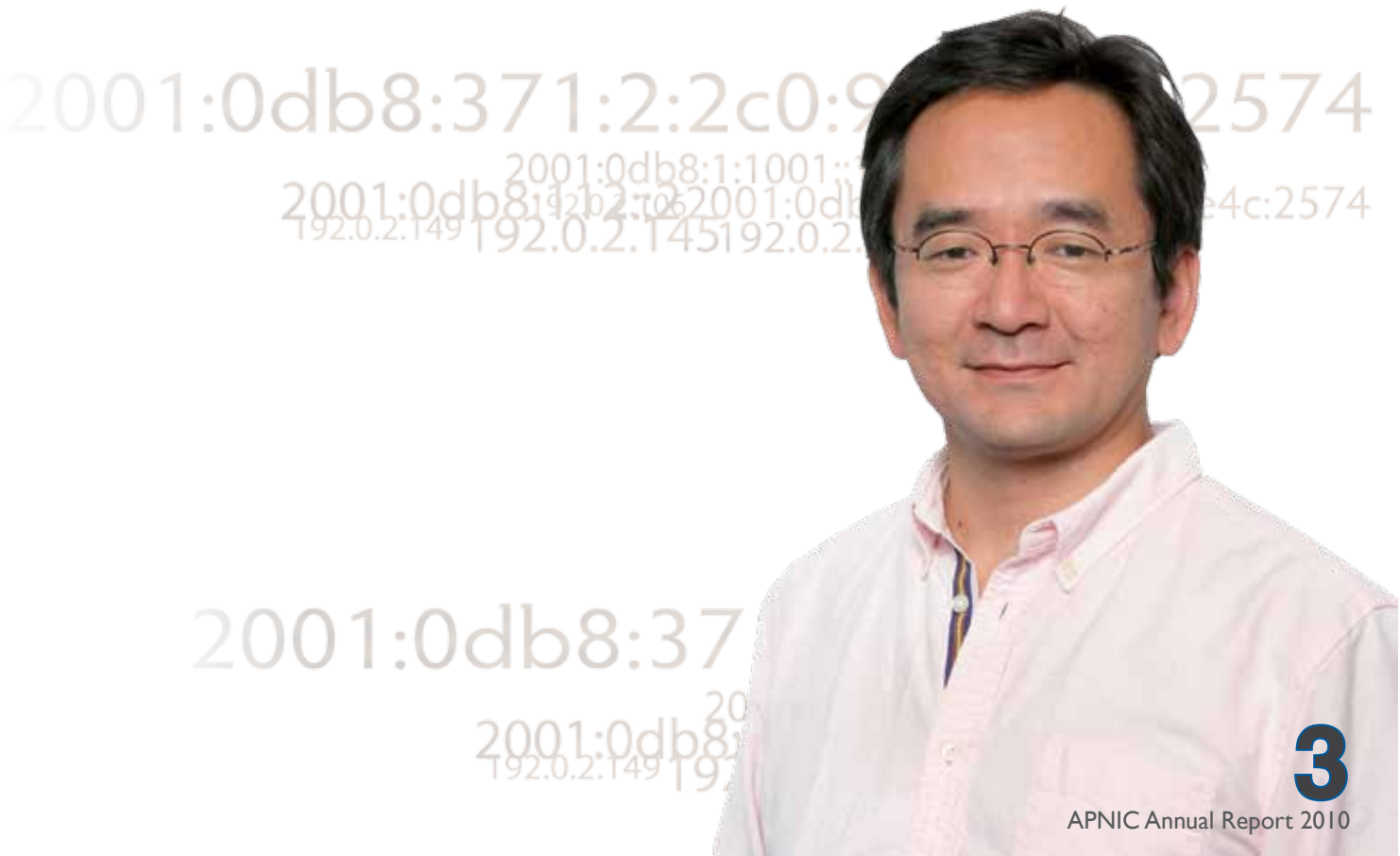
The Executive Council has already kicked off these changes by meeting in December 2010 for a retreat. Most of the discussions centred on creating the strategic plan for these changes, and going forward, our intention is to work on further planning regularly. We will also share this plan with our membership and the broader community, so that we can work together to shape the next decade of APNIC.

An icon of these changes is APNIC's new home, which I believe epitomizes this kick-start to change.

I am very pleased to introduce the 2010 Annual Report and I appreciate your continued support for APNIC, which is indispensable to APNIC's successful operation.



Maemura Akinori
EC Chair



Operational **Plan**

This document reports on the four key objectives of the APNIC 2010 Operational Plan.

The framework and key driver for the Operational Plan is the Member and Stakeholder Survey conducted in 2009.

As a service-driven, membership-based organization, it is very important for APNIC to continue to provide excellent service to its Members.

Every two years, the Executive Council commissions an independent survey of the Secretariat's performance. The findings are presented to the EC which reports them to the Membership and the Secretariat.

APNIC uses these results to write the Operational Plan, refine new and existing activities, formulate the budget, and set organizational goals for the following two years. The Operational Plan is reviewed every six months and adjusted to reflect changes in priority.

EC Strategic Planning

In December 2010, the APNIC EC met for a dedicated strategic retreat. They considered the major issues, choices, and responses that confront APNIC at this time. This process will continue into 2011 and will result in the production of a new statement of strategic direction.

2011 Member and Stakeholder Survey

At the end of 2010, the Secretariat supported the 2011 Member and Stakeholder survey on behalf of the Executive Council. An independent consultant, Professor Ang Peng Hwa of the Singapore Internet Research Center, conducted the survey.

Dr John Earls, who designed and carried out APNIC's past surveys, continued his involvement as an advisor to APNIC and Professor Ang. His contribution was greatly appreciated.

The survey ran from 2 to 21 November 2010.

The survey results and associated report were incorporated into the APNIC 31 Member Meeting agenda, and are available for download on www.apnic.net/survey

APNIC Operational Plan

Delivering Value

- *As a service organization, APNIC provides value to all stakeholders according to their specific needs.*
- *The Secretariat is funded by the membership. It applies those funds in the mutual interest of all Members through the provision of a core set of high-quality services related to Internet address allocation and management.*

Supporting Internet Development

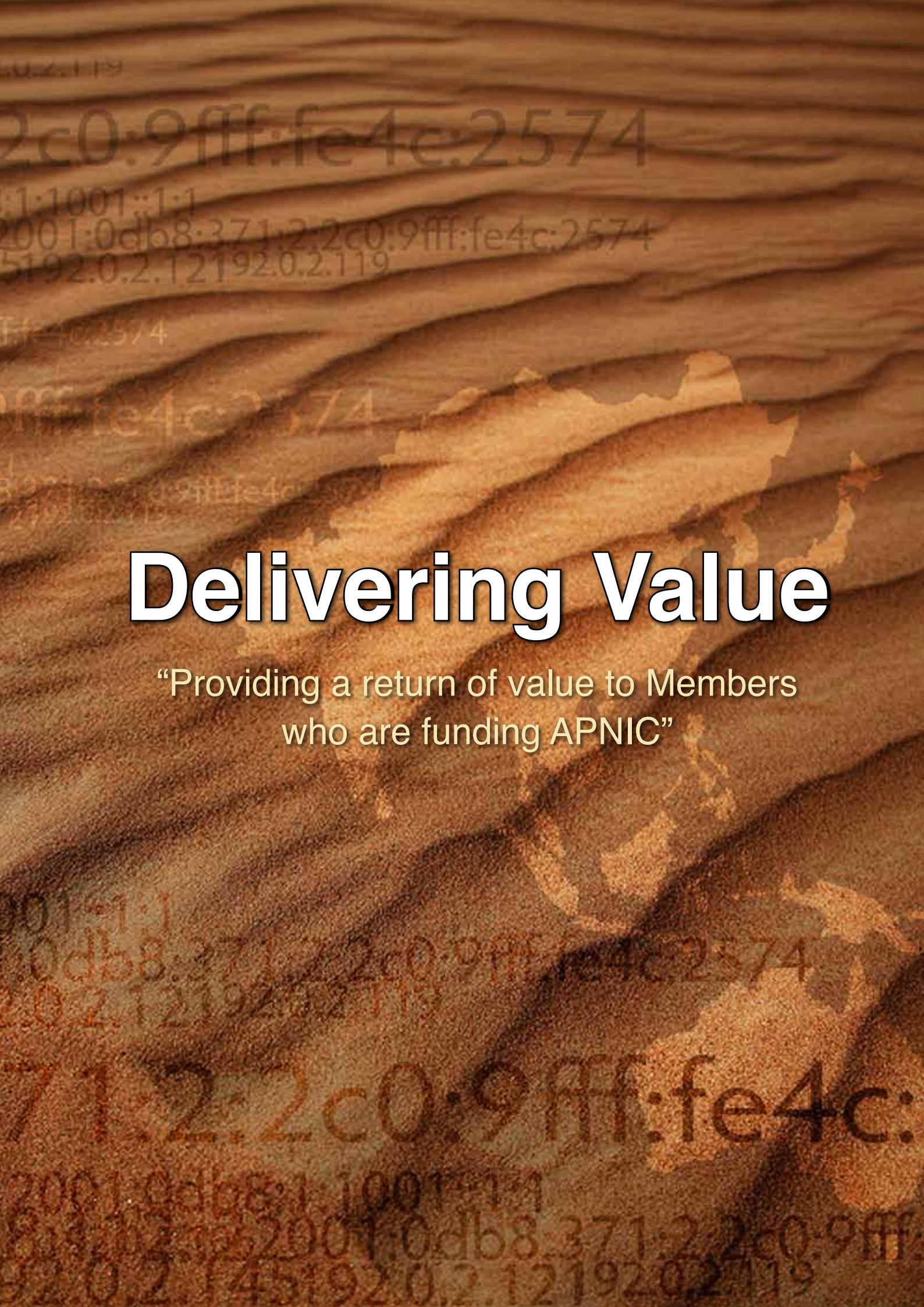
- *APNIC stakeholders share a common interest in the healthy and vigorous development of the Internet throughout all parts of the Asia Pacific region, and the world.*
- *APNIC supports the maintenance of an open and neutral Internet, based on global addressability of all network components and minimal barriers to global end-to-end reachability.*

Communication and Collaboration

- *APNIC exists within a global community of Internet stakeholders whose openness and cooperation is critical to the success of the organization and of the Internet itself.*
- *APNIC will work with other stakeholders for the mutual benefit of respective missions.*

Corporate Support

- *The APNIC Secretariat exists to provide services and support the activities of APNIC.*
- *It operates as a professional team with full accountability to the Members and stakeholders of APNIC*


Delivering Value
“Providing a return of value to Members
who are funding APNIC”

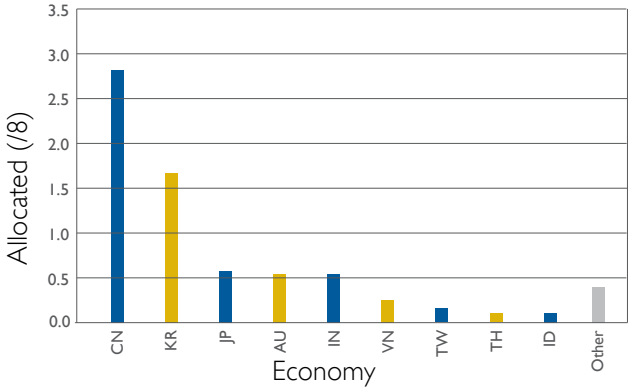
Statistics

Resource Allocation

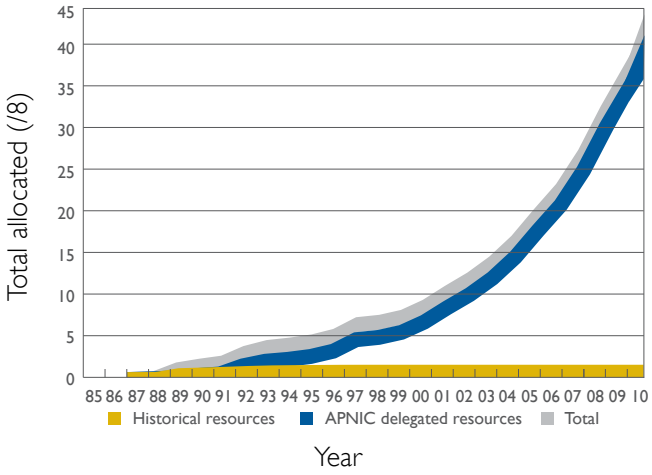
IPv4

By 31 December 2010, less than 5% of the total IPv4 address space remained in the Internet Assigned Numbers Authority (IANA) free pool. This left seven slash eights (/8s) of the total available for allocation to the RIRs. A /8 is about 16 million addresses.

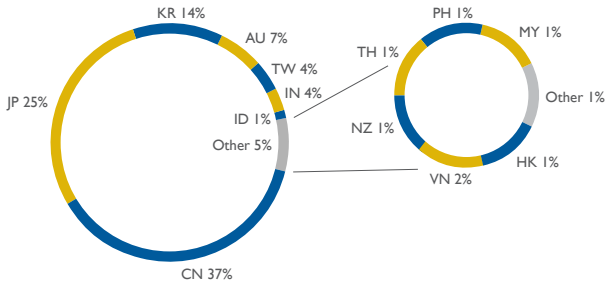
IPv4 addresses allocated in 2010 (by economy)



Total IPv4 allocated (cumulative)



Total distribution of IPv4 (by economy)



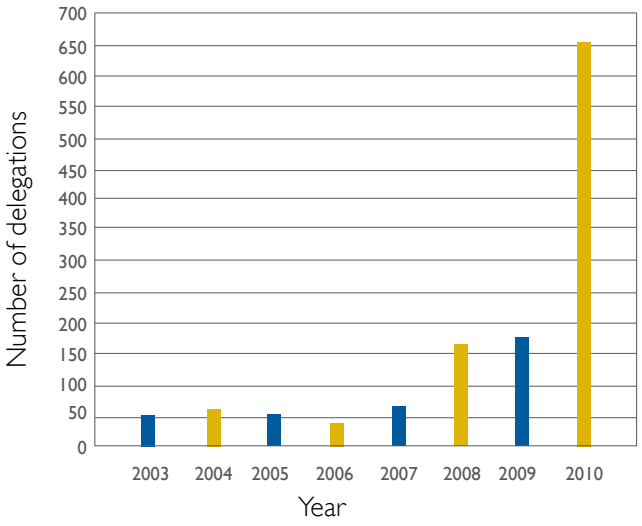
IPv6

During the past two years, many Asia Pacific organizations have made the required investments to ensure their products and services are IPv6-enabled, and have now implemented strategies for deployment planning and capacity building.

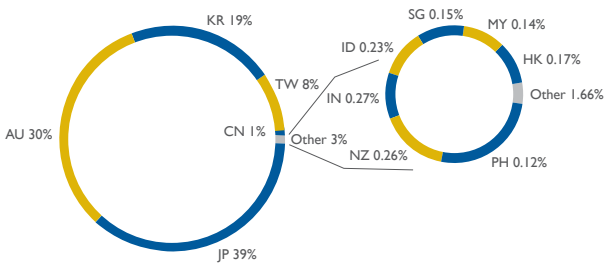
Governments across the Asia Pacific region have also adopted strategies for IPv6 deployment, with many now planning IPv6 roadmaps, such as the Indian government, which has called for a 2012 deadline on IPv6 deployment.

As the statistics indicate, IPv6 delegations more than tripled compared to 2009 delegations. This was fuelled by the strong response to APNIC's "Kickstart IPv6" campaign and the acceptance and awareness of IPv6 as the best option for future Internet growth.

Number of IPv6 delegations by year



Total distribution of IPv6 (by economy)



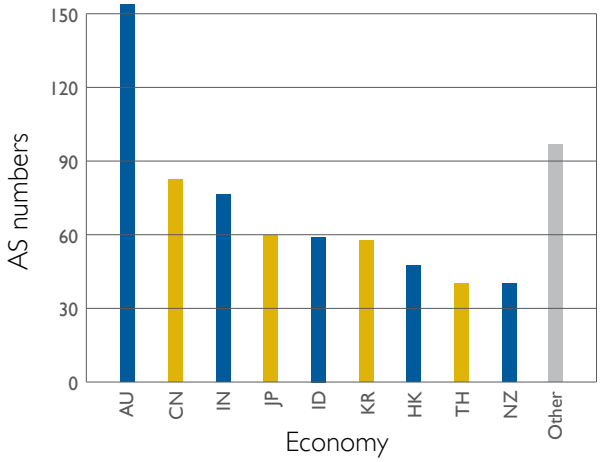
Membership

AS Numbers

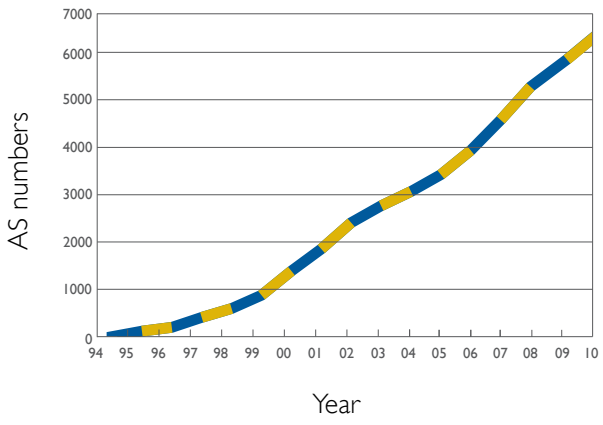
Autonomous System (AS) number growth has remained steady during the past year, with APNIC assigning 768 in 2010.

Global assignments of AS numbers also remains steady, at around 5,000 per year.

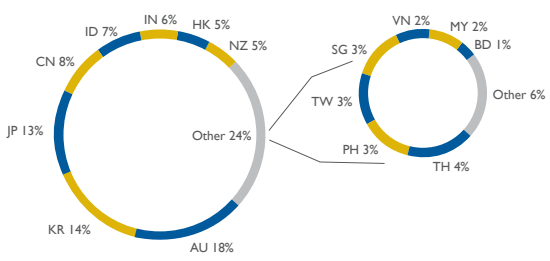
AS numbers assigned in 2010 (by economy)



Total AS numbers assigned (cumulative)



Total distribution of AS numbers (by economy)



www.apnic.net/stats

Member Statistics

Members as at 31 December 2010

Members	2009	2010
Associate	449	485
Very small	472	651
Small	823	874
Medium	276	328
Large	106	136
Very large	31	33
Extra large	13	11
Total Membership	**2,170**	**2,518**
Non-Member accounts	749	751
Total	**2,919**	**3,269**

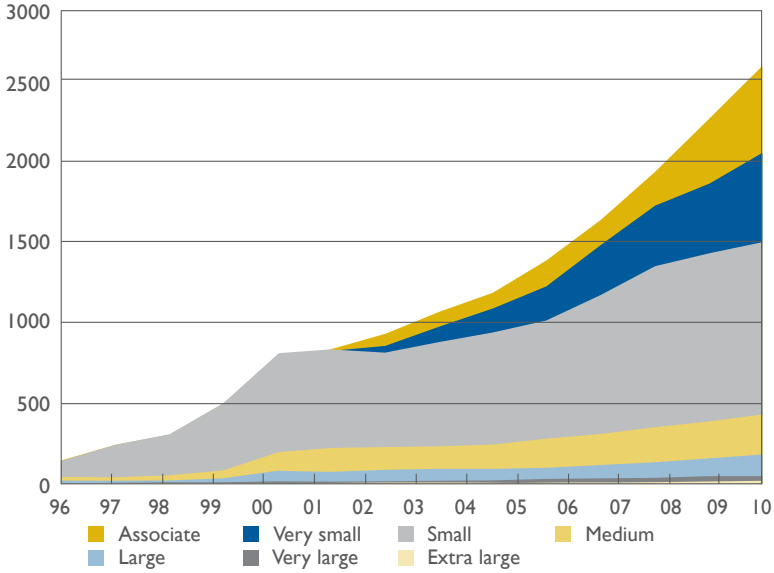
MyAPNIC Users

Number of:	
Returning visitors	5,887
New visitors	3,042
Registered visitors	8,929

Member Services

Number of:	
Helpdesk chat requests	1,964
Helpdesk tickets resolved	19,242
Administration tickets resolved	2,868
New Member accounts established	457

APNIC membership growth



Resource Quality **Assurance**

Throughout 2010, the Resource Quality Assurance (RQA) project conducted quality assurance activities for IPv4 address blocks allocated to APNIC by IANA. These resource assessments addressed community concerns about the routability of address blocks as IPv4 depletion approached. The RQA program works to minimize routability issues through a combined program of communication, training, and testing

The RQA project conducts comprehensive testing, including reachability testing on address space before distribution.

APNIC performs reachability tests on "pilot" prefixes before they are delegated in conjunction with the RIPE NCC. Testing involves comparing the "reach" of new prefixes, to the "reach" of regular production prefixes. Significant differences are then analysed to check which ISPs are filtering routing announcements from the new block. APNIC provides reports documenting the findings of these tests at: www.apnic.net/rqa

Bogon Filtering

One of the common problems with routing newly delegated resources is bogon filtering. APNIC encourages the technical community to manage address filtering responsibly by keeping Access Control Lists (ACLs) updated. This ensures that routers do not mistakenly filter newly delegated addresses.

Example of reachability testing
www.apnic.net/rqa

Address blocks tested under RQA:

- 1.0.0.0/8
- 14.0.0.0/8
- 27.0.0.0/8
- 36.0.0.0/8
- 39.0.0.0/8
- 42.0.0.0/8
- 49.0.0.0/8
- 101.0.0.0/8
- 103.0.0.0/8
- 106.0.0.0/8
- 223.0.0.0/8

Security and **Robustness**

DNSSEC – Domain Name Security Extensions

APNIC is implementing the final stage of its three-phase plan for DNSSEC as part of the ongoing effort to provide added security and robustness to APNIC services.

DNSSEC adds security provisions to the Domain Name System (DNS) so that DNS clients can verify they have been directed to proper name servers.

The DNS is a hierarchical naming system that translates domain names into their respective numerical IP addresses. In contrast, reverse DNS translates these unique numbers into names.

The DNS and reverse DNS are made up of domains or zones that can be secured by authenticating a series of encryption algorithms, or keys, in different zones to create a chain of trust.

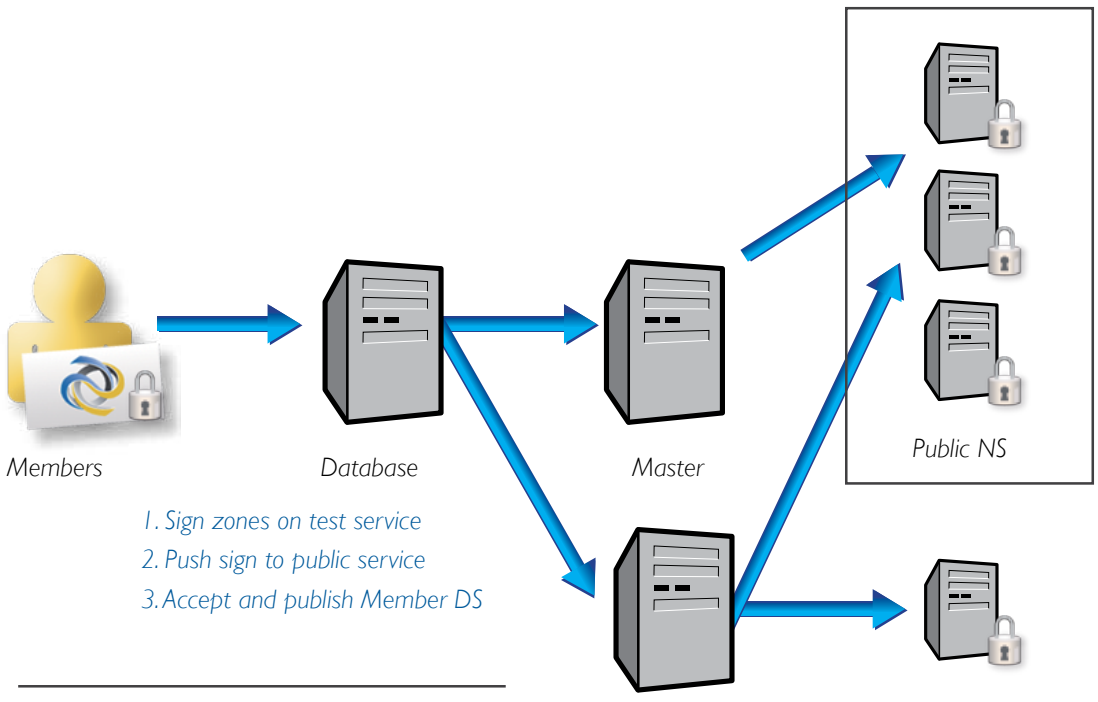
Therefore, users can be secure knowing that data is legitimately where it says it is from; that it has not been tampered with in any way; and can truthfully assert that it is legitimate.

APNIC is implementing its three-stage plan by:

- Selecting and testing relevant equipment
- Signing the APNIC zones
- Introducing Member DNSSEC data

When the final phase is implemented, APNIC Members will be able to register their DS (Delegation Signer) records to enable protection for their reverse zones via MyAPNIC. This will allow Members to link the name servers APNIC publishes in its zones with the encryption keys Members use in their zones.

www.apnic.net/dnssec



Phase 3 - Introduction of Member DNSSEC data

High Availability

APNIC also provides 24/7 online services that are critical to the way the Internet runs.

APNIC continues to improve the security, redundancy, and robustness on all the services it provides, and importantly, is treating IPv4 and IPv6 as equal on these services. APNIC therefore ensures that all service availability principles are applied equally to both protocols.

During 2010, APNIC worked to build network infrastructure with redundant connectivity and internal configuration that promote service redundancy. It invested in high availability equipment, and worked to improve storage solutions and server resiliency. It also worked to make overall improvements to monitoring and alert capabilities so that potential problems are detected earlier.

Total IPv6 Kickstart applications

Kickstart **IPv6**

After implementing prop-073: Automatic allocation/assignment of IPv6 in February 2010, existing IPv4 address holders can easily apply for an appropriately-sized IPv6 address block.

Using MyAPNIC, users click the appropriate link to immediately receive a delegation.

Members received 86 IPv6 delegations in the first week of implementation using the one-click feature. Five economies received IPv6 for the first time, including developing economies such as Bangladesh and Cambodia.

By the end of 2010, there were 402 applications from more than 25 economies, including Members in 12 economies receiving their first IPv6 addresses.

www.apnic.net/kickstart

Training in the **Asia Pacific**

APNIC provides a training and education program where Members can select from core technical topics such as IPv6 essentials, DNS, and BGP Routing as well as general networking courses on Internet Resource Management. Members can select face-to-face or eLearning courses.

During the past few years, the curriculum has changed significantly, to reflect not only Member feedback, but also the changing shape of the Internet.

The Internet Resource Management course is now entirely redesigned with exercises, graphics, and overall content updated and improved. APNIC offers specific IPv6 related courses such as IPv6 Essentials, IPv6 Routing, and IPv6 Workshops to help ensure Members are fully equipped to manage an IPv6 Internet. IPv6 courses offer increased flexibility, giving users the choice of two-day or four-day courses, including basic and advanced sessions. The materials also align with the new IPv6 Training Lab, which is used to provide live, hands-on exercises.

www.apnic.net/training

eLearning

APNIC also offers face-to-face training through interactive browser-based software allowing participants the ability to take part in live interaction with APNIC Trainers. In 2010, eLearning was moved from piloted production, to full production. eLearning helps network engineers to develop their skills and technical managers to train their staff.

Since January, eLearning has been offered twice a month on a sub-regional basis. Topics include:

- IPv6
- Internet Resource Management
- Routing
- DNS

The training schedule is time zone based, meaning participants can participate during their normal business hours.

Training **Statistics**

Face-to-Face Training

Number of:	2009	2010
Attendees	1870	1923
Courses	77	64
Economies	22	24
Locations	36	29

eLearning interactive

Number of:	2009	2010
Attendees	80	301
Economies	7+	24

Meeting **Statistics**

Meeting delegate numbers

APNIC 29 and APRICOT

Total delegates	733
Delegates at APNIC Member Meeting	145
Economies represented	53
APNIC Member organizations represented	123

APNIC 30

Delegates at APNIC Member Meeting	183
Economies represented	35
APNIC Member organizations represented	64

Remote Participation events APNIC 29 and APNIC 30

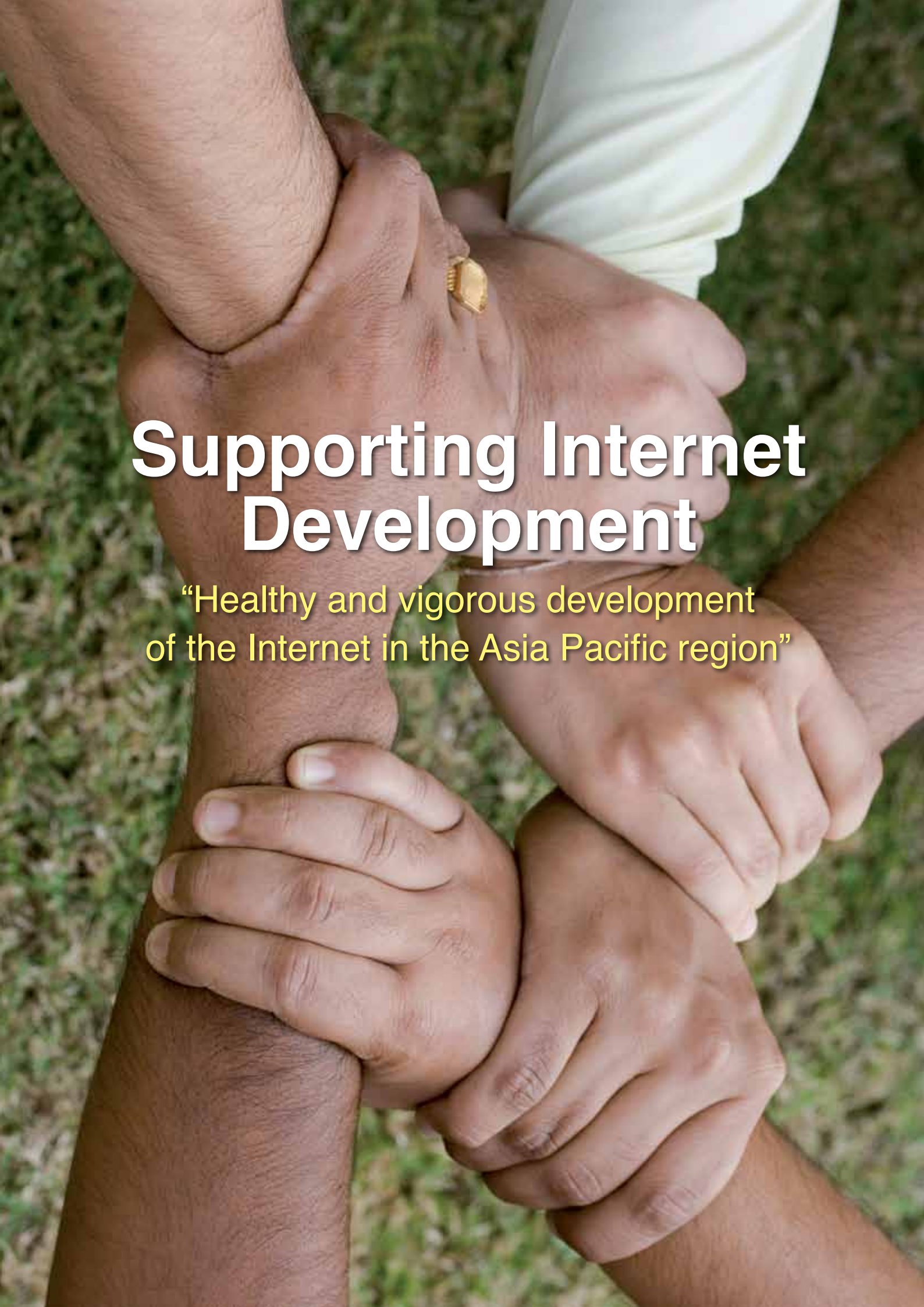
Bangkok, Thailand	27
Hong Kong SAR, China	7
Vientiane, Laos	25

Activities Across the **Region**

NOG Meetings:

APNIC supported the following Network Operator Group (NOG) meetings in 2010

- JANOG - Niigata, Japan
- SANOG - Dhaka, Bangladesh; Paro, Bhutan
- NZNOG - Hamilton, NZ
- NANOG - Austin, Texas, USA; Atlanta, USA
- MENOG - Riyadh, Saudi Arabia
- NANOG - San Francisco, California, USA
- PacNOG - PagoPago, American Samoa; Pohnpei, Micronesia
- AUSNOG - Sydney, Australia



Supporting Internet Development

"Healthy and vigorous development of the Internet in the Asia Pacific region"

Policy **Outcomes**

APNIC implemented the following policy proposals which reached community consensus.

- Prop-082: Removing aggregation criteria for IPv6 initial allocations

This proposal removed the aggregation requirement from the IPv6 initial allocation policy.

- Prop-080: Removal of IPv4 prefix exchange policy

This proposal removed the policy that permitted resource holders to return three or more non-contiguous IPv4 address blocks and have the prefixes replaced with a single, larger, contiguous block.

- Prop-079: Abuse contact information

This proposal requires mandatory Incident Response Team (IRT) references in all IP address and AS number records in the APNIC Whois Database. All reports of abuse would therefore be directed to specialized IRT contacts or departments within an organization. This change will improve responses to abuse reports and also enable faster, shared response strategies, so that networks can quickly identify and pursue security problems.

From an operational perspective, a single IRT object may be linked to many objects in the whois database, avoiding the need to update multiple entries.

At last count, the following objects have a reference to an updated IRT object:

- 5662 inetnums
- 26 inet6nums
- 60 autnums

Other Policy Outcomes

Proposals abandoned by authors:

- **prop-078: IPv6 deployment criteria for IPv4 final /8 delegations**
- **prop-081: Eligibility for assignments from the final /8**

Proposals for further discussion:

- **prop-083: Alternative criteria for subsequent IPv6 allocations**
- **prop-084: Frequent whois information update request**
- **prop-085: Eligibility for critical infrastructure assignments from the final /8**
- **prop-086: Global policy for IPv4 allocations by the IANA post-exhaustion**
- **prop-087: IPv6 address allocation for deployment purposes**

www.apnic.net/policy/proposals

ISIF **Grants Program**

The Information Society Innovation Fund (ISIF) is a unique small grants program based on the principles of mentoring, sharing, and networking to foster capacity building in developing communities. ISIF has allocated AUD 675,000 to 19 projects in 10 Asia Pacific economies, distributed across two project cycles in 2009 and 2010.

Grant recipients have shown outstanding commitment to develop and implement technological innovations that, in time, have benefited their communities through localization, health provision and diagnostic services, disaster management, IT security, e-trading, accessibility, wireless, and IPv6 deployments through applications development, training, capacity building, and infrastructure development.

ISIF wants to expand the current model of open sponsorship and funding, giving a wider range of ICT leaders the opportunity to contribute to social development in their own communities. Organizations and individuals are welcome to support the program through partnership and a variety of sponsorship packages.

APNIC is very proud to support the program, along with the International Development Research Center (IDRC), the Internet Society, and DotAsia.

www.isif.asia

IPv6 **Program**

APNIC is playing an active part in IPv6 awareness by proactively engaging different stakeholders in the region encouraging adoption of IPv6 at all levels and providing outreach to the Asia Pacific Internet community.

During 2010, APNIC participated in more than 20 events and shared technical expertise, global best practices, and promoted IPv6 deployment.

One of the key activities of the IPv6 program during 2010 were the efforts to engage with intergovernmental forums such as the Asia Pacific Economic Cooperation Working Group on Telecommunications (APECTEL). During APECTEL's Ministerial Meeting in Okinawa (TELMIN8), leaders of 21 economies included in its Declaration, a statement on IPv4 exhaustion and the importance of IPv6 deployment.

The IPv6 program emphasizes the importance of connecting Internet stakeholders to manage the historical challenges that we currently face with a multi-stakeholder approach.

IPv6 Outreach in 2010

- 2010 Global IPv6 Summit
- APEC TEL 41, 42
- APEC TELMIN8
- APIPv6TF
- APrIGF
- APT Cyber Security Forum
- Australian IPv6 Summit 2010
- CommunicAsia Ministerial Meeting
- ID IPv6 Summit
- IGF Japan
- INET ISOC HK
- International Electronics Conference and Exposition
- IPv6 Executive Briefing 2010
- ISOC INET, Singapore
- JPOPM 19
- Laos PDR Roundtable discussions
- PH CIOF IPv6 Event
- PITA
- Thailand IPv6 Summit
- WTDC

APNIC *IPv6 Program*

www.apnic.net/ipv6

"We recognize that the free pool of IPv4 addresses is expected to be exhausted around 2012, and the transition to IPv6 will facilitate the achievement of universal broadband access in the APEC region. We support the IPv6 Guidelines developed by TEL"

TELMIN 8 Okinawa Declaration, paragraph 9

Paul Wilson at TELMIN 8

IPv6 Deployment: Leading by example

APNIC has implemented IPv6 in key services:

- MyAPNIC
- Whois queries
- IPv6 ICONS wiki
- DNS servers
- www.apnic.net server
- Email servers
- FTP servers
- Online chat

APIPv6TF

The IPv6 Program also participated in the Asia Pacific IPv6 Task Force (APIPv6TF). APNIC was elected to serve as the APIPv6TF Secretariat for two years, supporting Tony Hill, President, ISOC-AU, who volunteered to take the role of APIPv6TF Chair.

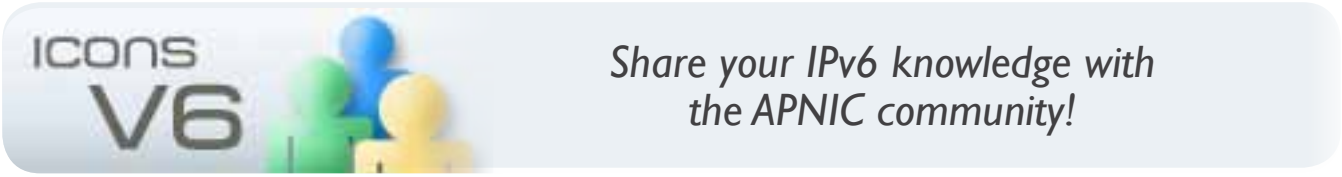
In coordination with the APIPv6TF, APNIC organized the Indonesia Bali IPv6 Summit 2010 "gathering" in collaboration with the local host. As part of a wider strategic initiative to reach out to as many Members and stakeholders as possible, particularly those who cannot travel and meet face-to-face, APNIC deployed the WebEx remote participation tools. Overall, eight economies participated remotely. APNIC also organized the APIPv6TF gathering at APNIC 30, where there was multi-stakeholder discussion from government representatives, ISPs, industry associations, and RIR representatives.

www.ap-ipv6tf.org

IPv6 Global Monitoring Survey

APNIC took part in a coordinated, NRO-led IPv6 Global Monitoring Survey, funded by the European Commission, and conducted by GNKS Consult and TNO. Close to 1,600 organizations from 140 economies responded to the survey, revealing that IPv6 awareness is increasing, with a significant proportion of organizations taking steps towards IPv6 deployment.

www.nro.net/news/ipv6-survey-results



Supporting Remote **Participation**

APNIC provides remote participation tools to the APNIC community for its Meetings and other events to enable wider participation from a more diverse audience, particular those from developing economies.

APNIC provided remote participation tools in support of the Internet Governance Forum in Vilnius where APNIC co-hosted four remote hubs with DotAsia in Dhaka, Bangladesh; Manila, Philippines; Hong Kong SAR; and Jakarta, Indonesia.

APNIC utilizes remote participation tools at APNIC Meetings and remote participation venues around the Asia Pacific for the Policy Special Interest Group (SIG) to allow the entire community to get involved. Remote participants have a choice of video, audio, transcript, and text chat options.

At APNIC 30 on the Gold Coast, Australia, there were:

- 165 online remote participants
- 24 remote venue participants

Root server and **TTM deployment**

Root Servers

APNIC has assisted the deployment of root name servers, or root servers, in the Asia Pacific region since 2002. These essential building blocks of the Domain Name System (DNS) support Internet scalability and accessibility by distributing query loads to handle growing DNS traffic.

The most recent deployment, installed in Cambodia, began operations at the end of July 2010. Upcoming installations include Bhutan, Mongolia, and a second instance of a root server in Pakistan.

www.apnic.net/root-server

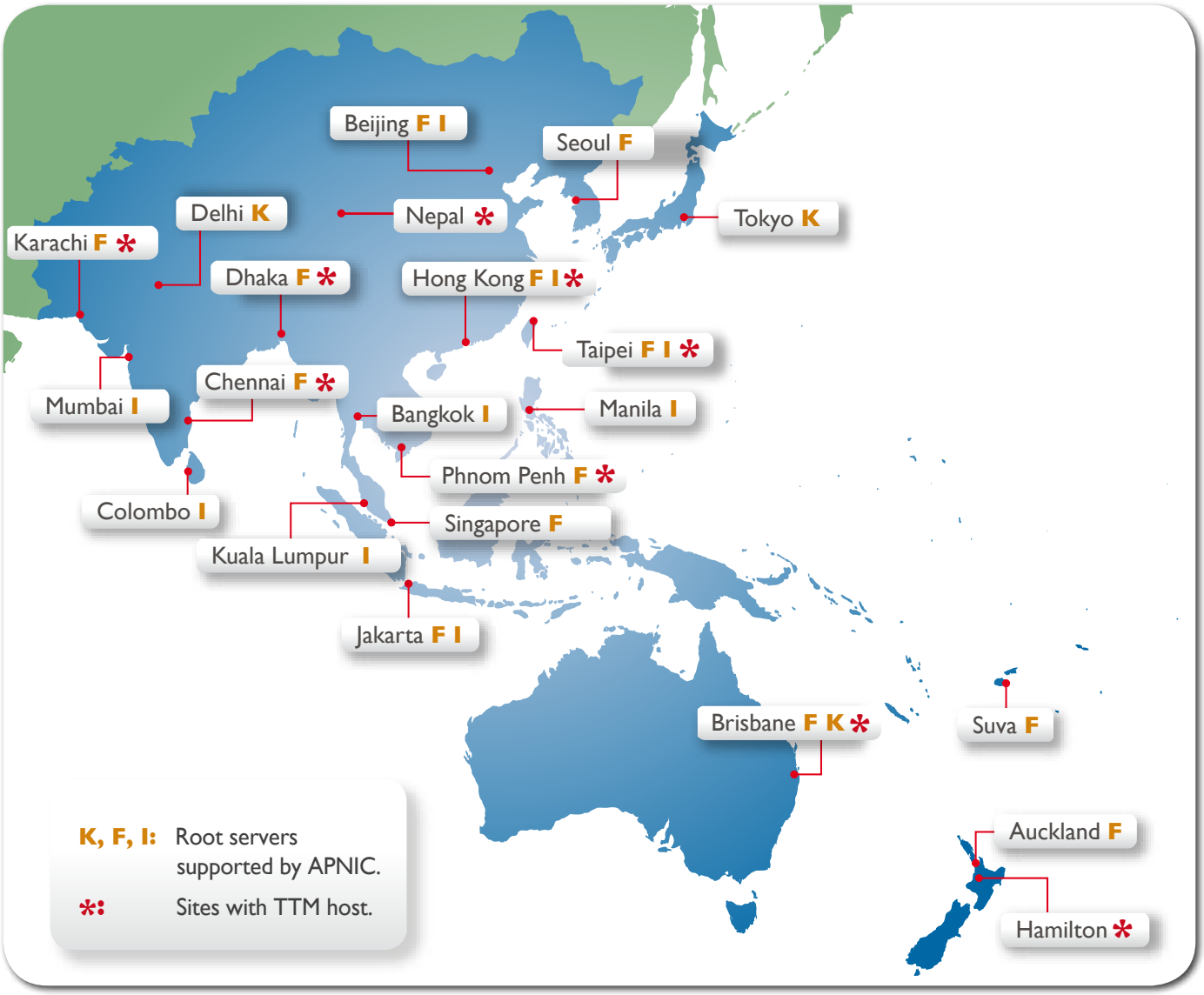
Test Traffic Measurement

APNIC also supports Test Traffic Measurement (TTM) and has funded 12 TTM nodes across the region.

TTM helps determine future network development by providing measurements to decision makers on connectivity between the TTM host and the rest of the region.

During 2010, TTM nodes were installed in New Zealand, Nepal, Cambodia, and Bangladesh. APNIC's support for this program makes valuable network data available for carriers, service providers, and researchers leading to better network planning.

www.apnic.net/ttm



Root server and TTM Map

Collaborating and Communicating

"Open and cooperative behaviour within the whole Internet community"

Internet **Governance**

Multi-stakeholder Forums

APNIC supports the Internet Governance Forum (IGF) model as an accurate reflection of the multi-stakeholder nature of Internet governance. In 2010, APNIC participated as part of the NRO in the fifth IGF, held in Vilnius, Lithuania, contributing its knowledge and experience to IGF participants. APNIC also participated as a co-organizer in the inaugural Asia Pacific regional IGF (APrIGF) in Hong Kong, with Paul Wilson presenting in the session: Managing Critical Internet Resources.

Law Enforcement Stakeholders

Given the increasing interest in combating cybercrime, APNIC has worked with law enforcement gatherings to educate the law enforcement communities on IPv6, whois database management, and the RIR system. In 2010, APNIC participated in workshops and presentations at the APT Cybersecurity Forum, the 6th Joint London Action Plan - Contact Network of Spam Authorities (LAP-CNSA) Workshop, and the Strategic Alliance Cyber Crime Working Group.

Government and Intergovernmental Stakeholders

In 2010, APNIC continued to contribute its expertise to OECD work on the Internet Economy. In particular, Geoff Huston, as a part of the Internet Technical Advisory Committee to the ICCP Committee (ITAC), contributed to the OECD's April 2010 report, "Internet Addressing - Measuring Deployment of IPv6".

APNIC's efforts in engaging intergovernmental forums such as the Asia Pacific Economic Cooperation (APEC) in 2010 peaked with APEC TELMIN8. APEC is a governmental body made up of 21 economies from the Pacific Rim with a working group dedicated to the discussion of telecommunication issues (TEL). Over the last two years, APNIC has worked with APEC TEL on a series of workshops on IPv6 addressing and IPv4 address depletion, highlighting the importance of IPv6 to the sustained future growth of the Internet. APNIC has also worked closely with APEC TEL to develop IPv6 Guidelines. Recently, during the TELMIN8, Ministerial Meeting in Okinawa, the TELMIN8 Declaration was announced that included a statement on IPv4 exhaustion and the importance of IPv6 deployment in relation to higher broadband penetration.

In 2010, APNIC, in coordination with the other RIRs through the NRO, participated in three ITU processes that included discussions on Internet matters, including IP addressing and cybersecurity. These were the IPv6 Group, the World Telecommunication Development Conference (WTDC), and the ITU Plenipotentiary (PP-10). APNIC contributed to these discussions by making factual information on IPv6 distribution, IP address management, and the RIR system, available to ITU Member States. In addition, APNIC encouraged multi-stakeholder input into ITU IPv6 discussions by holding a Community Consultation at APNIC 29, in which the ITU participated.

NRO and the **IETF**

From January 2011, the five Regional Internet Registries (RIRs) that form the Number Resource Organization (NRO) will begin a phased deployment of Resource Certification.

Resource Certification

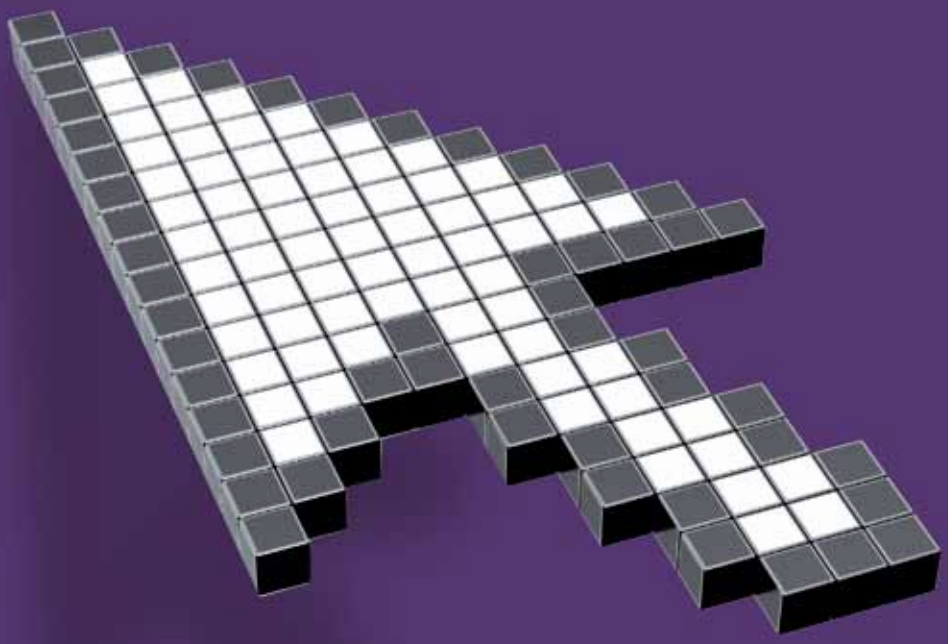
Resource Certification provides security to routing with a verifiable digital certificate that an Internet number resource has been registered by a RIR. This gives users confidence that a request to route a given range of IP addresses is issued by the legitimate holder of those addresses.

Recently, a major milestone was reached whereby all five RIRs were able to produce Route Origin Authorization (ROA) digital documents that state that address holders allow those addresses to be routed by specific Autonomous Systems.

APNIC played a key role in this globally coordinated effort by providing software expertise to AfriNIC, the RIR for the African region.

DNSSEC

APNIC is also working together with the other RIRs to provide DNSSEC capability to ERX address space, address space that was registered before the formation of the RIRs.



Corporate Support

"The internal functioning of APNIC that demonstrates full accountability to our Members"

APNIC's **New Home**

On 20 December 2010, APNIC successfully moved premises to a new building situated just across the Brisbane River in South Brisbane.

The purchase of the building was carefully considered by the Executive Council as it best utilized APNIC's financial reserves.

One priority in the relocation process was to find ways to make the operation as environmentally sustainable as possible, as part of the ongoing ecoAPNIC initiative. These measures include a fresh air component to the air conditioning system and "Smart Lighting", which significantly reduces lighting after hours and in unused areas with motion sensors.

Human Resource **Strategy**

APNIC staff:

- Represent 23 economies
- Speak 26 different languages

Diversity

APNIC prides itself on the diversity of its staff, with staff representing 23 economies. Twenty-six languages are spoken and APNIC provides multilingual Helpdesk support in eight languages.

APNIC continues its focus on employing high quality people with specialist skills to best represent our Members.

APNIC has also implemented an internship program that commenced in April 2010. This program allows regional graduates an opportunity to gain work experience at APNIC.

Training and Development

The Human Resource strategy includes ongoing staff training and professional development. APNIC has increased the use of in-house and group training as well as relevant external training.

APNIC also commenced an RIR Staff Exchange program, allowing staff members to develop and share their skills with other RIR employees. In 2010, APNIC worked closely with RIPE NCC and AfriNIC to share expertise on specific technical projects.

Workplace Health and Safety

APNIC is committed to providing a safe and healthy environment for its staff, and has implemented comprehensive health and safety strategies, which focus on:

- Ongoing First Aid training
- Staff participation in the Global Corporate Challenge (10,000 steps a day)
- Work-life balance
- Travel medical support to manage health risks
- EcoBiz accreditation

In July 2010, APNIC received the highest commendation possible for Workplace Health and Safety.

www.apnic.net/employment

Technical **Advances**

Agile Development Processes

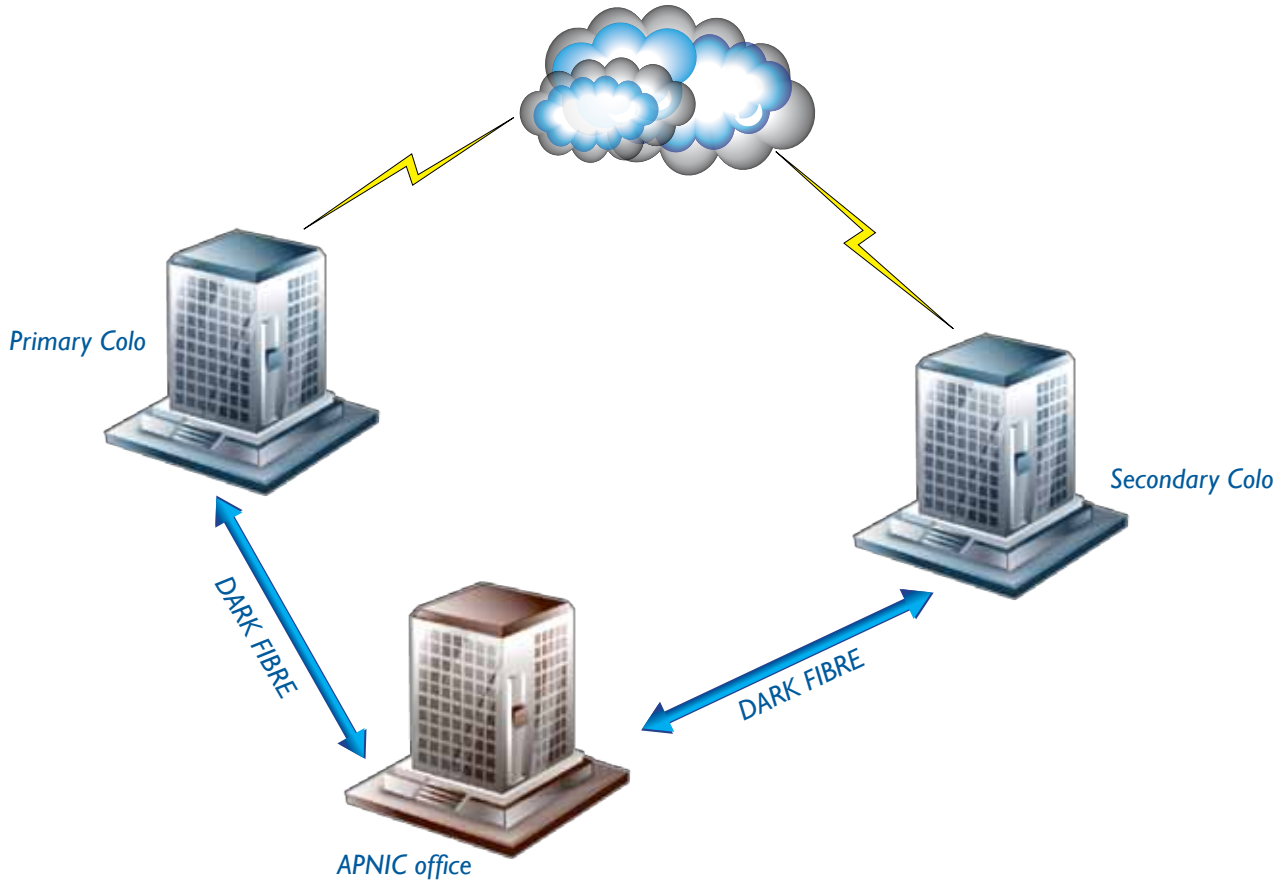
APNIC has implemented Agile software development processes to improve efficiency by providing a more versatile approach to its development methodology.

Initially rolled out in the software unit, Agile methodology will eventually be adopted by the whole organization where appropriate. APNIC will adopt the Agile process known as "Scrum", which progresses projects via a series of "sprints" or iterations that last from two to six weeks.

Site Redundancy

During 2010, APNIC also implemented site redundancy as part of the overall strategic plan for redundancy and robustness on all levels of services it provides.

To provide redundancy in cases of air conditioning and generator disruptions, or third party interruptions, APNIC is working towards a triangle architecture where we connect two co-locations and the APNIC office independently. This should provide greater resilience to our network services.



Financial **Information**

APNIC's Taxation Status

KPMG, on behalf of APNIC, lodged a formal objection to revised assessments from the Australian Taxation Office (ATO) in relation to the years ending June 2005, 2006, and 2007. In December 2010, APNIC was advised that the objection had been upheld and the decision by the ATO found that the Principal of Mutuality does indeed apply to receipts in the form of fees received by APNIC Pty Ltd from Members, and that APNIC is a not-for-profit organization. The ruling went further in approving APNIC's entitlement to deductions for marketing and promotional expenses that had been refused in the revised assessment.

Building Acquisition

APNIC purchased new premises at 6 Cordelia Street, South Brisbane in December 2009, with settlement occurring in May 2010. The new premises were refurbished in time for the office and infrastructure to be relocated during December 2010. The purchase of the office represents a strategy to invest part of APNIC's cash reserve to minimize future operational costs and diversify the investment portfolio.

2011 Budget

APNIC's activity planning process provides the basis for the development of APNIC's operating budget. The activity plan is derived from priorities identified in the Member and Stakeholder Survey and through APNIC's Operational and Strategic planning processes. The APNIC EC approved the 2011 budget submission in December 2010.

Statement of Financial Position

	2010 (AU$)	2009 (AU$)	% change from 2009
Current assets			
Cash	5,886,958	7,201,988	-18%
Restricted cash – ISIF grant program	66,891	145,215	-54%
Term deposit investment	0	2,338,882	-100%
Receivables	878,766	496,734	77%
Others	838,841	819,017	2%
Total current assets	**7,671,456**	**11,001,836**	**-30%**
Non-current assets			
Other financial assets	1,137,515	1,127,795	1%
Property, plant and equipment	8,390,656	1,607,819	422%
Long term deposit investment	0	1,000,000	-100%
Total non-current assets	**9,528,171**	**3,735,614**	**155%**
Total assets	**17,199,627**	**14,737,450**	**17%**
Liabilities			
Payables	416,262	797,990	-48%
Provisions	1,693,652	1,004,861	69%
Unearned revenue	6,074,216	4,130,987	47%
Total liabilities	**8,184,130**	**5,933,838**	**38%**
Equity			
Share capital	1	1	0%
Reserves	128,003	166,674	-23%
Retained earnings	8,887,493	8,636,937	3%
Total equity	**9,015,497**	**8,803,612**	**2%**
Total liabilities & equity	**17,199,627**	**14,737,450**	**17%**

Notes:

The statement of financial position, statement of comprehensive income, and the cash flow statement are the consolidation of APNIC Pty Ltd accounts being recorded in AUD.

For a better understanding of APNIC Pty Ltd's financial position and performance, as represented by the results of its operations for the financial year ended 31 December 2010, the statement of financial position and the statement of comprehensive income should be read in conjunction with the annual statutory financial report and the audit report contained therein.

Statement of Comprehensive Income

	2010 (AUD)	2009 (AUD)	% change from 2009
Revenue			
Interest income	397,689	566,854	-30%
IP resource application fees	1,373,986	1,194,713	15%
ISIF grant administration received	105,392	124,777	-16%
Membership fees	10,199,249	7,863,971	30%
Non-member fees	155,382	125,598	24%
Per allocation fees	994,276	1,542,369	-36%
Reactivation fees	17,550	8,876	98%
Sundry income	205,760	161,852	27%
Sub-total	13,449,284	11,589,010	16%
Exchange rate gain/(loss)	(18,471)	(38,262)	-52%
Total revenue	13,430,813	11,550,748	16%
Expenditure			
Communication expenses	339,964	156,901	117%
Depreciation expense	696,640	718,927	-3%
Donation/sponsorship	205,987	122,378	68%
ICANN contract fees	321,172	358,696	-10%
ISIF grant administration expense	105,392	124,777	-16%
Meeting and training expenses	249,401	138,457	80%
Membership fees	53,663	69,496	-23%
Other operating expenses	1,387,619	1,026,675	35%
Professional fees	554,295	591,140	-6%
Rent and outgoings	1,418,314	611,804	132%
Salaries and personnel expenses	6,507,584	6,033,254	8%
Travel expenses	1,404,527	1,404,359	0%
Total expenditure	13,244,558	11,356,864	17%
Operating profit before income tax expense	186,255	193,884	-4%
Income tax expense/(benefit)	(64,301)	48,830	-232%
Operating profit after income tax expense	250,556	145,054	73%

Cash Flow Statement

For the year ended 31 December

	2010 (AUD)	2009 (AUD)	% change from 2009
Cash flows from operating activities:			
Receipts from Members and customers	14,859,277	10,998,262	35%
Payments to suppliers and employees	(12,227,309)	(11,079,607)	10%
	2,631,968	**(81,345)**	**-3336%**
Interest received	528,573	599,800	-12%
Income tax paid	(76,925)	(208,418)	-63%
Net cash inflow from operating activities	**3,083,616**	**310,037**	**895%**
Cash flows from investing activities:			
Payments for property, plant and equipment	(7,829,216)	(556,363)	1307%
Proceeds from sale of property, plant and equipment	3,125	5,696	-45%
Net cash inflow/(outflow) from investing activities	**(7,826,091)**	**(550,667)**	**1321%**
Net decrease in cash held:	**(4,742,475)**	**(240,630)**	**1871%**
Cash at the beginning of the financial year	7,201,988	6,707,734	7%
Decrease in term deposits maturing in the next three months	3,417,206	661,119	417%
Effects of exchange rate changes on cash	10,239	73,765	-86%
Cash reserve at the end of the financial year	**5,886,958**	**7,201,988**	**-18%**

APNIC **Supporters**

APNIC expresses its sincere thanks to the following organizations that have supported its operations and training activities in 2010.

Training Sponsors for 2010

- .LK Domain Registry, Sri Lanka
- BrightHost Australia
- China Network Information Centre (CNNIC)
- China Telecom
- DST Multimedia Sdn Bhd Brunei
- Extreme Broadband Malaysia
- ICT Leadership and Management Academy, Brunei
- IDA Singapore
- INET Thailand
- International Training Institute (ITI) Papua New Guinea
- IPv6 Thailand
- ISOC Kolkata
- ISP Association of Bangladesh (ISPABD)
- Mobicom Mongolia
- Mobinet Mongolia
- Myanmar Computer Federation (MCF)
- Myanmar Post and Telecommunications (MPT)
- National Internet Exchange of India (NIXI)
- National University of Laos (NUOL)
- Nepal Internet Exchange (NPIX)
- Republic Polytechnic Singapore
- The University of Nottingham Malaysia Campus (UNMC)
- TOT Thailand

Training Hosts for 2010

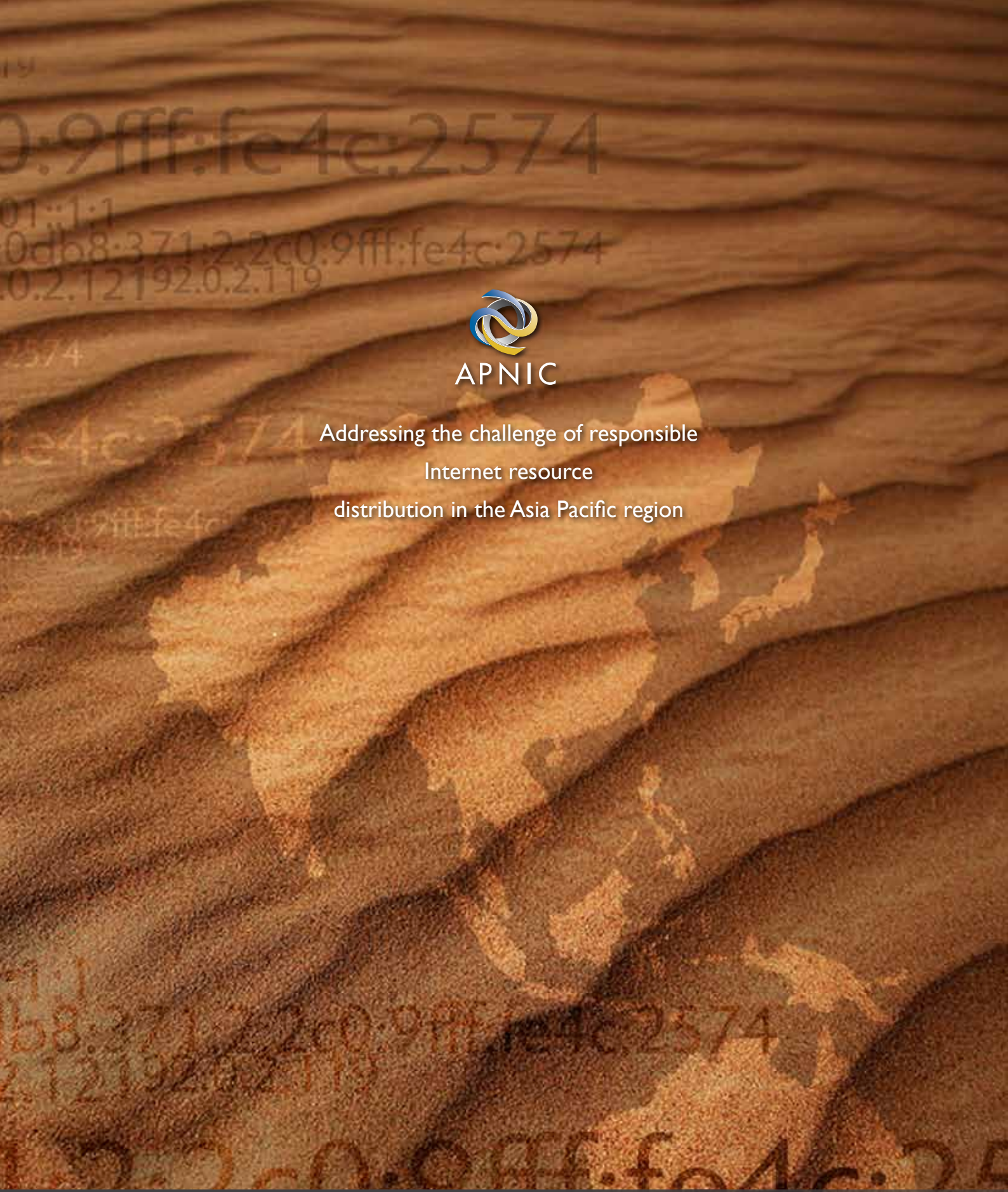
- New Zealand Network Operators Group (NZNOG)
- South Asia Network Operators Group (SANOG)
- Global IPv6 Summit
- Networkers Society of Pakistan (NSP)
- Pacific Island Telecommunication Association (PITA)
- ISOC Hong Kong
- Hong Kong Internet Exchange (HK-IX)
- DotAsia Organisation
- Asia Pacific Networking Group (APNG)
- intERIab Thailand
- Asia Pacific Advanced Network (APAN)
- MekongNet Cambodia
- AnAnA Computer Cambodia
- PacINET
- Pacific Network Operators Group (PacNOG)
- Indonesian Internet Service Providers Association (APJII)

Tech Sponsors for 2010

- HKIX
- PIPE
- SOUL
- Telstra
- WIDE

Meeting Sponsors

- Alcatel Lucent
- CNNIC
- Google
- Hurricane Electric (HE)
- INET
- IPv6 Thailand
- JPNIC
- KISA
- National University of Laos
- Next Byte
- On the Net
- PHCOLO
- Telstra
- TM
- TOT
- TWNIC
- VOCUS



APNIC

Addressing the challenge of responsible Internet resource distribution in the Asia Pacific region

Asia Pacific Network Information Centre

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Asia Pacific Network Information Centre

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