The Internet in Taiwan: Update

APNIC has previously held three Open Policy Meetings in Taiwan: APNIC 12 and APNIC 15 in Taipei, and APNIC 22 in Kaohsiung (see *Apster* issues 1, 6 and 19). The Taiwan Internet community is also active in the ICANN community; it hosted an ICANN regional meeting, *Toward the new era of Internet,* in October 2007, where Internationalised Domain Names (IDNs) and IPv6 deployment were the main topics of discussion. This month, APNIC will be returning to Taiwan for the 25th APNIC Open Policy Meeting in Taipei, in conjunction with APRICOT 2008.

Since APNIC's first meeting in Taipei in 2001, Internet usage in Taiwan has continued to grow. According to a survey conducted in 2007 by the Taiwan Industrial Development Bureau, over 70% of Taiwanese households now have Internet access, and 96% of those households are using broadband. In 2007, use of fibre optic networks (FTTx) by households with Internet access grew by 400% on 2006 figures. Wireless Internet is becoming increasingly common in Taiwan, with almost 20% of the population having used wireless Internet connections.

M-Taiwan

In the past year, Taiwan has inititated a major Information and Communications Technology (ICT) project, M-Taiwan. This project builds on e-Taiwan, which was a key component of *Challenge 2008: The 6-year national development plan*. Activities include constructing optical fibre pipeline infrastructure, and nurturing information and communication industries by promoting wireless broadband services.

Reducing the digital divide is one of the main goals of this project, which aims to bring network access to 90% of Taiwan's urban population. In addition, the program mandates upgrading domestic communications equipment capabilities, creating a mobile data service industry, and establishing a competitive mobile industry environment.

In an effort to establish long-distance wireless broadband networks (80% - 90% coverage in urban and 30% - 40% in rural areas), Taiwan has chosen the WiMAX (Worldwide Interoperability for Microwave Access) technology standard (IEEE 802.16).

WiMAX has been chosen as a wireless broadband alternative to traditional cable and DSL installations. It is being investigated for use in solving the last mile problem, which has become increasingly complex due to a rapid increase in the number of end users in recent years.

Promoting IPv6 in Taiwan

TWNIC has organised three exhibitions that let the general Taiwanese population see and touch IPv6 applications. The National Taiwan Science Education Center in Taipei is hosting the exhibition, 'IPv6 applications in the future life', where visitors can experience an IPv6 kitchen, study, bathroom, living room and bus stop. The exhibition runs from January to December 2008. APNIC 25 participants interested in seeing the exhibition can go to the APNIC Helpdesk for directions to the museum.

There are two other IPv6 exhibitions in Taiwan on display throughout 2008. The Chitou Forest Recreational Area in Nantou County is hosting the 'IPv6 weather sensors' exhibit, while the National Museum of Marine Biology and Aquarium in Pingtung County is hosting an 'IPv6 eco-observation' exhibit.

▲ Brochure for Taipei IPv6 exhibition (Source: TWNIC)

Sources:

http://www.wimaxforum.org/technology/downloads/M_Taiwan_Program.pdf

http://www.mtaiwan.org.tw

http://mit.find.org.tw

http://taipei2007.icann.org

25th APNIC Open Policy Meeting
25 - 29 February 2008   Taipei - Taiwan

APNIC 25 Open Policy Meeting

APNIC invites you to participate in the 25th APNIC Open Policy Meeting held in conjunction with APRICOT 2008:

The Howard Plaza Hotel, Taipei, Taiwan

25-29 February 2008

APNIC 25 is a five-day event that brings together Internet and networking experts, government representatives, industry leaders, and other interested parties from around the Asia Pacific region to meet with colleagues, attend workshops and tutorials and, importantly, discuss policies.

➡ http://www.apnic.net/meetings/25

You can follow the events at APNIC 25 from anywhere in the world. Use the following online features to participate in APNIC 25 in real time:

Live transcripts

Live transcripts of selected sessions can be accessed via chat clients and web browsers. Archived transcripts are available one day after the session is held.

Chat rooms

Jabber chat rooms enable people around the world to participate in meeting sessions in near real time. In these chat rooms, you can:

• Follow live transcripts of most meeting sessions

• Discuss issues with others in the chat room

• Have your questions or comments read out and discussed at the meeting

• Have your position on policy proposals considered during the consensus process

Video and audio streaming

Selected sessions are also streamed live in video and audio-only formats. Archived video footage will be available on the APNIC website after the meeting.

➡ http://www.apnic.net/meetings/remote

Policy proposals at APNIC 25

prop-050 **IPv4 address transfers**

This is a proposal to remove APNIC policy restrictions on transferring registration of IPv4 allocations and IPv4 portable assignments between current APNIC account holders.

The first version of this proposal was presented at APNIC 24, where the author asked for feedback. He did not seek consensus at that time. The author will seek consensus on version two of the proposal at APNIC 25.

Version two of the proposal includes amendments relating to community feedback about:

• The risk of transfers causing further IPv4 routing table fragmentation

• The possibility of allowing inter-RIR and APNIC/NIR transfers if other Internet Registries adopt similar transfer proposals

A proposal for address transfers similar to this proposal, 2007-08: 'Enabling methods for reallocation of IPv4 resources', has been submitted to the RIPE community as a policy proposal.

prop-052 **Cooperative distribution of the end of the IPv4 free pool**

This proposes how the remaining unallocated IPv4 address space should be distributed after the IANA free pool is exhausted. Under this proposal, when an RIR has less than thirty days of address space in its unallocated pool, it can approach the RIR with the most remaining unallocated IPv4 space and request a portion of that RIR's pool. As each RIR's pool becomes smaller,

RIRs will forward their LIR requests on a weekly basis to the RIR with the most remaining space.

This proposal has been submitted in the AfriNIC, ARIN and RIPE regions and will also be submitted in the LACNIC region.

prop-053 **Changing minimum IPv4 allocation size to /24**

This is a proposal to address the problem faced by small ISPs that cannot afford the annual Small membership tier fee of AU$3,169 (for the minimum APNIC allocation size, a /21). The proposal suggests that APNIC:

1. Change the minimum IPv4 allocation size from /21 to /24

2. Introduce a new membership tier for /24 allocations with an annual fee of AU$500

prop-054 **NIR operational policy document revision**

This proposes revising the reverse zone delegation section of the policy document, APNIC-103-v001: 'Operational policies for National Internet Registries in the APNIC region'. The proposal suggests:

1. Adding a reference to reverse DNS delegations in ip6.arpa

2. Simplifying the description of processes for delegating reverse zones specified in section 3.4 of the document

This proposal will be discussed in the NIR SIG.

prop-055 Global policy for the allocation of the remaining IPv4 address space

This is a proposal for allocating the remaining IPv4 space from IANA to the RIRs. The proposal suggests that IANA reserve one /8 for each RIR as soon as this proposal is adopted. Later, when IANA receives a request for IPv4 address space that cannot be fulfilled using the remaining IANA IPv4 free pool, IANA will allocate each RIR a single /8 from the block reserved for this purpose. Any remaining /8s in IANA's free pool will then be allocated to the RIR that makes the last request to IANA.

This proposal was a collaboration between the authors of the proposals:

- prop-046: IPv4 countdown policy proposal

- prop-051: Global policy for the allocation of the remaining IPv4 address space

These two proposals were deemed by a number of people in the RIR communities to be very similar; and at the ARIN XXI meeting, the authors of both proposals were asked to work together to produce a single proposal.

The two proposals that were combined to create this proposal have previously been submitted in all RIR regions. 'Global policy for the allocation of the remaining IPv4 address space' was adopted by the AfriNIC and LACNIC communities. The authors of this proposal plan to submit this new combined proposal to all RIR regions.

prop-056 IPv4 soft landing

This proposes tightening the criteria for receiving subsequent IPv4 allocations from APNIC to:

- Prolong availability of IPv4 addresses for requesters who can provide sufficient justification

- Encourage deployment of IPv6 as an alternative to IPv4 by making the requirements to justify IPv4 allocations increasingly stringent over time

- Promote more efficient use of increasingly scarce IPv4 resources

The proposal suggests that APNIC institute a set of IPv4 address allocation phases that vary the requirements for address allocation (using the amount of address space remaining unallocated by IANA as a metric). As the amount of address space in the IANA free pool is reduced, the requirements for IPv4 address allocation become more stringent.

This proposal has been submitted to the ARIN region. The author also intends to submit the proposal to the remaining RIR regions.

prop-057 Proposal to change IPv6 initial allocation criteria

Currently, to qualify for an initial IPv6 allocation, requesters must have a plan for making 200 assignments within two years. This is a proposal to add an alternative criteria that allows an LIR to choose between:

- Providing a plan for 200 assignments within two years, OR

- Proving that the requester is an existing LIR with allocations from an RIR or NIR AND plans to make assignments or sub-allocations within two years

Currently, AfriNIC policy requires initial IPv6 allocation requesters to show a reasonable plan for making /48 IPv6 assignments to end sites within a year, while LACNIC requires LIRs to offer IPv6 services within two years. RIPE policy requires LIRs to have a plan for making sub-allocations or assignments within two years. In 2007, a proposal to modify the 200 assignment requirement was abandoned in the ARIN region.

prop-058 Proposal to create IPv4 shared use address space among LIRs

This is a proposal for APNIC to delegate one /8 block as IPv4 shared use address space for LIRs in the Asia Pacific region. This shared use address space is intended to prevent collisions between two interconnected LIRs using the same RFC 1918 private address ranges. No registration is required in the APNIC Whois Database and there are no fees associated with using address ranges within the designated shared address space. Global uniqueness is not guaranteed under this proposal. LIRs continue to have the option of requesting allocations from APNIC under existing allocation criteria.

➡ http://www.apnic.net/policy/proposals

▲ PHNOG report on page 7

APNIC fee currency change: Impact analysis

In October 2007, the APNIC Executive Council (EC) announced a change in the APNIC fee structure: Beginning 1 January 2008, all APNIC fees would be charged in Australian dollars instead of US dollars.

The new fee schedule adopted by the APNIC EC is based on the old fee schedule, converted at a rate of 0.7889 US dollars to each Australian dollar. This exchange rate was the official projected exchange rate for 2007, and was used as the basis for calculating the 2007 APNIC budget.

http://www.apnic.net/news/2007/1026.html

The reason for this change in our fee currency is the US dollar's ongoing decline in value, which has been undermining APNIC's revenue base and financial stability. In fact, 2007 was the first year in which APNIC operated with a significant deficit budget. As the US dollar continued to decline during the year, it was clear that changes were needed to avoid reducing APNIC services or incurring ongoing operational losses and erosion of APNIC's capital reserve.

The following diagram (Figure 1) charts the devaluation of the US dollar against the Australian dollar from 2000 to 2007. While APNIC had absorbed large fluctuations and an overall devaluation of the US dollar from 2001 to 2004, the more recent devaluation since 2006 has caused greater concern. Looking ahead, it is predicted that this decline in the value of the US dollar will continue.


▲ Figure 1: AUD-USD exchange rate: 2000-2008
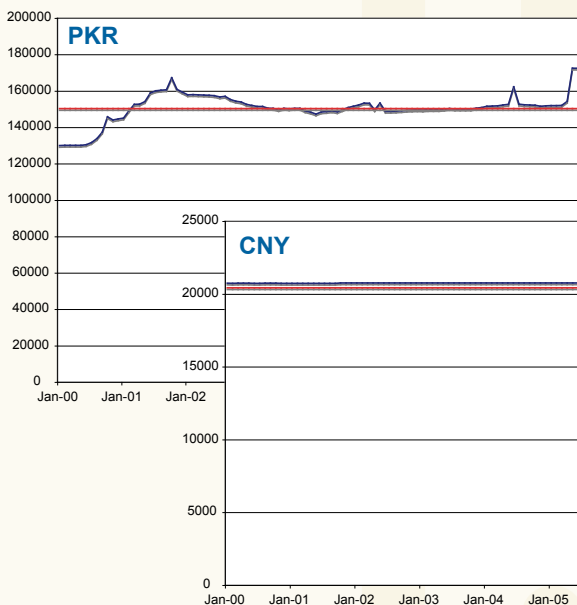
Impact on APNIC income

The devaluation of the US dollar has resulted in a reduction in APNIC's income on a per-member basis as expressed in Australian dollars, APNIC's operating currency. Figure 2 charts the income received by APNIC from a member in the Small tier from 2000 to present. It is clear from this chart that APNIC's income per Small member has been reduced by well over 40% since the high point in 2001 (that is, from over $5,000 to under $3,000 per Small member per year).
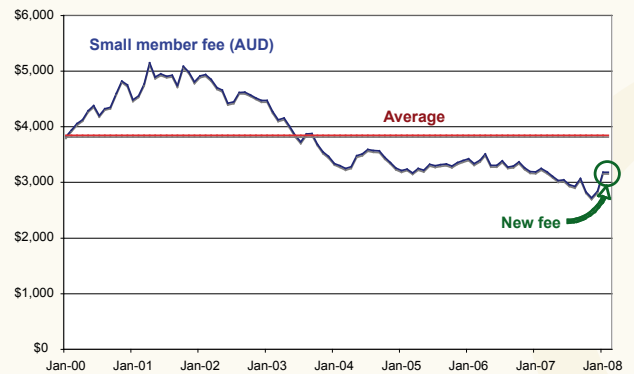

▲ Figure 2: Fees received by APNIC from a member in the Small tier (AUD)

Impact on member fees

Figure 2 also shows the cost of APNIC membership for a Small member in Australia, and illustrates that APNIC membership costs have reduced dramatically over this period. The far right-hand end of the curve indicates the new fee in Australian dollars, which is still well below the average for the whole period (shown by the red line).

The rest of the charts in this article show similar comparisons for a selection of currencies in the Asia Pacific region. Each chart shows the cost of a Small membership in that currency, the average cost for the whole period, and the new cost after the fee structure change on 1 January 2008. It is interesting to note that the exchange rate history and behaviour varies significantly across the region, and it is difficult to generalise the effect on APNIC members overall.
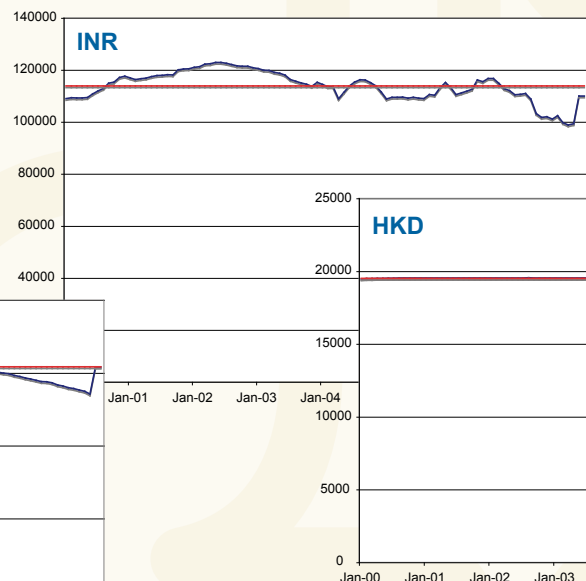
Fee structure vote

In a formal vote held in September 2007, the APNIC membership narrowly rejected a proposal to revise the fee structure. This proposal had two components:

1. Charge APNIC fees in Australian dollars
   (at the rate of 0.7889)

2. Add an increment of 7% to all fees

During discussions before and after the vote, it was widely agreed that the change to Australian dollars was reasonable; however, the additional increment was not as generally supported.

In making its decision in October, the APNIC EC considered the very close result of the vote and the content of discussions before concluding that the first component of the proposal was reasonable and should be accepted. The APNIC EC made the decision in line with its responsibility under the APNIC By-laws to determine APNIC fees.

This change of fee currency removes much of the financial uncertainty from the APNIC fee structure. Previously, both APNIC members and the APNIC Secretariat experienced financial uncertainty: Individual members carried their local currency's exposure against the US dollar while APNIC needed to convert the same sums from US dollars to Australian dollars. By adopting the new fee schedule, we hope that both the APNIC membership and Secretariat can enjoy a more stable financial arrangement that allows APNIC to concentrate on delivering relevant and helpful services with the expected levels of quality and timeliness.

- Paul Wilson

Note: The data used in this report was obtained from OANDA.com, using the "FXhistory" historical currency reporting tool, and interbank rate for all currencies examined.

TWD

KRW

JPY

NZD

SGD

IDR

MYR
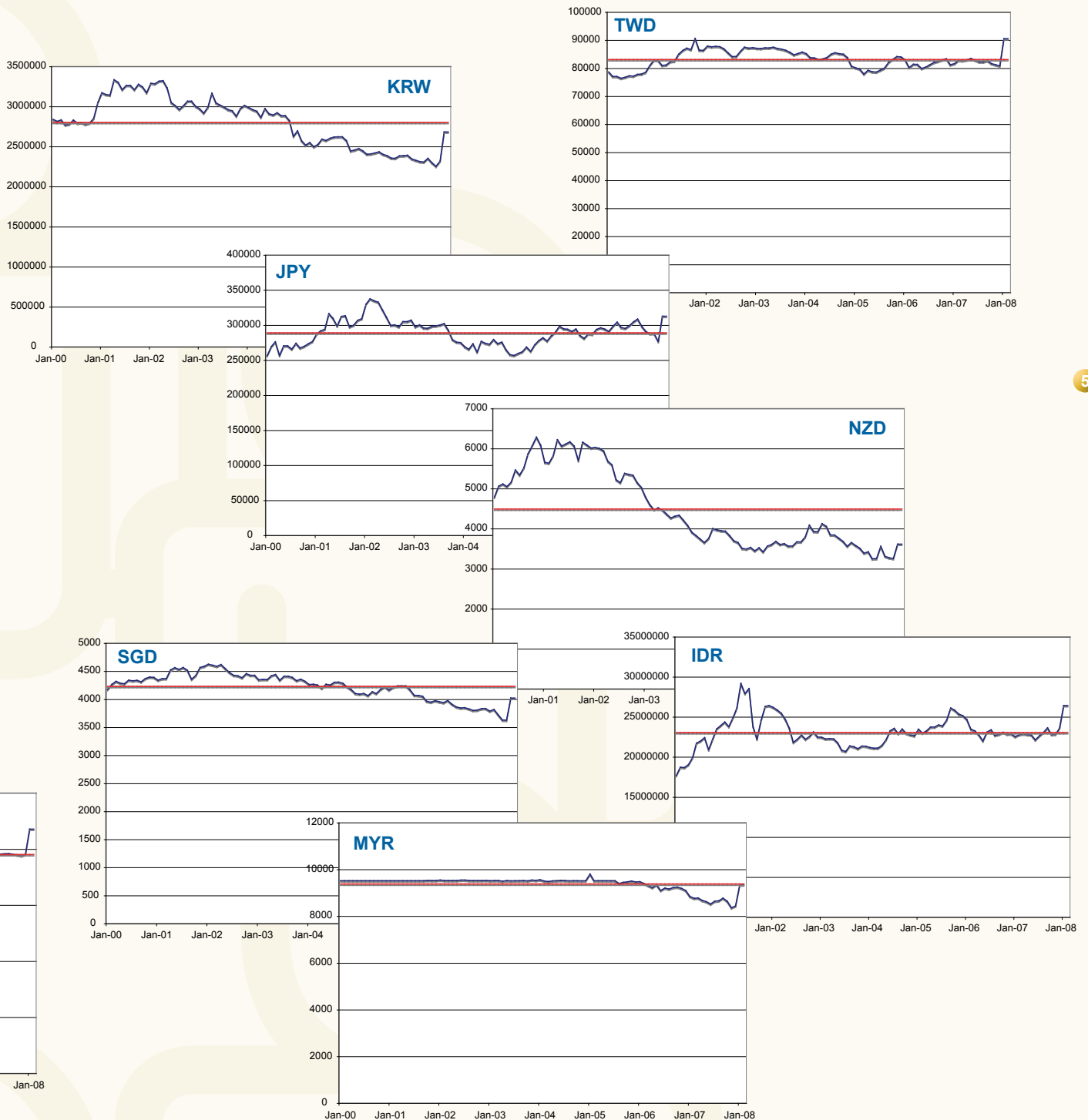
Elections at APNIC 25

Number Resource Organization Number Council (NRO NC)

There will be an election for one position on the NRO NC due to Kenny Huang's term expiring. The person elected in this position will serve on the NRO NC for 18 months beginning 1 April 2008. The NC performs the role of the Address Supporting Organization Address Council (ASO AC).

The NRO NC candidates are:

- Alec Shen
- Mohsin Farhan Siddiqui
- David Woodgate
- Nitin Walia
- Kenny Huang
- Vish Yelsangikar
- Mohammed Hanif Reza Bhuiyan

APNIC Executive Council (EC)

There will be elections for three APNIC EC positions as the terms of Akinori Maemura, Che-Hoo Cheng and Vinh Ngo expire. The three successful candidates will serve on the APNIC EC for two years.

The APNIC EC candidates are:

- Azhar Muhammad
- R S Perhar
- David Hughes
- Vinh Ngo
- Ma Yan
- Vish Yelsangikar

At the time of printing, nominations for the EC election were still open. Please visit the APNIC 25 elections web page below for the latest election information.

➡ http://www.apnic.net/meetings/25/elections

Key dates

13 February 2008	15:30 UTC+8 (Taipei time)	NC and EC online voting opens
27 February 2008	9:00 UTC+8 (Taipei time)	NC and EC online voting closes; EC proxy voting closes
29 February 2008	9:00 - 14:00 UTC+8 (Taipei time)	NC and EC onsite voting takes place

Notes:

- To vote online you must have voting rights in MyAPNIC
- To vote onsite in the EC election you must be an APNIC member with voting rights
- To vote onsite in the NC election you must be registered to attend the APNIC Member Meeting

For more information, contact helpdesk@apnic.net

▲ If you are a MyAPNIC user, you may be able to vote online

Resource Certification comes to MyAPNIC

APNIC has released a Resource Certification feature to MyAPNIC in time for APNIC 25. The new addition enables members to use their MyAPNIC account to register secure communication keys. Members can then use these keys during secure protocol exchanges to manage their resource certificates.

This MyAPNIC release is the first phase of APNIC's Resource Certification support program. In the next phase, APNIC will develop services that offer digital signatures and title verification for address holdings. These features build on the security offered by Resource Certification. We anticipate that other developers will release similar public services in the near future, including digitally signed whois and routing registries.

APNIC encourages early adopters with access to Resource Public Key Infrastructure (RPKI) systems to use this new MyAPNIC feature to support their local certification process.

For information on how Resource Certification works, see *Apster 23* (published September 2007) and *Apster 19* (published August 2006):

➡ http://www.apnic.net/docs/apster

If you are attending APNIC 25 and you have any questions about APNIC's Resource Certification activities, see George Michaelson and Geoff Huston onsite.

Member application form

In December 2007, APNIC simplified its new account and resource application process for prospective members. This project was part of the Clients First initiative.

➡ http://www.apnic.net/services/member

Have you used the new form? Let us know what you think! Send your feedback to helpdesk@apnic.net

MyAPNIC BoF at APNIC 25

Come to the MyAPNIC BoF at APNIC 25 to share your experiences using the portal, and discuss how we can make MyAPNIC more useful for you:

Magnolia Room

Wednesday 27 February 2008

18:00 - 19:00 UTC+8 (Taipei time)

MyAPNIC is being continually improved. Upgrades coming in the near future include:

- A feature that allows members to submit ongoing resource requests
- An enhanced current contacts feature that allows easier updates

APNIC community interface

SANOG 11

SANOG 11 was held in Dhaka, Bangladesh, 10-18 January 2008. The event was hosted by the ISP Association of Bangladesh and supported by the ICT Business Promotion Council of Bangladesh, the Internet Society and APNIC.

Around 150 people attended the event, and many participated in the workshops and tutorials. Topics included IPv6 routing, security and Multiprotocol Label Switching (MPLS).

The last day of SANOG was designated 'APNIC Day'. The day included a panel discussion on IPv4 depletion and IPv6 deployment issues in the region. The meeting attendees' general consensus was that it was high time operators looked into IPv6 very seriously, especially when buying equipment.

SANOG 12 will be held in Kathmandu, Nepal, 6-14 August 2008.

- Gaurab Raj Upadhaya

PHNOG 2

The second PHNOG was held 3-7 December 2007 in Pasig City, Philippines. The event was held in collaboration with the Advanced Science and Technology Institute (ASTI).

Since its inception, PHNOG has had a strong partnership with APNIC. APNIC staff member and PHNOG founder Amante Alvaran (pictured) participated, along with fellow staff Champika Wijayatunga and Annaliza Mulingbayan, who conducted training.

The event's theme was 'Improving the Internet Infrastructure', and featured presentations and workshops on topics including the Philippine Open Internet Exchange (PHOpenIX), the Philippine Research, Education and Government Information Network (PREGINET), multihoming, VoIP and IPv6 operations.

Stay tuned for information in the coming months about the next PHNOG.

Apster to be published twice per year

Beginning this year, *Apster* will be published twice anually. This will allow the *Apster* team to devote more time and resources to giving you high quality Internet community news. Coincidentally, the *Apster* issue number will match the number of the APNIC meeting it is distributed at - *Apster 26* will be distributed later this year online and at APNIC 26 in Christchurch, New Zealand.

Do you have news to share with Apster readers?
We remind our readers that we welcome contributions of any relevant, interesting, non-commercial content. Issues that affect the Asia Pacific Internet community will be particularly appreciated!

Staff updates

Richard Brown, Business Area Manager

Richard has recently been working with APNIC in a consulting capacity and became an APNIC staff member in February 2008. He holds a Masters of Business Administration, and a Graduate Diploma in Management. Richard brings APNIC his well rounded experience in all aspects of financial management and organisational performance, and in aligning system functionality with business requirements.

Training schedule

2008

February
- **20-25** Taipei, Taiwan (APNIC 25/APRICOT 2008)

March
- **21-27** Karachi, Pakistan
- **27-28** Jakarta, Indonesia

April
- **7-11** Kathmandu, Nepal (hosted by NPIX)
- **8-11** Kuala Lumpur, Malaysia
- **8-11** Sydney, Australia
- **14-16** Bandar Seri Begawan, Brunei
- **14-16** Thimphu, Bhutan

May
- **20-30** Guam, Palau, Marshall Islands
- **19-23** China
- **22-23** Manilla, Philippines (hosted by ASTI)
- Japan

June
- Singapore
- Phnom Penh, Cambodia (hosted by Angkor Net/Anana Computer)
- Bangkok, Thailand (hosted by AIT)
- Ulaanbaatar, Mongolia (hosted by Datacom)

July
- Vietnam

August
- India
- Australia
- Kathmandu, Nepal (in conjunction with SANOG 12)

September
- China

The APNIC training schedule is subject to change. Please check the website for regular updates at:

www.apnic.net/training

If your organisation is interested in sponsoring APNIC training sessions, please contact us at training @apnic.net

Calendar

How to contact APNIC

●	Street address	Level 1, 33 Park Road, Milton, Brisbane, Qld 4064, Australia
●	Postal address	PO Box 2131, Milton Qld 4064, Australia
●	Phone	+61-7-3858-3188
●	SIP	helpdesk@voip.apnic.net
●	Fax	+61-7-3858-3199
●	Website	www.apnic.net
●	Helpdesk	helpdesk@apnic.net
●	Training	training@apnic.net
●	Webmaster	webmaster@apnic.net
●	*Apster*	apster@apnic.net

Member Services Helpdesk

The Member Services Helpdesk provides APNIC members and clients with direct access to APNIC Hostmasters.

Chat
www.apnic.net/helpdesk

VoIP
helpdesk@voip.apnic.net

Email
helpdesk@apnic.net

Phone
+61 7 3858 3188

Helpdesk: 9:00 am - 7:00 pm (UTC + 10 hours) Monday - Friday

Are you using MyAPNIC?

APNIC members can use MyAPNIC to:

- View APNIC resources held by their organisation
- Monitor the amount of address space assigned to customers
- View current and past membership payments
- View current tickets open in the APNIC email ticketing system
- View staff attendance at APNIC training and meetings
- Vote online

For more information on MyAPNIC's features, see:

➡ www.apnic.net/services/myapnic