

# APNIC 32 Busan, Korea

## Trip Report

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This report will present pertinent information from my trip to the APNIC 32 conference in Busan, Korea. The report is divided into a number of sections.

1. An overview of the APNIC31 conference showing attendance figures, details from the Member's Meeting as well as the Policy Meeting.
2. Notes from the IPv6 Transition Plenary
3. A report on the Asia Pacific IPv6 Task Force meeting held at the APNIC32 conference.
4. Notes from Inter-networking during natural disasters.
5. Areas for future consideration by the NZ IPv6 Taskforce and InternetNZ.

### **1 An overview of the APNIC32 conference.**

#### **Meeting Statistics**

**Total number of on-site delegates: 244**

<b>Economies represented:</b>	35
<b>APNIC Member organizations represented</b>	62
<b>Remote online participants</b>	
<b>Online remote participants</b>	506

*Table 1 – Attendance numbers for the APNIC32 members’ meeting*

### 1.1 APNIC Member’s Meeting

There is an ongoing discussion around the election and voting structure within the APNIC organisation. An in-depth discussion is beyond the scope of this report, however this has potential to impact the way that New Zealand’s views are represented with in the APNIC organisation. Interested parties should contact me directly for more information.

### 1.2 APNIC Policy Meeting

Andy Linton, who ran unopposed, was re-elected as Policy SIG Chair.

An election was held for Co-Chairs and Skeeve Stevens (first Co-Chair, two-year term) and Masato Yamanishi (second Co-Chair, one-year term) were elected.

The SIG Chair suggested a small working group be formed to discuss IPv6 policy holistically. The Chair is currently seeking volunteers to participate. I plan to approach the SIG chair with an offer to participate in this group in order to ensure that New Zealand’s IPv6 interests are represented.

Four policy proposals were discussed. The following proposal reached consensus and will progress to the 8-week comment period:

- **prop-096:** Maintaining demonstrated needs requirement in transfer policy after the final /8 phase

This proposal opens up the way for ARIN to allocate any returned IPv4 addresses to APNIC (and other RIRs with a needs based allocation policy)

The following proposals did not reach consensus, and were sent back to the mailing list for further discussion:

- **prop-098:** Optimizing IPv6 allocation strategies (simplified) was sent back to the mailing list and to the new working group
- **prop-099:** IPv6 Reservation for large networks was sent back to the mailing list.

- **prop-100:** National IP Address Plan - Allocation of country-wide IP address blocks

All of the other policies shared a common theme; IPv6 allocation to large organisations with a long term view. These proposals were returned to the mailing list in the hope that some additional clarification can improve them.

It is heartening that the majority of the proposals at this meeting are dealing with the future of the Internet under IPv6 rather than any further conservation measures under IPv4.

An in depth discussion of these policies is outside the scope of this report. For details see the APNIC Policy proposals page or contact me directly for commentary.

## 2 IPv6 Transition Plenary - Lessons from the IPv6 test flight

I was invited by APNIC to chair a section of the day long IPv6 Transition Plenary. My panel was discussing with content providers what they observed on World IPv6 Day.

Google, Facebook, Yahoo and Limelight were represented on the panel and all had very similar experiences.

1. World IPv6 Day was a global success. There were small problems, but these were overcome easily in each case.
2. Planning was an important part of making this a success. In all cases the participants had 'soft-launches' a number of days in advance.
3. Having a date was important as it gave everyone something to plan (or cram) for.
4. All the participants have turned IPv6 back off again. This was partly because it was always an agreed outcome and part of the deal with management. It was also somewhat due to the 0.02% of people affected by lack of OS support for IPv6. For some of the larger content providers, 0.02% of their client base is a non-trivial number of users.
5. The volume of traffic was much less than hoped for. This wasn't due to problems on the content providers' networks, but much more around the ability of end users to be able to get access to IPv6 content. Issues such as availability of CPE and the extent to access network support were cited as contributing problems.

All in all World IPv6 day was considered a success. The organisers are looking to the future with moves to hold another, longer event in 2012.

## 3 Asia Pacific IPv6 Task Force meeting.

The APIv6TF held a conference as part of the larger APNIC members meeting. The following people presented on the state of IPv6 within their economies.

**Rakesh Mohan Agarwal, DoT, India**

**Tomohiro Fujisaki, ISOC-JP**

**Joonhyung Lim, KISA, Korea**

**Dean Pemberton, IPv6TF NZ**

**Bani Lara, ASTI, Phillipines**

The overwhelming theme of all these presentations (except NZ) was the involvement from governments within these economies. This has meant that the organisations within those economies have been much less focused on driving awareness or benchmarking. In fact while there was a high level of interest in the benchmarking work undertaken by the NZIPv6TF, it was unparalleled throughout the region.

This realization has lead me to suggest that work be undertaken by the NZ IPv6 Task Force to look at the countries in the Asia Pacific region and report on which ones do, and do not, have some level of government support or direction around IPv6.

I suspect that New Zealand is one of the only economies without a statement from government calling for IPv6 adoption. This has forced the NZ IPv6 TF into a position of having to produce its own momentum rather than is the case in other economies where the momentum is created by a government initiative.

#### **Way-forward: Future directions of APIv6TF**

Another topic discussed at the APIv6TF meeting was on the future of the task force.

Miwa Fujii is looking to establish where the task force should be putting its efforts in the future years. I was able to pass on to the members present that the NZ IPv6 TF finds this a very beneficial forum for both learning about the status of IPv6 deployment in other economies, as well as a place to gain feedback around out own activities.

I also expressed a desire to, through the task force, look at a way of pooling regional demand for IPv6 capable CPE in order to allow smaller economies to be benefit from the purchasing leverage of larger economies.

## **4 Inter-networking during natural disasters**

Andy Linton and I were invited, along with two Japanese experts, to participate in a panel discussion on the topic of how natural disasters affected networking.

The common theme among the presentations was that we all need to be prepared for such disasters and that the more flexible people were, the more options they would have during a disaster.

Both Andy and I were both briefed on the work that InternetNZ has already undertaken with a number of parties around this subject and we made sure to showcase these efforts to the international audience. I believe that it is an important aspect that InternetNZ can continue to provide leadership in.

Compared to Japan, the network infrastructure throughout Christchurch fared relatively well. This is due in no small part to the extraordinary efforts of those on the ground as well as everyone involved behind the scenes all over the country.

I believe that there is more work to be done in this area however and I would be keen to discuss future directions with InternetNZ and how I can see this benefiting both the New Zealand Internet community as well as the New Zealand population as a whole.

## **5 Areas for future consideration by the NZ IPv6 Taskforce and InternetNZ.**

I believe that APNIC and its members have handled the exhaustion of the IPv4 address space with a level of pragmatism. While there is some talk about the inevitable formation of an IPv4 address 'black market', for the most part the focus of the members meeting was on the allocation of IPv6 address space.

This is an encouraging development as it means that members are looking to the future and attempting to plan with IPv6 at the forefront of their minds. While members are resigned to having to work with CGNs on some level, the unanimous feeling was that these were a stop-gap measure rather than a sustainable future architecture direction.

With this change in focus comes some challenges however. Large economies such as India and China are finding that the existing two-year window for address justification is causing them operational issues when it comes to allocating IP addresses to large networks. It is felt that being able to allocate addresses based on a 10, or even in some cases 20 year requirement would allow network architects to design addressing plans that would require less change as they grew.

As previously mentioned, three of the proposals at this meeting were about this very fact. All of these plans seek to request a larger block of IPv6 address space than would be allowed under current APNIC allocation policies.

This has an impact for New Zealand due to the relatively small population of the economy in relation to others in the region. Previously, New Zealand has always 'hit above its weight' when it comes to the adoption of technology.

New Zealand should ensure that any attempt to tie entitlement of IPv6 allocations to population size, or economic growth rate should be given the same consideration as factors such as technological adoption

rate of population. New Zealand has a requirement for IP addresses that is independent of its population in many areas. New Zealand is world leader in the area of remote monitoring in both the vending machine as well as agricultural markets. This, among other areas, requires a number of IP addresses that does not scale in terms of 'number of addresses per person'.

**RECOMMEND:** *InternetNZ and the IPv6 Task Force will want to keep abreast of developments in this area of policy to ensure that New Zealand's avenues for development and innovation are not suppressed.*

Another issue of concern for New Zealand is that within APNIC there is a move by members of certain economies to request that the APNIC voting structure be changed.

At present, APNIC executive council positions are voted on using a proportional representation system. Essentially the more IP address resources a member has, the more votes they have to wield. New Zealand currently enjoys a strong voting presence within the APNIC community; largely thanks to a few very large New Zealand members and their IP address resources.

There has been a suggestion that APNIC move to a '1 member, 1 vote' system that I believe would change the way that New Zealand interacts with APNIC EC elections.

**RECOMMEND:** *InternetNZ works to understand what the impact of a change in the APNIC voting system would mean for the representation of the New Zealand Internet Industry*

I am happy to talk about this matter in more detail in person if required.

Dean Pemberton

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