Supporting Internet Development in the AP Region

An International Collaboration Effort

Sanjaya
Deputy Director General
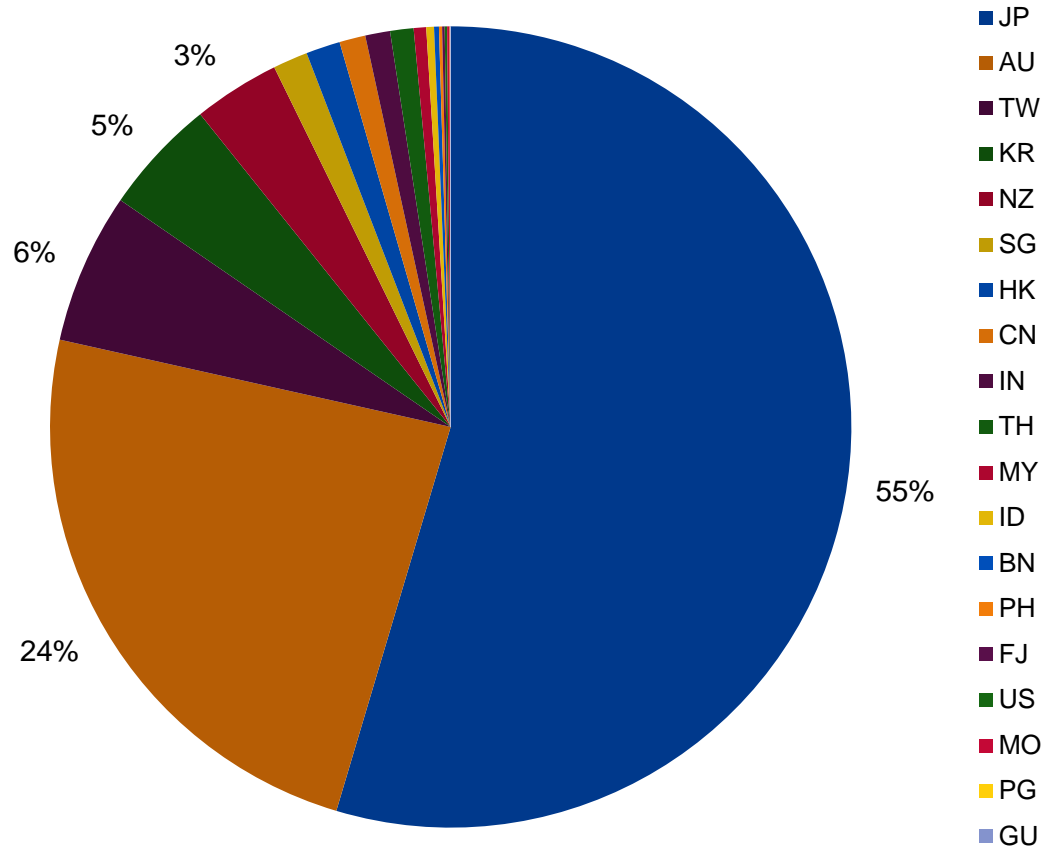
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Overview

- Looking back 20 years

- Development milestones
  - Policy
  - Human capacity
  - Infrastructure

- Learning points

- Moving forward

Looking back 20 years

- Year 1994
  - APNIC was just 1 year old. We barely walked ☺
  - First members weren't registered until 1995:
    - ChinaDotCom Corporation Hong Kong Limited
    - Internet Thailand Company Ltd.
    - Japan Network Information Center
    - Telstra Corporation
    - 2 from Philippines (now closed)
      - Philippine Network Foundation, Incorporated
      - Sequel Concepts, Inc
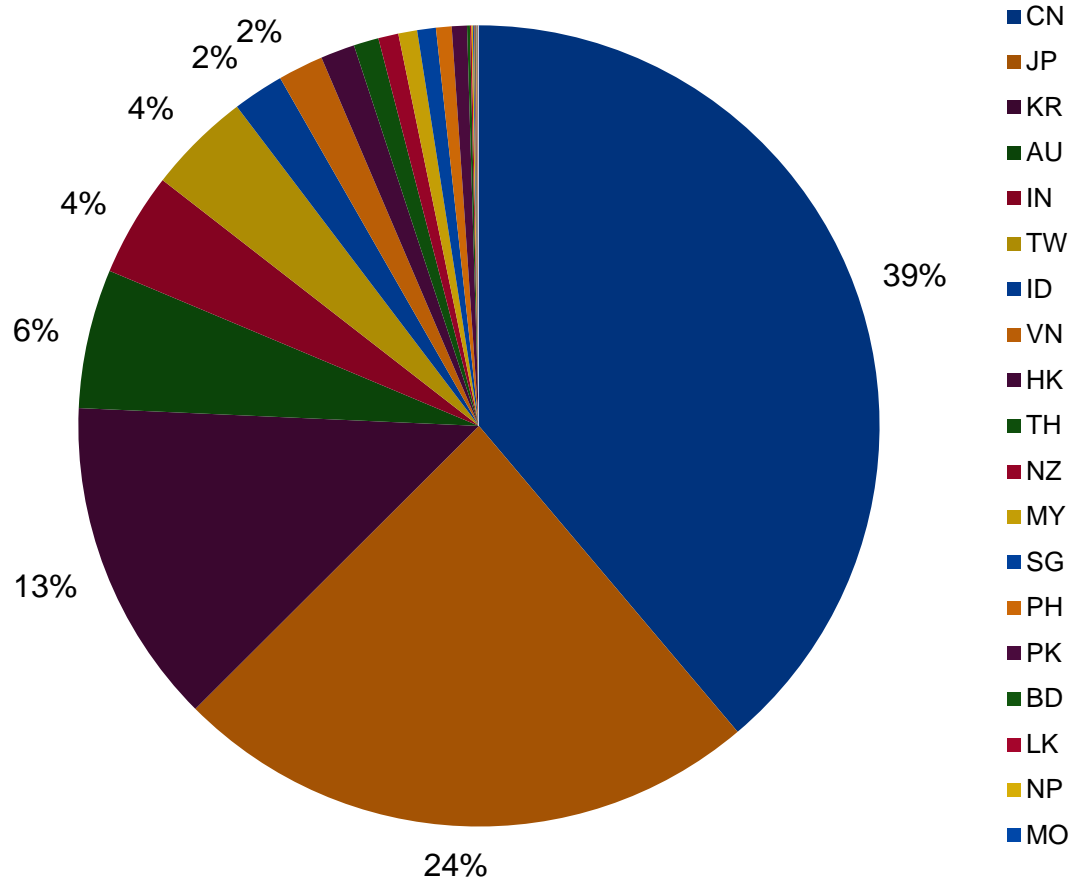   - And 6 others from HK, ID, LK, MY, TW (now closed)

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IPv4 distribution in 1994

The early adopters

Legend: JP, AU, TW, KR, NZ, SG, HK, CN, IN, TH, MY, ID, BN, PH, FJ, US, MO, PG, GU
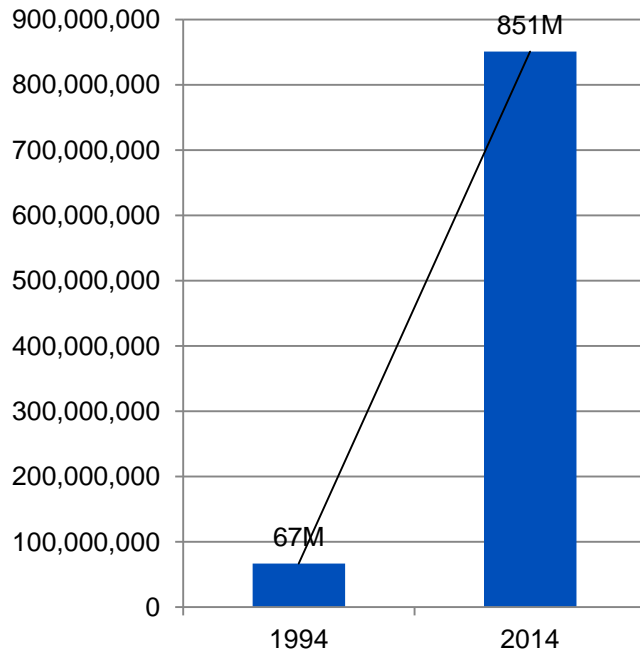
55%, 24%, 6%, 5%, 3%

APNIC

IPv4 distribution in 2014

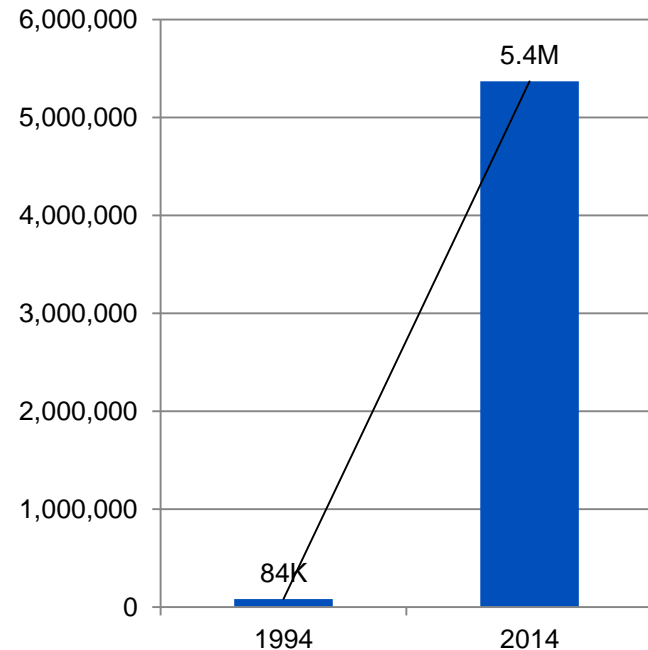Economic and demographic reflection

20 years of massive growth

Asia Pacific: 10-fold increase

Philippine: 60-fold increase

How did we do it?

- 3 key development area

1. Policy
2. Human capacity
3. Infrastructure

Policy Development

- Creating a policy environment that supports the region's Internet development stage
  - IPv4 minimum allocation size

Year	Minimum allocation size	Reached consensus in
2000	/20	Seoul
2004	/21	Kuala Lumpur
2008	/22	Taipei
2011	/24	Hong Kong

  - Assignment for IXP, Critical Infrastructure (ccTLD, gTLD)
  - Multi-homing assignment
  - Many IPv6 related policies in the past 10 years

Human Capacity Development

- Training -> focus on practical skills
  - In 1999 APNIC training begins with Internet Resource Management, in 5 cities
  - Today, courses are added in IPv6, DNS/DNSSEC, BGP routing, network security. In 2013 there were 89 training courses run in 37 cities, in 22 economies.
  - Often run as part of Network Operator Group (NOG) meetings throughout the region
  - Many training partners such as Network Startup Resource Center (NSRC), RIPE-NCC, other training professionals

Human capacity development

ISIF (http://isif.asia) small grants program

Member of the Seed Alliance for Internet development and digital innovation

- Joint effort with LACNIC (Frida) and AFRINIC (FIRE), with generous support from IDRC and Sida

- Small grants up to AU$ 30,000 for innovative ICT projects that benefits their community

Infrastructure development

- Root server deployment
  - To improve availability and response time in DNS root server queries
  - 2002 Partnership with ISC (F-root)
  - 2004 Partnership with Netnod (I-root)
  - 2005 Partnership with RIPE-NCC (K-root)
  - 30+ servers have been deployed in the AP region

- Internet exchanges
  - A cost effective way to exchange local and regional traffic
  - APIX is a good forum to share information, their meetings are run in conjunction with APRICOT, every year around February (apix.asia)

Learning points

- Collaboration > Competition
  - The Internet is not a zero-sum game. International collaboration in policy, human capacity and infrastructure development is key to the tremendous growth of the Internet in Asia Pacific region

- There is no 'local' problem
  - Internet is global. A problem faced in one economy may happen in other economies. Sharing the problem and solve it together produces the best result

- Regional forum is effective
  - Economic, cultural, and geographic proximity of the Asia Pacific economies make regional forum effective in discussing issues and working out common solutions.

Moving forward

- The next big challenge is to move to the new Internet based on IPv6

- We can and should rely on international collaboration again