

# Asia Pacific IPv6 Task Force Update

26th February 2012  
APStar Retreat  
By Tony Hill

# Agenda

- Recap
  - IPv4 address exhaustion
  - IPv6 network deployment
- About APIPv6TF
- Evolution of APIPv6TF
- Way Forward

# IPv4 address exhaustion

- Recap
  - The IPv4 address free pool exhausted, first globally at IANA (Feb 2011) then at APNIC (April 2011)
  - APNIC reached to the last /8 (around 16 million IPv4 addresses)
  - Each APNIC account holder may receive a max of /22 (1024 IPv4 addresses)

# IPv4 address exhaustion

- Occurred in 2011
- Focused attention on IPv6 adoption

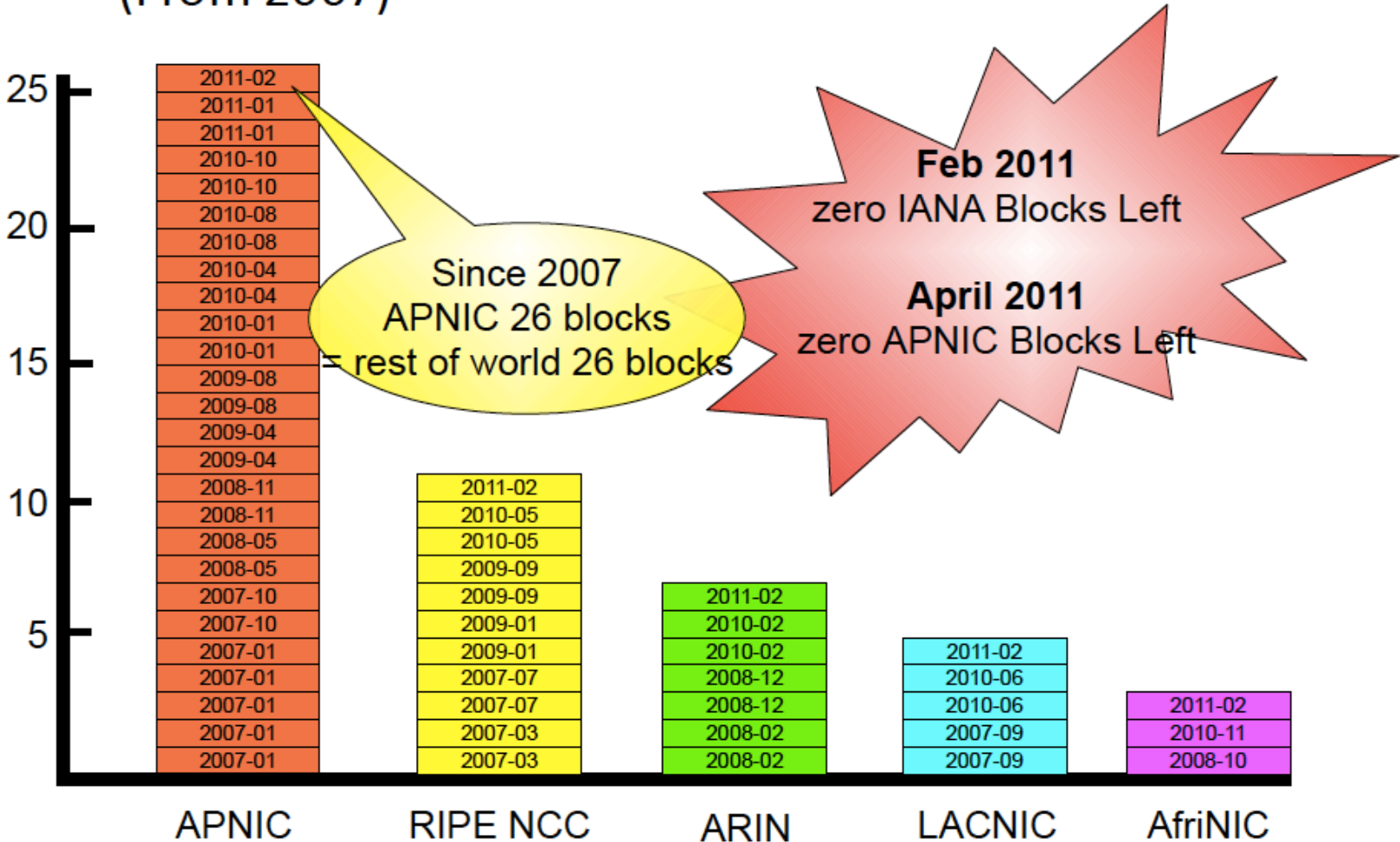
# IPv6 deployment status



- **IANA Pool Exhausted Feb 3<sup>rd</sup>, 2011**
- **APNIC Pool Exhausted Apr 15<sup>th</sup>, 2011 - small allocation for transition available**
- Other RIRs around the world will run out over the next 12-18 months

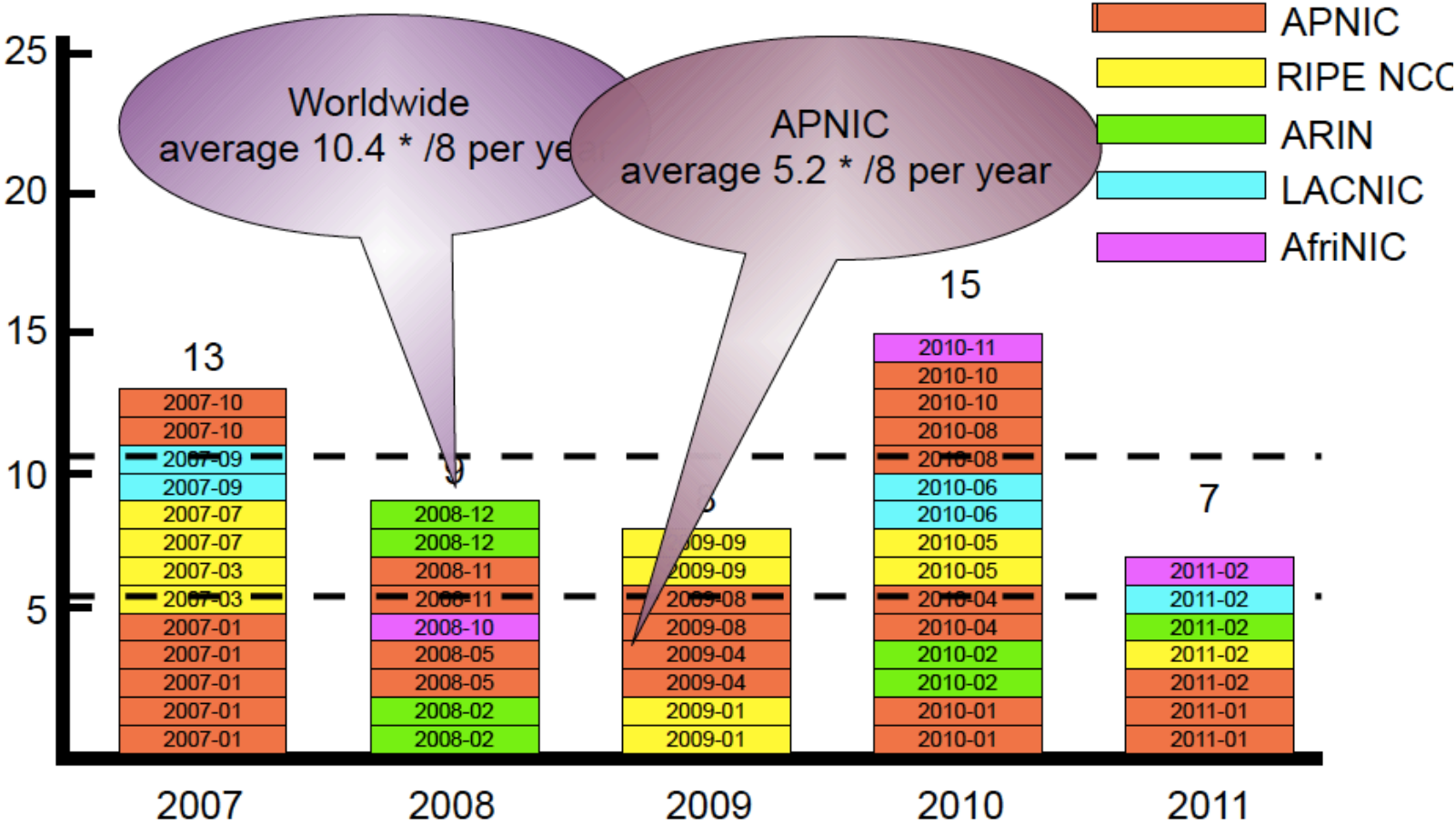
# IPv4 address exhaustion

IPv4 – The Last Few Years  
(From 2007)



# IPv4 address exhaustion

IPv4 – The Last Years?



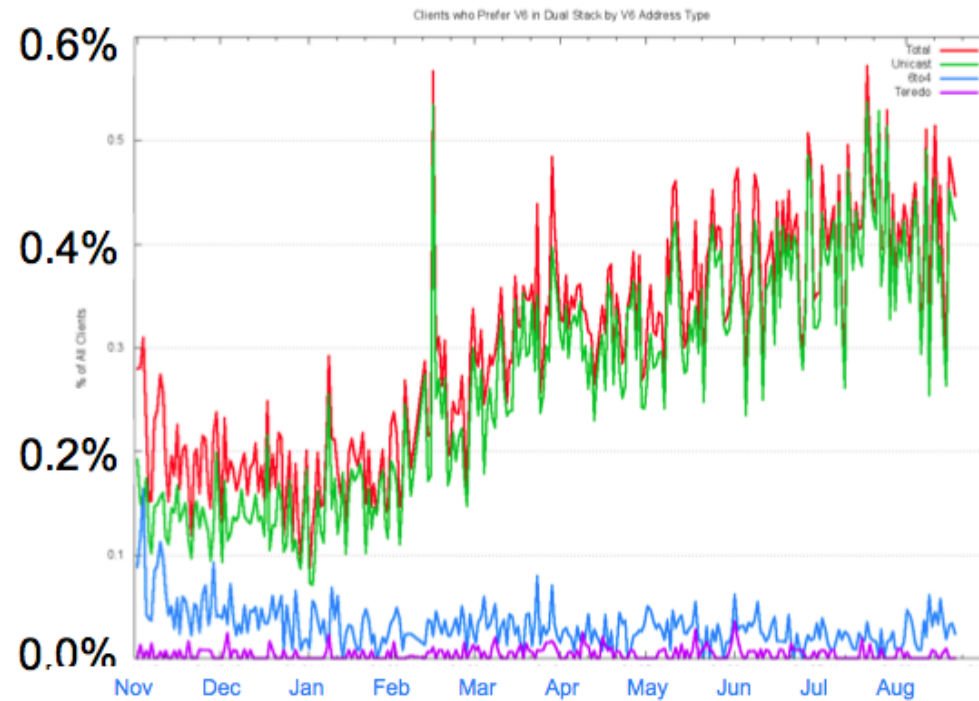
# IPv6 deployment status

- World IPv6 Day
  - First international coordinated trial of IPv6 on the REAL INTERNET
- Expectation:
  - 0.05% of users will break
- Experience:
  - 0.02% of users did break
- Result: FUD reduced



# IPv6 deployment status

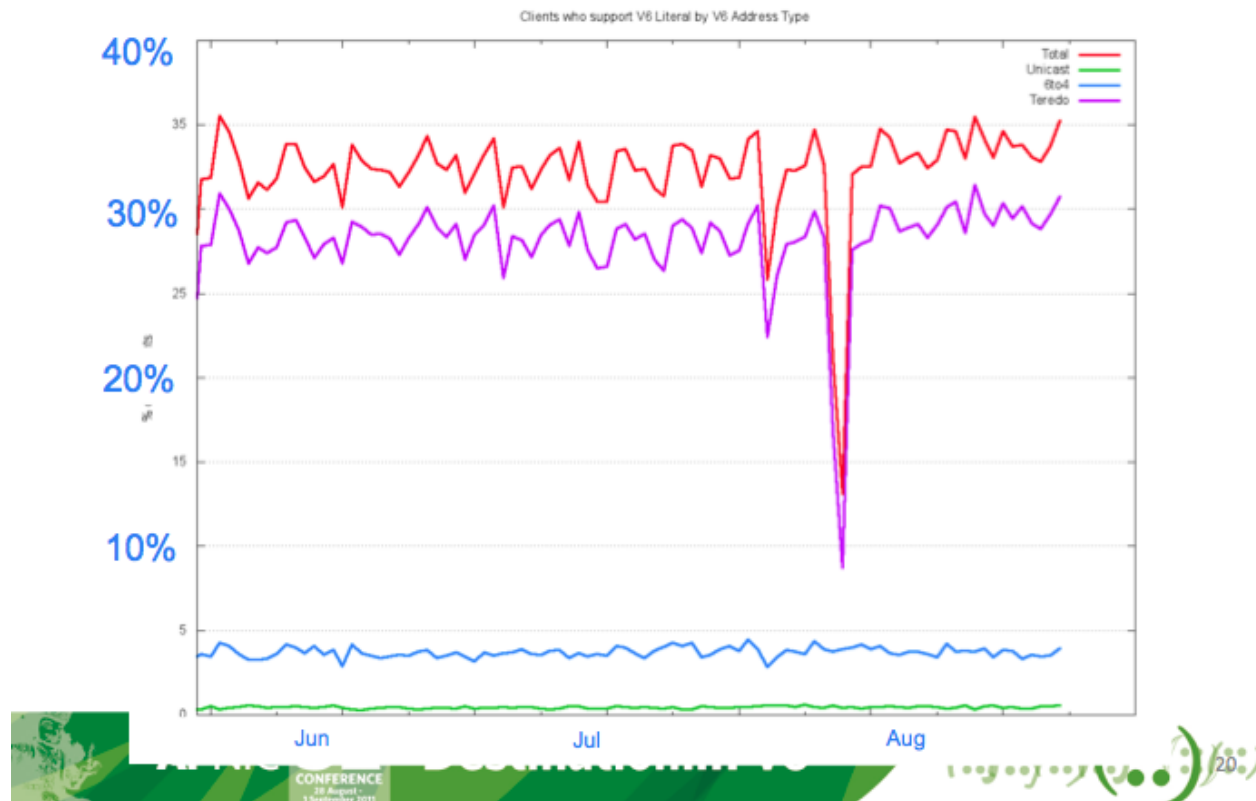
## IPv6 capability, as seen by APNIC



Courtesy: Geoff Huston, APNIC – IPv6 Forum,  
APNIC32, Busan  
<http://meetings.apnic.net/32/program/ipv6>

# IPv6 deployment status

## IPv6 Coerceable Clients



Courtesy: Geoff Huston, APNIC – IPv6 Forum,  
APNIC32, Busan  
<http://meetings.apnic.net/32/program/ipv6>

# About APIPv6TF

- Established in 2003
  - With initiative made by IPv6 leaders in various Asia Pacific economies (e.g., Japan, Korea, China, Taiwan, India, Singapore, etc.)
  - All voluntary contribution
  - Started with very loose structure intentionally in order to increase robust engagement and collaboration among members
    - Current chair: Tony Hill
    - Current secretariat: APNIC (Miwa Fujii)

# APIPv6TF Objectives

- To support IPv6 deployment in the industry
- To encourage international discussion and collaboration
- Facilitating the means to promote IPv6
- Developing guidelines
- Investigating and publicising IPv6 deployment status
- Promoting high-level awareness activities

# Evolution of APIPv6TF

- Need to review its role during the changing period of the Internet
  - How can APIPv6TF provide more “real and tangible” support to increase IPv6 deployment?
  - How can APIPv6TF support international collaboration?
  - How to stabilise APIPv6TF’s operation?
    - Clarification on membership structure
    - Clarification on voting mechanism for the Chair

# IPv6 Adoption Challenges

- Diversity among 50+ economies in the region
- Similar IPv6 adoption challenges
  - No immediate and additional revenue increase by deploying IPv6
    - Lack of incentives
    - Lack of medium to long term operational vision
  - Un-readiness of CPEs
    - Not much IPv6 enabled services to the edge
  - Slow IPv6 deployment at larger operators
  - Lack of collaboration among network operators in an economy

# IPv6 Adoption Opportunities

- International knowledge and information sharing
- Avoid reinventing the wheel
  - How to reaching out to other stakeholders than the technical stakeholder
- Possible international collaboration, e.g.,
  - Sending unified messages to vendors
  - Support economies without IPv6 organizations such as IPv6 TF

# Recent Achievements

- Regular gatherings to promote engagement
- Focused discussions on particular issues
- Maximising involvement through remote participation
- Revitalised mailing list, open to all
- Revitalised website, hosted on dual stack



# Way forward

- APNIC kindly agreed to manage the Secretariat continuously
  - Stability of the APIIPv6TF's operations
  - Increase communication among member economies
- Set tangible goals to achieve together
  - Creative use of the World IPv6 Launch initiative
  - Identify bottlenecks in IPv6 deployment and counter-measures
- Share metrics and statistics of IPv6 deployment

Thank you!