

Summary of IPv6 Readiness Measurement BoF

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Introduction of the BoF

▶ Motivation

- ▶ To monitor the status of the IPv6 migration process,
- ▶ Each measurement provides its own insights of IPv6 readiness in specific aspects.
- ▶ The methods and criteria among measurements are different, which may lead to different outcomes and interpretations.

▶ Aim

- ▶ To share the knowledge and methodology on measuring the IPv6 readiness, and
- ▶ To call for collaboration with the AP Internet community on the consensus building of the IPv6 readiness measurement,
- ▶ To analyze the data, and the results can be used as an important reference for government and industry in AP region

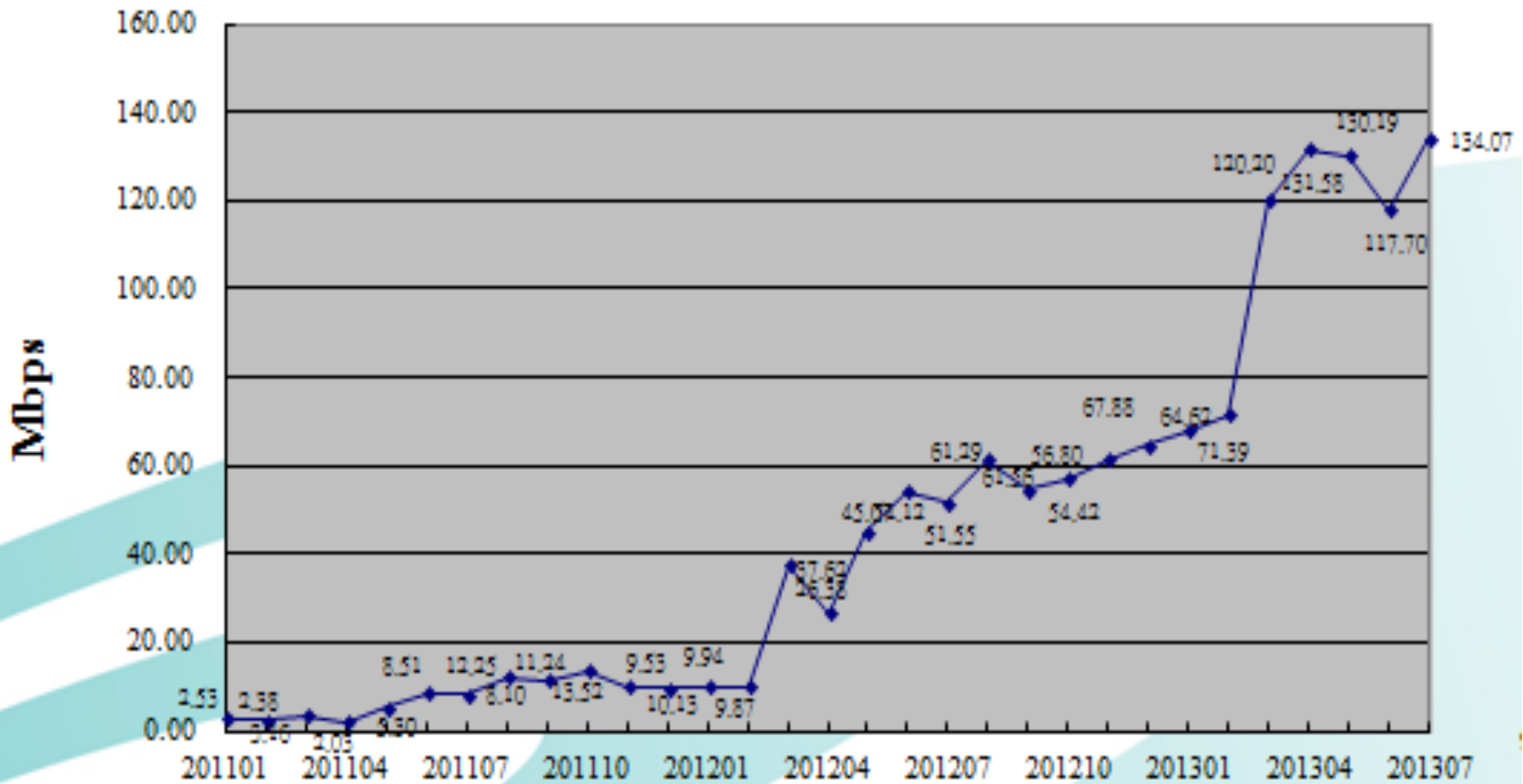
Presentation given

- ▶ IPv6 readiness measurements have been conducted by different groups, including APNIC, RIPE, NZ IPv6 Task Force, IAjapan, TWNIC, and so on.
- ▶ Around 40 attendees
- ▶ Five measurement metrics have been discussed in the BoF
 - ▶ Measurement of IPv6 Readiness in Taiwan, Ai-Chin Lu
 - ▶ NZ IPv6 Measurement, Dean Pemberton
 - ▶ JP IPv6 Measurement, Tomohiro Fujisaki
 - ▶ IPv6 Development in China, Zhiqiang Li
 - ▶ APNIC IPv6 Measurement, Geoff Huston

Summary of different Measurement methodologies

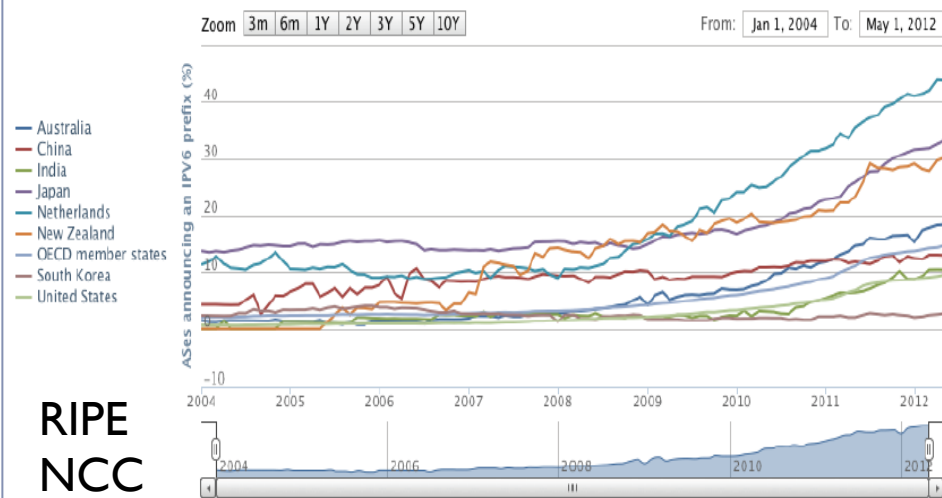
Criteria	TWNIC	New Zealand IPv6 TF	CNNIC	APNIC	JP(IPv6PC, IAJapan, Intec)
Network Traffic	in/out of Taiwan				
	IPv6 Tunnel Broker	v6 traffic flows from ISPs			
IPv6 allocation and BGP advertisement	# of ISP with IPv6 allocations and BGP4 Routing	By AS number	# of ISP with IPv6 allocation	By AS umber	By AS number
Service (DNS, Web, E-mail) availability of ccTLD	Servers of .tw	Servers of .nz			Servers of .jp
		Top 20 .nz web	Top 1,000 .cn web		Top 500 .jp web
User availability via specific website	7 registrar's websites	referred to APNIC		Google	IAJapan
DNS query to specific ccTLD	DNS query to .tw	DNS query to .nz	DNS query to .cn		DNS Query to .jp
Number of IPv6-enabled products	IPv6 Ready Logo Phase II				IPv6 Ready Logo Phase II

Network Traffic



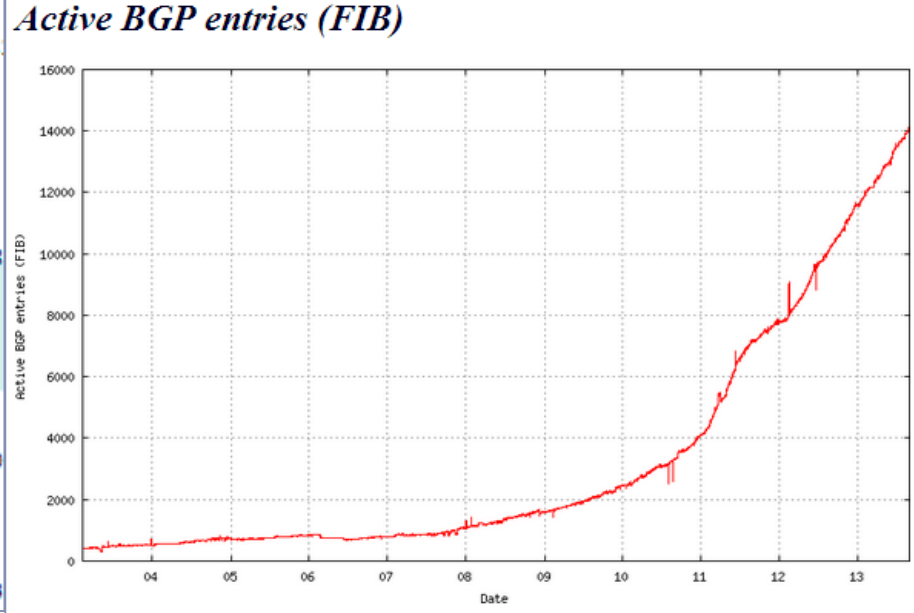
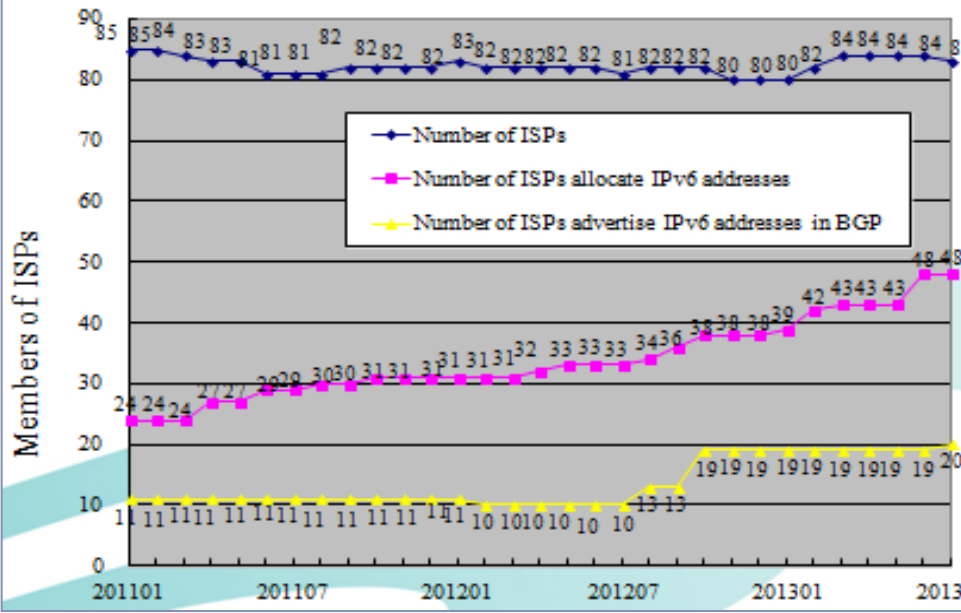
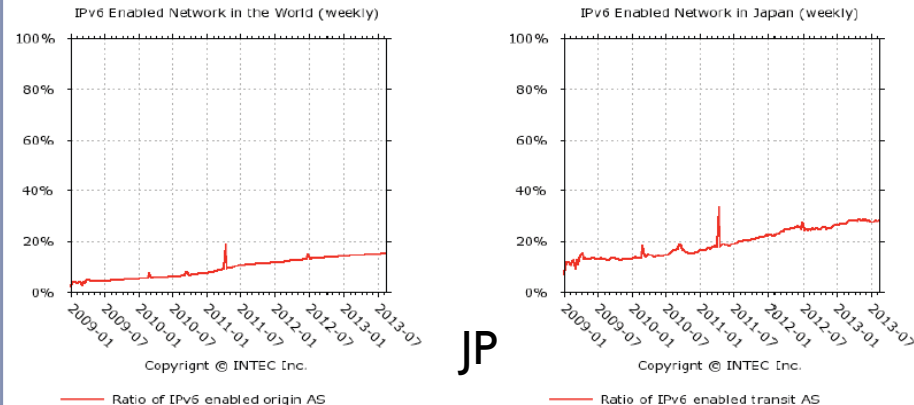
IPv6 allocation and BGP advertisement

% of ASes announcing an IPv6 prefix

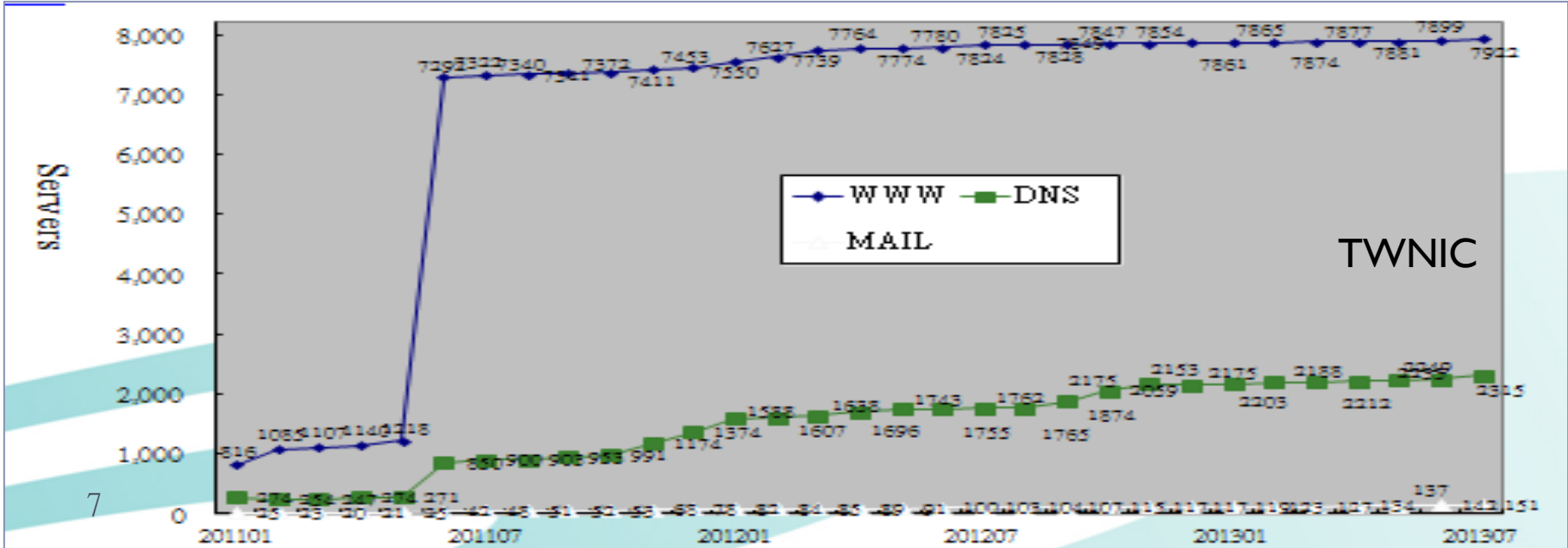
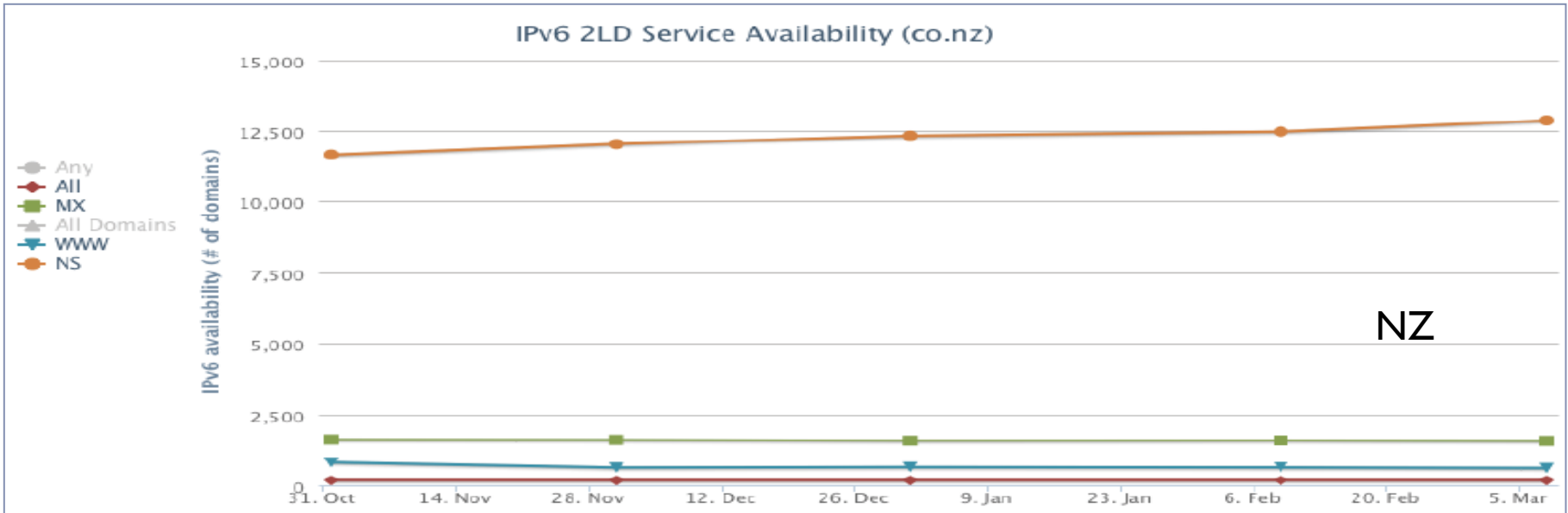


IPv6 penetration rate : Internet backbone

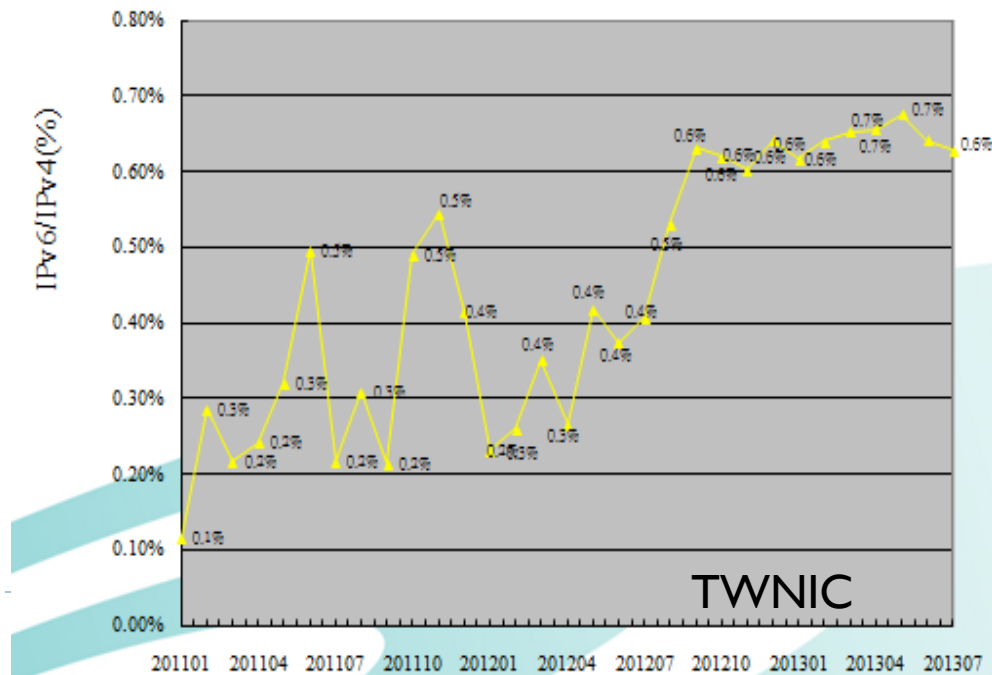
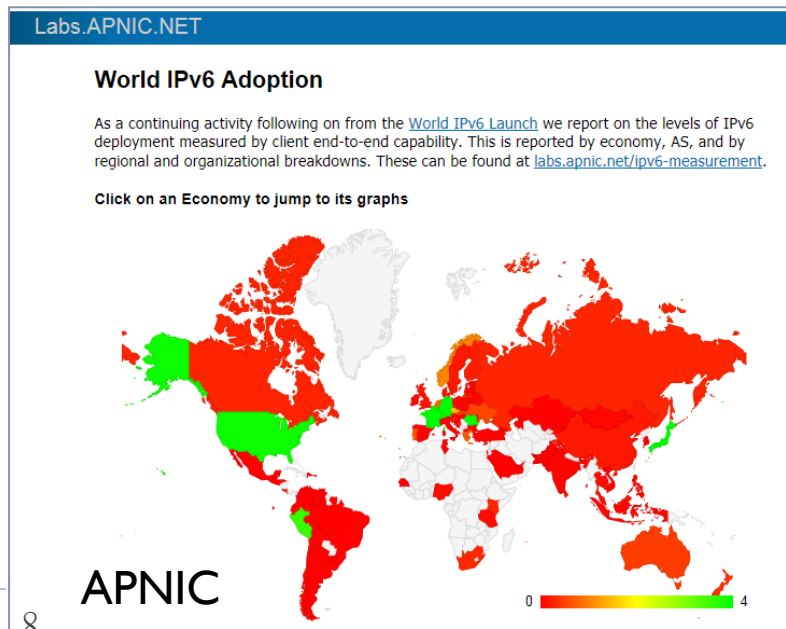
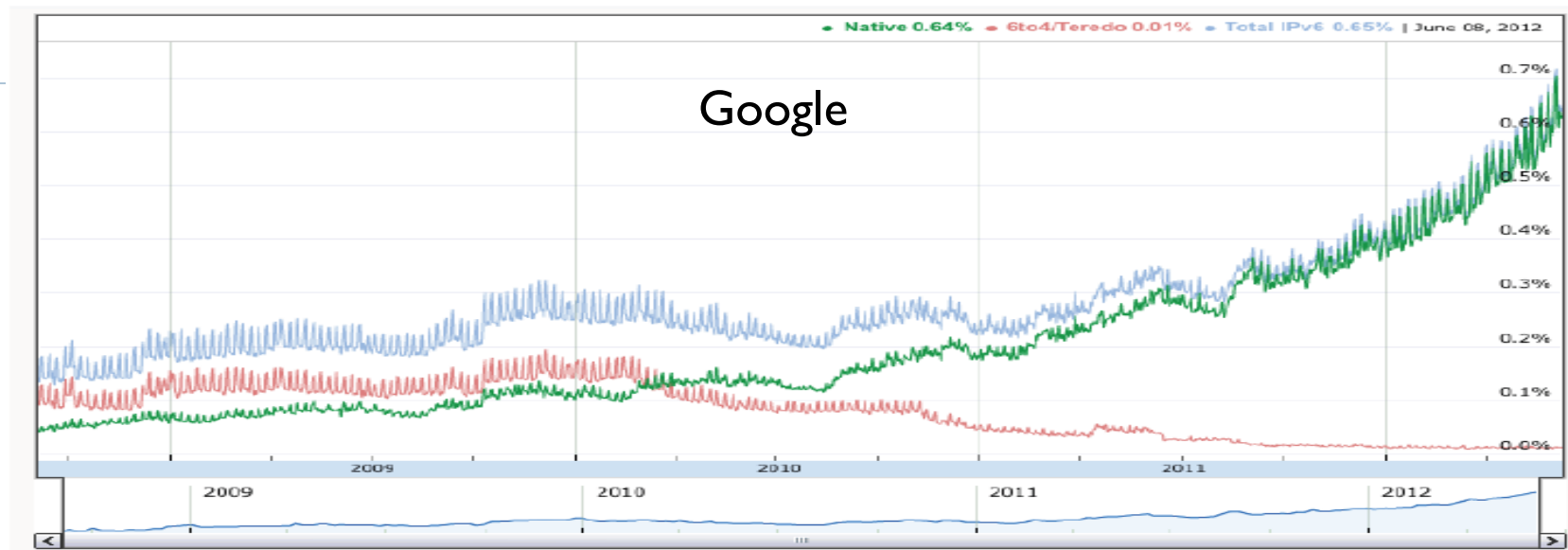
The number of IPv6 enabled of Transit AS in BGP routing tables.



Service availability of ccTLD



User availability via specific website

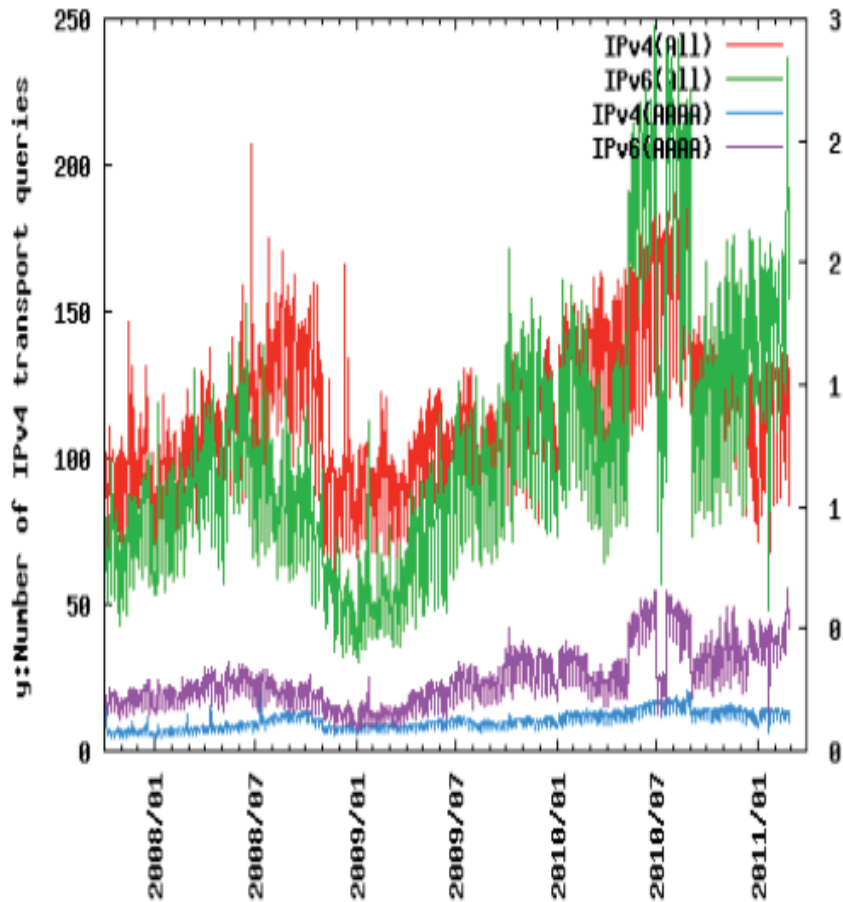


DNS query to specific ccTLD

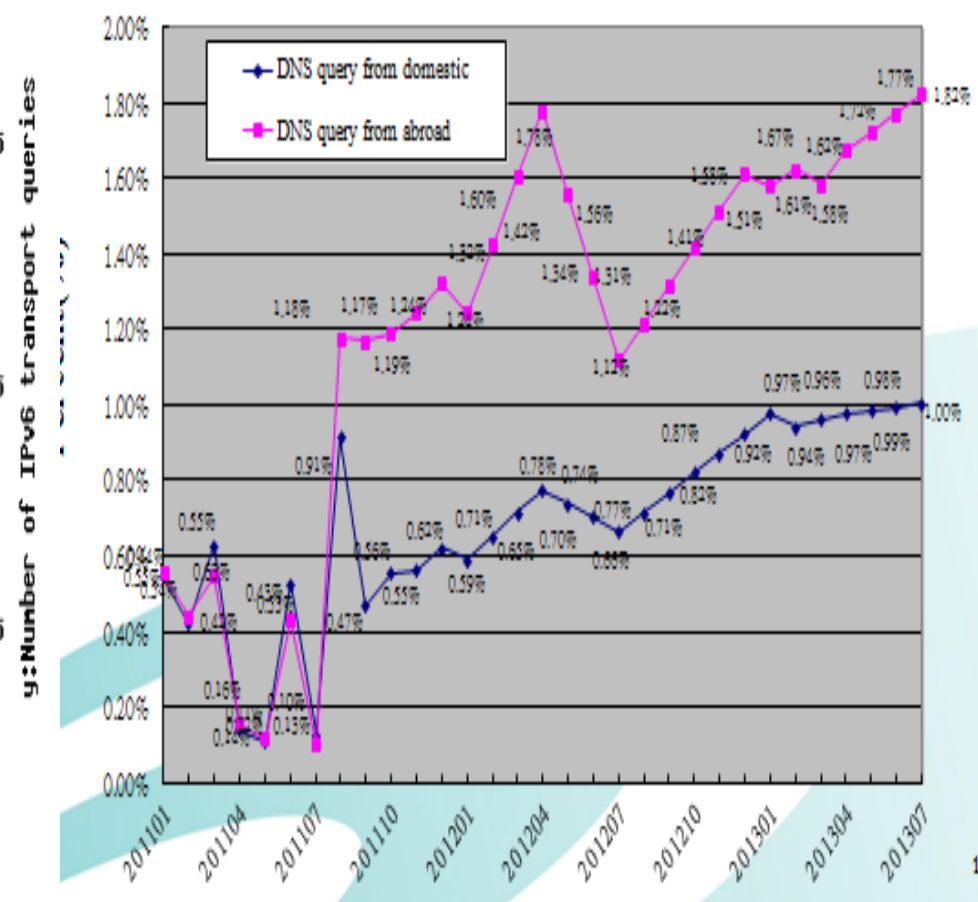
DNS queries to .jp DNS servers

DNS queries to II .tw DNS servers

The number of DNS queries by IPv4/IPv6 transport



JP



TWNIC

Future Work

- ▶ **Mailing List**
 - ▶ v6readiness@apnic.net
- ▶ **Website**
 - ▶ v6readiness.apnic.net
- ▶ **Possible Technical Program**
 - ▶ Data Collection of v6readiness criteria
 - ▶ Visualization of v6readiness profile