

IPv6 in the U.S.A.

Patrick Grossetete

Cisco Systems

Cisco IOS IPv6 Product Manager

Pgrosset@cisco.com

- **Perception is that “*IPv6 has not taken hold strongly within the USA*”**

IPv4 Address Space is less of a problem than the rest of the World

Private sector requires a business case

Wireless infrastructure emerges recently

- **But reality does not look so bad for the coming years!!!**

Vendors Status

- **Most of U.S. networking companies already ship IPv6 products**
 - Eg. Cisco IOS IPv6 Phase III deliverables
- **All software vendors officially support IPv6 in their latest O.S. releases**
 - Apple MAC OS X, HP (HP-Unix, Tru64 & Open VMS), IBM zSeries & AIX, Microsoft Windows XP, .NET, CE; Sun Solaris,...
- **2003 and beyond: *Call for Applications***
 - Applications must be agnostic regarding IPv4 or IPv6.
 - Successful deployment is driven by Applications

Deployment Activities over Time

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185 U.S. sites registered, including Academia, Government organisations, ISP, Research Labs, Vendors,

Academia & Research communities

National and Regional infrastructures are gradually moving to dual stacks

Downstream sites will follow

International partnership, eg. www.6ren.net

Several IPv6 IX are now operational

6TAP, 6IIX, NY6IX, PAIX, S-IX (NTT San Jose),...

ARIN

Same Address Allocation & Assignment policy as APNIC & RIPE-NCC

~ 40 prefixes allocated

Deployment Activities

- **DoD**

Early adopters – Spawar, DREN, CECOM,...

Leading role on IPv6 promotion (NAv6TF)

IPv6 address space registration (DISN, DREN)

But no IPv6 on operational networks before validation

- **Enterprises**

No interest except from software/hardware companies who need to add IPv6 connectivity for their development's teams

Roll-out is driven by the applications and O.S. release strategy

Deployment Activities

- **ISP**

Plans are largely driven by [lack of ?] customer's demand

Trial networks (C&W, Hurricane, Qwest, Sprint, Stealth, Verio, Worldcom) are up and running BUT

Lack of offering on Home Networking services (dial, DSL, Cable, Ethernet-to-the-Home,...)

Return on Investment (RoI) is hard to justify – mainly with the current economic situation

Applications and appliances are still 12-18 months away

Deployment Activities

- **Wireless**

US Wireless service providers have had IPv4 address requests rejected for long term business plan

Some currently investigate the benefits of IPv6

Phasing is R&D (03), Trial (04-05), Deployment (06 & beyond)

Some 802.11 Hot Spots already offer an IPv6 connectivity.

Concerns

- **Lack of Network Management solutions**
 - Provisioning, Billing,...
 - Managing a dual stack network? Ie: NoC staff training
- **IPv6 Deployment has a cost**
 - Software/Hardware, Training, Resources,...
- **Security**
 - Filtering & IDS IPv6 devices are not as developed as IPv4
 - Resources sharing through dual stack duplicates DoS potential risk during the transition
- **Return on Investment (RoI)**
 - Develop business models around new applications or services

Potential Business Model – Community of Interest

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- **End User's network (Enterprise or Home) may host several appliances manufactured or serviced by different companies**
- **Users may not want to open the reachability of Appliances beyond selected partners/service technicians**
- **Businesses may find automated warranty registration and remote diagnostics provide substantial value in servicing a customer**
- **Deployment and Operations must be done at the lowest cost possible**

The simplicity of auto-configuration is a Must

- **All channels expect revenues to be generated from these services**
- **A proposal: the use of Mobile IPv6 protocol for non-Mobile devices**

North-America IPv6 Task Force (NAv6TF)

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- **Similar in charter to the other regional task forces**

www.nav6tf.org

- **Mission: To help promote and foster IPv6 adoption within Target Industries through *Short and Long Term Objectives and Deliverables***
- **Recently, NAv6TF sent its recommendations to R. Clarke, *Special Advisor to the President for Cyberspace Security, Critical Infrastructure Assurance Office (CIAO)***
- **Meeting at U.S. Global IPv6 summit – June 2003**

Upcoming Events

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- **U.S. IPv6 Global Summit**
San Diego – June 2003
- **IPv6 Demonstration Collaborative Initiative**
Fall 2003

Questions?

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