



IPv6 Now!?

Tony Hill



Internet Society of Australia
IPv6 Special Interest Group
IPv6 Forum Downunder

www.isoc-au.org.au

Tony Hill

- ISOC-AU President – 2001 ongoing
- National ICT Industry Alliance
– Chair 2005-07
- Australasian Research Management Society
- President 2007
- Capital Hill Consulting Pty Ltd
– founder 1999 ongoing
- IPv6 Now Pty Ltd – founder 2007 ongoing

What is IPv6 about?

- IPv6 – Internet Protocol version 6
 - Currently using IPv4
- IPv4
 - limits growth, limits creativity, limits performance
 - IPv4 pool addresses exhaust 2010-11
- IPv6 fixes these things
 - Increased address space, autoconfiguration
 - Links to other technical improvements

What is IPv6 about?

- Domain name: `www.ipv6.org.au`
- IPv4: `203.42.34.45`
- IPv6: `2406:a000::17`

“The Internet is like a 15 storey building, and the domain name system is the columns holding it up...” and the Internet Protocol is the foundation on which the whole building stands.

Apologies to Paul Twomey, CEO, ICANN

Why should Australia be interested in IPv6?

- IPv6 transition is coming
 - Early start to transition will give Australia advantages in:
 - trade
 - skills development
 - information

Why should Australia be interested in IPv6?

- Trading and strategic reasons
 - Japan
 - Korea
 - China
 - India
 - USA
 - Europe

Who is already engaged with IPv6?

- ISOC-AU IPv6 Special Interest Group
- Lead sectors in Australia
- National ICT Industry Alliance from 2005
- Australian Government support from 2005

Australia's opportunities with IPv6?

- “Wait & see”...waiting for IPv4 exhaustion...

Innovation and IPv6?

...OR...

- Develop IPv6 in new larger networks
 - Our new networks should have IPv6
eg: FTTx, laptops in schools
 - IPv6 should be considered for **all** new infrastructure
- Use IPv6 as “Platform for Innovation”
 - Creating new business opportunities:
ICT, other sectors

IPv6 in Australia

- Building management
- Sensor networks
- Supply chains
- Emergency services
- Consumer electronics
- Automotive industry

What is happening with IPv6 in Australia?

- IPv6 Info – IPv6 for e-Business

- www.ipv6.org.au

- IPv6 Summits

- Next 10-12 Nov 2008

- ISOC-AU IPv6 Special Interest Group

- IPv6 Oz Tech list

- Service Providers

- Carriers & ISPs

A screenshot of the "IPv6 for e-Business" website. The header features the title "IPv6 for e-Business" in large blue and red letters, with the Australian Government logo and "Department of Communications, Information Technology and the Arts" to the right. A navigation bar includes links: Home, Background, Mapping, Enabling, Awareness, Infrastructure, Standards, and Contact. The main content area is divided into three columns. The left column lists partners: IPv6 for e-Business Consortium, ISOC-AU, .auDA, AEEMA, ADIESA, and Builders Net. The middle column, titled "Internet Protocol v6 is on the way!", explains that IPv6 is being phased in by Australian trading partners and defence allies, lists benefits (almost unlimited IP addresses, built-in security protocols, simpler address administration, widespread mobility support, and Quality-of-Service capabilities), and provides a link for more about the basics of IPv6. The right column, titled "Please help us by completing the Australian IPv6 Readiness Survey", includes a link to the survey, a section on "IPv6 Standards" mentioning the Internet Engineering Task Force, and a section on "Useful Sites" listing the IPv6 Forum, 606.net Community Portal, The IPv6 Portal, IPv6DISS, and IPv6 Forum Downunder.

Open Standards & IPv6

- Internet Standards are open standards - IETF
 - Key principles: Rough consensus, Running code
- Virtuous cycle: power of the Internet increases power of open standards process
- Interoperable platform: increased productivity, wealth, social & individual benefit
- Major opportunity for Australia re:
 - tyranny of distance, economies of scale

Australia – world player

- Cultural cringe again? - NOT!
- Korea IPv6 Summit 2005
- World IPv6 Congress 2006
- Asia Pacific IPv6 Task Force
 - White paper on regional development
- International collaborations
- OECD Ministerial Meeting 2008

Australia – world player

- Can we take advantage of these international opportunities?

Innovation

Wright Bros...apparently...

“dauntless resolution and unconquerable faith”

Wright Bros...actually...

very good science, know-how, commitment

IPv6: Platform for Innovation

IPv6 the protocol is ready to use now!

Innovation based on IPv6 needs:

- commitment, as for the Wright Brothers as well as...
 - skill, competence, know-how and strategic approach
- and
- supportive government policy

What do we need to do?

- Skills
- Transition planning
- Infrastructure projects
- Supportive government policies