



# IPv6 Now!?

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# 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](http://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](http://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 blue and red. Below the header is a navigation bar with links to Home, Background, Mapping, Enabling, Awareness, Infrastructure, Standards, and Contact. The main content area includes a section about the Internet Protocol v6, logos for ISOC-AU, .AUSTRALIA, AEEMA, ADIESA, and Builders Net, and a section for the IPv6 for e-Business Project. On the right side, there are sections for IPv6 Standards (with a link to the Australian IPv6 Readiness Survey) and Useful Sites (listing the IPv6 Forum, go6.net, The IPv6 Portal, IPv6DISS, and IPv6 Forum Downunder).
 

**IPv6 for e-Business**

[Home](#) | [Background](#) | [Mapping](#) | [Enabling](#) | [Awareness](#) | [Infrastructure](#) | [Standards](#) | [Contact](#)

**Internet Protocol v6 is on the way!**

For twenty years Internet Protocol version 4 has been the brilliant workhorse of network technology. Its successor, IPv6, is being phased in by Australian trading partners and defence allies. IPv6 has the potential for:

- almost unlimited IP addresses
- built-in security protocols
- simpler address administration
- widespread mobility support
- Quality-of-Service capabilities

[Click here for more about the basics of IPv6](#)

**The IPv6 for e-Business Project**

IPv6 for e-Business is a project for documenting, developing business tools, raising awareness and assessing readiness for Internet Protocol version 6, to build Australian capacity to take advantage of future innovation, especially in the area of

**Please help us by completing the [Australian IPv6 Readiness Survey](#)**

**IPv6 Standards**

Since work first began on IPv6, the [Internet Engineering Task Force](#) has created and defined all of its standards. Here is a list of IETF [IPv6 working groups and documents](#)

**Useful Sites**

[The IPv6 Forum](#)  
[go6.net Community Portal](#)  
[The IPv6 Portal](#)  
[IPv6DISS](#)  
[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