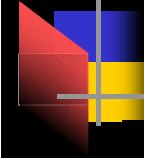




Internet Development & Governance

George Michaelson
`ggm@apnic.net`



Mandatory Disclaimer!!!


I'm speaking in my personal capacity

This presentation does not reflect APNIC
policy



Overview

- What is Governance anyway?
- IETF and Governance
- Does regional/International technical convergence matter?
- Support your local RIR
- Towards an Australian perspective
- Growing new network managers
- 'I had time to revise my slides wrt previous speakers'



not

What is Governance Anyway?

- "Do what thou wilt, is the whole of the law"
 - *Aleistair Crowley*
 - NAPSTER, Pornography, IPR abuse
 - IPR laws 'have a few problems' online
 - New protocol deployment unfettered
- "The whole duty of Government was to prevent crime and to preserve contracts"
 - *Viscount Melbourne*
 - BSA, Datacasting legislation, ACCC interventions
 - More hindrance than help?
- Truth lies somewhere inbetween
 - Emerging I.T. Law/Governance is 'interesting'




Governance is what you make it

- Preserve the Public Interest
- Seek 'Greatest-Good' outcomes
 - Not always the same as a competitive advantage
- Innately participatory
 - Often inefficient
 - Consensus more than voted decisions
 - Typically no enforcement regime
 - Legislation comes after (if at all)
 - Fosters better interoperation
- EG Sharing out scarce resources
 - auDA, RIR processes, IETF




IETF and Governance

- Mostly about technology
 - Often misguided when strays into layer 8
 - Dominated by US national interest
- "light hand" approach
 - No enforcement regime
 - Technical basis
 - But straying into layer 8
- Needs more Australian Participation!
 - Less than 2% of attendees?
 - Attendance Numbers dropping (good!)
 - We can leverage an advantage here



IETF Governance Examples

- RFC2804 IETF Policy on Wiretapping
 - Good outcome, Hard decision
 - Doesn't stop Echelon, State-mandated Inspection
 - Does define likely impacts/limits
- Consideration(s) of IPR issues
 - Heading into bad directions
 - Application of IPR law to IETF standards themselves
 - Ability of Internet(s) to apply IPR restrictions
 - Prior experiences in W3C (content controls)
 - Risks domination of IPR owners over users
- ITU liaison: standards convergence



Does Process convergence matter?

- Many strong YES cases
 - Packet-level, Transport-Level
 - End-to-End behaviours
 - Routing behaviours
 - Working interoperability
 - Eg deployment of 32 bit AS numbers in BGP
- Some weak NO cases
 - Address allocations differ in details
 - IDN interest varies worldwide
 - ccTLD management variations
 - Doesn't really affect end-to-end IP behaviours
 - But does lower the useability.




Support your local RIR

- Governance by membership consensus
 - No enforcement regime
- Tries to achieve international convergence on process
 - Hard when 3 bodies meet 2-3 times yearly
 - Not always in sync
- Prime role works: Address Allocation
 - AP-region fastest growing
 - Needs your participation!
 - (2 meetings/year in region, plus IETF/NANOG)




RIR examples

- Task force on SPAM
 - Unlikely to deliver substantive change soon
 - Education/Communication role
 - Improve quality of whois POC details
- AP-Cert cooperation
- Lease-Use language wrt IP addresses
- LAME DNS searches
 - Active de-registration may come by consensus
- SIG-IX exploring improved regional exchange outcomes
 - Australia has historic problems!
- Big investment in training, development




Towards an Australian Perspective

- Refine an Australian Strategic view of the network:
 - Need improvements in
 - State/federal cooperation
 - Research/Commercial sector interaction
- Internet standing in fed. cabinet low
 - Maybe this is as it should be?
 - Confused thinking about broadcast vs datacast
- Where do the packets flow?
 - Many transit paths in Asia still flow via USA
- Some very odd onshore packetflows
 - Brisbane-Brisbane via Sydney
- We need a more collaborative approach
 - Good to have serious debate back on the table (Telstra)




Can we do any better?

- What could we do better to enhance Australian interests in the AP region?
 - Making the internet part of the long term regional strategy
- Where is the national coordinated Internet strategy anyway?
 - EG Fed/State policies to encourage peering
- 5-10-15 year view, not 1-2 years
 - Short term thinking reflects rate of change and funding cycles
 - Can still plan for long-term outcomes...
- Learn from AARNet/GrangeNet
 - Academic/Research network leads trends 2-5 years




Where do network managers grow?

- Tertiary education needs attention
 - Improve fundamentals
 - Maths/Stats vital
 - Critical thinking skills
 - Introspection, Analysis, Synthesis of ideas
 - 'Body of knowledge' not well documented
 - Learning on the job is slow/risky process
 - Vendor-specific training has weaknesses
 - MCSE vs CCNE vs JUNOS-certified vs ...




Use the meeting cycles!

- Lots of choices
 - 3 IETF, NANOG P.A.
 - 1 APRICOT, 1 RIR AMM p.a (plus other RIR)
 - Half and one-day training
 - BGP fundamentals, advanced router config
 - DNS management
 - Security
- 2% of network recurrent spend not unreasonable overhead for longterm gain?
- Improved Governance Likely



There is no Killer Application

- There doesn't have to be a killer app
 - Speed of access to simple things is a goal in itself
- IPv6 take-up can be interesting
 - IPv6 802.11 on train Narita->Tokyo
 - IPv6 enabled windscreen-wipers
 - Scaling stateless autoconfig for
 - Home networks
 - IPv6 fridges
 - IPv6 cans of beans
- 'Whatever use it is, you are sure to tax it'
 - *Michael Faraday, when asked what use Electricity was by a Government official*



Is the Radio Spectrum 'scarce'?

- 802.11 class solutions leverage
 - Low Government overheads (licencing)
 - Ubiquity
 - Non-provider model of Internet
 - Loopholes in the law?
- Downside: security, congestion risks
 - Mediation for access to shared RF
- Selling RF off to the highest bidder not the answer
- More Governance, less Government?



Summary

- Governance is Participatory
- Regional/International Governance
 - Leverage an Australian Advantage
 - Cooperative National Goals/Outcomes in the International Arena
- Governance is as good as you make it
 - Good Governance Grows Giant (g)Nets!