

WSIS – a Stakeholder’s View from the Internet Address Community

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Critical Issues...

- What is an IP address?
- How are IP addresses managed?
- IP Addresses today
- IP Addresses tomorrow
- “Governance”, WSIS and ICANN

What is an IP Address?

What is an IP address?

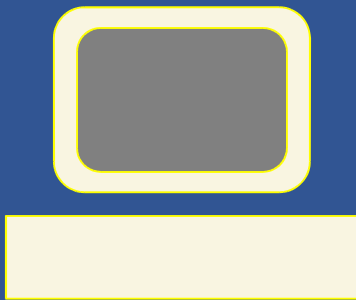
- Internet infrastructure address
 - Critical Internet identifier
 - Globally unique
- A finite Common Resource
 - IPv4: 32-bit number
 - 4 billion addresses available
 - IPv6: 128-bit number
 - 340 billion billion billion billion available
- Not “owned” by address users
- IP does not mean “Intellectual Property”

IP addresses are not domain names...

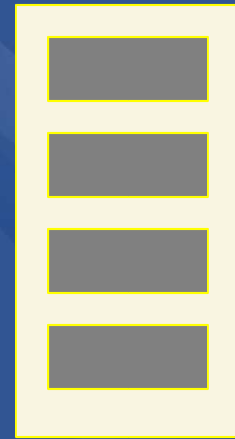
The Internet

DNS

www.cer.net.cn ?



My Computer



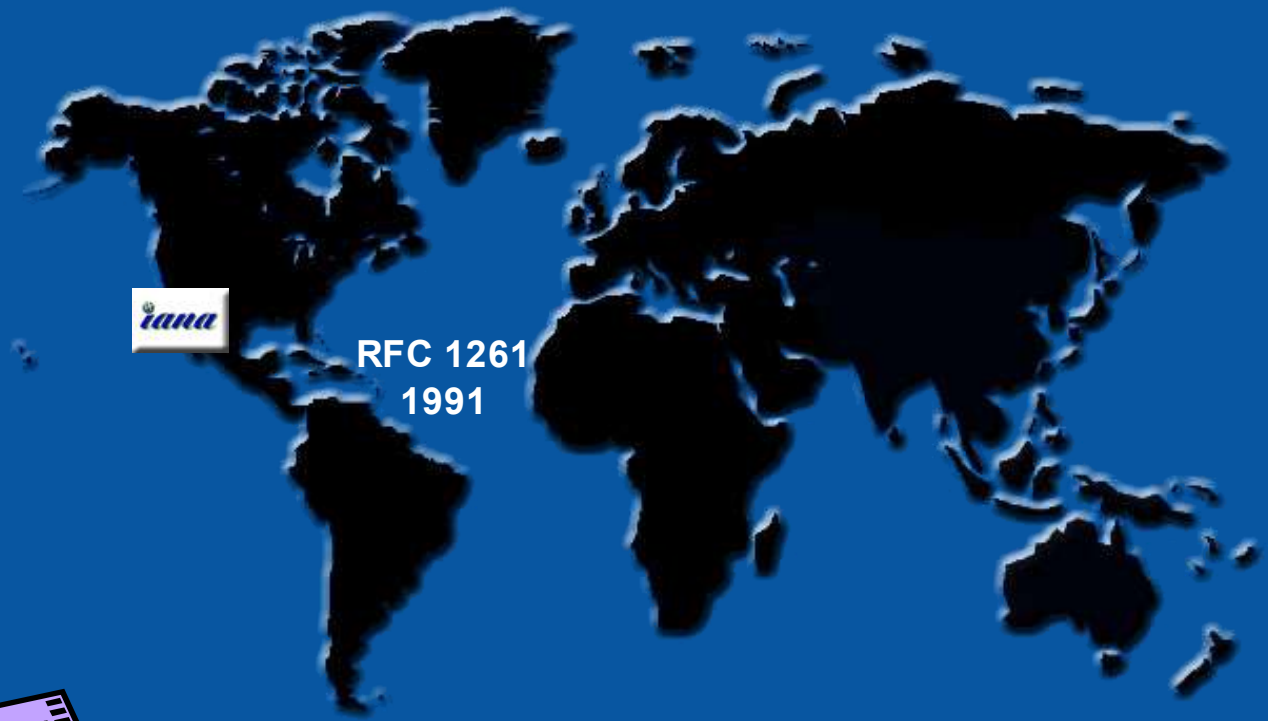
www.cer.net.cn



How are IP Addresses managed?

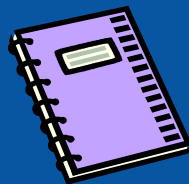
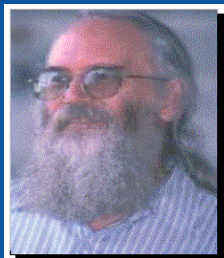
and how did we get here?

1981 - 1992



RFC 1020
1987

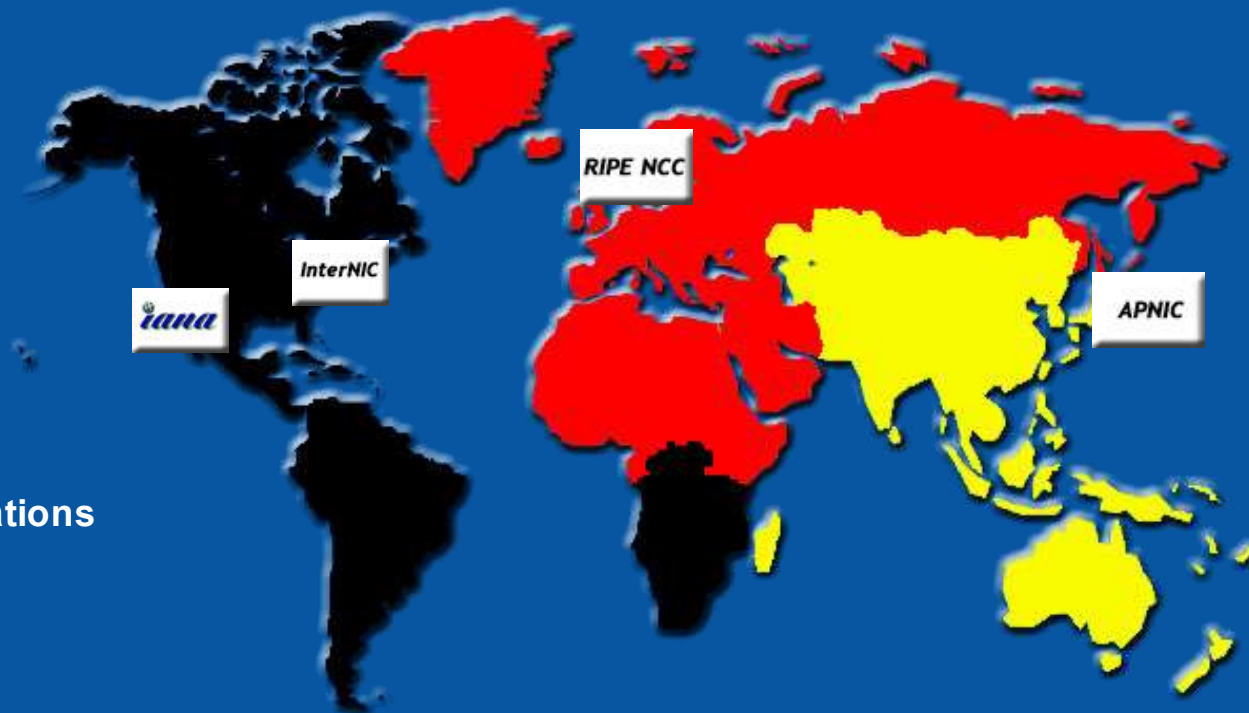
RFC 1261
1991



RFC 790
1981

“The assignment of numbers is also handled by Jon. If you are developing a protocol or application that will require the use of a link, socket, port, protocol, or network number **please contact Jon to receive a number assignment.**”

1993 - 1996



RFC 1366
Geographic Allocations

RFC 1466
1993

RFC 2050
1996

1997 - 2001



2002 - 2003



What are RIRs?

- Representative of ISPs globally
 - Industry self-regulatory structures
 - Non-profit, open membership bodies
- First established in early 1990's
 - Voluntarily by consensus of community
 - To satisfy emerging technical/admin needs
- In the “Internet Tradition”
 - Consensus-based, open and transparent

What do RIRs do?

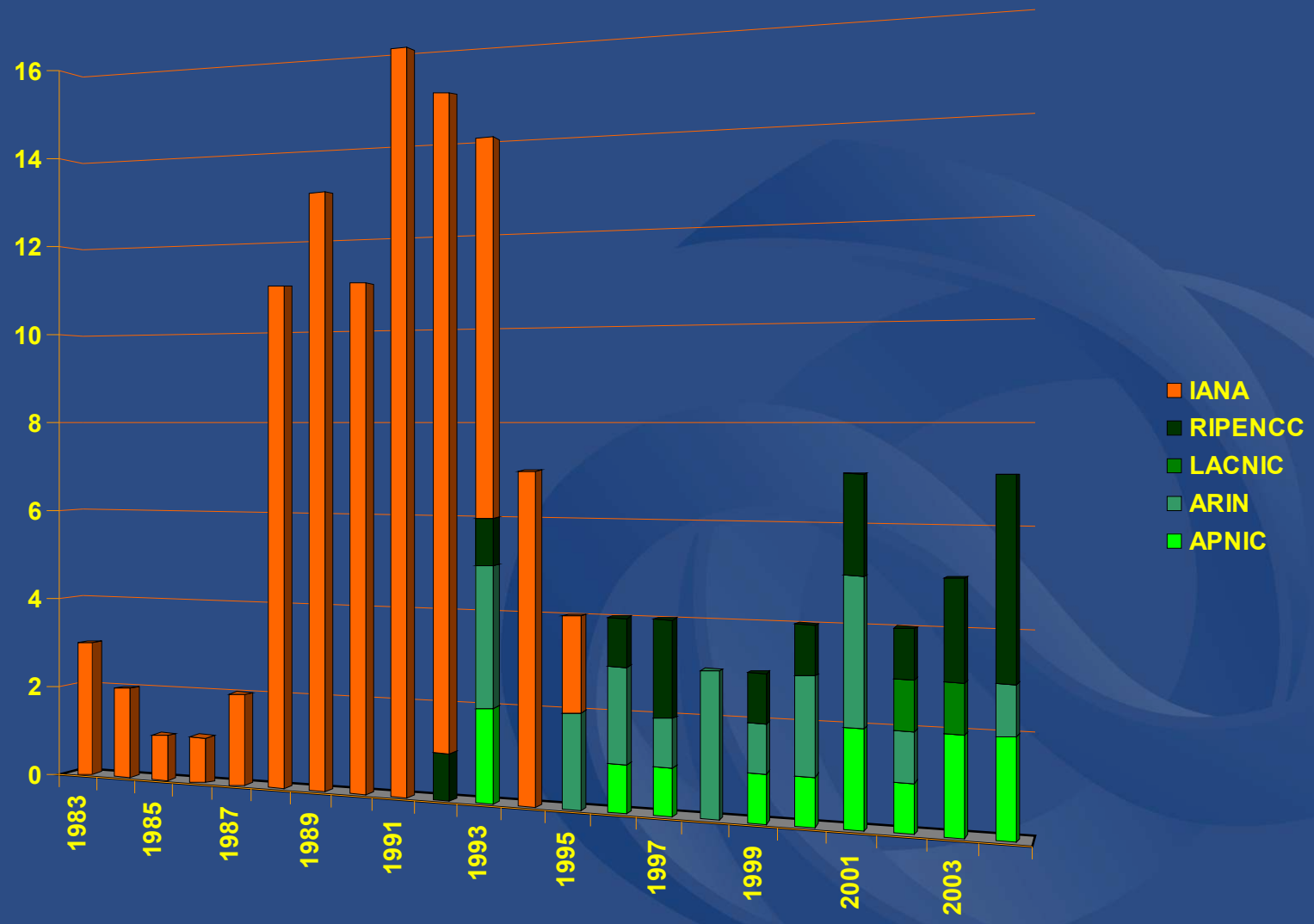
- Internet resource management
 - Primarily, IP addresses – IPv4 and IPv6
 - Registration services (“whois”)
- Policy development and coordination
 - Open Policy Meetings and processes
- Training and outreach
 - Training courses, seminars, conferences...
 - Liaison: IETF, ITU, APT, PITA, APEC...
- Publications
 - Newsletters, reports, web site...



IP Addresses Today

Where are all the addresses?

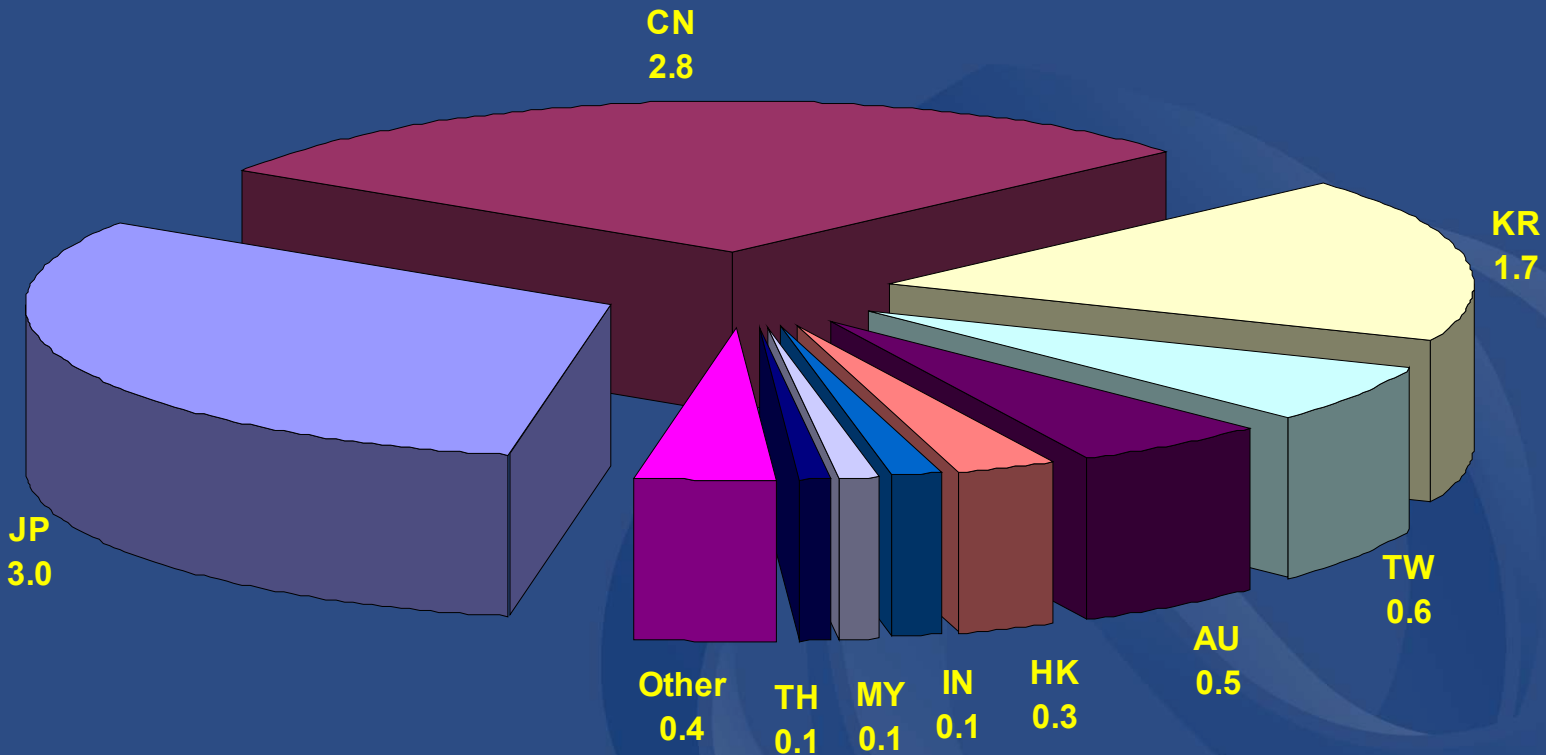
IPv4 Distribution - IANA



IPv4 Allocations - RIRs



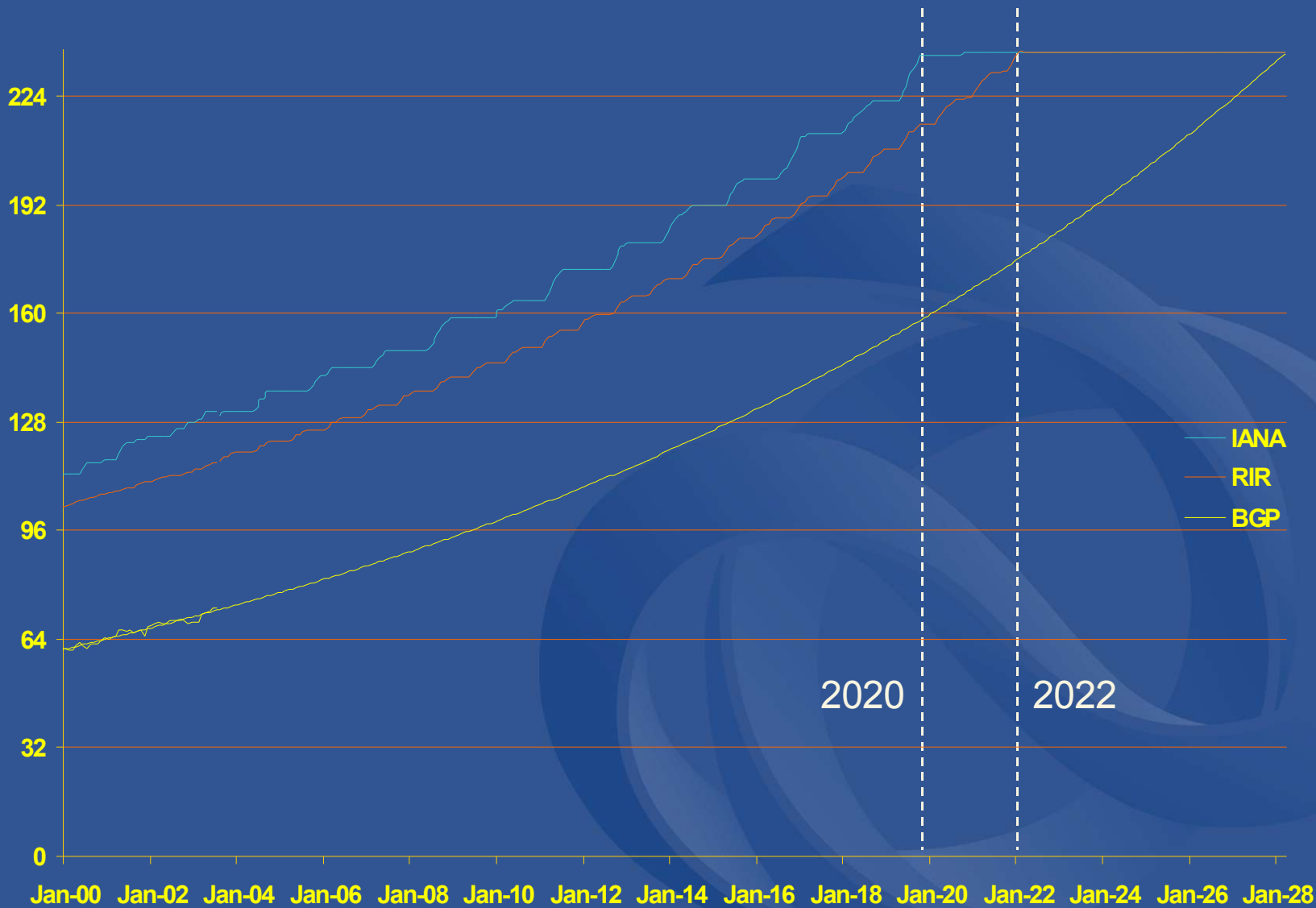
IPv4 Allocations - APNIC



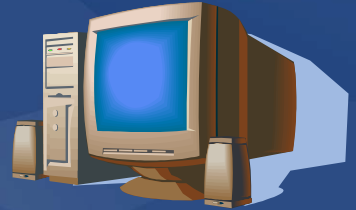
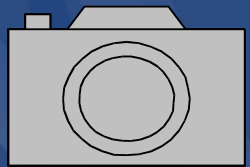
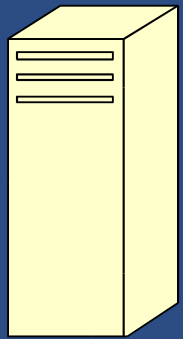
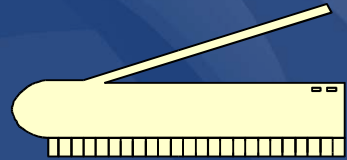
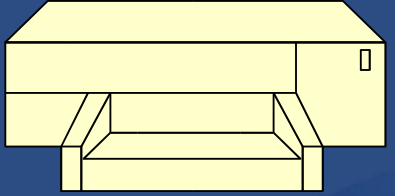
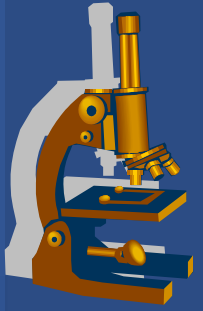
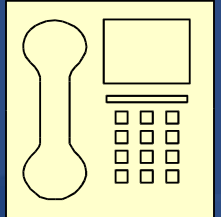
IP Addresses Tomorrow

What is the future?

IPv4 Address Lifetime



IPv6 - Internet for everything!



IPv6 – Issues

- Good news: IPv6 is Available
 - Technologies now available
 - Addresses are very easy to get
- The bad news: No Demand
 - Do users want it?
 - “Chicken and Egg”
- Reality: Long, hard, transition
 - “Changing engines in flight”
 - Long process – 10+ years
 - Start now!

“Governance”, WSIS and ICANN

RIRs and ICANN

- RIRs predate ICANN by many years
 - 1993: RIRs established
 - 1999: ICANN established
 - 2004: Negotiations continue...
 - RIRs support “Internet Model” not “ICANN”
- RIR system is established and respected
 - Well understood, open and transparent
 - Multilateral, transparent, democratic, open
- RIRs do not do “Internet Governance”
 - Administrative coordination only

NRO statement on ICANN

- *... The principle of these issues within the WSIS context is that of the independence and genuine internationalization of ICANN.*
 - *Therefore the NRO calls on ICANN to continue its work in this area, not by building a multinational organization, but rather by including and gaining the genuine support of its significant base of core stakeholders, namely those in the DNS, IP address, and protocol communities.*
 - *Furthermore, the NRO calls on ICANN to work with the US Government to demonstrate a genuine and unambiguous plan for its independence and to commit to this plan before the conclusion of the second phase of the WSIS.*
- ICANN meeting, Rome, 24 March 2004

Thank You

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