IPv6 Implementation State
TCP/IP Update

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IPv6 Implementation Agenda

- What Platforms and Specifications are Running?
- What Interoperability Testing has Happened?
- Where are the TCP/IP Base Platform Changes?
- How do we do Internet Testing?
- IPv6 1996 Implementation Projection!
- Who has IPv6 Packets on the Internet Now!
- Q&A and WWW Page Pointer!

IPv6 Platforms Running Today

- 4.4-lite and NetBSD
- HP-UX
- Digital UNIX and OpenVMS
- Solaris 2 and SunOS
- Macintosh
- NT
- Baynetworks Router
- Ipsilon Router
- Digital Router

Core Specifications being Tested

- Base Protocol
- Address Architecture
- ICMP Error Processing
- Neighbor Discovery
- DNS AAAA Records
- Stateless Autoconfiguration
- Transition Mechanisms
- Network Layer Security
- BSD Sockets and DNS APIs
- IPv6 over Ethernet and FDDI

Future Specifications to be Tested

- Path MTU Discovery
- IPv6 Generic Tunneling Mechanisms
- Stateful Autoconfiguration (DHCPv6)
- Routing Protocols
- Dynamic Updates to DNS
- Mobile Computing
- Multihome Nodes
- IPv6 over ATM
- RSVP for IPv6

IPv6 Multivendor Interoperability Testing

- TCP/IP EXPO (Aug 1995)
- Networld / Interop (Sept 1995)
- Internet (May 95 - NOW)
- Interoperability Event Feb 6-9, 1995 University of New Hampshire

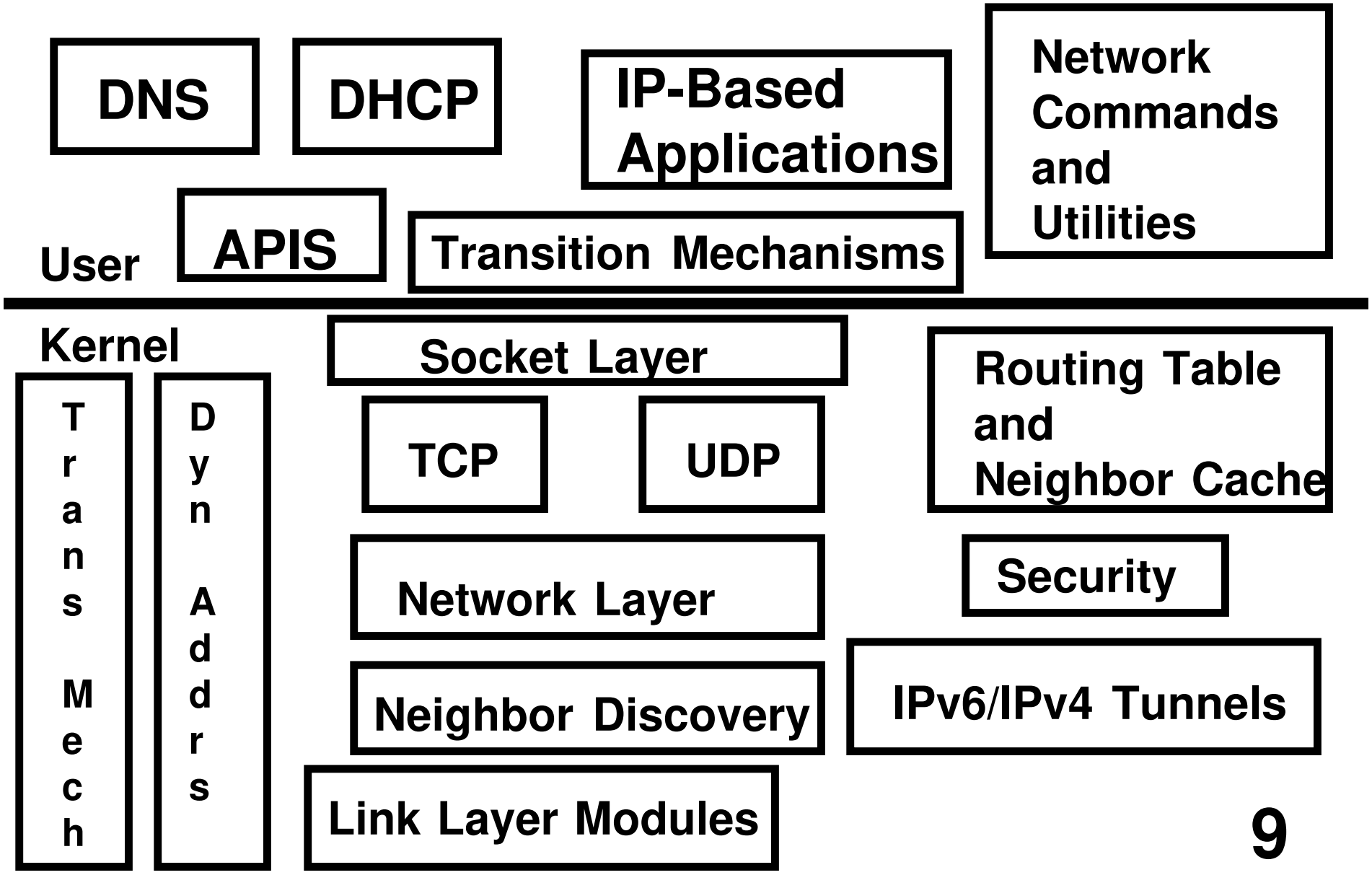
Whats being Tested?

- IPv6 Options Processing
- Fragmentation and Reassembly
- Neighbor Discovery
- Router Discovery
- Address Resolution
- Address Prefix Discovery
- Stateless Address Autoconfiguration
- Duplicate Address Detection
- Neighbor Unreachability Detection
- ICMP Error Generation Processing

Whats being Tested (continued)?

- Dual Network Layer Stack Selection (IPv4 and IPv6)
- Automatic Tunnels (IPv6 in IPv4)
- Manual Tunnels (IPv6 in IPv4)
- DNS Resolver and Server
- BSD Sockets and DNS IPv6 APIs
- Multicast Application
- RIPv6
- Static Routes and Forwarding
- Telnet, FTP, and PING
- Traceroute, Netstat, TCPdump, and IFconfig

Where are the TCP/IP Base Platform Changes?



How do we do Internet Testing?

- IPv6-in-IPv4 Tunnels
- ES-Net as IPv6 Backbone
- IPv6 Test Allocation Addresses
- IPv6 DNS Master and Secondary Servers
- Internet Service Providers
- Network Access Providers
- Vendor IPv6 Binary Kits to End Users Now

IPv6 1996 Implementation Projection

- Standardization of Additional Specifications
- Multivendor Interoperability Events
- Multivendor Trade Show Events
- IPv6 SixBone Deployed
- Early Adopter Prototype Binary and API Kits
- Transition Scenarios Defined

IPv6 Packets on the Internet

INRIA France
Swedish Institute of Computer Science
Mentat
Digital Equipment Corporation
Sun Microsystems
Hewlett Packard
Mitre
University of New Hampshire
Bay Networks
Ipsilon
Naval Research Labs
Indian Institute of Technology

IPv6 Implementation Q & A

IPng WWW Page:

http://playground.sun.com/pub/html/ipng-main.html