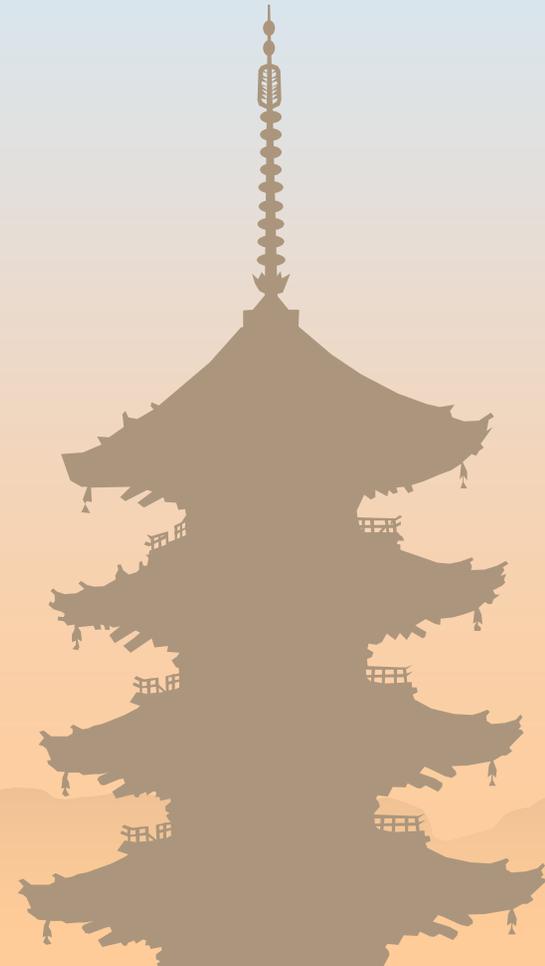


Recent topics in the IETF

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Contents

- ❁ Introduction of IPv6 related working groups in IETF
 - Recent topics of each WG
 - ipv6 WG
 - v6ops WG
 - multi6 WG
 - Mip6 WG



IPv6 standardization in IETF

- ❁ Today, standardization of IPv6 itself is almost completed
 - IETF says protocol dependent standard is not appropriate

4. Protocol Issues

Avoid IPv4 specificity. Both IPv4 and IPv6 must be supportable, unless the protocol is naturally IPv4 specific or IPv6 specific.

<http://www.ietf.org/ID-Checklist.html>

- Current main discussion points:
 - Document status update (to Standard)
 - Usability related
 - Autoconfiguration detail
 - multihoming
 - Mobility

IPv6 WG

❁ IPv6 WG

- Core WG for IPv6 standardization

❁ Recent topics:

- Document status update

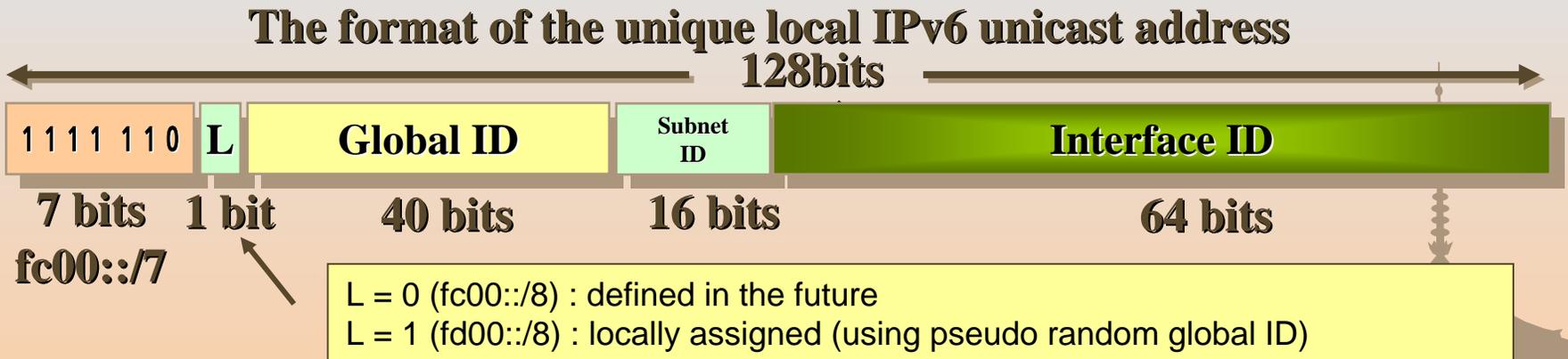
- Revise IPv6 main specification documents
 - RFC2461 – RFC2463 (currently, draft standards)
 - then, advance them to ‘Standard’ documents

- Optimistic duplicate address detection

- Simplify duplicate address detection sequence to reduce the time for DAD
 - Mainly for the IPv6 mobility feature

IPv6 wg (cont.)

- ❁ Deprecation of 'site-local address' (RFC3879)
 - New IPv6 local address is now under standardization.
 - 'unique local IPv6 unicast address (ULA)'



- ❁ DNS server discovery
 - Three mechanisms are proposed (based on DHCPv6, RA and well-known address)

v6ops WG

❁ IPv6 Operations WG

- Operating IPv6/IPv4 coexistent network, IPv4/IPv6 transition mechanism
- At last IETF, decided to create a new working group for discussing tunnel-based transition mechanism
 - BoF or new WG meeting will be held at 62nd IETF meeting.
 - Protocols such as ISATAP, Teredo and tunnel end-point discovery will be discussed at new WG

❁ Recent topics:

- Deployment scenarios are being discussed.
 - Unmanaged networks, Enterprise networks, and ISP networks
 - Currently, deployment scenario for Broadband environment is being discussed at ML

v6ops WG (cont.)

❁ Discussion on IPv6 security issues

– IPv6 security overview

- Protocol problem, transition mechanism, and deployment issue

– Proposal of security models for IPv6 networks

- Distributed security model
- Quarantine security model

❁ IPv6 Fix program

– Fixing problems that appeared during the IPv6 deployment

- DNS issue, and node behavior

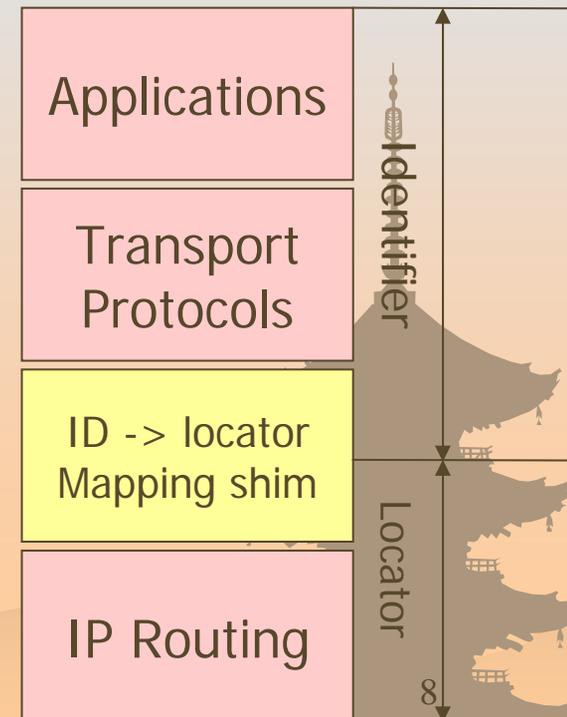
multi6 WG

❁ Multi6 WG

- Designing new multihoming approaches for IPv6

❁ Recent topics:

- Designed a new multihoming approach for IPv6
 - Split the IP address function
 - Locator/Identifier
 - An L3 shim between IP endpoint and routing sub layers has been added
 - Mapping between ID and locator
- Multi6 WG itself will be concluded and new WG designing multihoming protocol will be formed



Mobility for IPv6 WG(mip6)

❁ Mip6 WG

- Mobile IPv6 (MIPv6) specifies routing support to permit an IPv6 host to continue using its "permanent" home address as it moves around the Internet.

❁ Recent topics:

- Mip6 specification finally became RFC3775
- Recent discussion points are
 - Using IPsec (IKE)
 - Bootstrapping problem
 - Configuring home address, home agent address, and security
 - Redundancy problem

