SA46T Multicast Support
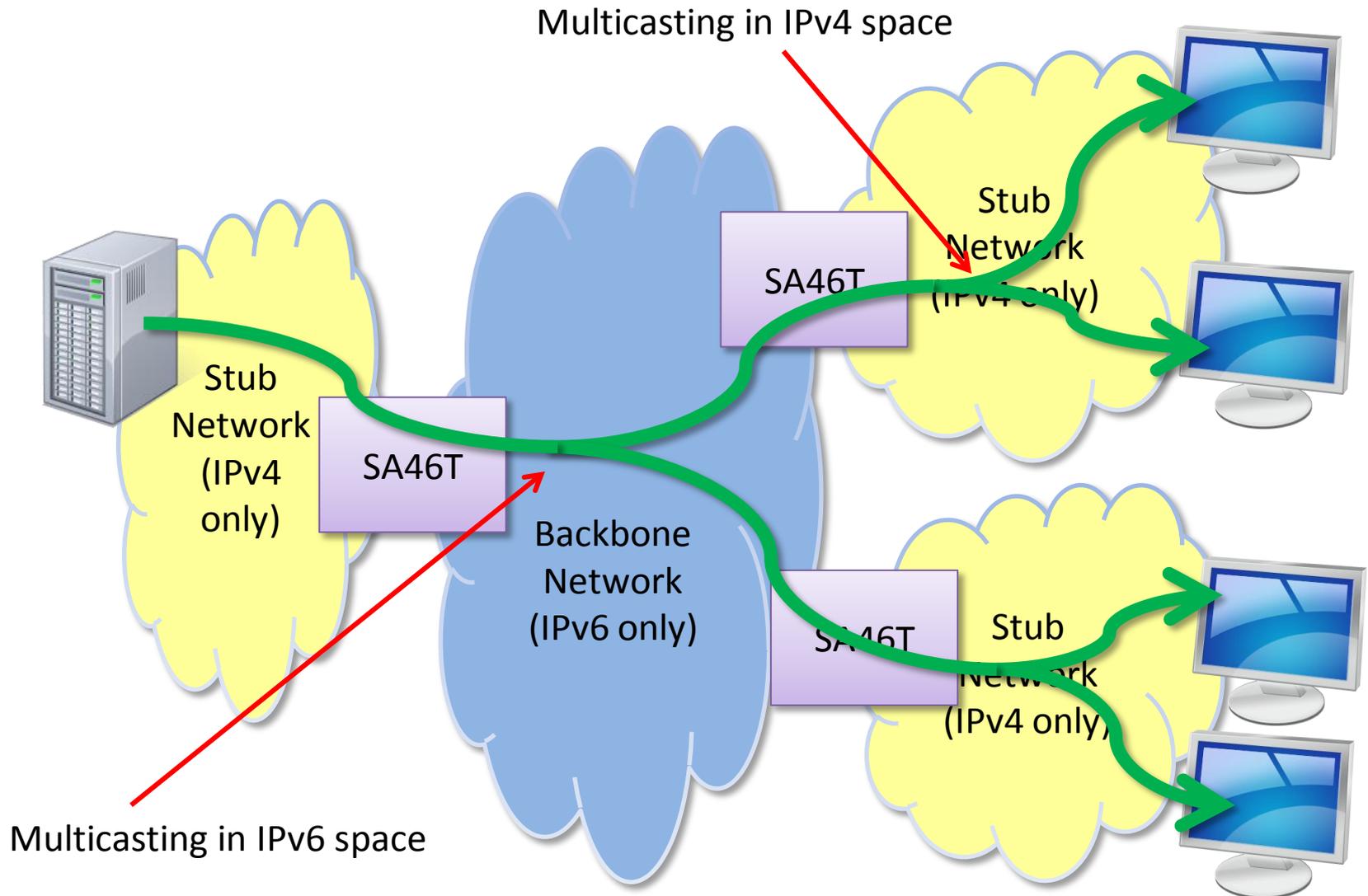# draft-matsuhira-sa46t-mcast-00

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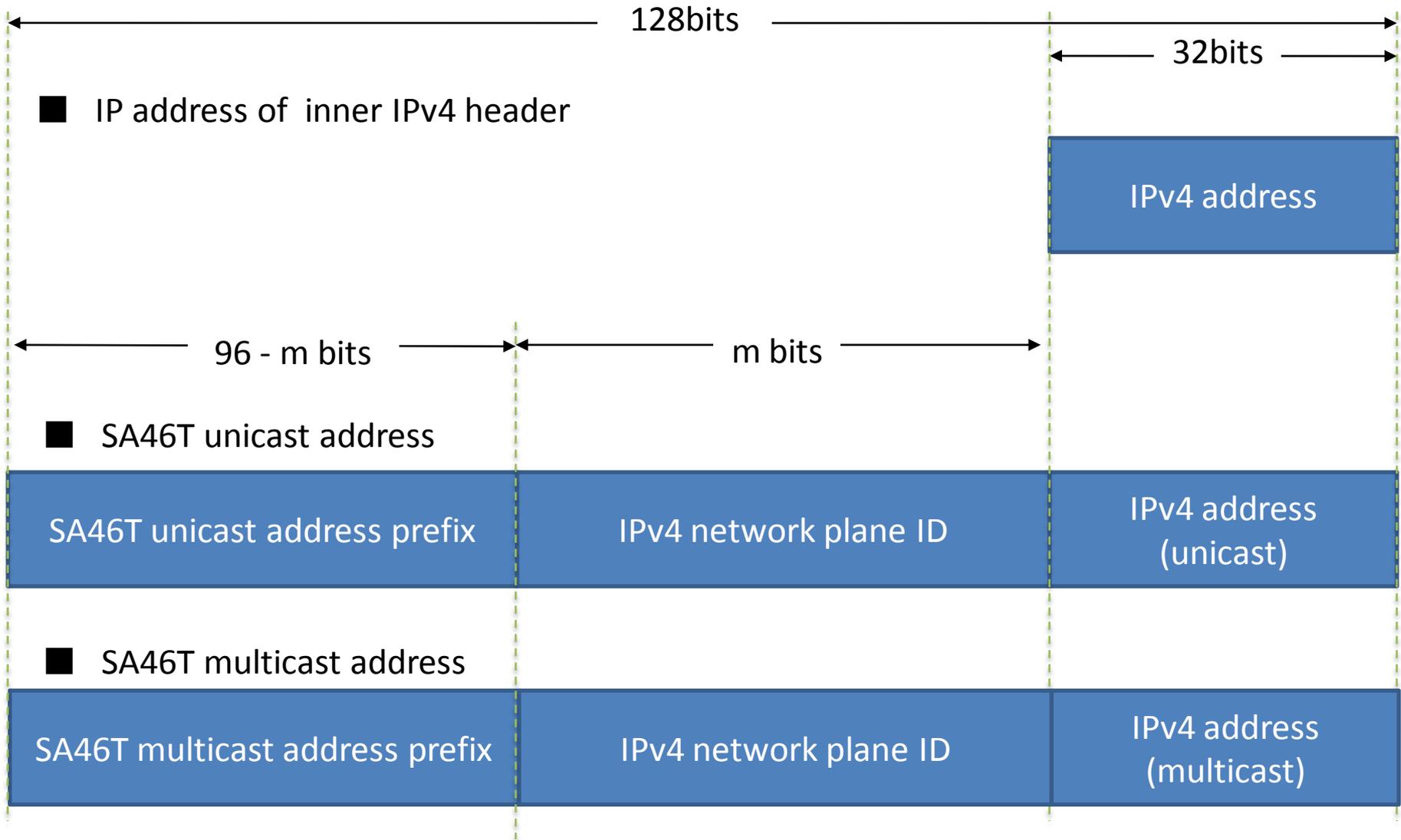
softwire WG, 82nd IETF, Taipei

About Terminology of SA46T

- From Chairs slide at Beijing interim meeting
  - Tunnels
    - usually point-to-point, set-up protocol
  - Encapsulation
    - usually point-to-multipoint or multipoint-to-multipoint, no set-up protocol
- Terminology of SA46T
  - Should use "Encapsulation" rather than "Tunnels"
  - Stateless Automatic IPv4 over IPv6 encapsulation/de-capsulation Technology
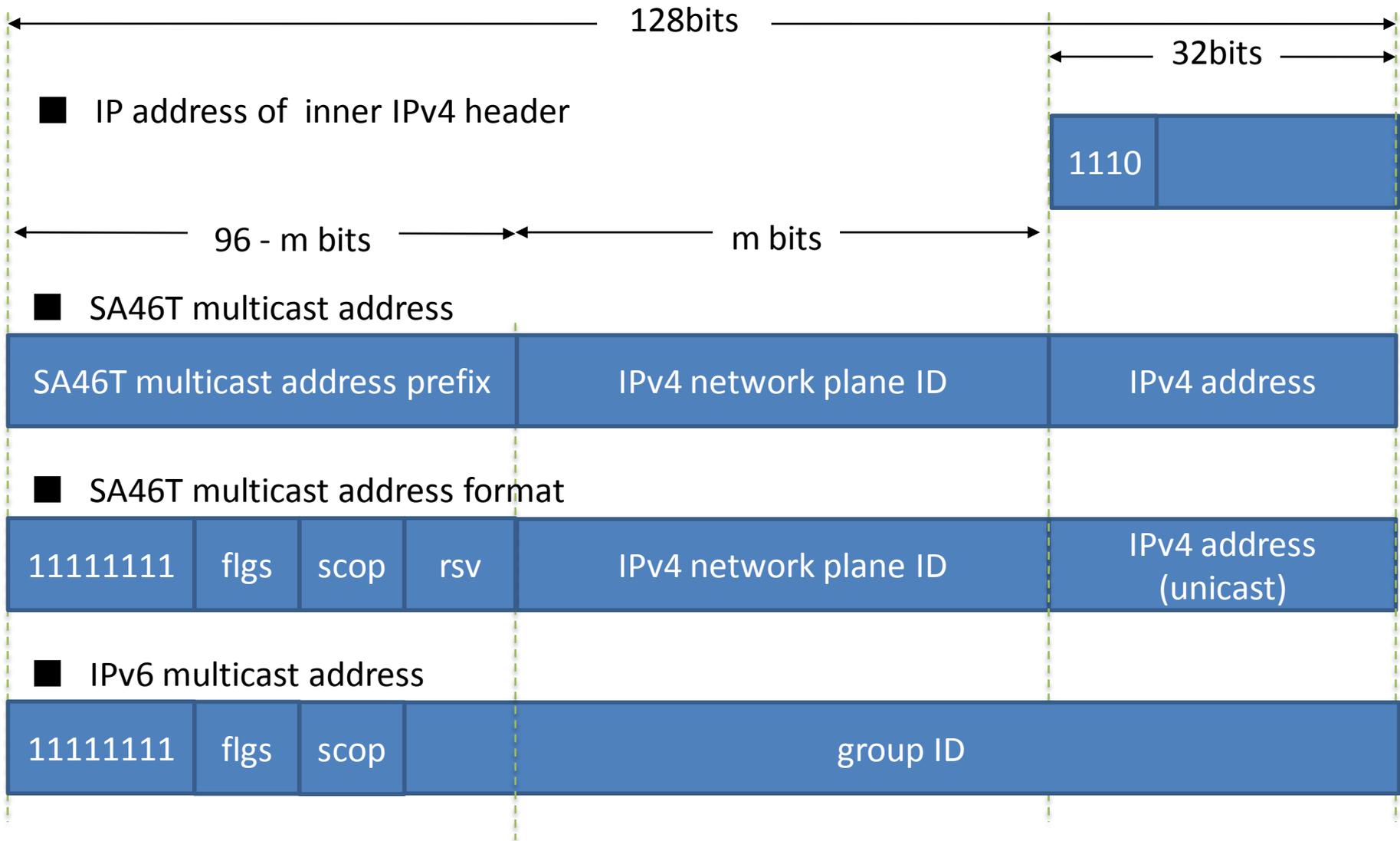 - Abbreviation "SA46T" remain the same

SA46T Multicast Support

Multicasting in IPv4 space

Multicasting in IPv6 space

Stub Network (IPv4 only)

SA46T

Backbone Network (IPv6 only)

SA46T

Stub Network (IPv4 only)

SA46T

Stub Network (IPv4 only)

SA46T address architecture

128bits

32bits

■ IP address of inner IPv4 header

IPv4 address

96 - m bits | m bits

■ SA46T unicast address

| SA46T unicast address prefix | IPv4 network plane ID | IPv4 address (unicast) |

■ SA46T multicast address

| SA46T multicast address prefix | IPv4 network plane ID | IPv4 address (multicast) |

SA46T multicast address architecture

128bits

32bits

- ■ IP address of inner IPv4 header

1110	

96 - m bits   m bits

- ■ SA46T multicast address

SA46T multicast address prefix	IPv4 network plane ID	IPv4 address

- ■ SA46T multicast address format

11111111	flgs	scop	rsv	IPv4 network plane ID	IPv4 address (unicast)

- ■ IPv6 multicast address

11111111	flgs	scop	group ID

SA46T multicast address format example

■ SA46T multicast address format

← 8 →	← 4 →	← 4 →	← 48 bits →	← 32 bits →	← 32 bits →
11111111	flgs	scop	rsv	Plane ID	IPv4 address

SA46T multicast address prefix

■ SA46T unicast address format

← 3 →	← 45 bits →	← 16 →	← 32 bits →	← 32 bits →
011	Global routing prefix	subnet ID	Plane ID	IPv4 address
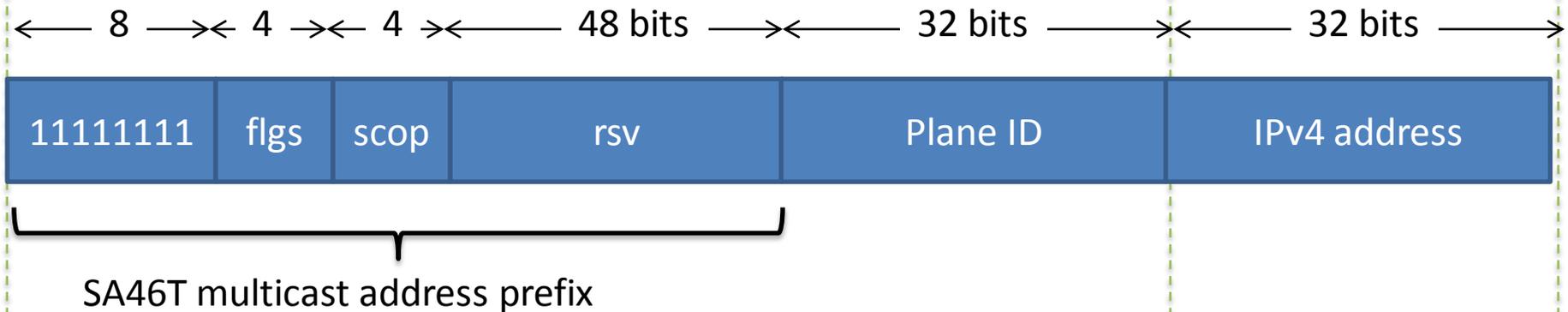
SA46T unicast address prefix
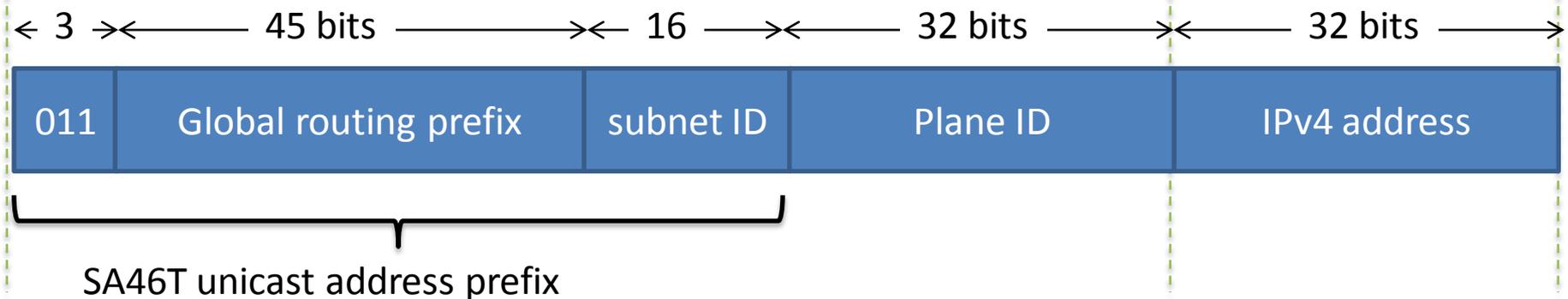
Issue

- The information which indicate SA46T multicast address is needed
  - Because there is a possibility of these value is the same
    - group ID for IPv6 multicast
    - "rsv + IPv4 network plane ID + IPv4 multicast address"
- This information is TBD.
  - It will happen very rarely.
- Considering merge MAP effort including SA46T , SA46T mcast, and SA46T-AS