Multicast Support for MAP

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IETF 87

draft-sarikaya-softwire-map-multicast-00
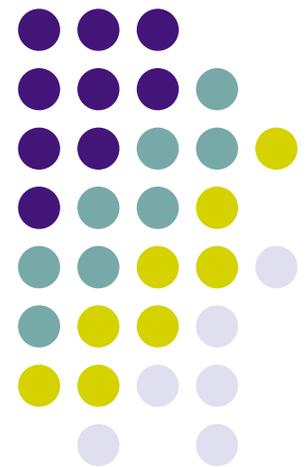
MAP Multicast
Motivation

- MAP IPv6 transition technologies are unicast

- Multicast support approaches for MAP are needed mainly for MAP-E but also MAP-T & 4rd to enable IPv4 hosts to have multicast communication over IPv6 network

- **draft-sarikaya-softwire-map-multicast-00**

  defines encapsulation for MAP-E and translation for MAP-T & 4rd based multicast support

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MAP-E Multicast

- ## Use RFC 2473 for tunneling

IPv4 Multicast Source

IPv4 multicast user

MAP CE

MAP BR

IPv6 Network

IPv4 Network

4-in-6 tunnel

IPv6

IGMP Proxy

IGMP Router

IGMP PIM

← **Group Management Messages in IGMP** →

IPv6 packet Payload: IGMP

← **Multicast Data**

IPv6 packet Payload: IPv4 multicast data

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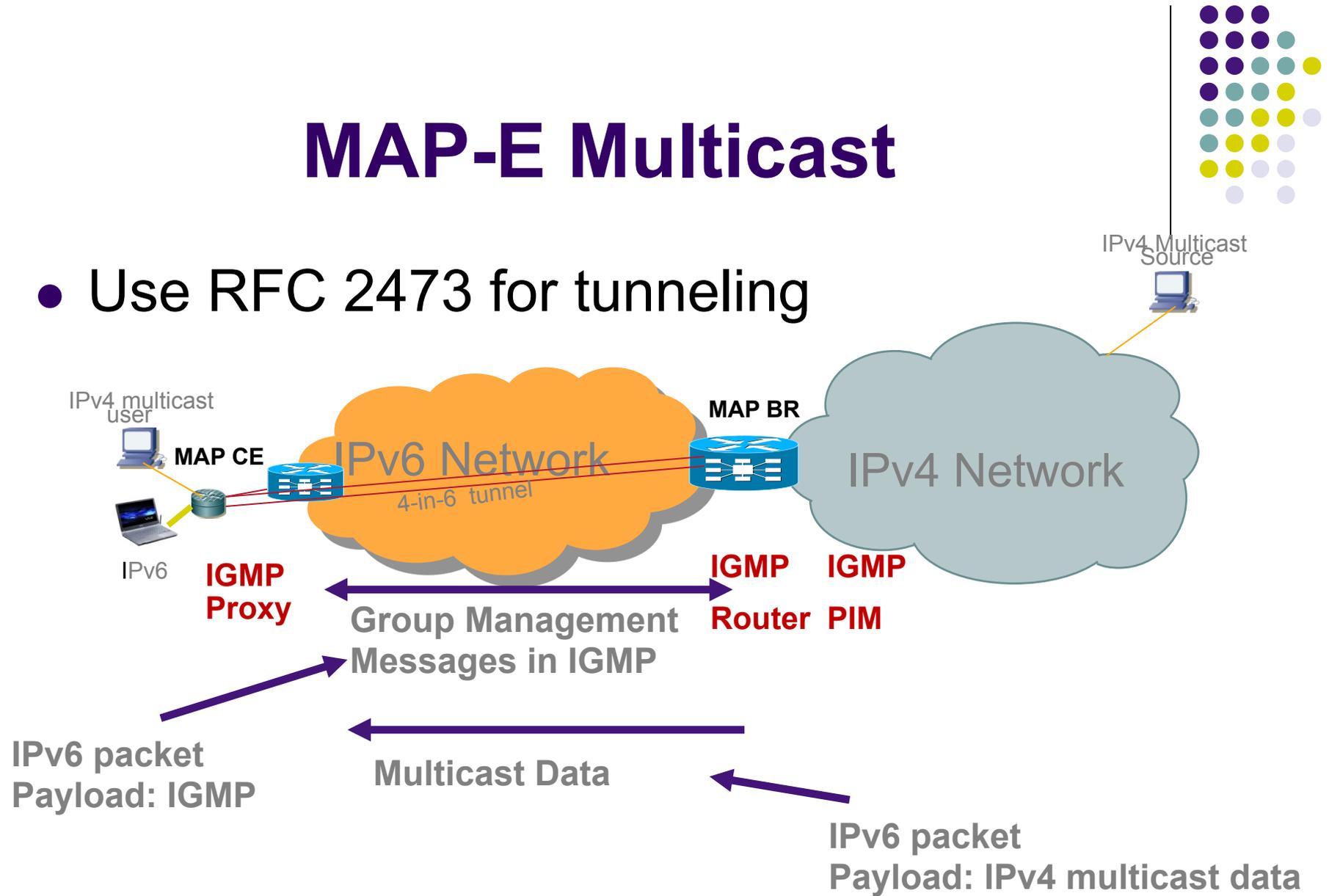
Translation Multicast

- On IPv6 network, may use native multicast with MLD

IPv4 Multicast Source

IPv4 multicast user

4rd CE

IPv6

4rd BR

IPv6 Network

IPv4 Network

MLD Querier on WAN side

MLD to IGMP translator

IPv4 Network side IGMP/PIM Router

Group Management Messages in MLD

Multicast Data in IPv6

Multicast user:
IGMP join
CE: MLD join

Multicast source: IPv4 multicast data
BR: IPv6 multicast data
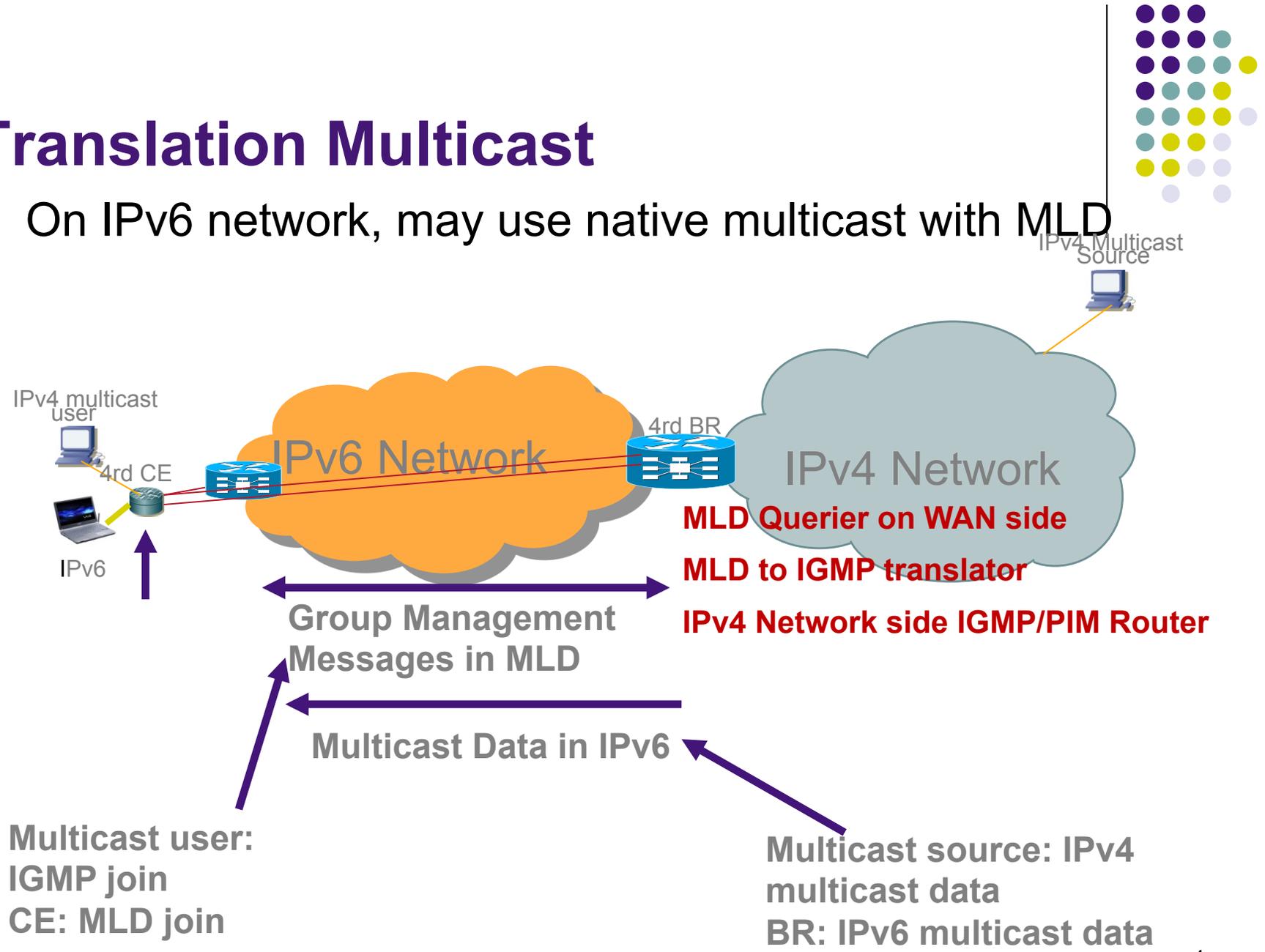
Discussion

❑ MAP-E multicast is based on RFC 2473 encapsulation

❑ Use Multiple BRs but for different groups, same group use always the same BR

❑ This provides more scalable solutions

❑ Eases the avalanche problem

❑

Next Steps
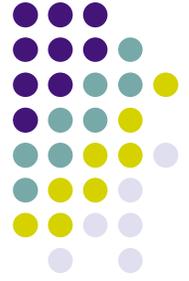
- Propose to add this draft to MAP set of WG drafts to complete the picture