

Mobile Multicast Sources Support in PIMIPv6 Domains

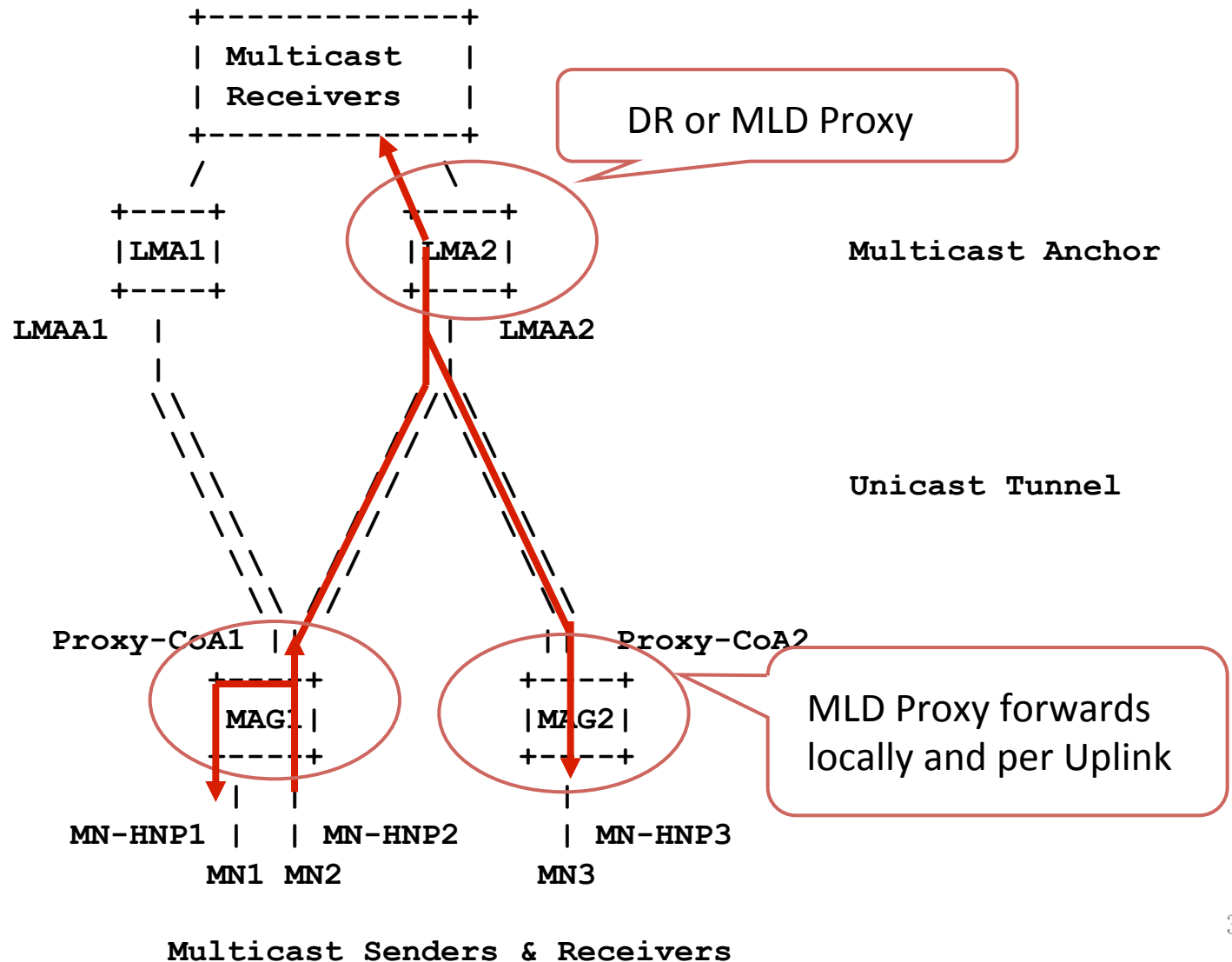
draft-schmidt-multimob-pmipv6-base-source-01
draft-zhang-multimob-msm-03

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Objective of the Drafts

- Describes the support of mobile multicast sources at basic deployment of multicast support in PMIPv6 domains.
- Discusses some open issues, including PIM neighbors, route optimizations, LMA suppressions.

Multicast Base Deployment with Mobile Source



Open Issues 1

- PIM DR direct connection check problem at the LMA
 - LMAs acting as DR in PIM [RFC4601] will require sources to be directly connected for sending PIM registers to the RP. This does not hold in a PMIPv6 domain, as MAGs are routers intermediate to MN and the LMA.
 - Solutions: LMA should act as a PIM Border Router (PMBR).
 - the DirectlyConnected(S) is treated as being TRUE for mobile sources.
 - Working at the incoming tunnel interface. Don't interfere normal multicast functions at other physical interfaces.
 - Some indication mechanism to switch on or off the PMBR function with the movement or access change of multicast sources?

Open Issues 2

- Routing is optimal for receivers at the sender's MAG that belong to the same LMA, and for the fixed Internet
- Routing detours via LMAs, whenever
 - Mobile listener is attached to another MAG
 - Mobile listener is associated with a different LMA
- Possible solutions
 - Direct Routing:
 - Up-link of MLD-proxy at the MAG into multicast cloud. PIM neighbor problem for the multicast sources?
 - MAG acts as DR?
 - Delay and handover cost during the movement of sources
 - Multi-Upstream Interfaces MLD Proxy

Open Issues 3

- The LMA will receive all multicast traffic originating from its associated MNs regardless whether there are receivers or not.
- Solutions
 - Admission control mechanisms like source-stop scheme between LMAs and MAGs may be added to suppress multicast flooding to LMAs, if there's no corresponding receivers
 - set a timer for resending data from MAGs if needed.

Status of the draft & Next Step

- A merged version of the proposed two drafts.
- The new draft will explain source mobility in the base scenario.
- The new draft will explore the direct routing option for sources.
- Optimization approaches will be included.

Questions

Thank You!