

Potential future work for MultiMob

draft-von-hugo-multimob-future-work-01

MultiMob WG

IETF 77, Anaheim

Dirk Von Hugo, Deutsche Telekom

Hitoshi Asaeda, Keio University

Behcet Sarikaya, Huawei USA

Pierrick Seité, France Telecom - Orange

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Overview/context

- MultiMob is proposing a base solution
 - Does not modify mobility and multicast protocol standards
 - Based on IGMP/MLD proxying to the LMA

- draft-von-hugo-multimob-future-work-01 proposes some work items for optimization
 - Requirements for an optimal mobile multicast support
 - E.g. reduce handover delay, reduce packet loss, route optimization...
 - Support new use-cases
 - E.g. source mobility, per-flow mobility
 - Extensions to build directly on basic MultiMob solution
 - This I.D. is a discussion paper...

Proposition for future work: performances optimization

- Modifying base MLD/IGMP for optimal mobility support
 - idea: tune IGMP/MLD to mobility context
 - Requirement: draft-liu-multimob-igmp-mld-mobility-req
 - E.g. proposition of IGMP/MLD Hold and Release extensions: suspend/resume data forwarding during handover (draft-asadea-igmp-mld-mobility-extension)
- Modifying base PMIPv6 for optimal multicast support
 - e.g. agent-based, hybrid approach
 - draft-asadea-multimob-pmip6-extension

Proposition for future work: performances optimization

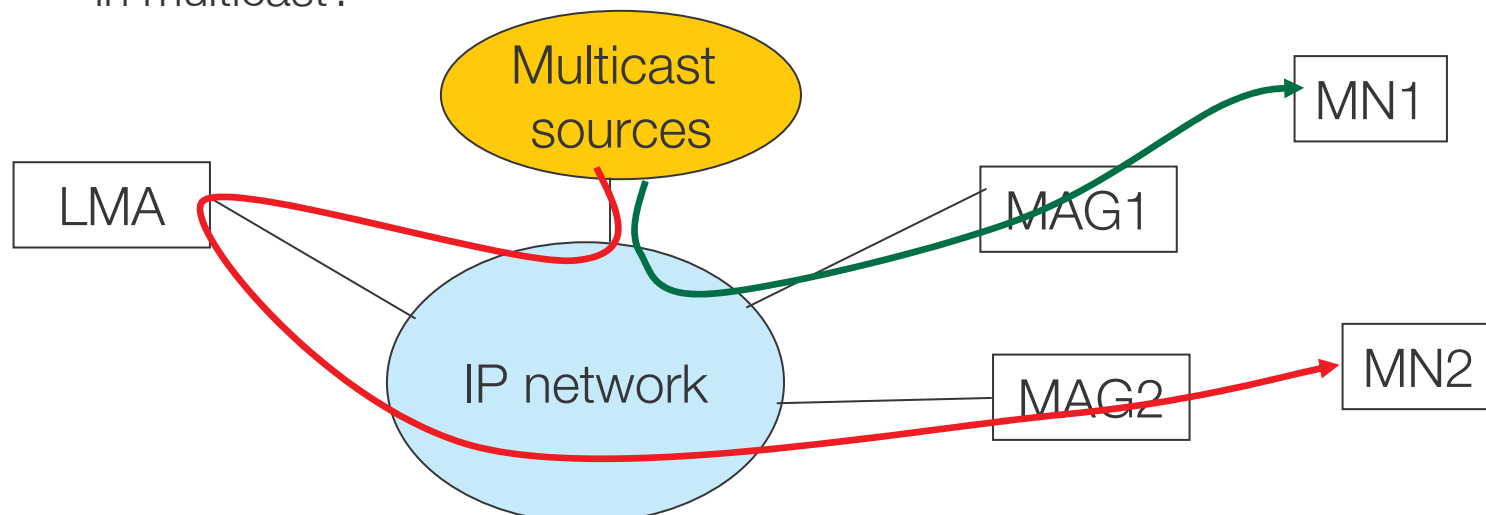
- Mobility agnosticity
 - Mobile node remains agnostic of mobility (the node is not required to re-subscribe to multicast group(s) after handoff)
 - So, the new MAG must be able retrieve the multicast states corresponding to the moving node (to subscribe on behalf to the MN)
- Reduce handover latency considering MIPSHOP outcomes
 - Adapt HMIP, FMIP, PFMIP and/or reuse multicast specific extensions
 - draft-schmidt-multimob-fmipv6-pfmipv6-multicast, draft-hui-multimob-fast-handover,...

Proposition for future work: advanced use-cases

- Multi-hop/multi-path transmission
 - Scope: MANET (Mobile had-hoc networks)
- Support of multiple flows
 - Per-flow mobility management allows to treat difference service requirements
 - Increase flexibility for an enhanced end-user quality of experience and better usage of network resource
- Sender (source) mobility
 - E.g. mobile multi-party gaming or AV conferencing
 - Issues described in RFC5757 (source must provide address transparency)

advanced use-cases

- Consider optimizations of MIP/DSMIP
 - Address compatibility between PMIP based multicast and MIP (mobility between network based and client-based mobility support)
- Local Breakout
 - Local content delivery network in a LMA centralized architecture
 - Issue: mobility management without mobility anchor (LMA not aware about MN's multicast states)
 - Makes sense for Unicast (e.g. VoD), but is it a realistic use-case in multicast?



thank you



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