



# Extension of the MLD proxy functionality to support multiple upstream interfaces

<draft-contreras-multimob-multiple-upstreams-01.txt>

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# Motivation

- The support of multiple upstream interfaces on an MLD proxy functionality has been identified as an opportunity for system optimization
- Complexity
  - Handling of control messages for/from multiple upstreams
  - Efficient handling of data traffic for/from multiple upstreams
- Purpose
  - Requirements identification for supporting multiple upstreams
  - Specification of the needed MLD proxy functional extensions
- Changes from last version
  - Fixed network communication scenarios introduced
  - PMIPv6 appendix included for explanatory introduction to mobile scenarios (MULTIMOB-centered)

# Scenarios of applicability for MULTIMOB

- Advantages for MULTIMOB scenarios:
  - ✓ Traffic routing optimization within the PMIPv6 domain
  - ✓ Simultaneous support of remote & local multicast subscription
  - ✓ Avoidance of multi-MLD proxy instances on MAG
- Documented listener mobility scenarios
  - ✓ Single MLD proxy instance on MAG
  - ✓ Remote and local multicast subscription
  - ✓ Dual subscription to multicast groups during handover
- Documented source mobility
  - ✓ Support of remote and direct subscription in basic source mobility
  - ✓ Direct communication between source and listener associated with distinct LMAs but on the same MAG
  - ✓ Route optimization support in source mobility for remote subscribers

## Next steps

- Collect pending / potential MULTIMOB scenarios not yet covered
- Receive comments on documented requirements, and identify new ones, if not yet raised
- Move the draft proposal to PIM WG
  - Keep ensuring alignment with present and future MULTIMOB WG goals