IETF Multicast Mobility work extension

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Future Work Presentation

Charter:

- Future work, subject to rechartering, may study/evaluate extensions to support PMIPv6 optimizations to address the avalanche problem and fast handover and extensions to IGMPv3/MLDv2 to support better operation in mobile environments.

- Jun 2010 Decision to include additional optimization work involving extensions to PMIPv6/IGMPv3 or MLDv2

- Jun 2010 Recharter based on the above decisions (or close the group if no new work is needed)
Proposal to discuss potential issues early enough

- draft-von-hugo-multimob-future-work-00 (mainly based on draft-irtf-mobbopts-mmcastv6-ps-09) proposes:
  - Future MultiMob extensions to build directly on basic MultiMob solution
  - Modifying base PMIPv6 for optimal multicast support
e.g. agent-based, additional encapsulation, hybrid approach
  - Modifying base MLD/IGMP for optimal mobility support
  - Extending to and modifying of MIPv4/v6 and DSMIP
e.g. FMIP/PFMIP, DSMIP, HMIP, NEMO ...
e.g. Handover optimization, Multi-homing, multiple flows, multi-hop/multi-path transmission, ...
  - Sender (source) mobility
  - Any other ideas?
Details

- Current work without modification of PMIP and MLD
Details

- Current work without modification of PMIP and MLD
- Future work extension on
  - MN mobility treatment,
  - multicast service protocol,
  - CN mobility
  - ...

\[ \text{MN} \quad \rightarrow \quad \text{MN} \quad \rightarrow \quad \text{MN} \]

\[ \text{MAG1} \quad \downarrow \quad \text{MAG2} \quad \downarrow \quad \text{AR1} \quad \downarrow \quad \text{AR2} \]

\[ \text{Internet Subnet 1} \quad \text{Internet Subnet 2} \quad \text{Internet Subnet 3} \]

\[ \text{Fixed Internet} \quad \rightarrow \quad \text{CN} \quad \rightarrow \quad \text{CN} \]
Open issues

- Consider ongoing mobility work in NetLMM, NetExt, MEXT, …
- Consider specific multicast-related enhancements within other WG's
- Include MANET type solutions?
- Invitation to contribute to open discussion!