Multicast Mobility in MIPv6: Problem Statement & Brief Survey Update

- draft-irtf-mobopts-mmcastv6-ps-05.txt -

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Outline

- Status of the Draft
- Changes from Version 4
  - Problem Space: Some Clarifications
  - Wireless Link Layer Aspects
  - Solution Space: Unreachable Agents & PMIPv6
  - Security Section: AAA Aspects
- Summary of the Current Draft

Status of the Draft

- State at IETF72: draft-irtf-mobopts-mmcastv6-ps-04.txt
- Went through RG last call in Sept. 08
  - Two thorough reviews support the document: Marshall Eubanks & Cedric Baudoin
- Version 05
  - Update accounting for review comments

Changes: Problem Space

- Confirmation/justification of real-time requirements: 100 – 150 ms in total according to ITU rec.
- Clarification/editorial improvements on different aspects of the problem space

Wireless Link Layer Aspects

- Added 3GPP2/BCMCS aspects in summary
- Added subsection on TV Broadcast and Satellite Networks
  - Variants of MPEG-2 transport streams
  - Second generation DVB allow for generic stream encapsulation (GSE)
- Editorial changes for enhanced clarity

Changes to Solution Space

- Agent-based handovers
  - Assume previous agent reachable after handover
  - This need not be true between walled domains
  - Solutions required to re-initiate mcast context without network assistance
- PMIPv6 activities
  - Paragraph on PMIPv6 multicast options extended
  - Pointer added to multimob requirements doc

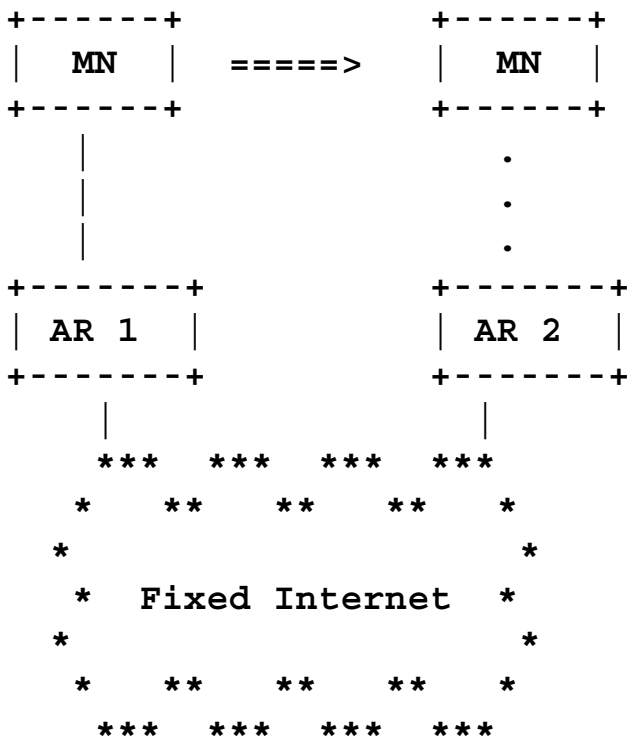
Security Section

- Explicit reference to threats originating from mobility agents
- Pointer to AAA issues:
  - AAA binding driven by user preferences
  - depends on billing, existing contracts etc.
  - not a plain routing decision nor context transfer

Summary: Focal Scenario – MIPv6

This document defines the problem scope for multicast mobility management, which may be elaborated in future work.

It is subdivided to present the various challenges according to their originating aspects, and identifies existing proposals and major bibliographic references.



Key Problems Stated

- Multicast Listener Mobility
  - Node & application perspective
  - Network perspective
- Multicast Sender Mobility
  - Any Source Multicast
  - Source Specific Multicast
- Deployment Issues

Specific Aspects in the Draft

- Structural Aspects of Multicast Routing Trees under Mobility
- Link Layer Aspects
  - 802.11
  - 802.16
  - 3GPP/3GPP2
  - DVB-H /DVB-IPDC
  - TV Broadcast and Satellite Networks
  - Vertical Multicast Handovers
- Overview of Solutions Currently Proposed

Yesterday's Discussion: How Should Multicast Behave under Mobility ?

Multicast reception is delocalized: Seamless receiver mobility is the same problem as seamless mcast channel access (zapping).

Multicast submission defines a channel (in routing, in SSM, in AAA): Transparent mobility requires explicit treatment ... similar to unicast mobility management.

Next Step

Any Open Issue ?