

# Multihoming extensions for Proxy Mobile IPv6 draft-bernardos-mif-pmip-01

Carlos J. Bernardos – Universidad Carlos III de Madrid

Telemaco Melia – Alcatel-Lucent Bell Labs

Pierrick Seite – France Telecom

Jouni Korhonen – Nokia Siemens Networks

Hiroshima, NETEXT WG, 2009-11-11

# Motivation

- Current PMIPv6 spec (RFC 5213) allows for some limited multihoming support
  - Basically, it supports a multi-interfaced MN (MIF node) to attach to a PMIPv6 domain
  - Each interface is managed by a different mobility session
  - Doesn't fully support the case of an MIF node attaching to a PMIPv6 domain
    - E.g., flow mobility scenarios

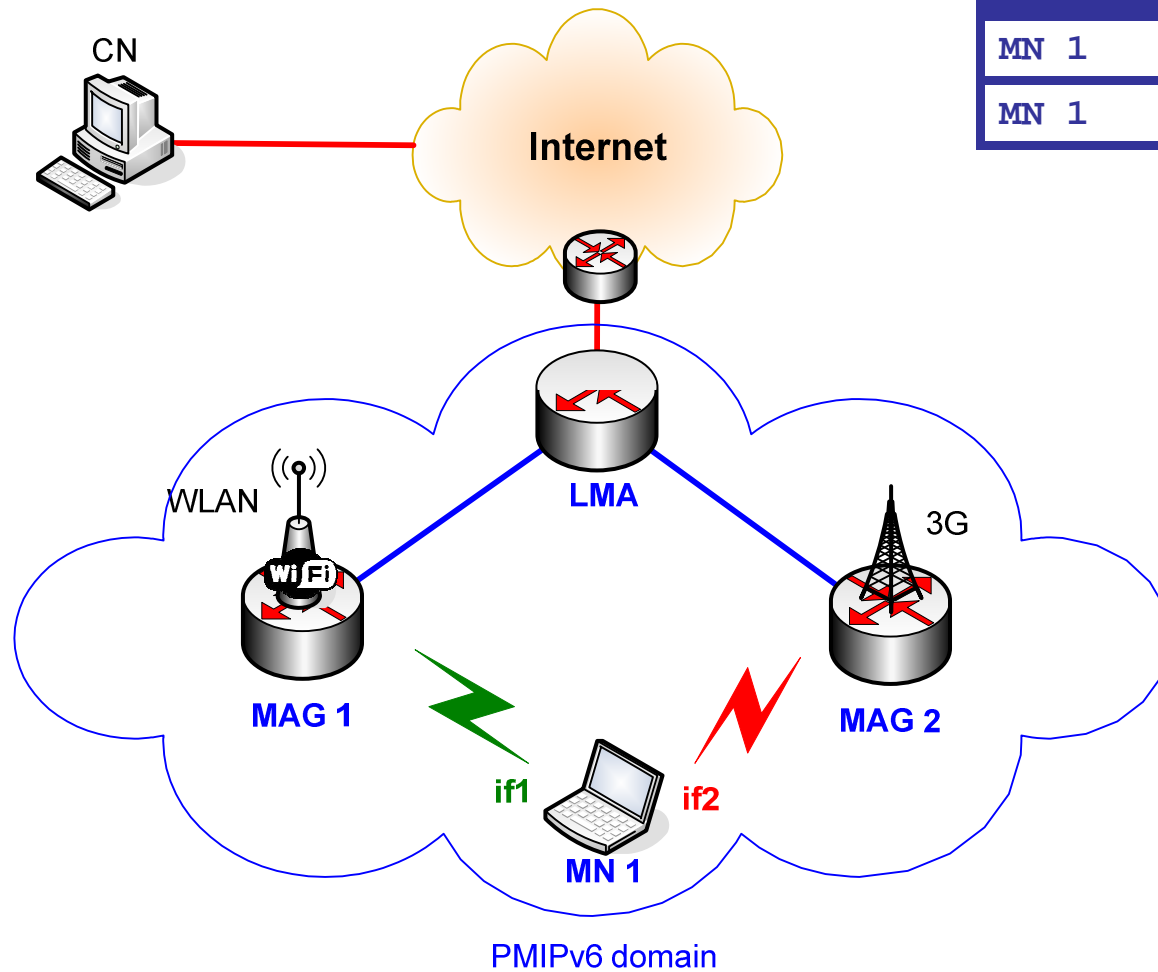
# Advantages

- The proposed approach enables multi-technology and IP flow mobility by means of simple configuration steps
- The MN behaves according to RFC 1122 (e.g., no need for special purpose and OS dependent solutions)
- DL rules for packet forwarding are supposed to be available at the LMA
- UL rules for interface selection are based on RFC 3484, 5014

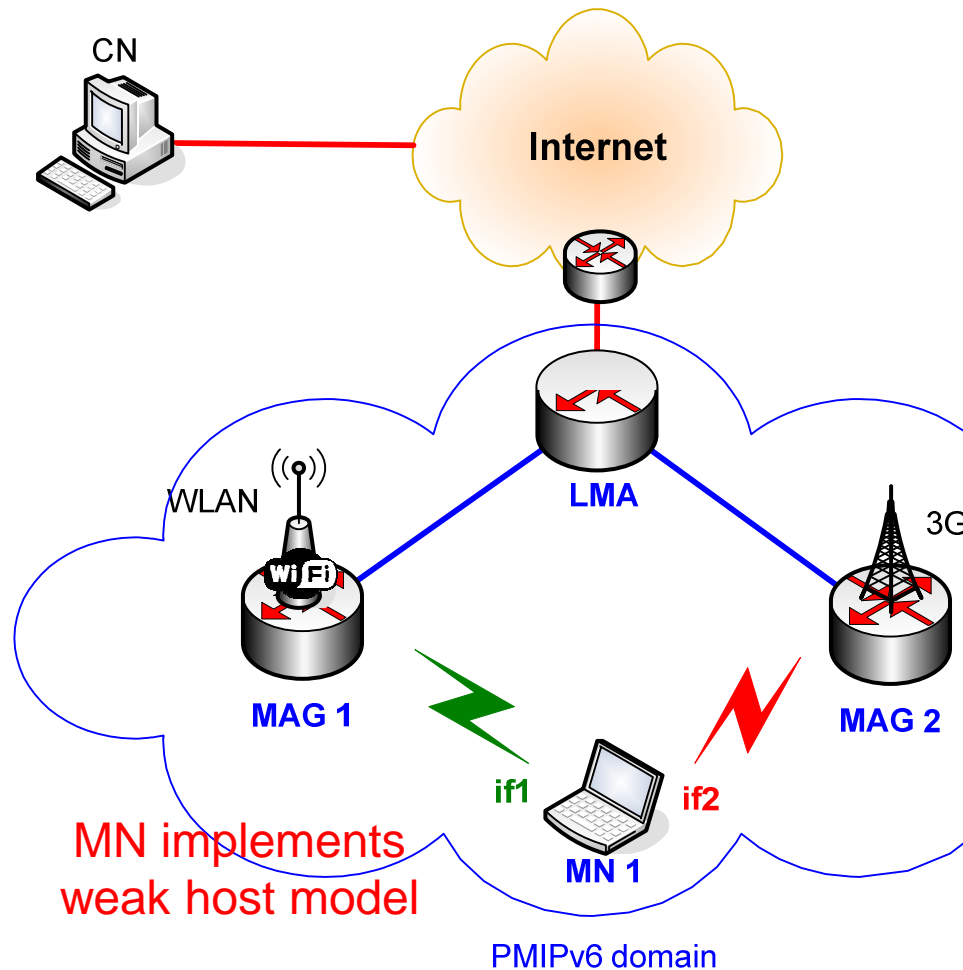
# Use case. RFC5213

LMA Binding Cache

MN-ID	MN-LL-ID	PREFIX	MAG
MN 1	MN:if1	pref1	MAG 1
MN 1	MN:if2	pref2	MAG 2



# Use case. Proposed approach



LMA Binding Cache

MN-ID	MN-LL-ID	PREFIX	MAG
MN 1	MN:if1	pref1	MAG 1
MN 1	MN:if2	pref2	MAG 2

LMA Policy/Routing Cache

flowID(src, dst, ports)	Next Hop
flow1(CN, pref1::if1,...)	MAG 2
flow2(CN, pref2::if2,...)	MAG 2
...	
flowN(CN, pref2::if2,...)	MAG 1

MAG 2 routing table

DESTINATION	Next Hop
pref2::/64	directly connected
pref1::if1	directly connected
::/0	LMA

# Use case. Proposed approach

- MN considerations
  - Weak host model
    - Some experiments performed
    - Automatic configuration of weak host model should be possible
- LMA considerations
- MAG considerations
- DL and UL considerations