

Hybrid home network prefix for multihoming in PMIPv6

draft-hong-netext-hybrid-hnp-01

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Goals of this draft

- Propose a hybrid home network prefix assignment scheme
 - Use both static prefix model and dynamic prefix model
 - Static prefix model : used within general PMIPv6 domain and for simultaneous access
 - Dynamic prefix model : used for inter-technology handoff

Motivations

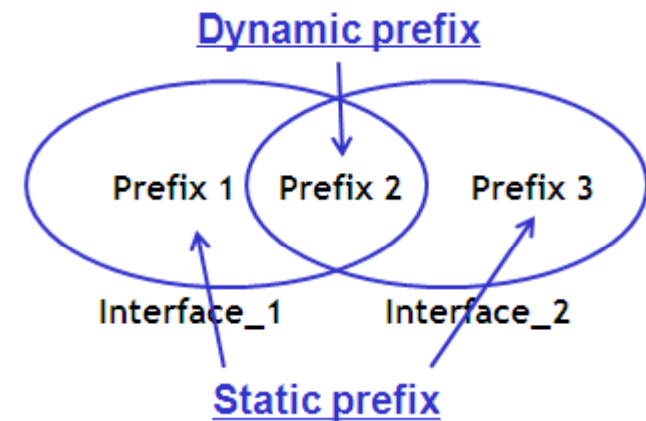
- In basic PMIPv6 (RFC 5213)
 - PMIPv6 basically supports multihoming
 - MN can connect to a PMIPv6 domain through multiple interfaces
- But,
 - During inter-technology handoff, it does not support simultaneous access
 - Since all the home network prefixes associated with one interface are associated with another interface of a MN
 - Fundamentally, this problem has been caused due to the fact that each of the attached interfaces must be assigned one or more unique prefixes in PMIPv6.

Problems of PMIPv6

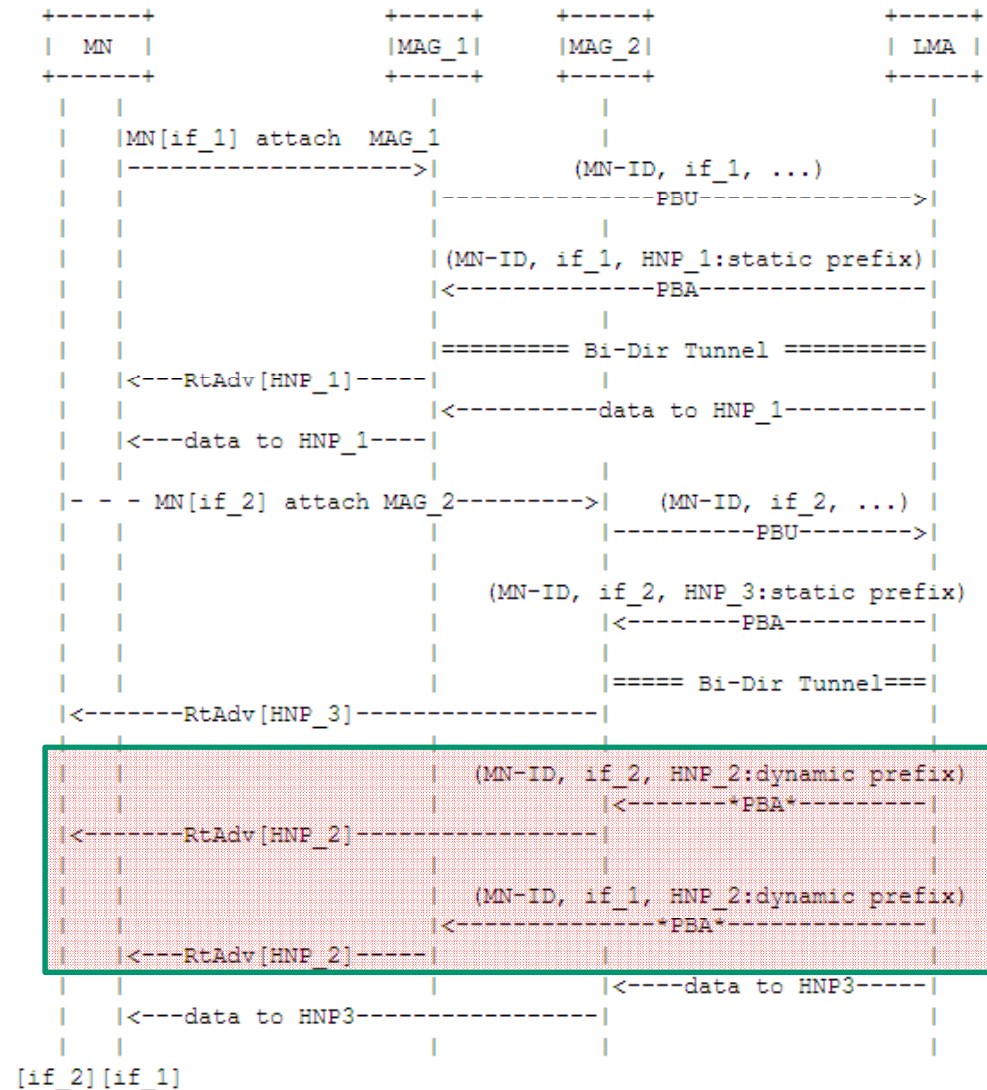
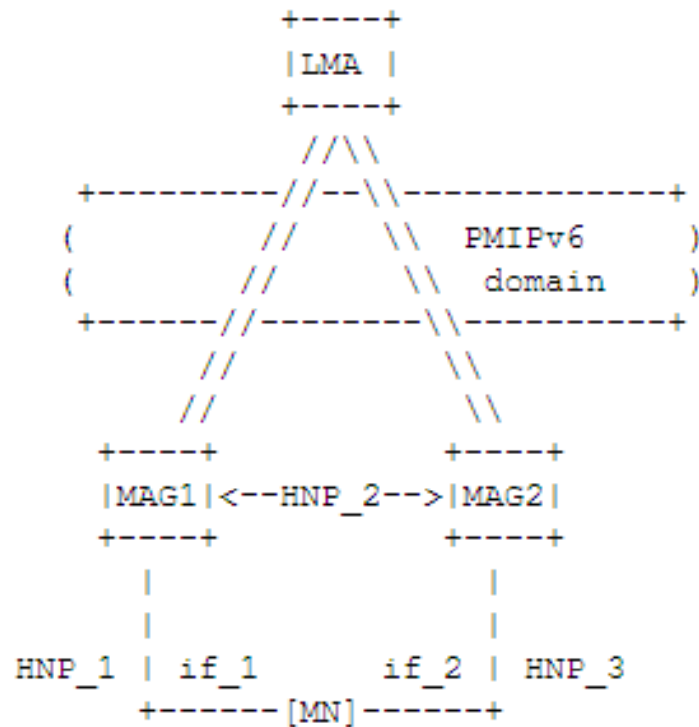
- During inter-technology handoff
 - The existing flows with the second interface may be disrupted
 - Compelled handoff of unwanted IP flows can be performed
 - MAG does not have sufficient information to set the handoff indicator flag
 - There is no way to add or delete a new home network prefix

Hybrid Home Network Prefix

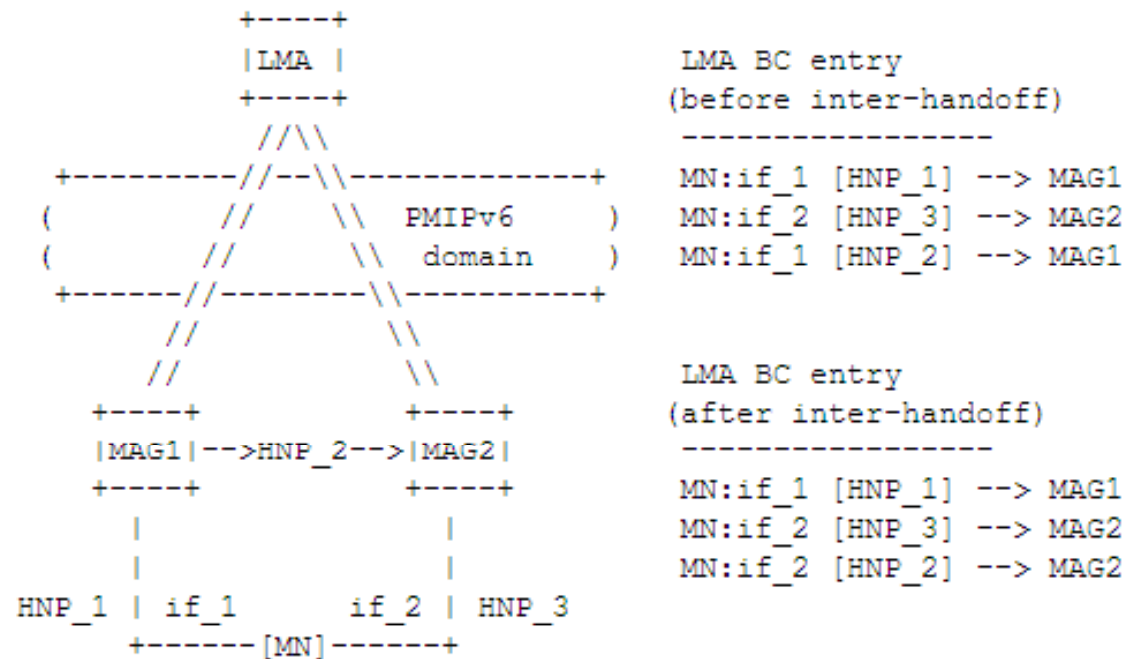
- Key idea
 - Separate HNP into the purpose of simultaneous access and the purpose of inter-technology handoff
 - Static HNP : cannot be switchable btw interfaces and used for simultaneous access
 - Dynamic HNP : assigned into only one interface and can be switchable btw interfaces and used for inter-technology handoff



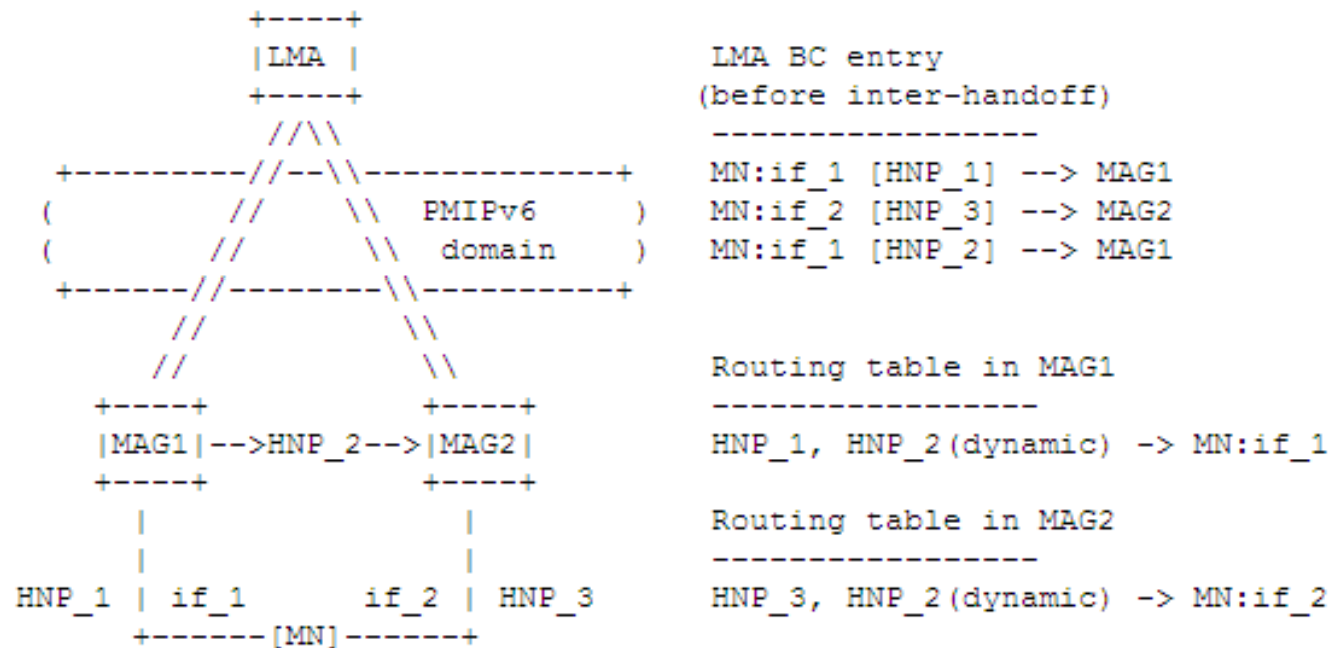
Message flow of HHNPA



Usage scenario of HHNPA



Decision of Handoff Indicator



Next Step?

- Is supporting both simultaneous access and inter-technology handoff in PMIPv6 necessary?
- Adopted as a WG document?