

# Multiple Care-of Address Registration

draft-wakikawa-mobileip-multiplecoa-04.txt

---

Ryuji Wakikawa  
Keio University/WIDE

# From Monami6 Charter

- A protocol extension to Mobile IPv6 (RFC 3775) and NEMO BasicSupport (RFC 3963) to support the registration of multiple Care-ofAddresses at a given Home Agent address [Standard Track].
- Jun 05 Submit Multiple CoA Registration to IESG

# issue 1. Separate BUs vs. Single BU

- Single Binding Update Pros
  - Reducing number of signaling
  - No BID is necessary
    - Note: new option and modification to RFC3775 are also needed
- Cons
  - painful with a longer list of care-of addresses
  - Possibly the same number of BUs to transmit
    - It needs to send all the CoAs even if a single CoA is changed
  - Fragmentation Consideration?
- If WG wants to consider both separate BUs and single BU, MCoA draft easily support this feature as well as separate BUs in Spec.
  - The reason not to support is due to limiting MIP6 modification, not technical reason

# issue 2. Identification of BC entry?

- Possible solutions
  - add/replace all CoAs (forget to identify BC)
  - keying an old CoA (128bit)
  - keying a BID (16bit)
- Identification is important
  - capable of both single BU and independent BU exchanges
  - capable of eliminating the overhead of sending all CoAs
- Our proposition is “We need some identification”
  
- BID vs. old CoA
  - “BID” and “old CoA” is basically same as “identification”
  - The use of old CoA is 8 times longer than BID.
    - It obviously causes a longer BU which should be avoided
  - BC may be required to search with BID.
    - Searching the best CoA is done by policy search.

## issue 3.

# Is “primary” CoA necessary?

- Primary CoA is introduced for “returning home”
  - MN de-registers the binding only when it returns home with the primary interface.
  - MN terminates the “non-primary” interface when it attaches to home with it.
- Using priority value per CoA
  - we did have priority field in the past draft, but leave it for policy exchange spec.
- Allowing returning home by “non-primary CoA”
  - Removing Primary/Non- from the spec, and leave this as implementation matter

# Issue 4. IPsec/Security

- Vijay will present issues right after me

# other issues

- Flag in BU is scare:-)
  - **remove the flag. fine.**
- Is DHAAD necessary?
  - for discovery of MCoA capable HAs
  - **just remove or keep**
- Suspend Mode (comment)
  - during returning home, suspend all the other active CoAs. The suspend mode help reregistering such CoAs again.
  - **need to support this?**
- Multiple CoAs on an interface
  - not MCoA specific issue

# Implementation Info.

- BSD
  - SHISA, KAME project in WIDE (NEMO code is verified)
- LINUX
  - MIPL, the EU funded IST Daidalos project
  - NEPL, Nautilus Project in WIDE (ongoing)
- KDDI R&D Mobile Router
  - interoperability with SHISA
- We believe the base part is fairly stable, but need more updates regarding security



# WG Document?

- How to proceed this work?
- The problem is obvious to solve in Monami6 WG
- We need base spec for monami6 goal