

Draft-chakrabarti-mip4-mcbc-01.txt

Alex Bachmutsky
Samita Chakrabarti
Gabriel Montenegro
Ahmad Muhanna
Basavaraj Patil
Yingzhe Wu

Background

- RFC3024 provides two alternatives for reverse tunneling (direct versus encapsulating)
- However, multicast/broadcast support requires the so-called encapsulating delivery style
- If using encapsulating delivery style **all** traffic (even unicast) must be encapsulated from MN to FA
- This introduces wireless packet overhead even for the more common unicast packets
- Folks desire a more optimized delivery option between the MN and the FA in the particular case of radio links of a p-p nature (e.g., WiMAX)

Proposal

- Multicast-Broadcast encapsulating delivery (MBED) style
 - Encapsulates MC/BC packets from MN to FA
 - Unicast packets are direct delivered between MN and FA
- MBED style extends RFC3024 encapsulating delivery style
- Link-layer assisted delivery style for links of a point-to-point nature (example: Wimax)
- MBED encapsulating extension
 - TLV structure; allows different delivery style (*including* RFC3024 encapsulating delivery style)

Multicast-Broadcast Encapsulating Delivery extension

- FA advertises MBED support in its Agent advertisement
- MN negotiates use of the MBED extension in its Registration Request

```

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|      Type      |      Length      |      Bit-field Value      |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
Type TBD          Length      2          Bit Field Value : 1, 2, 4 ...
Value x0001 : same as RFC3024 encapsulating delivery style
          x0002 : Multicast-broadcast encapsulating delivery style
          x0004 : Link-layer assisted delivery style for local network

```