
Title: Proposed MAC header modification

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Re: This document is submitted in response to 802.16 Letter Ballot #3

Abstract: This document proposes several changes to the MAC header fields.

Purpose: This document is submitted for consideration by 802.16 in the comment resolution process of Document 802.16/D2-2001.

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MAC Header Format Change Proposal

Huanchun Ye
BeamReach Networks

Comments

1. Page 50, Line 38, Section 6.2.2
   Replace Figure 18, Generic MAC Header Format (Uplink), with the following figure:

<table>
<thead>
<tr>
<th>Payload Type</th>
<th>H</th>
<th>E</th>
<th>EKS</th>
<th>CI</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Page 50, Line 64, Section 6.2.2
   Replace Figure 19, Generic MAC Header Format (Downlink), with the following figure:

<table>
<thead>
<tr>
<th>Payload Type</th>
<th>E</th>
<th>EKS</th>
<th>CI</th>
<th>P</th>
<th>S</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Page 51, Line 29, Section 6.2.2
   Replace Figure 20, Bandwidth Request Header Format, with the following figure:
Discussions

1. We suggest adding a Payload Type field to allow upgrade to future MAC versions. This flexibility is necessary to accommodate requirements of other Task Groups within the 802.16, some of which are still in the process of being defined.

2. The position and format of the Payload Type field should be the same for all header types.

3. The original header formats contain fields for convergence sublayer indications, CSI and CPT. These fields properly belong to the MAC SDU, rather than in the MAC header. Removing them provides a clean layer separation.

4. The original headers contain a packet discard eligibility indicator. It seems very odd to send a packet over the airlink, where the bandwidth resource is at a premium, and then having the receiving MAC discard it. It is better to pass this kind of marking from higher layer to the transmitting MAC, which can decide to discard it if bandwidth is not available. We suggest that this field be removed from the MAC header.

5. Other fields shown in the above figures are the same as in the original document.