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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | **On AMS Reporting the Accessibility of CSG-closed Femto ABS** | |
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| Re: | IEEE 802.16m D8 change requests. | |
| Abstract | This contribution is to propose changes in support femtocells. | |
| Purpose | To be discussed and adopted by WG SB | |
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**On AMS Reporting the Accessibility of CSG-closed Femto ABS**

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# Introduction

Problem: In the current draft D8, the scanning report message does not include the indicator of whether the detected CSG-closed femtocell is in the AMS’s local whitelist. Since AMS should have a whitelist to check whether the detected femtocell is in the whitelist or not, if AMS reports this information, it gives the ABS some free information, which it otherwise would have to realize through some extra processing. The ABS needs to know whether the AMS is accessible to the reported cell for different follow-up operations:

* If it is accessible, the ABS may use the cell as handover candidate
* If it is inaccessible, the AMS may use the cell as the one to coordinate interference mitigation

If the AMS would not report whether the CSG-clsoed femto is in its whitelist or not, the ABS had to check about it via the backhaul every time when the AMS reports CSG-closed femtocell, **because the ABS may not have the AMS’s whitelist or subscription information**, and the backhaul check adds on the latency for the ABS to perform the handover or interference mitigation, which are very importantly to be timely treated.

Remedy:

Add one bit of the indicator of whether the detected femtocell is in the AMS’s local whitelist, in AAI\_SCN-REP.

# Proposed Text

Please revise D8 as follows.

----------------------------------------------------- Start of Proposed Text -----------------------------------------------------

16.4.8.1.2 AMS scanning of neighbor Femto ABSs

*[Insert the following on page 846, line 21]*

AMS may include the CSGID(s) of the subscribed CSG femto BSs in the AAI-SCN-REP message.<ins> The AMS should report in AAI\_SCN-REP an indication on whether the detected CSG-closed Femto ABS is in its whitelist, to help the ABS timely decide whether to perform handover or interference mitigation. </ins>

16.2.3.16 AAI\_SCN-REP

*[Modify Table 695, page 141, line 45]*

**Table 695—AAI\_SCN-REP parameters**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | ……. | |  |  |  |
| O | N\_Reported\_ABS\_Full | | 6 | Number of neighbor ABS [0..63] reported in this message, which are using full 48-bit BSID. | Present only when the scan­ning report includes ABSs referred using ABS ID |
| O | Rsp\_Bitmap\_Index | | Variable (Rsp\_Bit map\_Size) | Index of the corresponding AAI\_SCN-RSP message, where the least significant bit corresponds to the first ABS Index, each next significant bit corresponds to the next ABS Index, the most significant bit corre­sponds to the ABS Index of the last reported ABS, and ABSs with ABS Index greater than the last reported ABS are not reported and do not have a corresponding bit position in the bit­map.  Bitmap position bit value:  0: the corresponding ABS is not reported.  1: the corresponding ABS is reported. | Present if N\_Reported\_ABS\_Full > 0 |
| <ins>O</ins> | <ins>NumCSGClosed</ins> | | <ins>6</ins> | <ins>Number of CSG closed ABSs indicated in fullBsI­dArr </ins> | <ins> Present if N\_Reported\_ABS\_Full > 0 </ins> |
| <ins> O </ins> | <ins>NumCSGClosedWhitelist </ins> | | <ins>6 </ins> | <ins> Number of CSG closed ABSs in AMSs whitelist, among the ABS IDs indicated in fullBsI­dArr </ins> | <ins> Present if N\_Reported\_ABS\_Full > 0 </ins> |
| O | fullBsI­dArr [0..63] | Reported ABS ID | Variable ( 48 x N) | ABS-IDs of the ABSs reported in this message  <ins>NumCSGClosedWhitelist IDs for CSG ABS in the AMSs whitelist appear first, followed by (NumCSGClosed – NumCSGClosedWhitelist) IDs of CSG ABSs not in AMSs whitelist, followed by other ABS IDs. </ins> | Present if N\_Reported\_ABS\_Full > 0 |
| O | N\_Reported\_SA\_Preamble\_Index | | 4 | Number of SA preambles reported in this message  [0..15] | Present only when the scan­ning report includes SA pre­amble reports |
| … | …… | |  |  |  |

------------------------------------------------------ End of Proposed Text ------------------------------------------------------