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Re:	LB comment to 802.16m Amendment Working Document D3
Abstract	This contribution provides text addition to AWD to clarify the general description of Section 16.4 "Support for Femto ABS".
Purpose	For discussion and approval by IEEE 802.16m TG
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Proposed text related to Signalling Exchange between Femtocell and Macrocell BSs over-the-air for the IEEE802.16m/D3 (16.4.1)

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1   Introduction

Signalling exchange between Femtocell and Macrocell ABSs over-the-air has many advantages. It is supported in the current SDD [1] and has been also adopted in the IEEE P802.16m/D3.

The features that need to use the signalling exchange between femtocell and macrocell ABSs over-the-air are listed as follows:

- Synchronization: A Femtocell ABS can synchronize with the network by scanning the A-Preamble transmitted by a macrocell ABS. (Section 16.4.6)
- Initial Ranging: A femtocell ABS can perform ranging over-the-air in addition to its other initialization procedure over the backhal. The messages transmitted over-the-air are AAI_RNG-REQ, AAI_RNG-RSP and AAI_RNG-ACK. (Section 16.4.5.1)
- Interference Mitigation: The D3 states that "The serving ABS and/or the network may request the interfering Femto ABS to mitigate the interference by reducing transmission power, and/or blocking some resource region." (Section 16.4.11) Transmitting signaling over-the-air leads to quick response to interference conditions, compared to that of its backhaul counterpart.
- Neighbor Advertisement: Both macrocell and femtocell ABSs can broadcast AA_NBR-ADV to perform neighbor advertisement. (Section 16.4.8.1.1)
- AMS scanning of neighbor Femto ABSs: It states that "an overlapped Macro ABS may recommend CSG Femto ABS to monitor UL signaling of accessible AMS which is served by the Macro ABS. A CSG Femto ABS can monitor the ranging preamble at the dedicated ranging slot of Macro ABS. When the received signaling quality (e.g RSSI) of an AMS is stronger than a threshold, CSG Femto ABS can request overlapped Macro ABS to send unsolicited AAI_SCN-RSP for the AMS to scan the CSG Femto ABS." (Section 16.4.8.1.2)

In this contribution, we propose the text to support signalling exchange between Femtocell and Macrocell BSs over-the-air in AWD to clarify the general description of Section 16.4 "Support for Femto ABS".

2   Proposed Text

[Insert text in subclause 16.4.1 as follows]

--Start of the Text--

16.4 Support for Femto ABS

16.4.1 General Description

A Femto ABS is an ABS with low transmit power, typically installed by a subscriber in the home or SOHO to provide the access to closed or open group of users as configured by the subscriber and/or the access provider. A Femto ABS is typically connected to the service provider's network via one or multiple wired and/or wireless broadband connection, e.g., Cable, DSL, Wireless-OFDMA reference systems, Advanced Wire-lessMAN-OFDMA systems, etc. The femtocell BSs may communicate with the overlapped macrocell BS for exchanging signalling/control messages over the air-interface.

--End of the Text--

References

[1] IEEE 802.16m-09/0034r2, "IEEE 802.16m System Description Document (SDD)"