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Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"
Abstract	This contribution proposes the modifications of MR_Code-REP message defined in baseline document IEEE 802.16j-06/026r4.
Purpose	Text proposal for 802.16j Baseline Document.
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Modifications on MR_Code-REP message for transparent RS systems

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1. Introduction

In an MR system with transparent RSs, the CDMA BR ranging code sent by MS might be received by the MR-BS and multiple RSs near the MS as shown in Figure 1. In order to decide the most appropriate path to communicate with the MS, every transparent RS must report the information of the received CDMA BR ranging code to the MR-BS as long as the CDMA BR ranging code can be decoded successfully. However, the schemes defined in 6.3.6.7.2.1 of the baseline document IEEE 802.16j-06/026r4 are applicable to non-transparent RS only because the MR_Code-REP message does not contain sufficient information. In order to resolve the problem with minimum modifications on the baseline document, we propose to modify the MR_Code-REP message to accommodate the transparent RSs.

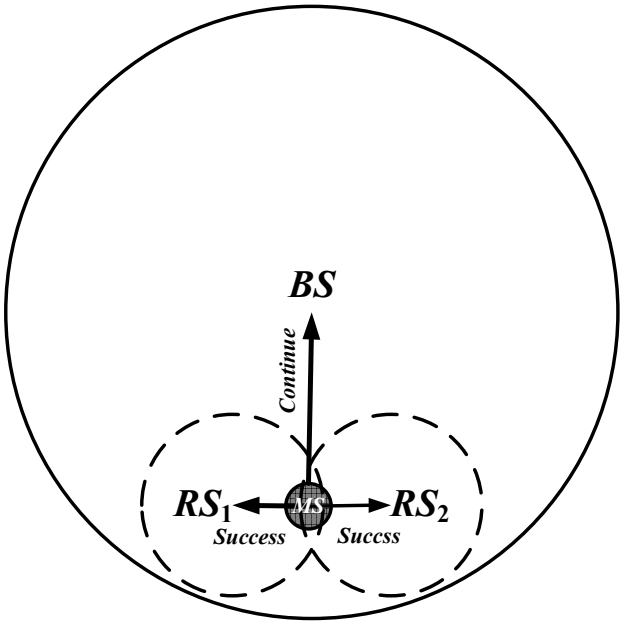

Figure 1 Examples of MR-BS and multiple RSs receiving MS ranging code in transparent RS system

In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r4 are listed below.

2. Spec Changes

6.3.2.3.64 MR_Code-REP message

[Change the following text in line 42 of page 34 as indicated]

This message is transmitted using the RS's basic CID. ~~See 11.X for MR_CODE REP TLV.~~

Table 183c—MR ~~e~~Code report (MR_C~~ODE~~ode-REP) message format

Syntax	Size	Notes
MR_Code-REP_Message_Format() {	-	-
Management Message Type = 69	8 bits	~~TBA~~
Number of Remaining BR CDMA Codes	8 bits	Number of BR CDMA codes remaining at the RS ready to be forwarded
while(data remain) {		
Frame Number Index	8 bits	LSBs of relevant frame number
Ranging Code	8 bits	Indicates the CDMA Code sent by the MS.
Ranging Symbol	8 bits	Indicates the OFDMA symbol used by the MS.
Ranging subchannel	7 bits	Identifies the Ranging subchannel used by the MS.
Channel Measurement	6 bits	The mean CINR as measured on CDMA ranging code.
Reserved	3 bits	
Timing Adjust	32 bits	Tx timing offset adjustment (signed 32-bit).
Power Level Adjust	8 bits	Tx Power level adjustment (signed 8-bit, 0.25 dB units).
Offset Frequency Adjust	32 bits	Tx frequency offset adjustment (signed 32-bit, Hz units).
}		
~~MR_CODE-REP TLVs~~	~~Variable~~	
}	-	-

Number of Remaining BR CDMA Codes

The number of remaining BR CDMA codes received by the RS but not forwarded due to lack of bandwidth.

Channel Measurement

The mean CINR as measured on CDMA ranging code shall be quantized in 1 dB increments, ranging from a minimum of –10 dB (encoded 0x00) to a maximum of 53 dB (encoded 0x3F). (see 8.4.11.3)

Timing Adjust

The amount of time required to adjust MS/RS transmission so the bursts will arrive at the expected time instance at the access station. Units are PHY specific (see 10.3).

Power Level Adjust

Specifies the relative change in transmission power level that the MS/RS is to make in order that transmissions arrive at the access station at the desired power. When subchannelization is employed, the subscriber shall interpret the power offset adjustment as a required change to the transmitted power density.

Offset Frequency Adjust

Specifies the relative change in transmission frequency that the MS/RS is to make in order to better match the access station. (This is fine-frequency adjustment within a channel, not reassignment to a different channel.)

[Delete the following section in page 189 as indicated]

~~11.23 MR Code Report management message encodings~~

~~Name~~	~~Type (1 byte)~~	~~Length~~	~~Value (Variable length)~~

~~Code attributes~~	~~TBA~~	~~4~~	~~Bits 31:22 - Used to indicate the OFDM time symbol reference that was used to transmit the ranging code.~~ ~~Bits 21:16 - Used to indicate the OFDMA subchannel reference that was used to transmit the ranging code.~~ ~~Bits 15:8 - Used to indicate the ranging code index that was sent by the SS or RS.~~ ~~Bits 7:0 - The 8 lease significant bits of the frame number of the OFDMA frame where the SS sent the ranging code~~