

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	MAC management messages for relaying of mulit-frame structure consistent to 802.16e in MMR Networks	
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Re:	This is a response to the call for technical contributions 80216j-07_007r2.pdf	
Abstract	This contribution proposes relay messaging scheme for multi-frame structure consistent to 802.16e legacy frame structure to support multi-hops in MMR networks.	
Purpose	Text proposal for 802.16j Baseline Document	
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MAC management messages for relaying of multi-frame structure consistent to 802.16e in MMR network

1. Introduction

Based on multi-frame structure consistent with the 802.16e legacy system in MMR network, which is described in IEEE C802.16j-07/162r3, new MAC management messages are proposed for relay frame control of multi-frame structure consistent to 802.16e legacy system.

MR-BS shall transmit the relay request message RLY-CMD to the relay group for relay control using the DL burst. An RS shall transmit received frame to its subordinate RS or MS according to the RLY-CMD and it shall also forward this control message to its subordinate RS.

An RS shall transmit a relay report message RLY-RPT using UL burst allocated to the RS if needed to its super ordinate.

2. Text Proposal

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Append following two rows into Table 14 of 6.3.2.3:

Type	Message name	Message description	
xx0	RLY-CMD	Relay Request	Basic
xx1	RLY-RPT	Relay Report	Basic

Append following text into subsection of 6.3.2.3

6.3.2.3.xx0 Relay command message

In order to control RS's correct operation, MR-BS shall transmit the same RLY-CMD message to the relay group using DL burst in every unit frame of the corresponding multi-frame. An RS shall transmit received frame to its subordinate RS or MS according to the RLY-CMD and it shall also forward this control message to its subordinate RS. RLY-CMD should include: frame number, start frame number, end frame number, number of RSs to be received the command body and command body according to the control function. The message shall be transmitted on the basic CID or broadcast CID.

MR-BS shall generate RLY-CMD message including parameters shown in Table xx.

Table xx --- RLY-CMD message format

Syntax	Size (bits)	Notes
RLY-CMD message format() {		To multicast id of relay group
Management Message Type = xx0	8	
Multi-frame Identification		
Start frame number	8	The least significant 8 bits
End frame number	8	The least significant 8 bits
N Relays	8	The number of relays to receive a

		command body
For (i=0; i< N Relays; i++) {		
CID	16	Relay CID
Length of command body	8	
Command Body	<i>variable</i>	Command dedicated to specific RS
Padding	v	Number of bits required to align to byte length. Shall be set to zero.
}		
}		

An MR-BS generates RLY-CMDs including all of the following parameters, as shown in Table xx:

Start frame number

Start frame number of current Multi-frame. The value is the least significant 8 bits of the start frame

End frame number

End frame number of current Multi-frame. The value is the least significant 8 bits of the end frame

Command Body

This parameter is reserved for future use of higher layer. This may contain routing information for specific RS or RS's operation due to MS's association.

Append following text into subsection of 6.3.2.3

6.3.2.3.xx1 Relay report message

An RS shall transmit a RLY-RPT message using UL burst allocated to the RS. An RS shall generate RLY-RPT message including parameters shown in Table yy.

The message shall be transmitted on the basic CID or broadcast CID.

Table yy --- RLY-RPT message format

Syntax	Size	Notes
RLY-RPT message format() {		From RS via UL unicast
Management Message Type = xx1	8	
Length of report body	4	Length of the slot
Report Body	<i>variable</i>	
Padding	v	Number of bits required to align to byte length. Shall be set to zero.
}		

Report Body

These parameter is reserved for future use. It may contain the ranging information from MSs and/or from neighbors.