Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	R-MAC PDU format	
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Re:	A response to a Call for Technical Proposal, http://wirelessman.org/relay/docs/80216j-06_027.pdf	
Abstract	In this contribution, we propose a R-MAC header format upon which detailed R-MAC proposal can be used.	
Purpose	To incorporate the proposed text into the P802.16j Baseline Document (IEEE 802.16j-06/026)	
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R-MAC PDU Format

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Introduction

To efficiently support 802.16e MAC PDU forwarding by RSs, a new sub-layer R-MAC is suggested in the contribution C80216j-06/238. The resulting new data protocol stack is shown in Figure 1. The R-MAC layer provides an extendable framework for various relay related functions, such as QoS control, routing control and etc.

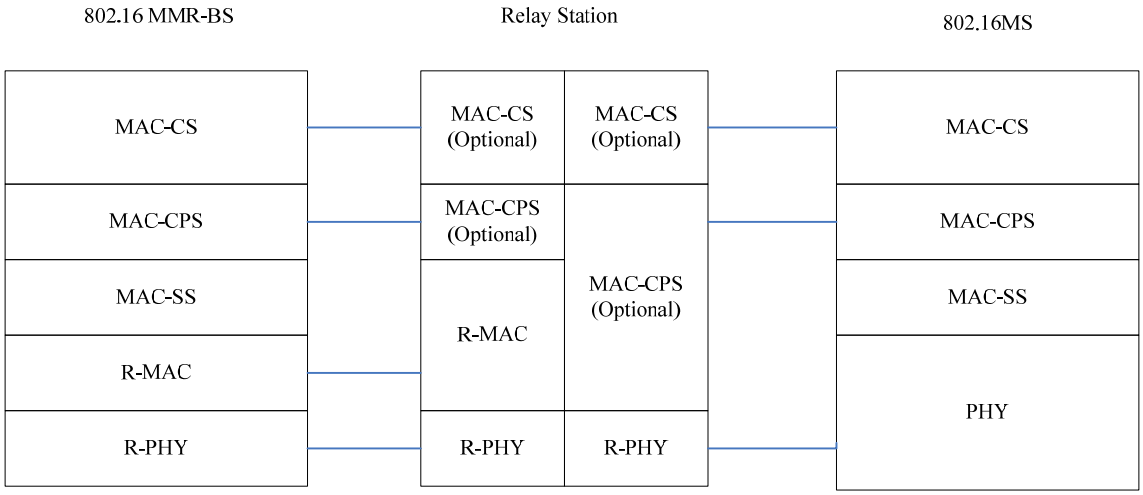

Figure 1 MMR Data protocol

The principle of the R-MAC layer proposal should

- Enable extendibility of functionality
- Minimize overhead

In this contribution, we propose an R-MAC header format upon which detailed R-MAC proposal can be used.

Proposed text change

[Insert the following text after the section 6.3.2.1.2]

6.3.2.1.3 R-MAC header format

Two types of R-MAC headers are defined. Type 1 R-MAC header is a control header. The corresponding R-MAC PDU contains only the header and there is no payload included. Type 2 R-MAC header is used for data forwarding. An R-MAC PDU with payload contains type 2 R-MAC header, R-Sub-header(s) and payload.

6.3.2.1.3.1 Type 1 R-MAC header format

The format of type 1 R-MAC header is shown in Figure 20m.

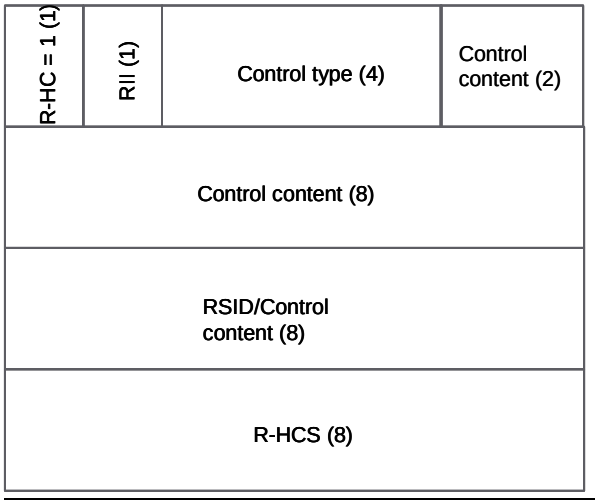

Figure 20m.

The fields of type 1 R-MAC header are described in Table 7k.

Table 7k. Type 1 R-MAC header fields.

Name	Length (bits)	Description
R-HC	1	R-MAC header control 1= Type 1 header (control header)
RII	1	RSID inclusion indicator 1: RSID included 0: RSID not included
Control type	4	Indicate control types
Control content	10	Control content associated with the control type
RSID/control content	8	If RII = 1, this field indicates RSID; If RII = 0, this field contains control content associated with control type
R-HCS	8	R-MAC header check sequence

6.3.2.1.3.2 Type 2 R-MAC header format

The format of type 2 R-MAC header is shown in Figure 20n.

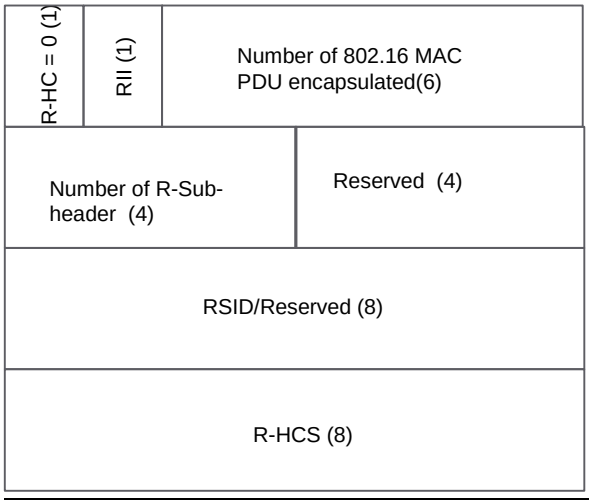

Figure 20n.

The fields of type 2 R-MAC header are described in Table 7l.

Table 7l. Type 2 R-MAC header fields.

Name	Length (bits)	Description
R-HC	1	R-MAC header control 0 = Type 2 header (header with payload)
RII	1	RSID inclusion indicator 1: RSID included 0: RSID not included
Number of 802.16e MAC PDUs encapsulated	6	Indicate the number of 802.16e MAC PDUs encapsulated in payload
Number of R-Sub-header	4	Indicate the number of R-Sub-header(s)
Reserved	4	This field is reserved for future use
RSID/reserved	8	If RII = 1, this field indicates RSID; If RII = 0, this field is reserved for future use
R-HCS	8	R-MAC header check sequence