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Title	**R-MAC Header Format Enabling Source QoS Control**	
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Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"	
Abstract	In this contribution, R-MAC PDU format enabling source QoS control is proposed	
Purpose	To incorporate the proposed text into the P802.16j Baseline Document (IEEE 802.16j-06/026r4)	
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R-MAC Header Format Enabling Source QoS Control

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1. Introduction

In this contribution, R-MAC PDU format enabling source QoS control is proposed.

2. Proposal

In contribution C80216j_07/424, source QoS control is proposed. For enabling source QoS control, the R-MAC header shall carry scheduling instruction: transmission deadline and QoS class. The format of source QoS R-MAC header is proposed in the following figure.

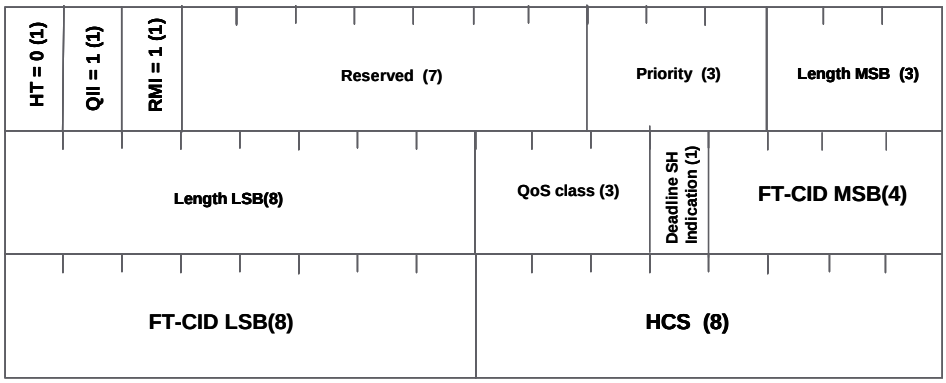

Figure 1. Source QoS header.

In this source QoS control R-MAC header, QoS class ID (3 bits) is included. Similar to 802.1Q-rev-d4, the 3-bit QoS class specifies the traffic type of 802.16 scheduling services and their priority: UGS (5), rtPS (4), ertPS (3), nrtPS (2) and BE (1). The deadline information may appear as a type of R-MAC sub-header. The presence of deadline sub-header is indicated by the Deadline SH indication bit.

In DL data forwarding using source QoS control method, the MR-BS R-MAC layer creates an R-MAC PDU with the header including scheduling instruction. The 12-bit FT-CID (Forwarding Tunnel CID) field is the reduced FT-CID of the destination RS.
In UL data forwarding using source QoS control method, an access RS R-MAC layer in R-link creates an R-MAC PDU with the header including the scheduling instruction. The FT-CID is the reduced FT-CID of this access RS.

3. Proposed text change

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[Add the following section 6.3.2.1.1.1.1]

6.3.2.1.1.1.1 Source QoS R-MAC header

The R-MAC header is used always with payload and can be used in both DL and UL. The source QoS R-MAC header shall carry scheduling instruction: QoS class and Deadline SH indication. When QII is set to 1, it indicates QoS class index and deadline indication are included in the R-MAC header, and the reduced 12-bit forwarding tunnel CID is used. The 3-bit QoS class specifies the traffic type of 802.16 scheduling services and their priority: UGS (5), rtPS (4), ertPS (3), nrtPS (2) and BE (1). The deadline sub-header will present if the bit of Deadline indication is set to 1. The format of source QoS R-MAC header is shown in Figure XXX.

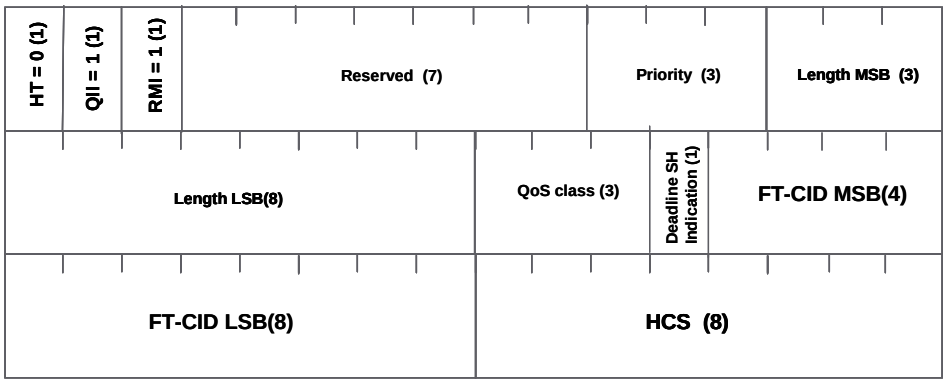

Figure xxx. Format of source QoS R-MAC header.

The source QoS R-MAC header field encoding is show in Table xxx.

Table xxx. source QoS R-MAC header field encodings.

Name	Length (bits)	Description
HT	1	Header type. Should be set to 0
QII	1	QoS information inclusion indication. Shall be set to 1
RMI	1	R-MAC header indication. Shall be set to 1
Reserved	7	
Priority	3	Index of priority defined in 802.16
Length	11	Length of MAC PDU
QoS class	3	Index of QoS class of payload
Deadline SH indication	1	1: Deadline sub-header present 0: Deadline sub-header does not present
FT-CID	12	Reduced FT-CID of the destination access RS for DL or the source RS for UL
HCS	8	Header check sequence

[Add the following section 6.3.2.1.1.1.2]

6.3.2.1.1.1.2 R-MAC subheaders and special payloads

6.3.2.1.1.1.2.1 Deadline sub-header

This sub-header presents if the Deadline SH indication in source QoS R-MAC header is set to 1. If this sub-header presents, it shall be the last sub-header.

Syntax	Size	Notes
Deadline	8 bits	Indicates the absolute transmission time (8 LSB of frame number) where the payload of this R-MAC PDU shall start to be transmitted to MS by an access RS in DL direction or by a first-tier RS in UL direction

++++++++++++++ End text ++