

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Remedy for centralized scheduling mode</b>	
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Re:	This is in response for IEEE 802.16 Working Group Letter Ballot #28 Recirc: Announcement, 80216j-07_059.pdf	
Abstract	The proposal suggesting to add signaling for UL CINR reporting for centralized scheduling mode.	
Purpose	Review and adopt	
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## Remedy for centralized scheduling mode

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### Introduction

In legacy IEEE802.16e, BS can directly measure the uplink CQI for each MS to facilitate the radio resource control and scheduling. However, in multi-hop relay networks, the MR-BS could not measure the UL CQI for the MS/RS connecting to the subordinated RS in centralized scheduling mode. Some mechanisms are needed to fix this issue.

### Proposed Remedy

Following remedy should be considered to improve the centralized scheduling model.

1. New TLV is proposed, thus MR-BS could send REP-REQ to request subordinated RS to measure and report the UL CQI.

### Specification changes

#### 11.11 REP-REQ management message encodings

*[Insert following rows into the third table in subclause 11.11 as indicated]*

Name	Type	Length	Value
<a href="#">Vector of Stations</a>	<a href="#">1.13</a>	<a href="#">2N</a>	<a href="#">Basic CIDs of the N reported stations</a>
<a href="#">Type of UL CQI Measurement</a>	<a href="#">1.14</a>	<a href="#">1</a>	<a href="#">Bit 0:1 = Physical CINR</a> <a href="#">Bit 1:1 = Effective CINR</a> <a href="#">Bit 2-5: = Average Alpha in multiples of 1/32 (range [1/32, 16/32])</a> <a href="#">Bit 6:0 = Report the CINR measurement on Pilot subcarriers</a> <a href="#">Bit 6:1 = Report the CINR measurement on Data subcarriers</a> <a href="#">Bit 7: reserved</a>

[Add one paragraph after the last paragraph of subclause 11.11]

When an RS received an REP-REQ with the TLV of Vector of Stations (type 1.13), it shall report the UL CQI measurement for those stations. The Type of UL CQI measurement shall be specified by the TLV of Type of UL CQI Measurement.

#### 11.12 REP-RSP management message encodings

*[Insert following rows into the third table in subclause 11.12 as indicated]*

Name	Type	Length	Value
<a href="#">Vector of stations</a>	<a href="#">2.9</a>	<a href="#">2N</a>	<a href="#">Basic CIDs of the N reported stations</a>

<u>UL CINR Report</u>	<u>2.10</u>	<u>N</u>	<u>UL CINR for each of the N RS or MS</u>
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*[Add one paragraph after the last paragraph of subclause 11.12]*

When an RS received an REP-REQ with the TLV of Vector of Stations (type 1.13), it shall response to the MR-BS with and REP-RSP with TLVs of type 2.9 and 2.10.

*[Insert new sub clause after 8.4.11.4]*

#### **8.4.11.5 UL CINR Reporting**

In multi-hop relay system with centralized scheduling, MR-BS may request RS to report the CINR value of the subordinated RS/MSs connecting to the RS by sending a REP-REQ message on RS' basic CID. RS shall send REP-RSP as the response.