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| Source(s) | Changyoon Oh, Hyunjeong Kang, Jungje Son<br>Samsung Electronics, Suwon, Korea<br>E-mail: changyoon.oh@samsung.com<br><br>Rakesh Taori<br>Samsung Advanced Institutes of Technology (SAIT)<br><br>Eugene Visotsky<br>Motorola Labs<br><br>Shashikant Maheshwari<br>Nokia-Siemens<br><br>Kerstin Johnsson<br>Intel |
| Re: | IEEE802.16-07/043"IEEE 802.16 Working Group Letter Ballot #28: Announcement" |
| Abstract | This contribution proposes a signaling method for the resource request of access zone. |
| Purpose | Discuss and adopt proposed text by TG16j |
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# Signaling to assign the resource in the UL access zone

**Changyoon Oh, Hyunjeong Kang, Jungje Son, Rakesh Taori***

**Samsung Electronics, Samsung Advanced Institutes of Technology (SAIT)***

## 1. Introduction

This contribution proposes a signaling method of assigning the resource in the uplink access zone in response to the resource request of uplink access zone from RS, i.e., 'RS UL size request header' in subclause 6.3.2.1.2.2.2.6 [1]. 'RS UL size request header' proposed by [2] has been accepted in July meeting. However, signaling to assign the resource in response to 'RS UL size request header' has not been defined yet. To complete the aforementioned 'RS UL size request header', the signaling method of assigning the resource in the UL access zone is proposed in this contribution.

## 2. Proposed solution

To complete the aforementioned operation, i.e., 'RS UL size request header', signaling method of resource allocation, i.e., RS UL access zone IE, is proposed.

## 3. Proposed text change

***[Insert new subclause 8.4.5.9.1.3:]***

**8.4.5.9.1.3 RS UL access zone IE (RS_UL-AZONE IE)**

In the distributed scheduling, MR-BS may transmit RS UL access zone IE to its subordinate RSs upon receiving RS UL size request header (see 6.3.2.1.2.2.2.6) from one of the subordinate RSs. RS UL access zone IE provides the allocation for a region of the UL access zone. The RS whose RS CID appears in RS UL access zone IE shall allocate that region to its subordinate MSs , whereas MR-BS and other RSs that receive the RS UL access zone IE shall not allocate that region for their subordinate MSs.

Table xxx – RS_UL-access zone IE format

| Name | Length | Description |
|---|---|---|
| RS_UL-AZONE IE { | | |
| _Type | 5bits | RS_UL-AZONE IE=0x02 |
| _Length | 4bits | Variable |
| _CID | 16bits | RS basic CID |
| Indicator | 1bit | 1: indicates allocation of resource<br>0: indicates release of resource<br>Notes: allocation/release is effective in the next frame |
| _OFDMA symbol offset | 8bits | |
| _No. OFDMA symbols | 7bits | |
| Subchannel Offset | 7bits | |
| No. of subchannels | 7bits | |

| | | |
|---|---|---|
| } | | |

**Indicator:** RS_UL-access zone IE with indicator field=1 allocates a region of an UL access zone to the RS whose CID appears in the RS_UL-access zone IE. In this case, the RS shall allocate that resource to its subordinate MSs. MR-BS and other RSs that have received RS_UL-access zone IE shall not allocate that same resource to its subordinate MSs. RS_UL-access zone IE with indicator field=0 releases the allocated region of an UL access zone from the RS whose CID appears in the RS_UL-access zone IE. In this case, MR-BS and its subordinate RSs may allocate the released resource to their MSs autonomously.

***[Change Table 496c in page 192 as follows:]***

Table 496c – R-link specific IE types

| Type (hexadecimal) | Usage |
|---|---|
| 00 | RS_UL_DCH assignment IE |
| 01 | RS_BW-ALLOC IE |
| 02 | RS_UL-AZONE IE |
| 03-1F | Reserved |

***Modify the first sentence in subclause 6.3.2.1.2.2.2.6 as follows::***

Under distributed scheduling, an RS may request size for its region of the access zone from the ~~superordinate RS/~~MR-BS by sending the RS UL Size Request Header

***Insert the following text at the end of subclause 6.3.2.1.2.2.2.6::***

The MR-BS may allocate a region of the uplink access zone in the RS UL access zone IE (Section 8.4.5.9.1.3).

***Insert new subclause 6.3.6.7.1.2.3:***

**6.3.6.7.1.2.3 UL access region request and allocation in distributed mode with non-transparent RS**

A non-transparent RS may request a dedicated access uplink region for its access uplink traffic by sending an RS_UL_Size_Request header to its MR-BS (see 6.3.2.1.2.2.2.6). Upon assigning a dedicated uplink access region, the MR-BS shall notify the RS by inserting an RS UL_access_zone_IE in the R-UL-MAP (see 8.4.5.9.1.3). The MR-BS may allocate to the RS a dedicated access uplink region without receiving a request from the RS.

**Reference:**

[1] IEEE P802.16j/D1 August 2007
[2] IEEE C802.16j-07/307r1, “UL Access Region Size Request for Semi-Distributed RS”.