

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	Non-transparent RS in Virtual Group	
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Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"	
Abstract	This contribution proposes required changes in baseline document in order to accommodate the non-transparent RS in a virtual group.	
Purpose	Text proposal for 802.16j Baseline Document.	
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## Non-transparent RS in Virtual Group

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### 1. Introduction

In IEEE 80216j-06/026r4 section 6.3.9.16.3.1 RS grouping, it states that “*when the virtual RS group include an MR-BS, all the RSs in the virtual group shall either **transmit the same preamble as the MR-BS**, FCH and MAP or they all do not transmit any preamble. When an MR-BS is not included in the virtual group, one of the RSs in the virtual group is a non-transparent RS and all the others shall either transmit the preamble, FCH and MAP of the said non-transparent RS or they all do not transmit preamble, FCH and MAP. The radio resources may be shared by these RSs for data burst transmission. The existence of the group is totally transparent to its MS(s).*”

Even though each RS transmitting same preamble in a virtual RS group utilizes non-transparent frame structure and follow the procedures of non-transparent RS to obtain FCH, DL-MAP, UL-MAP DCD and UCD (for transmit in the next frame) from BS. But, for other operations such as MS network entry and MS CDMA ranging, the RS transmitting same preamble must follow the procedures defined for transparent RS. Therefore, this contribution proposes required changes in baseline document IEEE 802.16j-06/026r4 in order to accommodate the non-transparent RS in a virtual group.

In order to facilitate the incorporation of this proposal into IEEE 802.16j standard, specific changes to the baseline working document IEEE 802.16j-06/026r4 are listed below.

### 2. Spec Changes

*[Insert the text in section 3 “Definitions” in line 11, page 5 as indicated:]*

*3.107 Non-transparent RS in virtual RS group: When a virtual RS group consists of non-transparent relays, a member RS transmitting the corresponding DL frame-start preamble, FCH, DLMAP/UL-MAP, and DCD/UCD of the assigned virtual RS group.*

#### 6.3.1.3 Addressing and connections for relay support

*[Change the following text in the second paragraph in 6.3.1.3 in page 5 as indicated:]*

~~RSs that broadcast a preamble, FCH, and DL Map shall be assigned a unique Base Station ID.~~

*Non-transparent RSs which do not belong to a vitural RS group shall be assigned a unique Base Station ID. A virtual RS group having a preamble different from the MR-BS, shall be assigned a unique Base Station ID.*

*[Change the following subclause at page 135 as indicated]*

#### 6.3.9.16.3.1.1 MS network entry procedures-Non-transparent RS in Virtual RS Group

~~Each RS group member shall monitor the CDMA ranging codes from subordinate nodes. If the group parent is not a member of the RS group, then RS group members shall follow the procedures in 6.3.9.16.1. If the group parent is a member of the RS group, then the RS group members other than the parent shall follow the procedure in 6.3.9.16.1, and the parent (if not MR-BS) shall follow the procedures in 6.3.9.16.2.~~

A non-transparent RS in virtual RS group shall be assigned Base Station ID of the virtual RS group according to section 6.3.1.3, and follow the procedures for Non-transparent RS (e.g., 1. Frame structure 2. Relaying messages and data), except for the following cases for which it shall follow the transparent RS procedures.

1. Network Entry
2. Handoff