Project	**IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>**
Title	**Modification on Relaying DCD and UCD**
Date Submitted	**2007-07-18**
Source(s)	Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee, Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee, Institute for Information Industry 8F, No. 218, Sec. 2, Dunhua S. Rd., Taipei City 106, Taiwan Voice: +886-2-27399616 Fax: +886-2-23782328 loa@nmi.iii.org.tw
Re:	IEEE 802.16j-07/019: "Call for Technical Comments Regarding IEEE Project 802.16j"
Abstract	This contribution proposes modification on relaying DCD and UCD
Purpose	Text proposal for 802.16j Baseline Document.
Notice	*This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups*. It represents only the views of the participants listed in the "Source(s)" field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein.
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.
Patent Policy	The contributor is familiar with the IEEE-SA Patent Policy and Procedures: <http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and <http://standards.ieee.org/guides/opman/sect6.html#6.3>. Further information is located at <http://standards.ieee.org/board/pat/pat-material.html> and <http://standards.ieee.org/board/pat>.

Modification on Relaying DCD and UCD

Kanchei (Ken) Loa, Yi-Hsueh Tsai, Yung-Ting Lee,
Hua-Chiang Yin, Shiann-Tsong Sheu, Youn-Tai Lee
Institute for Information Industry (III)

Introduction

In order to reduce the overhead of non-transparent RS, this contribution proposes the modification of relaying DCD and UCD for non-transparent RS systems. The MR-BS periodically sends the DCD/UCD message to access RS until receiving acknowledge from the RS. Afterward, the access RS broadcasts DCD/UCD autonomously on the access link. Whenever the DCD/UCD message is updated, MR-BS repeats above procedure to send the new DCD/UCD message to the access RS.

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.

Proposed text change

6.3.28.1 RS broadcast message relaying

[Change the following text in line 25 of page 134 as indicated]

A non-transparent RS shall broadcast DCD, UCD, DL-MAP and UL-MAP messages in the DL access zone. In addition, a non-transparent RS shall also broadcast DCD and UCD messages in the DL relay zone in the case of more than two hops.~~, which may be~~ When the messages are generated by the MR-BS, ~~and be sent in the relay zone. T~~the MR-BS should send DCD and UCD messages for RS to broadcast on the access link and relay link with RS primary management CID and RS secondary management CID, repectively. Moreover, the MR-BS should send DL-MAP and UL-MAP messages with RS basic CID to the RS.

Upon receiving the DCD/UCD message with RS primary CID, as shown in Figure xxx, the RS should acknowledge the reception of DCD or UCD messages over primary management connection by sending an acknowledgment header (See 6.3.2.1.2.2.2.3). The Transaction ID of the ACK header shall be set to the Configuration Change Count of DCD or UCD message. There shall be one ACK header per message. The RS may retransmit DCD/UCD message if ACK header is not recieved at the expiration of T52 timer.

Under centralized scheduling, as shown in Figure yyy, the RS shall request bandwidth on the access link to broadcast the DCD/UCD message with fragmentable broadcast CID.

Under distributed scheduling, the RS shall autonomously broadcast DCD/UCD on the access link.

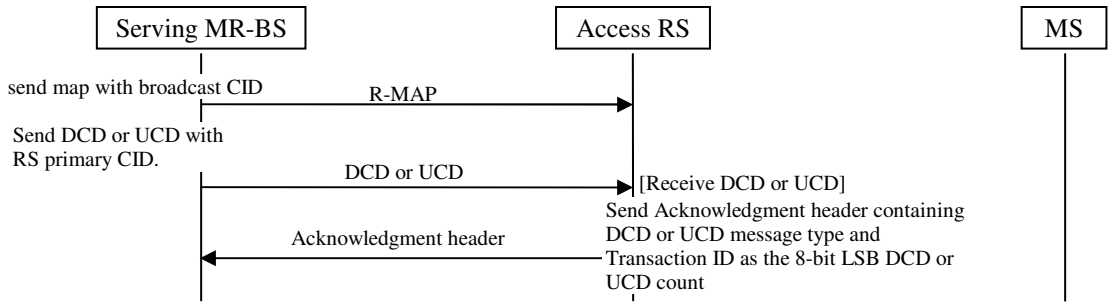

Figure xxx –Relaying DCD/UCD procedure

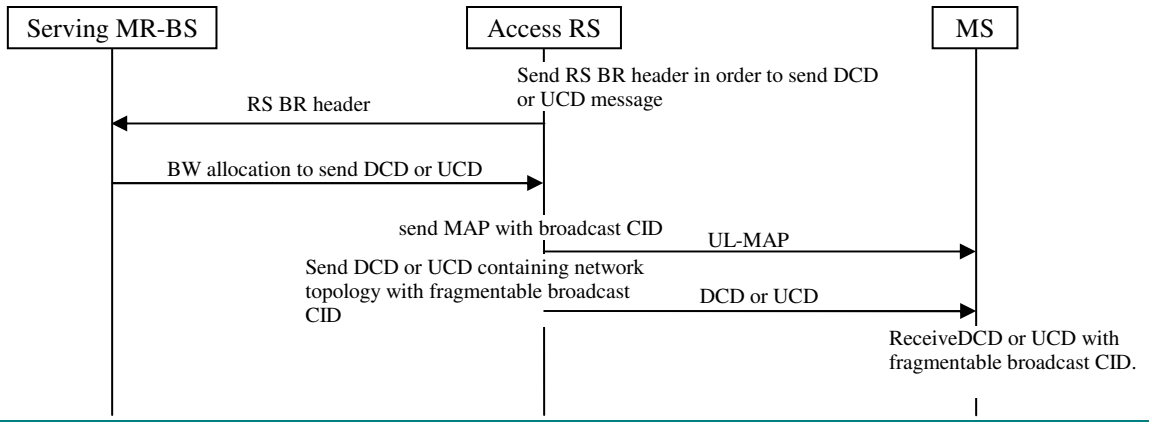

Figure yyy – DCD/UCD broadcasting with centralized scheduling

[Add the following row at the end of table 583 in page 169 as indicated]

Table 583—Parameters and constants

System	Name	Time Reference	Minimum Value	Default value	Maximum value
MR-BS	T52	Waiting for ACK from RS for DCD/UCD messages	TBD	TBD	TBD