Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Data broadcasting corrections
Date Submitted	**2004-11-02**
Source(s)	Yigal Eliaspur yigal.eliaspur@intel.com Yuval Lomnitz Yuval.Lomnitz@intel.com Dov Andelman Intel Corp.
Re:	IEEE P802.16d/D5-2004
Abstract	Data broadcasting is a broken feature in 16d, this contribution presents a proposal correction.
Purpose	Adopt changes.
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) 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 and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:chair@wirelessman.org> as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices>.

Data broadcasting support correction

Yigal Eliaspur

1. Motivation

The data broadcasting feature is a broken feature in 16d.
In 16d there might be two types of broadcasting DL traffic: Management traffic and Data traffic.
The only way to distinguish between Management PDU and Data PDU is by looking on the PDU's associated CID.
Because there is only one broadcast CID defined (0xffff), PDU parsing is not well defined.
The SS can not distinguish between the two PDU types in the broadcast case.

2. Details

The proposal will be to use the 0xffff CID only for MAC Management messages and to use DSX multicast mechanism to create a broadcast downlink data CID.

3. Changes summary

[Make the following changes to section 10.4 Page 647 Table 343]

Broadcast CID	0xFFFF	Used for broadcast ~~information~~ Management Messages that ~~is~~ are transmitted on a downlink to all SS.

[Make the following changes to section 6.3.13]

6.3.13 Establishment of multicast and broadcast connections

The BS may establish a downlink multicast or broadcast service by creating a connection with each SS to be associated with the service. Any available traffic CID value may be used for the service (i.e. there are no dedicated CIDs for multicast transport connections). For networks of BS employing synchronized transmissions of common multicast or broadcast data, some traffic CID values may be assigned for the service (.i.e. there may be some dedicated CIDs for multicast transport connections). To ensure proper multicast or broadcast operation, the CID used for the service is the same for all SSs on the same channel that participate in the connection. To ensure proper multicast or broadcast operation on networks of BS employing synchronized transmissions of common multicast or broadcast data, the CID used for the service may be the same for all BS and SSs on the same channel that participate in the connection. ~~The SSs need not be aware that the connection is a multicast connection.~~ The data transmitted on the connection with the given CID shall be received and processed by the MAC of each involved SS. Thus each multicast or broadcast SDU is transmitted only once per BS channel. Since a multicast or broadcast connection is associated with a service flow, it is associated with the QoS and traffic parameters for that service flow.