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Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Intra Frame Power Save (IFPS) in OFDMA PHY
Date Submitted	**2004-05-10**
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Re:	IEEE P802.16e/D2-2004
Abstract	Intra Frame Power Save support in OFDMA
Purpose	The purpose of this document is to achieve better MSS power consumptions based on the usage of CID indicator on OFDMA DL-MAP.
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Intra Frame Power Save (IFPS) in OFDMA

Yigal Eliaspur

Motivation:

Knowing the target of each burst at the beginning of a frame will eliminate the MSS need to process unnecessary DL bursts within that frame.
In particular, when there is no data toward an MSS within a frame, the MSS will be able to reduce its power through the entire duration of the DL frame.

Details:

The proposal is to add a new capability to the MSS "Intra Frame Power Save" (IFPS).

The BS mandate to comply this capability by explicitly triggering an MSS to listen to a burst if and only if it contains data directed to it. The triggering is been done using CID lists on each DL burst IE.
To reduce the overhead implication of such capability on the network wide allocation, some explicit definition is added to the CID appearance on OFDMA DL-MAP.

1. Broadcast CID that is part of a burst must be explicitly indicated in the OFDMA DL-MAP IE if:
    a. There is at least one MSS registered to the serving BS with an **IFPS** capability on.
2. Multicast CID that is part of a burst must be explicitly indicated in the OFDMA DL-MAP IE if:
    a. Non of the burst's CIDs is broadcast CID
    b. One of the MSSs of the CID has the **IFPS** capability enabled and it's not matched to previously indicated Multicast CID.
3. Unicast CID that is part of a burst must be explicitly indicated in the OFDMA DL-MAP IE only if:
    a. Non of the burst's CIDs is broadcast CID
    b. The MSS of the CID has the **IFPS** capability enabled and it's not matched to previously indicated Multicast/Unicast CID.

In particular, an IFPS SS considers a burst which appears in the OFDMA DL-MAP without a CID to be not directed to it.

Changes summary:

TBD.