Project	**IEEE 802.16e Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Clarification for UL HARQ Power Control Operation**
Date Submitted	**2006-09-22**
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Re:	Call for contributions, IEEE P802.16e-2005 Sponsor Ballot
Abstract	This document suggests changes in TGe Draft Document IEEE 802.16e-2005 to clarify the power control operation for UL HARQ
Purpose	Adopt into the current TGe working draft
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Clarification for UL HARQ Power Control Operation

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Background

With the operation of UL power control, there is an incompleteness regarding HARQ operation. A non HARQ message burst and HARQ traffic bursts may exist within the same UL frame since the HARQ operation can not be applied to management message. However, there is no UL power control mechanism to achieve link reliability of non HARQ message burst and throughput gain of HARQ traffic bursts simultaneously.

Proposed Remedy

Proposed remedy is to introduce an UCD TLV which defines a power offset for HARQ burst with respect to non-HARQ burst. The MS shall apply this offset right after the first HARQ enabled connection is established.

Proposed Text Changes

[Insert the following text on page 637at the end of Sec 8.4.10.3 Power Control]

"If MS has UL HARQ connection, the normalized C/N value for HARQ bursts can be adjusted referencing to non HARQ bursts. The power offset is defined in UCD TLV of 'Relative_Power_Offset_for_UL_HARQ_burst'. If this TLV exists in the UCD, then the power offset shall be added to the C/N value in table 334 in case the transmission is HARQ."

[Insert the following entry in Table 353 on page 670 of IEEE 802.16e-2005]

Name	Type (1 Byte)	Length	Value
Relative_Power_Offset_ For_UL_HARQ_burst	205	1	Bit#0-3: Offset for HARQ burst relative to non-HARQ burst (Signed integer in 0.5dB unit) Bit#4-7: reserved (Shall be set to zero)

References

[1] IEEE 802.16 2004: "IEEE Standard for Local and Metropolitan Area Networks Part 16: Air Interface for Fixed

Broadband Wireless Access Systems”.

[2] IEEE Std 802.16e 2005 and IEEE Std 802.16 2004/Cor1 2005 (Amendment and Corrigendum to IEEE Std 802.16 2004)