Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Generic Sleep Corrections**
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Re:	IEEE P802.16e/D5a
Abstract	The document contains suggestions for corrections in the usage of the Generic Sleep Headers.
Purpose	To make the Generic Sleep Headers more robust and scalable using the Extended Subheader Field.
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Generic Sleep Corrections

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1. The Document's Goal

The document's goal is to correct the Generic Sleep Header format in 802.16 by using the Extended Subheader Field (ESF).

2. Incentive for Correction of the Generic Sleep Headers

The generic sleep feature contribution that was accepted last session requires some refinements and corrections.

For example, it would be better to change the location of the sleep control header in the 802.16 PDU. As defined today, the Sleep Control Header PDU type changes the GMH and other basic building blocks of the 802.16 standard. These changes are not scalable and are very limited in flexibility.

The suggestion here is to use the ESF (Extended Subheader Field) (defined in C802.16e-05/024) while retaining the regular GMH. The Sleep Control Headers will be converted into mini-TLVs under the ESF. This allows greater flexibility and robustness in future extensions of the Sleep Control Headers and other functionalities.

For mini-TLV definition please refer to contribution number C802.16e-05/023.

3. Specific changes in the Standard

[Remove section 6.3.2.1.6]
Remove entire section

[Change in section 11.20]

11.20 Mini-TLV Encodings

Table 11.20.2

Type	Name	Length (Octets)	Description
0b0011	Generic Sleep Header	DL: 3 UL: 1	See 11.20.3
0b0100-0b1111	*Reserved*		*Reserved*

[Insert new section 11.20.3]
11.20.3 Generic Sleep Header mini-TLV

The format of this mini-TLV differs in the UL and the DL.

The following Sleep Control Header is sent by the MSS to request activation/ deactivation of certain Power Saving Class.

MOB_SLP_ULC mini-TLV format (UL)

Name	Length (bits)	Description
Power_Saving_Class_ID	6	Power Saving Class ID this command refers to.
Operation	1	1 = to activate Power Saving Class 0 = to de-activate Power Saving Class
Reserved	1	

The following message is sent by the BS to activate / deactivate certain Power Saving Class. The requested operation is effective from the next frame after the one where the message was transmitted.

MOB_SLP_DLC mini-TLV format (DL)

Name	Length (bits)	Description
Power_Saving_Class_ID	6	Power Saving Class ID this command refers to.
Operation	1	1 = to activate Power Saving Class 0 = to de-activate Power Saving Class
Final_Sleep_Window_Exponent	3	For Power Saving Class Type 3 only: assigned factor by which the final-sleep window base is multiplied in order to calculate the duration of single sleep window requested by the message.
Final_Sleep_Window_Base	10	For Power Saving Class Type 3 only: the base for duration of single sleep window requested by the message.
Reserved	4	