Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>	
Title	**Femto BS Power Adjustment Processes**	
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Re:	TGm SDD: Femtocells; 802.16m-08/040, "Call for Contributions and Comments on Project 802.16m System	
Abstract	Clarifies categories of femto BS power adjustments and necessary information for femto BS to facilitate power adjustments.	
Purpose	To be discussed and adopted by TGm for use in the IEEE 802.16m SDD	
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Femto BS Power Adjustment Processes

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Introduction

It is necessary to adjust the downlink transmission power of the SCH message of a new coming femto BS during the network entry process. Femto BS Power adjustment is not a trivial mission because the femto BS would be under-utilized if the transmission power is too low. In the opposite, femto BS would disturb MSs from communicating with their serving femto BS if it radiates too much power. Femto BS should initialize the power level without a manual operation. For the purpose of improving system performance, femto BS should also be able to adjust power level periodically when it is operating. This contribution tries to clarify the necessary information for a femto BS to achieve the power adjustment processes and the categories of power adjustment processes.

Proposed Text for SDD

--Start of the Text---

[Add the following section 17.x "Femto BS Power Adjustment"]

17.X Femto BS Power Adjustment

Basic requirements for the femto BS power adjustment processes are listed below:
(1) Location of every femto BS should be known by the network access provider (NAP).
(2) CINR threshold ($CINR_T$), which is the minimum CINR for a MS to receive the SCH message from the serving BS.
(3) NAP should record the downlink radiation power of every femto BS.
There are two kinds of power adjustments:
I) Power initialization in the femto BS network entry process. Power initialization process of femto BS is divided into two parts: i) femto BS estimation and ii) MS estimation.
II) Periodical adjustments when the femto BS is operating.