Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>	
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Re:	IEEE 802.16 Session #47 plus over the phone	
Abstract	This contribution proposes the updates of IEEE 802.16g D7 document in order to obtain loading information from the Base Station	
Purpose	Update 802.16g draft: MS HO decision factoring the BS loading figures.	
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DL and UL Radio Resource Reporting in the DCD and UCD message

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1. Introduction

Currently the **Non-pre-assigned DL or UL radio resource encoding information of neighboring BSs is reported in the NBR_ADV message. However, the serving BS needs to report it as well. By adding the same TLVs to the DCD and UCD message this situation is corrected.** In addition, the MS needs the threshold values for both the DL and UL radio resources in order to determine whether it should consider the channel as overloaded and move to the next channel for synchronization and ranging. The two thresholds are defined as constant system parameters.

2. Proposed Text Change

Remedy:

1. Add two constant parameters for the threshold values of the loading information.
2. Factor the loading information when determining the target BS for initial entry and handover.

Add the following two lines in Table 342.

Table 342 Parameters and Constants

Systems	Name	Time references	Minimum Value	Default Value	Maximum Value
MS	Radio_resources_DL_loading _system_paramater	The threshold value of the Non-pre-assigned DL radio resources such that the MS will move to next channel for synchronization and ranging if the Non-pre-assigned DL radio resources are less than the threshold value			100%
MS	Radio_resources_UL_loading _system_paramater	The threshold value of the Non-pre-assigned UL radio resources such that the MS will move to next channel for synchronization and ranging if the Non-pre-assigned UL radio resources are less than the threshold value.			100%

Add to section 11.4.1 TLV (type 23) - Non-pre-assigned DL radio resource encoding

Non-pre-assigned DL radio resources shall indicate the average percentage of non-pre-assigned physical radio resources for DL where averaging shall take place over a time interval which shall be a configurable value (with a default value of the last 200 frames) common to all BS within an operator network. Available physical radio resources shall be defined as the set of subchannels and symbols within a radio frame, which are not used by any non-best-effort service flow class as identified by either the uplink grant scheduling type or the data delivery service as identified in the service flow encodings.

Name	Type	Length(bytes)	Value	Scope
Non-pre-assigned DL radio resources	23	1	0x00: 0% 0x01 : 1%, ..., 0x64 : 100% 0x65 - 0xFE : reserved, 0xFF indicates no information available	MOB_NBR-ADV, DCD

Add to section 11.3.1 TLV (type 24) - Non-pre-assigned UL radio resource encoding

Non-pre-assigned UL radio resources shall indicate the average percentage of non-pre-assigned available physical radio resources for UL where averaging shall take place over a time interval which shall be a configurable value (with a default value of the last 200 frames) common to all BS within an operator network. Available physical radio resources shall be defined as the set of subchannels and symbols within a radio frame, which are not used by any non-best-effort service flow class as identified by either the uplink grant scheduling type or the data delivery service as identified in the service flow encodings.

Name	Type	Length(bytes)	Value	Scope
Non-pre-assigned UL radio resources	24	1	0x00: 0% 0x01 : 1%, ..., 0x64 : 100% 0x65 - 0xFE : reserved, 0xFF indicates no information available	MOB_NBR-ADV, UCD