Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Maximum MAC data per frame
Date Submitted	**2004-08-18**
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Re:	IEEE P802.16e/D42004
Abstract	The document proposes to add capability parameter to the MSS that's provides restriction to amount of MAC level data the MSS is capable to receive and process in a single MAC frame.
Purpose	MSS finer ability to estimate the required resources allocation for receiving data..
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Maximum MAC data per frame – a new MSS capability

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1. Motivation

Data traffic characteristic to/from an MSS is defined based on Service Flow parameters.

Service Flow (SF) parameters (see service flow encoding parameters 11.13 REVd/D5) are specified and negotiated using DSx transactions.

Service flows limitation of rate and burst size is been done using the two parameters below:

11.13.6 Maximum sustained traffic rate
This parameter defines the peak information rate of the service. The rate is expressed in bits per second and pertains to the SDUs at the input to the system. Explicitly, this parameter does not include MAC overhead such as MAC headers or CRCs. This parameter does not limit the instantaneous rate of the service since this is governed by the physical attributes of the ingress port. However, at the SS in the uplink direction, the service shall be policed to conform to this parameter, on the average, over time. At the BS in the downlink direction, it may be assumed that the service was already policed at the ingress to the network and the BS is not required to do additional policing. If this parameter is omitted or set to zero, then there is no explicitly mandated maximum rate. This field specifies only a bound, not a guarantee that the rate is available. The algorithm for policing to this parameter is left to vendor differentiation and is outside the scope of the standard.

11.13.7 Maximum traffic burst
This parameter defines the maximum burst size that shall be accommodated for the service. Since the physical speed of ingress/egress ports, the air interface, and the backhaul will in general be greater than the maximum sustained traffic rate parameter for a service, this parameter describes the maximum continuous burst the system should accommodate for the service assuming the service is not currently using any of its available resources.

These parameters do not give the MSS the ability to make fine estimation and prediction for the maximum amount of data the BS will allocate for it per frame which is based on the DL scheduling algorithm the BS maintains. Theoretically, in any combination of the parameters above the MSS Still need to be able to handle a frame in which the entire DL frame is directed to it.

The proposal of this contribution is to add explicit parameter to restrict the amount of MAC level data the SS is capable to receive and process in a single MAC frame. The parameter should be per MSS rather then per SF so that multiple SF can share the same limitation in a best effort manner.

The motivation is for the 802.16 standard to support simple MSS devices that do not aimed to provide high data rate services and that have limited resources capability like processing power and memory requirements.

2. Changes summary

11.7.8.x Maximum MAC data per frame support

This parameter defines the maximum amount of MAC level data including MAC headers the MSS is capable to process in the DL/UL part of a single MAC frame. A value of 0 indicates such limitation doesn't exist, except the limitation of the physical medium. If those TLVs are absent then the default value (0) should be used.

Type	Length	value	Scope
?	2	Maximum amount of MAC level data per DL frame (in unites of 256 Bytes) A value of 0 means unlimited.	REG-REQ REG-RSP
?	2	Maximum amount of MAC level data per UL frame (in unites of 256 Bytes) A value of 0 means unlimited.	REG-REQ REG-RSP