Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**URFM Submission to IEEE 802.16 TG4**
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Re:	This is a response to a IEEE 802.16.4 Task Group session 12 assignment.
Abstract	This document proposes a new URFM message for the TG4 strawman.
Purpose	This document forms a response to the requirement of updating the TG4 MAC strawman document.
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This section to be included in the Draft IEEE 802.16.4 MAC Standard.
Section and paragraph numbering to change as necessary.
All TBD's refer to other sections in theDraft IEEE 802.16.4 Standard
Version Dated 25April 2001 John Sydor

Uplink Radio Frequency Management (URFM) Message

An Uplink Radio Frequency Management (URFM) Message shall be transmitted by the SS at periodic intervals (30 sec TBD) (Table XX TBD). The URFM is a MAC Management Message of Type 29 (TBD). It begins with a Generic Uplink MAC header and its format is shown in Figure (XX TBD). The CID in the MAC Management Header is the basic CID for the SS.

This message will characterize the radio frequency emission properties of the SS. Its purpose is to inform the host as well as other nearby and potentially interfering base stations of the emission characteristics of the SS.

Each SS will have its radio emission characteristics summarized by the URFM, which will contain information on the occupied channel frequency, EIRP, and beamwidth of the emission. Information will include the identification of the host base station to the SS. Reserved space is left in the URFM to include advanced propagation and SS identification characteristics that can be included in future improvements. The following parameters will be included in the current URFM:

Base Station ID

This is the ID of the BS to which the SS registered. It is a 64 bit long field. The BS ID can be extracted from the DL-MAP message broadcast to the SS by the BS.

Uplink Channel ID

The uplink channel ID which the SS uses. This channel is an override for the channel selected during initialization. The uplink channel ID is unique within the Downlink Channel. This message is 1 byte.

Downlink Frequency Configuration Setting

 The transmitted frequency used by the SS. This is the centre radio frequency of the uplink channel in KHz stored as a 32 bit binary number. In the TDD mode, this frequency will be the same as the received frequency of the SS.

 EIRP Level Setting

 This is a single byte with the most significant bit indicating the sign of the EIRP. The EIRP is expressed as an absolute transmitted power spectral density level in dBm/MHz radiated at the peak gain of the antenna.

 Antenna Beamwidth

 This is a single byte with that is derived from the configuration files for the SS station. The value represents the 3 dB azimuth beamwidth of the SS. This value is defined in increments of 2 degrees.

Bit 0							8							Bit 15

EC	EKS	Rsvd	Length											
Connection Identifier														
HT=0	CSI	FC		FSN		CI	PDE	CPT		PSP	Rsvd			
GM						HCS								
MAC Management Message Type=29						Reserved								
Base Station ID Byte 1						Base Station ID Byte 2								
Base Station ID Byte 3						Base Station ID Byte 4								
Base Station ID Byte 5						Base Station ID Byte 6								
Base Station ID Byte 7						Base Station ID Byte 8								
Uplink Channel ID						Downlink Frequency Byte 1								
Downlink Frequency Byte 2						Downlink Frequency Byte 3								
Downlink Frequency Byte 4						Reserved								
Beamwidth of SS Antenna						Reserved								
Eirp 0= - 1= +	EIRP in dBm/MHz for					Reserved								

Figure XX TBD Uplink Radio Frequency Management Message Format