Project	IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>	
Title	**Clarification on Table of MAC Control Messages over IEEE 802.16.1a**	
Date Submitted	**2012-05-07**	
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Re:	"IEEE 802.16-12-271," in response to Letter Ballot Recirc #38a on P802.16.1a/D2	
Abstract	Clarification on MAC control message number in GRIDMAN Draft Standard	
Purpose	To discuss and adopt the proposed text in the draft amendment document on GRIDMAN	
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Clarification on Table of MAC Control Messages over IEEE 802.16.1a

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1. Introduction

This document provides clarification on numbering the MAC control message.

2. References

[1] IEEE 802.16-12-0132-00, GRIDMAN System Requirement Document including SARM annex, January 2012.
[2] IEEE P802.16n[TM]/D2, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.
[3] IEEE P802.16.1a[TM]/D2, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.
[4] EEE P802.16Rev3/D6, IEEE Draft Standard for Local and metropolitan area networks; Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems," February 2012.
[5] IEEE P802.16.1[TM]/D6, IEEE Draft for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems, April 2012.

3. Proposed Text on the IEEE 802.16.1a Amendment Draft Standard

[-----------------------------------Start of Text Proposal---]

[Remedy: change from line #2, page 6 to line #1, page 10 on P802.16.1a/D2 as follows:]

6.2.3 MAC control messages

Change Table ~~26~~29 as indicated:

Table ~~26~~29 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
24	Security	AAI-PKM-RSP	Privacy Key Management Response	Before AK is derived at network entry: NULL at network entry and EAP-transfer message is enclosed: encryption/ICV after AK is derived after AK is derived at network entry and the other message is enclosed: CMAC	Unicast or Multi-cast
~~TBD~~ 71	Multimode	AAI-MM-ADV	Multimode advertisement	N/A	Broadcast
~~TBD~~ 72	Multimode	AAI-MM-RS-REQ	Multimode Relay request	Encrypted/ICV	Unicast
~~TBD~~ 73	Multimode	AAI-MM-RS-RSP	Multimode Relay response	Encrypted/ICV	Unicast
~~TBD~~ 74	Multimode	AAI-MM-RL-REQ	Multimode release request	Encrypted/ICV	Unicast
~~TBD~~ 75	Multimode	AAI-MM-RL-RSP	Multimode release response	Encrypted/ICV	Unicast
~~TBD~~ 76	Multimode	AAI-MM-BS-REQ	Multimode Base station request	Encrypted/ICV	Unicast
~~TBD~~ 77	Multimode	AAI-MM-BS-RSP	Multimode Base station response	Encrypted/ICV	Unicast
~~TBD~~ 78	Multimode	AAI-MM-BS-CMD	Multimode Base station command	Encrypted/ICV	Unicast
~~TBD~~ 79	Multimode	AAI-MM-RS-SYN-REQ	Multimode Relay Synchronization request	Encrypted/ICV	Unicast

Table ~~26~~29 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
~~TBD~~ 80	Multimode	AAI-MM-RS-SYN-RSP	Multimode Relay Synchronization response	Encrypted/ICV	Unicast
~~TBD~~ 81	BS-controlled neighbor discovery	AAI-HR-RNG-CMD	HR-MS/HR-MS ranging command	Encrypted/ICV	Unicast or multicast or broadcast
~~TBD~~ 82	BS-controlled neighbor discovery	AAI-HR-RNG-REP	HR-MS/HR-MS ranging report	Encrypted/ICV	Unicast or multicast or broadcast
~~TBD~~ 83	~~Link Establishment~~ Direct Communication	AAI-DC-LEST-REQ	Link Establishment Request		Unicast
~~TBD~~ 84	~~Link Establishment~~ Direct Communication	AAI-DC-LEST-RSP	Link Establishment Response		Unicast
85	Direct Communication	AAI-DC-LEST-CMD	Link Establishment Command		Multicast
~~TBD~~ 86	~~Measurementt~~ Direct Communication	AAI-DC-MES-REP	Measurement Report		Unicast
87	Direct Communication	AAI-DC-MES-CMD	Measurement Command		Unicast or Multicast
~~TBD~~ 88	~~Resource Management~~ Direct Communication	AAI-DC-RCHG-REQ	Resource Change Request		Unicast
~~TBD~~ 89	~~Resource Management~~ Direct Communication	AAI-DC-RCHG-RSP	Resource Change Response		Unicast
90	Direct Communication	AAI-DC-RCHG-CMD	Resource Change Command		Unicast or Multicast
~~TBD~~ 91	~~Token Management~~ Direct Communication	AAI-DC-TKN-REQ	Token Request		Unicast
~~TBD~~ 92	~~Token Management~~ Direct Communication	AAI-DC-TKN-RSP	Token Response		Unicast
~~TBD~~ 93	~~Token Management~~ Direct Communication	AAI-DC-TKN-HO	Token Handover		Unicast
94	Direct Communication	AAI-DC-TKN-ADV	Token Advertisement		Multicast

Table 2629 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
~~TBD~~	~~Link Establishment~~	~~AAI-DC-LEST-CMD~~	~~Link Establishment Command~~		~~Multicast~~
~~TBD~~ 95	~~Link Release~~ Direct Communication	AAI-DC-LREL-CMD	Link Release Command		Unicast or Multicast
~~TBD~~ 96	~~Flow Management~~ Direct Communication	AAI-DC-DSA-CMD	Dynamic Service Addition Command		Unicast or Multicast
~~TBD~~ 97	~~Flow Management~~ Direct Communication	AAI-DC-DSC-CMD	Dynamic Service Change Command		Unicast or Multicast
~~TBD~~ 98	~~Flow Management~~ Direct Communication	AAI-DC-DSD-CMD	Dynamic Service Delete Command		Unicast or Multicast
~~TBD~~	~~Measurement~~	~~AAI-DC-MES-CMD~~	~~Measurement Command~~		~~Unicast or Multicast~~
~~TBD~~	~~Resource Management~~	~~AAI-DC-RCHG-CMD~~	~~Resource Change Command~~		~~Unicast or Multicast~~
~~TBD~~	~~Token Management~~	~~AAI-DC-TKN-ADV~~	~~Token Advertisement~~		~~Multicast~~
~~TBD~~ 99	~~Resource allocation~~ Direct Communication	AAI-DC-RTS	Request to Send		Unicast or Multicast or broadcast
~~TBD~~ 100	~~Resource allocation~~ Direct Communication	AAI-DC-CTS	Clear to Send		Unicast
~~TBD~~ 101	~~MCS Change~~ Direct Communication	AAI-DC-MCHG-CMD	MCS Change Command		Unicast
102	Direct Communication	AAI-DC-RELAY-ADV	Relay Advertisement		Broadcast
103	Direct Communication	AAI-DC-RELAY-REQ	Relay Request		Unicast
104	Direct Communication	AAI-DC-RELAY-RSP	Relay Response		Unicast
~~TBD~~ 105	~~BS-controlled HR-MS forwarding to network~~ HR-MS Forwarding to Network	AAI-FN-CONFIG-CMD	Forwarding to network configuration		Unicast or multicast

Table 2629 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
TBD 106	BS-controlled HR-MS forwarding to network HR-MS Forwarding to Network	AAI-FN-RNG-ACK	Acknowledging successful receiving of ranging preamble by forwarding HR-MS		Broadcast (toward new HR-MS that is carrying out network entry through the forwarding HR-MS)
TBD 107	BS-controlled HR-MS forwarding to network HR-MS Forwarding to Network	AAI-FN-RNG-REP	Forwarding HR-MS report to serving HR-BS/RS the reception	Encrypted/ICV	Unicast
TBD 108	BS-controlled HR-MS forwarding to network HR-MS Forwarding to Network	AAI-FN-RNG-FLU	HR-BS/RS selects one or group of HR-MS to follow-up with the ranging process of new HR-MS	Encrypted/ICV	Unicast or multicast
TBD 109	Forwarding MS List HR-MS Forwarding to Network	AAI-DC-MM-ADV	MS list Advertisement		Broadcast or multicast or unicast
TBD 110	Forwarding MS List Update HR-MS Forwarding to Network	AAI-DC-LU-REQ	MS List Update Request		Unicast
TBD 111	Forwarding MS List Update HR-MS Forwarding to Network	AAI-DC-LU-RSP	MS List Update Response		Unicast
TBD 112	Standalone	AAI-SA-BPAG-ADV	Blind Page Advertisement Message		Broadcast
TBD 113	Standalone	AAI-SA-BPAG-ACK	Blind Page ACK message		Unicast
TBD 114	Multicast	AAI-HR-MG-IND	Multicast Group Indication Message		Broadcast

Table 2629 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
~~TBD~~ 115	Multicast	AAI-HR-MT-IND	Multicast Traffic Indication Message		Broadcast or Multicast

[---------------------------------End of Text Proposal---]