

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Clarification on Table of MAC Control Messages over IEEE 802.16.1a</b>	
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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<sup>TM</sup>/D2, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.
- [3] IEEE P802.16.1a<sup>TM</sup>/D2, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.
- [4] IEEE 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<sup>TM</sup>/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 ~~2629~~ as indicated:

Table 2629 - 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 <u>or</u> <u>Multi-cast</u>
<del>FBD</del> <a href="#">71</a>	<u>Multimode</u>	<u>AAI-MM-ADV</u>	<u>Multimode advertisement</u>	N/A	<u>Broadcast</u>
<del>FBD</del> <a href="#">72</a>	<u>Multimode</u>	<u>AAI-MM-RS-REQ</u>	<u>Multimode Relay request</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">73</a>	<u>Multimode</u>	<u>AAI-MM-RS-RSP</u>	<u>Multimode Relay response</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">74</a>	<u>Multimode</u>	<u>AAI-MM-RL-REQ</u>	<u>Multimode release request</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">75</a>	<u>Multimode</u>	<u>AAI-MM-RL-RSP</u>	<u>Multimode release response</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">76</a>	<u>Multimode</u>	<u>AAI-MM-BS-REQ</u>	<u>Multimode Base station request</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">77</a>	<u>Multimode</u>	<u>AAI-MM-BS-RSP</u>	<u>Multimode Base station response</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">78</a>	<u>Multimode</u>	<u>AAI-MM-BS-CMD</u>	<u>Multimode Base station command</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">79</a>	<u>Multimode</u>	<u>AAI-MM-RS-SYN-REQ</u>	<u>Multimode Relay Synchronization request</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>
<del>FBD</del> <a href="#">80</a>	<u>Multimode</u>	<u>AAI-MM-RS-SYN-RSP</u>	<u>Multimode Relay Synchronization response</u>	<u>Encrypted/ICV</u>	<u>Unicast</u>

Table 2629 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
<del>FBD</del> 81	<u>BS-controlled neighbor discovery</u>	<u>AAI-HR-RNG-CMD</u>	<u>HR-MS/HR-MS ranging command</u>	<u>Encrypted/ICV</u>	<u>Unicast or multicast or broadcast</u>
<del>FBD</del> 82	<u>BS-controlled neighbor discovery</u>	<u>AAI-HR-RNG-REP</u>	<u>HR-MS/HR-MS ranging report</u>	<u>Encrypted/ICV</u>	<u>Unicast or multicast or broadcast</u>
<del>FBD</del> 83	<u>Link Establishment</u>	<u>AAI-DC-LEST-REQ</u>	<u>Link Establishment Request</u>		<u>Unicast</u>
<del>FBD</del> 84	<u>Link Establishment</u>	<u>AAI-DC-LEST-RSP</u>	<u>Link Establishment Response</u>		<u>Unicast</u>
85	<u>Link Establishment</u>	<u>AAI-DC-LEST-CMD</u>	<u>Link Establishment Command</u>		<u>Multicast</u>
<del>FBD</del> 86	<u>Measurement</u>	<u>AAI-DC-MES-REP</u>	<u>Measurement Report</u>		<u>Unicast</u>
87	<u>Measurement</u>	<u>AAI-DC-MES-CMD</u>	<u>Measurement Command</u>		<u>Unicast or Multicast</u>
<del>FBD</del> 88	<u>Resource Management</u>	<u>AAI-DC-RCHG-REQ</u>	<u>Resource Change Request</u>		<u>Unicast</u>
<del>FBD</del> 89	<u>Resource Management</u>	<u>AAI-DC-RCHG-RSP</u>	<u>Resource Change Response</u>		<u>Unicast</u>
90	<u>Resource Management</u>	<u>AAI-DC-RCHG-CMD</u>	<u>Resource Change Command</u>		<u>Unicast or Multicast</u>
<del>FBD</del> 91	<u>Token Management</u>	<u>AAI-DC-TKN-REQ</u>	<u>Token Request</u>		<u>Unicast</u>
<del>FBD</del> 92	<u>Token Management</u>	<u>AAI-DC-TKN-RSP</u>	<u>Token Response</u>		<u>Unicast</u>
<del>FBD</del> 93	<u>Token Management</u>	<u>AAI-DC-TKN-HO</u>	<u>Token Handover</u>		<u>Unicast</u>
94	<u>Token Management</u>	<u>AAI-DC-TKN-ADV</u>	<u>Token Advertisement</u>		<u>Multicast</u>

Table 2629 - MAC Control messages

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

Table 2629 - MAC Control messages

No.	Functional Areas	Message names	Message description	Security	Connection
<del>TBD</del> <a href="#">104</a>	BS-controlled HR-MS forwarding to network	AAI-FN-RNG-REP	Forwarding HR-MS report to serving HR-BS/RS the reception	Encrypted/ICV	Unicast
<del>TBD</del> <a href="#">105</a>	BS-controlled 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
<del>TBD</del> <a href="#">106</a>	Forwarding MS List	AAI-DC-MM-ADV	MS list Advertisement		Broadcast or multicast or unicast
<del>TBD</del> <a href="#">107</a>	Forwarding MS list Update	AAI-DC-LU-REQ	MS List Update Request		Unicast
<del>TBD</del> <a href="#">107</a>	Forwarding MS list Update	AAI-DC-LU-RSP	MS List Update Response		Unicast
<del>TBD</del> <a href="#">108</a>	Standalone	AAI-SA-BPAG-ADV	Blind Page Advertisement Message		Broadcast
<del>TBD</del> <a href="#">109</a>	Standalone	AAI-SA-BPAG-ACK	Blind Page ACK message		Unicast
<del>TBD</del> <a href="#">110</a>	Multicast	AAI-HR-MG-IND	Multicast Group Indication Message		Broadcast
<del>TBD</del> <a href="#">111</a>	Multicast	AAI-HR-MT-IND	Multicast Traffic Indication Message		Broadcast or Multicast

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