
Project	IEEE 802.16 Broadband Wireless Access Working Group	
Title	IEEE 802.16.1 MAC & Task Group 1 Meeting Minutes, IEEE 802.16 Session #9	
Date Submitted	2000-09-19	
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Re:	This contribution is to provide the minutes of the MAC task group for session #9.	
Abstract	Session # 9 MAC task group minutes.	
Purpose	[Description of what the author wants 802.16 to do with the information in the document.]	
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IEEE 802.16 TG1 & MAC Meeting Minutes for Session #9

Acting Secretary: Juan-Carlos Zuniga
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Session # 9

Monday, **September 11, 2000**

15:30	Roger Marks	Call to Order
		Resolution of General Comments on the 802161-00_01r1.pdf document.
	Comment #:	Discussion:
	1	The Editor will be responsible for making the appropriate changes and the editing has to be revised by the commentator.
	2-9	Comment accepted
	9	Same as 1
	10-13	Comment accepted
	14	Has to be changed more than once. Comment accepted.
	15	Comment accepted
	16	Terminology has to be in agreement with the Functional Requirements: BS and SS. Similar to 17. Comment rejected.
	17	Motion to amend the Request to extend the change to the whole document from BTS to BS and CPE. Motion passes. Comment accepted.
	18	Discussion: 'expected' describes better the situation than 'allowed'. Motion to make the change carries unanimously. Comment accepted.
	19-23	Comment accepted.
	24	The Figure number is now included in the document. Since the shown version does not match the one revised, Jim will take care of reviewing the database comment by comment in the correct version. The '802.16 protocol' will be changed to '802.16.1 protocol'. Comment accepted.
	25	This comment overrides one part of last comment. Scott Marin double-checked the document and the figure that has to be referenced comes from the Functional Requirements. Scott: The correct figure is in the Functional Requirements. Roger: The comment should be changed from Editorial to Technical. Carl: If we reject the comment, we won't deviate from the actual design, and hence we don't have to change it. Scott: The purpose of the Functional Requirements is clear and this group cannot change those requirements. Roger: The comment is changed from Editorial to Technical and will be reviewed later on.
	26	Motion to delete the paragraph. Motion carries unanimously. Comment accepted.
	27	Paragraph is already gone.

	28	Friendly amendment from Roger, accepted by Ken, to also replace and with 'the BS'. Comment accepted.
	29	Comment accepted.
	30	No specific change is given. Comment rejected.
	31	The comment has been edited for conformance. Mary: Cell radius is a very important parameter. Juan Carlos: Cell radius is still acknowledged in the paragraph. The new editing was voted. Motion carries unanimously. Comment accepted.
17:00	Roger	Session adjourned.

Tuesday, September 12, 2000

8:15	Roger	Call to Order
	Comment:	Discussion:
	32-36	Comment accepted.
	Review of Comment 25	Jim: Marianna's proposal was rejected Scott: I think it would be inappropriate to change this because it has been already rejected. Roger: We have to vote on the comment. Ken: This will affect a lot our development and I don't think that we want to do that Jane: We should mark this and avoid causing conflict in a future with inconsistency in the documents. Phil: In the following sentence (Functional Requirements) it is stated that the diagram is just a reference for development, but it is not the Protocol Stack. Motion to accept the comment. 5 Favour / 6 Against Comment rejected.
	Roger	For the Technical Comments, the MAC and PHY Group will be split.

8:30	Carl	MAC Session: Technical Comments.
	Comment:	Discussion:
	37	Glen: in session 7.5 and 8 it was decided that the Convergence Layers would be defined in separate Annexes. Ken: Comment 37 and 38 are linked together. In order to address this issue, a call for contributions should be written. Glen volunteered for writing it. Comment Unresolved.
	39-44	Editorial comments like 39-44 will be skipped.
	45	Yigal: The MAC Primitives do not agree with the 3-way protocol handshake described by the Dynamic Service Addition and Change operations. Comment referred to Group.
	46	Ken: I don't see any place where this can happen. Friendly amendment to change the comment to reflect future applications. Comment accepted.

	49	ARQ comments cannot be accepted or rejected until we have seen the presentation that Yigal will make.
	Carl	Could Yigal present the ARQ proposal now?: Yes.
8:58	Yigal	<p>Presentation on ARQ.</p> <p>Carl: If the ARQ is per connection, why do you need to use the bit if the Service will be on all the time?.</p> <p>Yigal: Yes. The purpose would be to implement a simpler look-up table, but it is not absolutely necessary.</p> <p>Yigal: TG3 has marked ARQ as compulsory in the MAC.</p> <p>Carl: There is no harm in accepting this proposal. It could be optional.</p> <p>Ken: We have to make it optional for the BS too.</p> <p>?: TG3 is concern about a difficult path and consider ARQ as important. Hence, it is wise to consider it in the current draft.</p> <p>Jim: Motion to accept the comment. Seconded by Yigal.</p> <p>7 in Favour / 3 Against</p> <p>Comment accepted.</p>
	52	Comment accepted.
	56	Deferred to call for contributions.
	58	<p>Carl: There is a conflict with GPT and GPC definitions regarding this section.</p> <p>Ken and Glen to modify the text.</p> <p>Comment referred to editor.</p>
	59-62	Comment accepted.
	65	<p>The figures are changed not to collide with Registration CID, but to make it clear.</p> <p>Comment reworded by the Group.</p> <p>Comment accepted.</p>
	67-68	Comment accepted.
	69	Comment referred to the Group.
10:15	Carl	Break
10:35	73	Comment accepted.
	83-86	Comment accepted.
	87	Referred to next comment.
	88	Comment accepted.
	90	<p>Juan Carlos: This comment comes from a DOCSIS specific implementation that is irrelevant to the present document.</p> <p>The whole TLV will be deleted since it is internal to the vendor's implementation.</p>
	91	Comment rephrased and accepted
	92	Comment referred to a joint MAC-PHY session
	95	Comment referred to the Group.
	97	Comment accepted and extended to other sections.
	99	Comment accepted as modified.
	100	Comment accepted as modified.
	101	Already solved
	102	Comment accepted.
	103	Referred to Group, by Glen's revisiting the issue.
	104	Sentence deleted
	105	Already solved
	106	Ken to give input after consulting with Glen. Comment referred to the Group.

	109	Comment accepted.
12:30	Carl	Lunch break
13:30	110	This issue is brought from DOCSIS assumptions. Mary: DHCP and IP interactions should not be part of the MAC. Jim Carlo gave an explanation on how the EUI-64 addresses are being considered from the Standards point of view. The standard bodies will be more open to accept new standards using the EUI-64 instead of the 48 bits, but an explanation should be sufficient if the group decides to go for the 48-bit format. Since FBWA systems are not going to be deployed in tens of millions per year, it may be accepted. Carl: Motion to change the MAC address length to 48 bits 7 Favour / 1 Opposed The issue will be addressed again by the whole Group.
	111	Already solved.
	113-115	Comment accepted.
	118	Yigal: This would be considered in GPT with Best-effort. Ken: This scheme could be advantageous to GPT with best-effort, but nothing else. Sergio: This breaks the rules of scheduling at the BS. Carl: Motion to accept the comment. 1 Favour / 9 Against Comment rejected.
	120	Friendly amendment from Ken to change the 'CSI bit' for one bit from the Fragment Sequence number. Yigal accepted. 4 Favour / 5 Against Comment rejected.
	123	Since ARQ is still to be evaluated, because may be needed for 802.16.3 requirements, the comment will be referred for discussion with TG3
	125	Comment accepted.
15:00	Carl	Break
15:15	132	Comment modified and referred to Group.
	133	Comment accepted. Ken will elaborate some wording.
	134	Comment rejected.
	135-136	Comment accepted.
	137	Comment obsolete (paragraph removed).
	138-139	Comment rejected.
	140	Comment referred to PHY Group.
	142	A reference to the PHY section will solve the problem. Accepted as modified.
	144	Comment accepted.
	145	Accepted with Figure 50 changed accordingly
	146	Although this proposal is valid for a scheme only, the MAP bandwidth gain would be important. Accepted unanimously. Comment accepted.
	147	Referred to Group and to be reworded by Ken
	149	This issue created a lot of discussion since impacts the system parameters, which potentially are going to be different for each system (i.e. TG1 vs. TG3 scenarios). Issue still open

17:20	Carl	Session adjourned
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Wednesday, September 13, 2000

8:10	Carl	Call to order
	Comment:	Discussion:
	149	The issue has to be revisited. By now, the concept is accepted, but more explicit suggestions will be welcome by contributions.
	155	Accepted unanimously
	156	Comment accepted.
	157	Ken to provide wordings
	158	Friendly amendment: change title to "Requested DL Burst type". Comment duplicates until 162.
	164-166	The value belongs to the DCD. Change the name to "Downlink Burst Type Thresholds". The units will be discussed with the PHY Group (C/I dB, or received dBm?). Corresponding tables will have to be updated correspondingly. A small Group will address the ranging issue and Modulation change. Glen, Ken, Yigal and Juan Carlos will try to propose something.
	168	Comment accepted.
	180	Carl to provide a different wording. Comment referred to Group.
	182	To be discussed with the PHY.
	185	Figure 50 to be changed accordingly.
	186	Preamble to be addressed by the PHY.
	189	PS-mslot concept to be re-defined with the PHY.
	191	Comment to be discussed with the PHY
	193	Ken to present a paper to PHY and MAC groups.
	196	Put together a group to generate text. No-camping TLV by another name needed. Referred to the Group.
	201	Phil to provide text. Comment referred to the Group.
	203-204	Yigal proposed a friendly amendment. Accepted modified.
	205	Already addressed. Rejected.
	206-207/209	Comment accepted.
	215	After deferring the discussion of whether the bit will be used from the length or the bandwidth request, the Comment was accepted.
	217-218	Comment accepted.
	219	Accepted modified.
	220	Comment accepted.
12:30	Carl	Lunch break
13:40	221	Comments on figures 60 and 61 to be addressed by Ken and Juan Carlos. Comment referred to group.
	222	This comment is obsolete in the present UGS-AD implementation. Comment accepted.
	223-224	Comment accepted.
	227	Glen to update the whole section.
	233	Glen to re-generate the SDL diagrams showing the up-to-date version for registration. Comment accepted modified.
	236	Comment accepted.
		Carl: Comments that are pending will be discussed in the plenary, with the possibility of delaying the Latter-ballot.
16:30	Carl	Session adjourned

18:20	Jay, Carl	PHY+MAC joined session. Call to order
	Jeff	The list of PHY comments addressed to the MAC:
	263/182	These two comments are similar. The idea of inverting the MAC and PHY sections was rejected, so Jim and Jeff will work out the mechanics of the document tonight.
	273	Jeff and Jim will make the change. Comment accepted.
	276	Comment referred to editor.
	266	A 'null' has been already discussed in the MAC. Comment referred to editor.
	295	Comment referred to editor.
	296	Section redundant with MAC. Comment referred to editor.
	Jim	The list of MAC comments addressed to the PHY:
	92	Yigal explained that the pre-equaliser scheme is not good in any of the 802.16 scenarios. Favour 13 / Against 3. Comment accepted
	115	CRC has to be included in PHY Mode A, or removed from PHY Mode B and used in the MAC. Also, the group showed the concern about being able to turn the CRC feature enabled or disabled. Comment changed to "Add the CRC checksum to all MAC payload and remove CRC from PHY Mode B and the upstream TC layer. And allow MAC to enable or disable CRC on a per-connection basis. Favour 19 / 0 Against Comment referred to editor. Jeff will take care of the PHY section. Yigal will take care of the MAC section by providing Jim.
	140	Comment already solved.
	141	Comment referred to editor. Jeff and Glen will handle this issue, since that will be anyway a better choice than what is contained in the document, so that the group can comment later on.
	149	Requires more discussion and understanding of the scheme.
		Comments still to be resolved: 165, 186, 189, 191, and 193.
19:40	Jay. Carl	Session adjourned.

Thursday, September 14, 2000

8:10	Carl	Call to Order
	Group	The document is in much better shape, but the general feeling is that the document is still not ready to be sent to a letter ballot. TG3 issues are not as critical as the TG1 that have to be solved with the PHY group.
	Figure 50	New version from Ken was included.
	165	The thresholds have to be discussed together. The metrics for changing the modulation have to be defined. By now, C/(I+N) and/or BER are suggested.
	186	The whole comment will be discussed in the PHY. Comment rejected by the MAC.
	189	The PHY group will define the size of the PS. Comment rejected by the MAC.

	191	This accuracy is required for TDD systems in order to avoid co-channel interference intra and inter-cell. "It is recommended that all the BSs MACs within a network be provided with a common time reference accurate to one microsecond."
	193	Ken to present a paper to the PHY and MAC on TDD and FSDD.
10:00	Carl	Group will reconvene at 13:00 to let people with specific action items work on them.
13:30	Ken	Presentation on TDM and TDMA (continuous vs. burst) for Downlink.
	193	Jeff had a comment on the limitation of FECs for the different IUCs. The Control messages (i.e. MAP, DCD) require a well known strong but different FEC. Ken will work out the wording into the text. Comment accepted and modified.
	165	The PHY has no specific metric defined for the thresholds. The MAC group will assume that a single metric (potentially $C/(N+I)$) will be provided to the MAC. Also, the BER will be available from the CRC in the MAC.
	164	Glen and Yigal presented their solution for the Modulation/FEC transition. A discussion about the ambiguity of the thresholds defined the necessity of the overlap in the regions for hysteresis. Jay pointed that in ETSI meetings, the need for limiting the number of IUCs not to increase the complexity of the devices has been largely discussed. The optimal values that have been found are in-between 4 and 6. The thresholds are going to be defined to the transition-to approach, instead of the transition-from approach. This should solve the issue of having more than one Modulation/FEC to transition to.
	191	This is a recommendation, which goes in the TDD section. Phil opposed to have recommendations into a specification document. 6 in Favour / 1 Opposed The sentence will be included in the document.
15:00	Group TG3 discussion	A presentation on the capabilities and the actual status of the MAC document will be presented to TG3 in order to make sure that all the specific concerns from TG3 have been addressed in the present document.
18:00	Carl	Session adjourned