|      | Junuary 1990 |       |       |      |                        | uoc.: IEEE 1 002:11-70/10-10 |                      |  |
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## IEEE 802.11 Wireless Access Method and Physical Specification

Title:

**Clause 10 Comments Resolution** 

Date:

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Author:

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doc.: IEEE P802.11-96/18-10

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Section 10 comments from Ballot on Draft Standard D2 (Vic Hayes, Chair, AT&T WCND)

| C-        |       |                | -    |     | Compared Toyt/Commant                  |                               | Diamonition/Dobuttol    |
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|           | 10    | D              | T    |     | How are parameters like SIFS and       |                               | Defined in parameter    |
|           |       | $ \mathbf{W} $ |      |     | Slot time specified, who do depend on  |                               | aSIFS_Time.             |
|           |       |                |      |     | both MAC and PHY parameters.           |                               |                         |
|           |       |                |      |     | It could be a PHY specification, which |                               |                         |
|           |       |                |      |     | should include fixed                   |                               | 1                       |
|           |       |                |      |     | MAC_processing_time values.            |                               |                         |
|           | 10    | BT             | Е    | N   | add                                    | Used in section8.1.5; I can't | Not applicable. Deleted |
|           |       | h              |      |     | aDwell_Offset                          | find its definition           | in 8.1.5.               |
|           | 10    | D              | T    | Y   | A parameter is needed that specifies   | The MAC needs this to         | Accept comment and      |
| 1         |       | $ \mathbf{w} $ |      |     | the total PHY overhead of PLCP         | calculate the Duration        | will add new            |
| 1         |       |                |      |     | preamble and Header. So anything       | fields in Control and         | parameters:             |
| 1         |       |                |      |     | that determines the total duration     | Dataframes.                   | aPreamble_Lngth,        |
| 1         |       |                |      |     | occupied on the medium.                |                               | aPLCP_Hdr_Lngth,        |
| 1         |       |                |      |     | Also needed is a factor with which the | This does specifically        | aMPDU_Duratn_Factr      |
|           |       |                |      |     | MPDU duration can be calculated by     | apply to the Fhopper, who     | PHY group               |
|           |       |                |      |     | the MAC.                               | apparently adds one bit       | unanimous.              |
|           |       |                |      |     |  | for every 32 bits.            | WARREST VERY            |
|           | 10.1  | D              | е    |     | Change numbering to remove single      | If there is only one          |                         |

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doc.: IEEE P802.11-96/18-10 Seq. Section **Cmnt Part Corrected Text/Comment** vour Rationale Disposition/Rebuttal number initype of E, e, tials NO T, t vote M subsections. There should always be subsection then the more than 1 subsection. subsection should become a section of the next higher level. The purpose of a subsection is to break a section down into more parts. If there is only one part then it doesn't warrant a subsection. W Combine all MIB information into 10.1 There is overlap between 8.4 e R a single clause. and 10.1. All MIB information should be in its own clause Replace aMPDU\_Max\_Lngth\_1M and 10.1. **KD** E The 1M and 2M 2 aMPDU Max Lngth 2M with parameters were voted MPDU\_Max\_Lngth and down by the previous Pref\_MPDU\_Max\_Frgmnt\_Lngth. letter ballot. Both new parameters are GET parameters only. 10.1. **KD** E Add aCurrent Pwr State as a Get-The acceptance of the new 2 Replace parameter. layer management primitives eliminated the PLME\_POWER primitive which turned the FH PHY on/off. This function must now be controlled for power management by a

|           | Januar            | y 199                 | 6                             |                          |                        | doc.: IEEE P802.11-96/18-10 |                      |  |
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| 10.1. 2                        | D<br>W  | T |     | -aTxRx_Turnaround_time spec is required. Tx and Rx delay figures are needed to allow a MAC to asses proper SIFS timing.                           | PHY MIB parameter.  I would expect that aTxRx_Turnaround_time is intended here.  The MAC needs to know the difference between the actual and standard specified numbers, to assure proper IFS timing. | Rejected because SIFS is defined. PHY group unanimous. |
|--------------------------------|---------|---|-----|---|---|--|
| 10.1.                          | НС      | е |     | aSlot_Ttime, aCCA_Asmnt_Time, aRxTx_Turnaround_Time, aTx_PLCP_Delay, aRxTx_Switch_Time, aTxRamp_On_Ttime,   | spelling  | ]  |
| 10.1.<br>4                     | KJ      | Е | 224 | All final level numbers should be renumbered since many have been deleted and others added with duplicate levels                                  | 8   |  |
| 10.1.<br>4.10<br>10.1.<br>4.12 | FM<br>i | t | N   | The time units for each of these attributes should be microseconds, based on the adoption of the time unit unification decision at the July, 1995 | The intervals calculated using these delays are all in microseconds. The units of the values summed to  | Accepted. PHY group unanimous.                         |

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|           | Januar                         | y 199                 | 6                             |                          |   | doc.: IEE   | E P802.11-96/18-10   |
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| Seq.<br># | Section<br>number              | your<br>ini-<br>tials | Cmnt<br>type<br>E, e,<br>T, t | Part<br>of<br>NO<br>vote | Corrected Text/Comment  | Rationale   | Disposition/Rebuttal   |
|           | 10.1.<br>4.13<br>10.1.<br>4.15 | FM<br>i               | Т                             | N                        | meeting. If there is a reason for some of the delays to be in units smaller than one microsecond, a binary divisor should be used, such as units of 1/16 microsecond or 1/128 microsecond.  The behavior should be defined as:  "The nominal time in miroseconds between the them the MAC entity receives a PHY RXEND.indicate primitive at the end of a successful MPDU reception and the time the MAC entity issues the PHY TXSTART.request primitive to send an acknowledgementuses to process a frame and prepare a response to the frame"; | calculate the intervals should be in microseconds, or in units which can be scaled to microseconds by shifting.  This attribute is either improperly described or misplaced. A MAC processing time does not belong in the PHY MIB. Since this attribute is used in the SIFS calculation, probably the behaviour is described improperly, and a definition of the relevant MAC behavior is provided in this comment. | Accept text. PHY group unanimous.                                |
|           | 10.1.<br>4.4                   | НС                    | Т                             | N                        | aSlot_Time is dependent on Air_Propagation_Time, which this section says is equal to 1 usec. WHY?   | Why is this a fixed value and where does it come from? I don't know what it should be, just wonder why it is what it is.  | By vote of the full WG,<br>the delay is 1 usec.                  |
| I         | 10.1.<br>4.6                   | НС                    | Т                             | N                        | "The maximum time in nanomire oseconds the PHY requires to change from receive to transmiting the   | Units mismatch -<br>aTx_RF_Delay (10.1.4.10)<br>is defined in units of  | Fixed by accepting comment by FMi to use 1 usec as basic unit of |

|           | Januar  | y 199  | 6        |                        |  | doc.: IEE  | EE P802.11-96/18-10 |
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|           |   |        |          |                        | start of the first symbol out on the air. The following equation is used to derive the RxTx_Turnaround_Time: aTx_PLCP_Delay + aRxTx_Switch_Time + aTxRamp_On_Time + aTx_RF_Delay. "; | nonoseconds.   | time.               |
|           | 10.3.<br>2.3  | M<br>M | t        |                        | Need a means to disable the whitener on a per frame basis.   | Japan call sign id requirements specify that the call sign id be transmitted in the clear with no scrambling or whitening. This means the 802.11 standard needs to define a mechanism which allows the data to be sent in this format. |                     |

| Se | Secti | yo   | Cm   | Pa  | Corrected Text/Comment | Rationale | Disposition/Rebuttal |
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