Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal

Section 11 comments from Ballot on Draft Standard D2 (Vic Hayes, Chair, AT&T WCND)

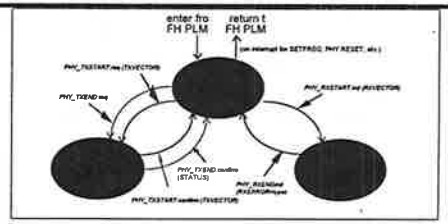
1	11 12	BD	T	N	Reduce the number of incompatible, non-Interoperable, mutually interfering PHYs specified for each single band to one.	I reiterate my objections to having multiple, mutually interfering, non-Interoperable, incompatible PHYs specified for a single Band. This is market death for 802.11 and represents failure to accomplish the goals set for 802.11. For more detailed comments, refer to my letter ballot comments on draft 1.	Joint PHY Group Discussion. Discussion Table until 11/11/95.
	11	HD a	e	N	11.10.	References to chapter 10 should be to chapter 11 in many points in the text.	Agreed 11/11/95. Editors to address
	11	mji	e		Fix fig, section etc number references from ch 10 reference to ch 11 reference		Agreed 11/11/95. Editors to address
2	11.1	MRo	t		Figure 11-1 differs from Figures 12-1 and figure 2-1. There is no equivalent in section 13. Use the figure 2-1 reference model..		
	11.1		e		Add descriptive material similar to other PHY's.	Both the DS and IR phys have descriptions of the advantages of the respective PHY's or potential limiations of there usage.	
	11.1.2 .3	MB	e		Title... Physical Medium Dependent Sublayer		
	11.1.2	mji	e		Physical Medium Dependent Sublayer	Fix typo	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.3						
	11.1.2 .3	MR o	e		Correct spelling of Physical in Title.		
	11.1.2 .3	PP	e		Correct spelling of "Physical" in header		
	11.1.2 .3	WR	e		Add "P" to the begining if the clause name	Missing "P" in physical	
	11.1.2 .3	ws	e		in header - "hysical"	spelling	
	11.1.2 .3	ws	e		in Fig 11-1 - "managemen"	spelling	
	11.2.1	PP	e		Word "define" should be "defined"		
3	11.2.2	ZJ	T	N	Add DURATION to table 11-1, as a value between 0 and 32767	Duration information should be part of the PLCP header, not the MAC contents of the frame.	Issue not yet addressed
	11.2.2 9.3.4. 3 9.3.4. 4 12.2.6 13	BJa	E		The desciption of the service primitives and vector descriptions is not aligned for the different sections. Definition of the primitives and parameters that are common for the different Phy's must appear in section 9, while value definition that are Phy dependant must be defined in the respective sections.		
3	11.2.2 .3	ZJ	T	N	Add section. "The DURATION parameter has a value of 0 to 32767. This parameter is passed to the PHY for inclusion in the PLCP header, and is reported back to the MAC for each received frame."	Duration information should be part of the PLCP header, not the MAC contents of the frame. Since units communicating at lower speeds cannot receive the MAC contents of a frame transmitted at higher speed, but	Issue not yet addressed

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
						all stations can receive the PLCP header for all frames (in all PHYs), it is logical to move Duration to where everyone in the BSS can receive it (I don't care if it violates layer purity).	
4	11.2.3	ZJ	T	N	Add DURATION to table 11-2 as a value between 0 and 32767.	Duration information should be part of the PLCP header, not the MAC contents of the frame.	Issue not yet addressed
5	11.2.3.2	mji	t		The ANTSEL parameter is an optional parameter. Its value describes the antenna used by the PLCP to receive the current MPDU. The antenna value is defined as ANT1, ..., ANTn where n is the number of antennae supported by the PMD implementation.	This is optional, so why have it as part of the standard	Tabled until MAC Meeting
6	11.2.3 .3	mji	t	N	The Receive Signal Strength Indicator (RSSI) parameter has a value of 0 through RSSI Max. This parameter is an indication by the PHY sublayer the value of the energy observed on the antenna used to receive the current MPDU. RSSI shall be measured between the beginning of the start frame delimiter and the end of the PLCP Header error check. RSSI shall be measured between the beginning of the start frame delimiter and the end of the PLCP Header error check. RSSI is intended to be used in a relative manner. Absolute accuracy of the RSSI reading is not specified.	This is optional so it should not be in the standard. In some implementations this could represent a significant cost burden so I see no reason to require a additional cost burden	Ed and Jim to supply text once issue has been discussed in joint MAC-PHY group.
	11.2.3	MB	e		Sentence 3 and 4 are the same. Delete one		

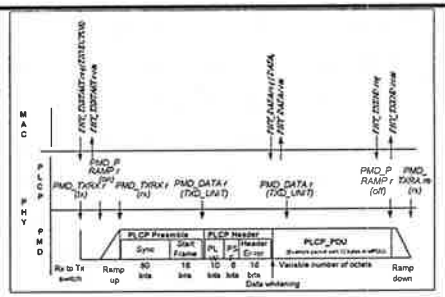
Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.3						
	11.2.3 .3	ws	e		Missing CR after header		
	11.2.3 .3	ws	e		Duplicate sentence - "Rssi shall be..."		
	11.2.3 .3	DW	e		Delete the double text in this section.		
7	11.2.3 .4	ZJ	T	N	Add section. "The DURATION parameter has a value of 0 to 32767, and corresponds to the contents of the Duration field in the PLCP header."	Duration information should be part of the PLCP header, not the MAC contents of the frame.	Issue nnot addressed
	11.3	RJa	E		Several places still have references to section 10 which should be changed to section 11.	Need to verify all references.	
	11.3.1 .1	DM	e		Change numbering to remove single subsections. There should always be more than 1 subsection.	If there is only one subsection then the 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.	
	11.3.1 .1	MB	e		6th sentence.... identified by a name ~~in capital letters~~	Either delete or change the State diagrams of figures 11-7,11-9 et al	
8	11.3.2	RJa	T	N	Need to specify order of transmission of fields. Our approach is slightly different than the MAC in that the PHY preamble is really transmitted as a serial bit stream and the MAC information is transmitted as a series of bytes (LSB First) over the air.		Unknown disposition, check minutes

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
9	11.3.2 11.3.2 .2 (etc.)	ZJ	T	N	Change figures 11-3, 11-8, 11-10, 11-12 to include the 16-bit Duration field in the PLCP header.	Duration information should be part of the PLCP header, not the MAC contents of the frame.	
10	11.3.2 .1	SA	T	N	The CS/CCA state machine must indicate medium busy during the hop_time.		MAC PHY Issue, Section 8 Guys
11	11.3.2 .2.1	mji	t		The PLCP_PDU Length Word (PLW) is passed down from the MAC as a parameter within the PHY_TXSTART.request primitive in the transmitting station. The PLW represents the number of octets contained in the MPDU packet. Its valid states are 000h - 7FFh, representing counts of zero to 2047 octets. The PLW is transmitted LSB first and MSB last. The PLW is used by the receiving station in combination with the 31/32 coding algorithm to determine the last bit in the packet.	The PLW is really not a length field. One needs to include the stuffing bits to determine the length, but this is done in the receiving dewhiting process.	
12	11.3.2 .2.1 and 11.3.2 .2.2	YI	T		Add 1 bit to the PLCP_PDU length field in place of 1 reserve bit in the PLCP Signal Field. Extend the maximum PLCP_PDU length to 2312 or whatever the maximum MSDU.	It is rather sad to support 2047 octet Data Unit but not the remaining 265 octets of MSDU. This fix will allow the system to communicate the longest MSDU in one fragment as environment permits.	
13	11.3.2 .2.2	ZJ	T	N	Add section. "The 16-bit Duration field is used by the MAC for collision avoidance calculations. It contains a 15-bit integer value in the low order bits, and a pad bit (always 0) in the high order bit."	Duration information should be part of the PLCP header, not the MAC contents of the frame.	Issue not yet addressed

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	11.3.2 .2.2	mji	e		Reserved ~~for length expansion~~	We don't know what the bit is reserved for at this point in time	
	11.3.2 .3	MB	e		next to last sentence…and decoding method used is defined in Figures ~~10-7a~~ 11-7a and ~~10-11a~~ 11.11a		
	11.3.2 .3	ws	e		second paragraph - "10-7" and "10-11"	wrong chapter #	
	11.3.3 .	OM i	E		Figure 11-6: PLCP Top Level State Diagram	 Adding the following primitives: • PHY_TXEND.req • PHY_TXSTART.confirm Removing the following primitives: • PHY_RXEND.ind (RXERROR=no_error) Because PHY_RXEND.ind (RXERROR=type) includes the above primitive.	
14	11.3.3 .1	MR o	T		Figure 11 7-a: 4 FSK bias suppression is not robust.	This algorithm works for 2-FSK. For 4-FSK, the accumulated Bias can exceed the 2 FSK value by a substantial margin. The worst case occurs	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					(Due to the complexity of any possible change at this late date, this is not part of my NO vote)	for a block of all +3 or -3, occuring when accum is about zero, followed by a large number of blocks of bias near zero. It is also possible to pass more than 90 consecutive 32 symbol blocks without traversing both the +3 and -3 states in the signalling alphabet. This potentially degrades data recovery. Mahany change at 11.6.1 reduces this concern.	
	11.3.3 .1	MR o	E		Change text to: The PLCP transmit procedure is invoked by the CS/CCA procedure immediately upon receiving a *PHY_TXSTART.request(TXVECTOR)* from the MAC layer. ~~The CSMA/CA protocol is performed by the MAC with the PHY PLCP in the CS/CCA procedure prior to executing the transmit procedure~~.	This allows transmit to be initiated from either CCA or receive states.	
	11.3.3	MR	e		Figure 11 7-a, replace "see section 10.3.2.3"		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.1	o			with "11.3.2.3"		
15	11.3.3 .1.1	OM i	t			PHY_TXSTART.confirm and PHY_TXEND.confim are not defined in Section 9.3.	
	11.3.3 .1.1	MB	e		1st paragraph, 2nd sentence....ramp on the transmit power amplifier in a manner prescribed in Section ~~10.6~~ 11.6 3rd sentence...as defined in Section 10~~11~~.3.2.2 2nd paragraph, next to last sentence ...and described in Section ~~10~~ 11.3.2.3 3rd paragraph, 2nd sentence... prescribed in Section ~~10.6~~ 11.6		
16	11.3.3 .1.2 11.3.3 .3.2	FMi	T	N	Delete the last sentence of the first paragraph in each section.	For the MAC to operate as defined, the PHY service primitives must have time significance, as specified in several comments to sections of clause 9. These time relationships must be supported for the service primitives by all PHYs.	Agreed to remove these sentences. 11/7/95
17	11.3.3 .1.2	DW	T		It should be made clear that the total length of the PLCP preamble and Header (PHY overhead) needs to include the max 20 usec rampup delay.	This is needed to assure a correct NAV operation in the MAC. In addition the question is what the actual rampup delay is, which will affect the NAV accuracy.	
	11.3.3	MB	e		7th sentence ...within the time specified in		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.1.2				section ~~10~~ 11.6.		
	11.3.3 .1.2	MR o	e		Last Sentence, 3rd paragraph: The PLCP shall turn off the transmitter ~~power amplifier~~ reducing the output energy to ~~and be~~ less than the specified off-mode transmit power within the time specified in section 10.6. At the end of the power amplifier ramp down period, the PLCP shall switch the PMD circuitry from....	Too specific.	
	11.3.3 .1.2.	OMi	E		Figure 11-8: Transmit Timing	 Adding the following primitives: PHY_TXSTART.conf. PHY_DATA.req (DATA) PHY_DATA.conf PHY_TXEND.req PHY_TXEND.conf PMD_DATA.req (TXD_UNIT) PMD_DATA.req (TXD_UNIT)	
18	11.3.3 .2.1	mji	T	N	Upon exiting the CS/CCA procedure to receive a frame, the last indication of CS/CCA was BUSY. The indication remains BUSY when returning from the receive procedure	It's not clear to me what the "first CS/CCA assessment" is. From the next section, 11.3.3.2.2, it is clear that the	Resolved Per Dean submission 12-0-1 11/8/95

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					until ~~the first CS/CCA assessment is performed and determines that the channel is IDLE~~ the end of the fragment as predicted by the PLW.	timing for the PIFS,DIFS and the contention windows is "defined relative to the end the last bit of the last packet on the air." I believe the prevailing concept of CCA within the FH group is that after the "last bit" then under some conditions additional CCA detection processes will be undertaken. This, however, seems to violate the 11.3.3.2.2 concept. This additional CCA activity seems to lead to the conclusion that different STAs, in the areas will use a different time reference for PIFS, DIFS and contention windows and thus undercut the system timing plan. Therefore, make the system simple and more reliable as suggested	
19	11.3.3 .2.1	mji	T	N	The TIME_REMAINING may be a non-zero value when returning from the receive procedure if a signal in the process of being received was lost prior to the end as positively indicated in the length field of a valid PLCP header. The countdown timer shall be set to the TIME_REMAINING and used to force the CS/CCA indication to remain in the BUSY state until the predicted end of the frame regardless of actual CS/CCA indications.	Without the indicated change we are requiring a receiver to recognize a strong signal overtaking an existing signal mid course. Thus, if while receiving one fragment, another fragment starts, and is strong enough to override the existing signal (and by how many dB???) the receiver should	Resolved by vote 6-0-5. 11/7/95

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					However, if the CS/CCA procedure has the ability to indicate and indicates the start of a new frame within the countdown timer period, it is possible to transition to the receive procedure prior to the end of the countdown timer period. When a non-zero countdown timer reaches zero, the PLCP shall reset all relevant CS/CCA assessment timers to the state appropriate for the end of a complete received frame.	recognize this and extend the CCA time as indicated by the new PLW. Among the problems generated by this requirement is a form of the killer pattern problem.	
20	11.3.3 .2.1	mji	t		The MAC layer and exit to the receive procedure. The PLCP shall dwell and search for the SFD/PLCP header for a minimum period longer than the latest possible arrival time of the SFD/PLCP header. Indication of a busy channel does not necessarily lead to the successful reception of a frame.	Clarity	
	11.3.3 .2.1	CP	e		change existing reference to 10.6.15..3 to 11.6.15.3	renumbering required	
	11.3.3 .2.1	MB	e		3rd & 4th sentence.....specified in section ~~10~~ 11.6.15.3. Section ~~10~~ 11.6.15.3 specifies detection performance... end of 5th sentence .... specified in section ~~10~~ 11.6.15.3. end of 1st paragraph, last sentence... specified in section ~~10~~ 11.6.15.3.		
	11.3.3	MRo	e		First Paragraph, change 10.6.5.3 to 11.6.5.3		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.2.1				The carrier sense/clear channel assessment (CS/CCA) state machine is shown in Figure 11-9. The PLCP shall perform a CS/CCA assessment on a minimum of one antenna within a contention backoff slot time of 50 μs. The PLCP shall be capable of detecting within the slot time an FH PHY conformant signal which is received at the selected antenna up to 20 μs after the start of the slot time with the detection performance specified in section 11~~1~~0.6.15.3. Section 11~~1~~0.6.15.3 specifies detection performance with zero-one sync patterns and with random data patterns. If a start of a transmission is asynchronous with the BSS and arrives after the start of the slot but at least 16 usec prior to the end of the slot, the PLCP shall indicate a busy channel prior to the end of the slot time with the detection performance specified in section 11~~1~~0.6.15.3. The CCA indication immediately prior to transmission shall be performed on an antenna with essentially the same free space gain and gain pattern as the antenna to be used for transmission. The method of determining CS/CCA is unspecified except for the detection performance of a conformant method as specified in section 11~~1~~0.6.15.3.		
	11.3.3 .2.1, 11.6.9	PP	E		References to Section 10 should be changed to Section 11		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	, 11.6.10, 11.7.2.1, 11.8.2.1.29						
	11.3.3.2.2	MB	e		First paragraph, last sentence....specified in ~~10~~.6 11.6 (PMD)		
	11.3.3.2.2	MR o	e		Carrier Sense/Clear Channel Assessment State Timing ..... The appropriate CS/CCA indication shall be generated prior to the end of each 50 μs slot time with the performance specified in section 11~~10~~.6 (PMD)."	Too specific.	
	11.3.3.3.1	RJa	E		Figure 11-11a does not really reflect 2 Mb/s operation. Should be updated to talk about stuff symbol of 00 or 10 and how to invert 4-ary symbols.		
21	11.3.3.3.1.	OM i	T	N	Figure 11-11a: Data Whitener Decoding Procedure Data Whiter Decoding Algorithm: /* If stuff bit =1 = next block is inverted; 0 = not inverted */ ... If {[b(0)=1] then Invert [b(0), ..., b(N)]}; /* if invert bit=true */ Descramble {b(0), ..., b(N)};	/* If MSB of stuff bit=1=next block is inverted; 0=not inverted */ ... If {[b(0)=1 or b(0)=11] then Invert {b(1), ..., b(N)}}; /* if invert bit = true */	Resolved 11/7/95. Text error agreed. Text to be provided.

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					...	Descramble {b(1), ..., b(N)}; ...	
22	11.4.2 .2	DW	T		Why program Set, Pattern, Index to specify a channel rather then Index derived channel number only. Is a separate set, pattern defined for Scanning purposes?		
23	11.4.3	DW	T		An indication is somehow needed that the channel switching is completed, and the transmitter is available. This can be done by specifying that the PHY_CCA.indicate indicates Busy during the specified 224 usec switching time.	Question is whether the 224 usec does also include the misallignement between the channel switching time between different stations in a BSS	
	11.4.3 .2	MB	e		3rd sentence.....as defined in section ~~10~~ 11.3.3		
	11.4.3 .2	ws	e		"MLMEto" to "MLME to"	typo	
	11.5.4 .3 11.5.5 .5 11.8.2	YI	E		Number of Antenna State is not consistent.		
	11.5.5 .1 11.5.5 .2	YI	E		TXD_UNIT and RXD_UNIT should include 2 and 3 for High Rate Option?		
24	11.5.5 .10	MRo	t	N	Delete Section:	Implementation Specific	Remove Synlock Indication. 111/7/95. 6-1-3
	11.5.5 .10	ws	e		In first sentence, "This primitive is a indication" should be "This primitive is an	Grammar	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					indication"		
25	11.5.5.5	RJa	t		Should allow for more than 2 antennas.		
	11.5.5.7	MB	e		4th sentence.... The CHNL_ID parameter can be one of the following values ~~list~~ listed in Table 11-11 or ~~10~~ 11-12		
	11.6.	OMi	e		section 10.x.x	section 11.x.x	
26	11.6.10	CP	T	N	CORRECTED TEXT:Fc is the average center frequency of the last 8 bits of the preamble SYNC field, measured as the deviation at the mid symbol. Mid symbol is defined as the point which is mid way between the zero crossings derived from a best fit to the last 8 bits of the SYNC field.	11.6.10 refers to the "unique word": this is not specified anywhere. The fig 11.3 shows the preamble consisting of of Sync and Start Frame Delimiter. Thus the last 8 bits are 10111101, which has a considerable centre frequency bias to the high frequency side. Further, "mid symbol" is not defined, and could be +/-1/4 bit if derived from midway between zero crossings. NB: The minimum deviation of 110KHz is NOT consistent with the modulation in 11.7.2 - 4 level GFSK Modulation	Resolved 7-0-4. Accept text as shown. New text added. 11/7/95
	11.6.10	FK	E		Change text in third paragraph, last sentence to "...occupied bandwidth limits of 11.6.6"	Wrong section. The previous text stated "...limits of 10.6.6"	
	11.6.10	MB	e		3rd paragraph, 1st sentence..... The peak deviation, as shown in Figure ~~10~~ 11-15 below		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					shall be .... 3rd paragraph, last sentence.....modulation is subject to the occupied bandwidth limits of ~~10~~ 11.6.5		
	11.6.10	RJa	E		Change Para 3 'peak frequency deviation' to 'minimum frequency deviation' to match figure. Or other way around is ok too.		
	11.6.10.	OM i	E		Fc is the average center frequency of the last 8 bits of the preamble prior to the unique word.	Fc is the average center frequency of the last 8 bits of the preamble prior to the start frame delemiter.	
27	11.6.11	MR o	T	X	add "+/- 50ppm" A compliant 802.11 FHSS PMD shall be capable of transmitting and receiving at a nominal data rate of 1.0 Mbps. +/-50ppm	Missing, Consistency with 11.7.3	Accepted Change. Add text 11/7/95. 11/7/95
28	11.6.11	CP	t		CORRECTED TEXT:A compliant 802.11 FHSS PMD shall be capable of transmitting and receiving at a nominal data rate of 1.0Mbps, +/- 50ppm	i) An accuracy is required to define the limits within which clock and data recovery should work. ii) Proposed text produces consistency with the 2Mbps text	Accepted Change. Add text 11/7/95. 11/7/95
29	11.6.12	CP	T	N	A conformant PMD meets this requirement when the operating centre frequency is within +/-60KHz of the nominal centre frequency defined in 11.6.4.15	As written, there is no effective allowance for frequency drift: if the frequency has drifted to +50KHz, then the maximum variation from nominal becomes +10KHz rather than +60KHz	See Text removal and adds 8-0-5 11/7/95 **Delete** desired final. **After** +/-60kHx **replace** operating **with** nominal
	11.6.12	FK	E		Change text to "...channel frequency, as specified in section 11.6.3" and "...frequency	Wrong section. The previous text stated "... 10.6.3"	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					as outlined in section 11.6.3"		
	11.6.12	MB	e		1st sentence ..... as specified in section ~~10~~ 11.6.3, is ..... last sentence ..... as outlined in section ~~10~~ 11.6.3.		
30	11.6.13	CP	t	N	At the end of this 19 μsec, the amplitude of the signal shall be within 2dB of the power achieved during the period between the first bit of the PLCP header and the last symbol at the end of the frame.	Sections 11.6.13 and 11.6.14.1 (Nominal Frame Transmit Power) are inconsistent and mutually antagonistic.	Resolved, see text. 11/7/95. **Change:** "... the rf carrier shall be within the nominal transmit power level and ..." in section 11.6.13 **Change :** "When in the ... the start of the preamble SYNC field to the last symbol at the end of the frame." in section 11.6.14
31	11.6.13	RJa	t		Allow for 2 dB variation over frame in para. 11.6.14.1. Probably should change 2 dB to 1 dB here for consistency. Also, should change 'final' to 'nominal'		
32	11.6.13	YI	T		change 1 dB to 2 dB	Isn't 1 dB too stringent a requirement while in Sections 11.6.14.1 and 11.6.14.6, 2 dB are specified.	
33	11.6.14.3	mji	T	N	~~Transmit Power Level Control~~ ~~If a conformant PMD implementation has the ability to transmit in a manner that results in the EIRP of the transmit signal exceeding the level of 100 mW, at least one level of transmit~~	No algorithm is in place to indicate under what conditions the RF power should be above or below 100 mW. The spec merely requires that the cost of providing power control be	Rejected. Power level control available via MIB table and Management entity. 11/7/95

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					~~power control shall be implemented. This transmit power control shall be such that the level of the emission is reduced to a level at or below 100 mW under the influence of said power control.~~	assumed without the associated why and how etc. How would one test for this? Thus it seems reasonable that this specification be deleted or listed as an option.	
34	11.6.14.4	CP	T	N	The transmitted spectrum shall fit within a mask such that when operating with a receive to transmit duty cycle of 50% and a nominal transmit frame length of 400μsec, the power in the 1 MHz wide channel N represented by N=M+/-2 shall be -20dBm or -40dBc, whichever is the less, but with no requirement to be less than -70dBm. For those channels where N>=M+/-3, the power shall be -40dBm or -60dBc, whichever is the less, but with no requirement to be less than -70dBm. M is the actual transmitted centre frequency, and the channel N is separated therefrom by integer numbers of MHz. This measurement shall be made with a resolution bandwidth of 100KHz and a peak hold detector. Where the dwell time is less than100msec, themeasured measured peak shall be reduced by a correction factor applied to it of CdB= 20log100/t, where t is the dwell time in msec,with C not exceeding 20dB.	The paragraph as worded is confusing . The addition of the peak Correction factor for dwell times less than 100ms brings this measurement into line with FCC measurement procedures for spurs outside the band.	Add to section 11.6.14.4 text as indicated. Withdrew second comment. **ADD:** M is the actual transmitted center frequency, and N a channel separated from it by integer numbers of MHz.
35	11.6.14.4	FK	t		Add one additional paragraph:	Address the Japanese requirements.	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					"Within the frequency band of 2.473 GHz to 2.495 GHz, two failures are permitted providing they are less than -50dBc."		
36	11.6.14.4	ws	e		The header "Channel" should be with the information that it is describing		
37	11.6.14.6	CP	T	N	ADD: This paragraph is informative only	Without invasive testing, this is impossible to measure: it needs to be defined in terms of the turn around time from the receipt of a conformant signal addressed to the equipment, and the emission of an ACK signal.	Rejected 4-1-9
38	11.6.15	CP	T	N	DELETE the section "The signal leakage when receiving shall not exceed -45dBm peak in the operating frequency range" Add New Paragragh, make it easy **11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.	It is unclear as to what is meant by signal leakage - LO radiation, perhaps? - but in any case, regulatory requirements in Europe and Japan require -47dBm above 1 GHz, and -57dBm below 1 GHz.	Resolved. Add new paragraph. 11/7/95 **11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.
39	11.6.15	RJa	t		Change -45 dBm to -50 dBm. Add New Paragragh, make it easy **11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.	Signal leakage from Rx side is 5 dB higher than allowed leakage from transmit side when it is turned off. Should just specify that all signal leakage when in Rx is at a level below -50 dBm.	Resolved. Add new paragraph. 11/7/95 **11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.
	11.6.15	SKy	e		Move the sentence "The signal leakage when receiving shall not exceed -45 dBm peak in the	The sentence does not fit into an introductory paragraph, since it	Resolved. Add new paragraph. 11/7/95

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					operating frequency range" to a new paragraph. Add New Paragragh, make it easy **11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.	seems to be meant as a requirement.	**11.6.15.7 Receiver Radiation.** The signal leakage when receiving shall not exceed -50 dBm EIRP in the operating frequency range.
	11.6.15	ws	e		"from the PLCP and the Receive PMD" should be "from the PLCP. The Receive PMD"	runon sentence	
40	11.6.15.1	RJa	T	N	3 percent requirement appears to be based entirely upon BER of 10e-5. Does not seem to account for 33/32 expansion, Bit errors during PLCP header or missed detection of the PMD header. If detection probability is 0.99, the 3 percent requirement means that BER must be less than approx. 6.1e-6.		Resolved, Withdrawn by commentor
	11.6.15.1	CP	E		RENUMBER this para as11.6.15.4	"the sensitivity', besides being loose terminology, has not been defined.Further, what is a "Conformant PMD Signal" - this has not been formally defined.	
41	11.6.15.1, 11.6.15.4, 11.6.15.5	FK	T	N	Change "FER" to "BER".	Has not been accepted by the 802.11 committee. If motion to change "BER" to "FER" is accepted by 802.11 plenary, you can remove the "N" from the Part of NO vote section in this row.	Resolved at last meeting, concern withdrawn by editor

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
42	11.6.1 5.3	CP	T	N	The PMD shall detect and signal busy, during the CCA Assessment window with a probability of greater than 90%, an 802.11 compliant FH 1Mbps signal transmitting the PLCP header at a level of -80dBm. In the presence of an 802.11 compliant FH 1Mbps signal, modulated with random data, at a level of -65dBm,a busy signal shall be generated within the CCA Assessment window with a 70% probability of detection.	A requirement for detection of random 2Mbps is unrealistic, unless the randomness is defined.	Accept the document change. 12-1-0 11/7/95, Dean to supply text
43	11.6.1 5.3	YI	T		Remove the CCA detection requirement during random data.	To detect 2 and 4FSK during random data would require extra hardware yet the resulting CCA is performed at a degraded level. It is assumed that all stations in the same BSS are synchronized. Outside of the BSS, the stations will be hopping with different patterns, the chance of collision is already small. The added benefit due to random data CCA probably can not justify the cost to implement.	See comment 42
44	11.6.1 5.3	mji	T	N	The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -85 dBm, signal busy with a 90% probability in detection of the preamble within the CCA assessment window. ~~The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -65 dBm, signal busy with a 70%~~	Not conducive to economic implementation Most implementors expressing opinions at 802.11 have indicated that they do not wish to defer to microwave ovens. In order to avoid this consequence,	Resolved due to prior comment. See comment 42

Seq. #	Section number	your initials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					~~probability for detection of random data within the CCA assessment window.~~ This specification applies to a PMD operating with a nominal EIRP of <100mW. A compliant PMD operating at a nominal output power greater than 100mW shall use the following equation to define the CCA threshold. Pt represents Transmit Power.	yet meet the requirements of pseudorandom CCA detection associated with the 802.11 FH PHY, requires a sophisticated detection device. This is especially difficult for the provider of baseline 1 Mb/s equipment. Please note that a 2 Mb/s, 4 level FSK signal present at the RF input to a receiver especially design for economical reception of a 1 Mb/s signal would typically provide no eye opening at the discriminator output. One might argue that the receiver could be designed to detect the presence of clock energy. This is true, but please note that an adjacent channel FH signal of either the 1 Mb/s or 2 Mb/s options would provide clock energy at the discriminator output. Thus the use of clock energy or eye opening detection for CCA purposes is not useful. The consequence is that providers of simple 1 Mb/s equipment are faced with the choice of either deferring to	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
						microwave ovens and to FH signals on adjacent channels or to increase the cost and engineering investment in order to provide for the convenience of those providing the 2 Mb/s option. The 2 Mb/s option was accepted by the FH PHY under the assumption that it would not degrade the performance or increase the cost of the basic 1 Mb/s PHY. To meet this goal, the recommended deletion is required.	
45	11.6.1 5.4	mji	T	N	The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -85 dBm, signal busy with a 90% probability in detection of the preamble within the CCA assessment window. ~~The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -65 dBm, signal busy with a 70% probability for detection of random data within the CCA assessment window.~~ This specification applies to a PMD operating with a nominal EIRP of <100mW. A compliant PMD operating at a nominal output power greater than 100mW shall use the following equation to define the CCA threshold. Pt represents Transmit Power.	Ambiguous PIFS and DIFS timing Please refer to figure 6-13 of D2. Here, the reference for the DIFS and the PIFS is provided as the end of the fragment or packet occupying the channel as indicated. Without the recommended deletion, however, the CCA will not necessarily indicate clear channel at the end of the packet. Instead, the CCA mechanism must, if the initial signal is strong enough, examine the channel for additional time to determine if the channel is	Resolved due to prior comment. See comment 42

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
						indeed clear. The time limitation is not indicated but it might be rather long compared to a contention window period. Thus, different radios monitoring the same RF channel at different points will have vastly different time references for CCA, depending on the design of the hardware and the actual levels of the RF signal monitored The vision depicted by fig 6-13 is thus not maintained	
46	11.6.1 5.4	mji	T	N	The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -85 dBm, signal busy with a 90% probability in detection of the preamble within the CCA assessment window. The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -65 dBm, signal busy with a 70% probability for detection of random data within the CCA assessment window. If a strong signal, >xyz dBm, has a predictable end by virtue of its length field, then the channel must be examined for xyz mSec after the predicted fragment end to determine if there exist a second compliant FH signal occupying the channel. If there is a second signal, then the CCA should continue to indicate busy until that signal falls below -	If the random data aspect of the CCA criteria is to be maintained, then timing and signal level specification associated with it need to be addressed. This is a first pass at address what the issues might be	Withdrawn by commentor

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					65 dBm. CCA should indicate busy within xyz mSec of this occurrence. This specification applies to a PMD operating with a nominal EIRP of <100mW. A compliant PMD operating at a nominal output power greater than 100mW shall use the following equation to define the CCA threshold. Pt represents Transmit Power.		
47	11.6.1 5.4	mji	T	N	The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -85 dBm, signal busy with a 90% probability in detection of the preamble within the CCA assessment window. ~~The PHY shall, in the presence of any 802.11 compliant FH PMD signal above -65 dBm, signal busy with a 70% probability for detection of random data within the CCA assessment window.~~ This specification applies to a PMD operating with a nominal EIRP of <100mW. A compliant PMD operating at a nominal output power greater than 100mW shall use the following equation to define the CCA threshold. Pt represents Transmit Power.	I know of no reason to believe that the random data section of this section leads to improved system performance. With a world full of non 802.11 devices I would think that the random data aspect actually degrades performance. If company X and company Y have proprietary systems that operate at 1 Mb/s then the 802,.11 devices will defer to them but they will not necessary defer to 802.11. The FCC provided for spread spectrum as the etiquette for system to share the band. overlaying CCA will not necessarily help	Withdrawn by commentor
48	11.6.1 5.4	RJa	T	N	3 percent requirement appears to be based entirely upon BER of 10e-5. Does not seem to account for 33/32 expansion, Bit errors during PLCP header or missed detection of the PMD header. If detection probability is 0.99, the 3		Resolved by prior action. 11/7/95

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					percent requirement means that BER must be less than approx. 6.1e-6.		
	11.6.15.4	CP	E		RENUMBER as para 11.6.15.1 DELETE the term minim um	Removes anomaly of referring to an undefined parameter. Minimum receiver sensitivity is not defined - only "sensitivity' and "reference sensitivity"	
49	11.6.15.7	mji	T	N	Inband Emissions During Receive Inband emissions during receive should be less than -70dBm	This is a new specification I propose because without it the standard is open to a self interference problem with poorly designed receiver equipment. This is an interoperability issue not a regulatory issue. The specification limit I propose is the same as the transmit spec we have for low power transmitters, and therefore a reasonable level to propose	Rejected 6-1-1, accepted as -50 in other section
50	11.6.16	CP	T	N	DELETE SECTION	This section is unclear. What is a type 1 range - the range of a host equipment? What about temperature build up inside a host equipment?Unless accurate definition of exactly what is emant, and the types of equipment - plug in, fixed, stand alone etc- are included, this section is superfluous.	Defer to Plenary Discussion

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
51	11.6.16	RJa	t		DS has no temp spec. IR has only 0 to 40 degrees C. Should either be common requirement for all PHYs or (better yet) be removed from standard. Each vendor is responsible to ensure that all requirements are satisfied over their advertised temp range.		
	11.6.2	CP	e		Japan, Documents CHANGE to RCR33A	Latest issue of standard	
	11.6.2	ws	e		First Paragraph - Regional and National are not supposed to be capitalized		
52	11.6.3	mji	t		Upper limit = 2.40~~2~~80 GHz	Typo to be fixed	
	11.6.3	CP	e		change table 11-9 to correct upper US frequency range to 2480MHz		
	11.6.3	FK	E		Change the Upper Limit for the USA geographical location from 2.402 GHz to 2.480 GHz	If not changed, the US frequency band has only one 1 MHz channel.	
	11.6.3	RJa	E		Table 11-9 still has incorrect upper limit for USA.		
	11.6.3	ws	e		First sentence - "set of available set of" should be "set of available"		
	11.6.3	ws	e		In the note to table 11-9, Regulatory Authorities should not be capitalized		
53	11.6.3, 11.6.4, 11.6.5	FK	t		Change "USA" to "North America".	Be consistent with Section 11.6.2. Includes Canada.	
	11.6.4	MB	e		2nd sentence..... This is more fully defined in Tables ~~10~~ 11-11 and ~~10~~ 11-12 of Section ~~10~~ 11.6.5		
54	11.6.5	FK	t		Change "USA" to "North American" in Table	Be consistent with Section	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					11-11.	11.6.2. Includes Canada.	
	11.6.6	MR o	E		Remove "on the other hand" from sentence #2. Occupied channel bandwidth shall meet all applicable local geographic regulations for 1 MHz channel spacing. The rate at which the PMD entity will hop at is governed by the MAC. The hop rate, ~~on the other hand~~, is a managed object with a maximum dwell time subject to local geographic regulations.	clarity	
55	11.6.7	FK	T		Remove the last sentence "For the USA, Part 15.247 of the Rules of the FCC states that a PMD must visit at least 75 channels in a 30 second period: Number of Channels 75 (channels) 2.5 hops ---------- = ---------- = ---------- Total Dwell Time 30 (seconds) sec	In the future, it is possible that the FCC can change the regulation. Therefore, let the reader determine the number of channels/total dwell time.	
	11.6.7	MR o	E		Eliminate the sentence beginning with "For the USA..." ~~. For the U.S.A., Part 15.247 of the Rules of the FCC states that a PMD must visit at least 75 channels in a 30 second period:~~	Country Specific,	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					$\frac{\text{Number of Channels}}{\text{Total Dwell Time}} = \frac{75 \text{ (channels)}}{30 \text{ (seconds)}} = 2.5 \text{ hop}$		
56	11.6.8	FK	t		Change "US" to "North America"	Be consistent with Section 11.6.2. Includes Canada.	
	11.6.8	FK	E		Change the text in first paragraph to "A frequency hopping pattern, Fx, consists of a permutation of all frequency channels defined in Tables 11-11 and 11-12."	Wrong section. The text currently indicates Tables 10-11 and 10-12.	
	11.6.8	FK	E		Change text to "fx(I) = channel number (as defined in 11.6.4)..."	Wrong section. The text currently indicates section 10.6.4.	
	11.6.8	FK	E		Change last sentence in section to "The channel numbers listed under each pattern refer to the actual frequency values listed in Tables 11-11 and 11-12."	Wrong section. The text currently indicates Tables 10-11 and 10-12.	
	11.6.8	MB	e		2nd sentence.....of all frequency channels defined in Tables ~~10~~ 11-11 and ~~10~~ 11-12 After "Fx" equation where fx(i) = channel number (as defined in ~~10~~ 11.6.4) for.... last sentence... to the actual frequency values listed in Tables ~~10~~ 11-11 and ~~10~~ 11-12		
	11.6.9	FK	E		Change the text to "Conformant PMD implementation of the FHSS shall limit the emissions that fall outside of the operating frequency range, defined in Table 11-9 in Section 11.6.3, to the local geographically applicable limits."	(1) Wrong section. The text currently indicates Section 10.6.3. (2) Should specify better the definition of geographical. Put	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
						the word "local" in front of geographical"	
	11.6.9	MB	e		..... defined in Table 11-9 of Section ~~10~~ 11.6.3, to the...		
57	11.7	mji	T	N	11.7 ~~FHSS Physical Medium Dependent Sublayer 2.0M Bit~~ Delete all of section 11.7 if the CCA problem associated with the 2 MB/s option is not resolved	The D2 draft CCA requirement is not compatible with the presumption that the 2 Mb/s option will not add cost or reduce performance of the basic 1 Mb/s PHY. If we cannot agree to fix the random data aspect of the CCA then the 2 Mb/s option should be deleted. This would be an unfortunate move but one that would be necessary to meet the priority requirement of the 1 Mb/s FH PHY	Withdrawn by commentor, but supportted by others.
	11.7.1	MB	e		1st sentence..... PMD as contained in section ~~10~~ 11.6.		
58	11.7.2	MR o	T	X	The modulation error shall be less than +/- 15kHz at the mid symbol time for 4-GFSK, from the frequency deviations specified above, for a symbol surrounded by identical symbols, and less than +/-25 KHz for any symbol. The deviation is relative to the nominal center frequency of the RF carrier. For definition purposes, the nominal center frequency is the mid frequency between symbols 11 and 01. The nominal center frequency shall not vary	The current 10khz/ms specication allows an accumulated frequency error of 1/2 the distance between adjacent signalling states over the duration of a full MPDU. The 10khz drift in the draft is fine in the MPDU is limited to 400 octets. Since we have expanded the MPDU to 2047	1. +/- 60kHz for 2M bit PHY 2. Nominal should be changed to actual in the PMD section 3. Rate of change or drift of center frequency. **Add text to intro regarding:** that 1M bit requirements apply to 2M

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					greater than +/-~~2~~10kHz/msec, from the beginning of the PLCP_PDU ~~start to end~~ to the end of the PLCP_PDU~~of the 4GFSK data word~~. H4, measured as a difference between the outmost frequencies, divided by 3, divided by 1 MHz, should have a minimum value of 0.140. The ratio h4/h2 will be 0.45+/-0.01. The peak to peak deviation h2 of the 2-GFSK is measured in the middle of 0000 and 1111 patterns encountered in the unique word in the PHY header. Symbols and terms used within this section are illustrated in the figure 11-16 below:	octet, 10khz/ms is too severe..	bit PMD unless otherwise specified in 2M bit PMD. **Change** "... 4GFSK data word" to 4GFSK maximum length PLCP_PDU. **Change** "nominal frequency" to "actual frequency". **Add requirement:** Total peak-to-peak variation of less than 15 KHz over a maximum length PLCP_PDU.
	11.7.2	MR o	E		Revise Note following Table 11-14. *Note: These deviation values are measured using the center symbol of 7 consecutive symbols of the same value,~~The frequency deviations shown in the Table 11-14 are achieved by symbols being surrounded by identical symbols; in actual data stream~~. Tthe instantaneous deviation will vary due to Gaussian pulse shaping.	Clarity	
	11.7.2.	OM i	E		The peak to peak deviation h2 of the 2-GFSK is measured in the middle of 0000 and 1111 patterns encounted in the unique word in the PHY header.	The peak to peak deviation h2 of the 2-GFSK is measured in the middle of 0000 and 1111 patterns encounted in the start	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
						frame delimiter in the PCLP preamble.	
	11.7.2 .1	DM	e		Change numbering to remove single subsections. There should always be more than 1 subsection.	If there is only one subsection then the 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.	
	11.7.2 .1	FK	e		Change the text in first paragraph, first sentence to "...PHY, as described in 11.3.2." Change the text in third paragraph to "...to method in 11.3.2.3." Change the text in fifth paragraph, first sentence to "...defined in 11.3.2.3, figs. 11-5, 11-7a."	Wrong section.	
	11.7.2 .1	MB	e		1st sentence....to 1 Mbit PHY as described in ~~10~~ 11.3.2 3rd paragraph... The inputs are scrambled according to the method as described in ~~10~~ 11.3.2.3 5th paragraph 2nd sentence... The bias suppression algorithm is defined in ~~10~~ 11.3.2.3, figs ~~10~~ 11-5, ~~10~~ 11-7a		
	11.7.2 .1	MR o	e		First sentence: The High Rate~~HS~~ FHSS PHY frame consists of PLCP preamble, PLCP header and PLCP_PDU. The PLCP preamble and PLCP	consistency with other sections	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					header format are identical to 1 Mbit PHY, as		
59	11.7.2 .4	CP	T	N	NO PROPOSED TEXT AT THIS STAGE - DISCUSSION REQUIRED	The minim um value of h4 is defined as 0.14.The +/-25KHz accuracy allowed for the symbol gives a maximum h4 of 0.173, and since h4/h2=0.45, this gives a minimum value for h2 of 155KHz. h2 minimum is defined as as 110KHz in Sect 11.6.10, while by implication, the maximum value of h2 is defined as 195KHz, which conflicts with the statement in Sect 11.6.10. There is no definition of a 4 GFSK data word.	
60	11.7.3 .1	RJa	T	N	3 percent requirement appears to be based entirely upon BER of 10e-5. Does not seem to account for 33/32 expansion, Bit errors during PLCP header or missed detection of the PMD header. If detection probability is 0.99, the 3 percent requirement means that BER must be less than approx. 6.1e-6.		Withdrawn by commentor
	11.7.3 .1	CP	E		renumber as 11.7.3.2	"sensitivity" has not yet been defined - it is bad practice to refer to undefined parameters.	
61	11.7.3 .2	RJa	T	N	3 percent requirement appears to be based entirely upon BER of 10e-5. Does not seem to account for 33/32 expansion, Bit errors during PLCP header or missed detection of the PMD		Withdrawn by commentor

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					header. If detection probability is 0.99, the 3 percent requirement means that BER must be less than approx. 6.1e-6.		
	11.7.3 .2	CP	E		renumber as 11.7.3.1	removes anomaly above The term "minimum" should be removed as this does not align with the definition given.	
	11.7.3 .3	CP	E		DELETE SECTION	Section unnecessary. A 2Mbps PMD must operate at 1Mbps, and therefore the IMD performance has been specified in 11.6.15.5	
	11.7.3 .3	FK	e		Change text in first sentence to "...sensitivity specified in section 11.7.15.4)."	Wrong section.	
	11.7.3 .3	MR o	E		First sentence, replace -77 dBm with -72 dBm. Intermodulation protection (IMp) is defined as the ratio to -72~~7~~ dBm of the minimum amplitude of one of the two equal level interfering signals at 4 and 8 MHz removed from center frequency, both on the same side of center frequency, that cause the FER of the receiver to be increased to 3% for MPDUs of 400 octets generated with pseudo random data, when the desired signal is -72 dBm	error, -72 dBm for the high rate PHY	
62	11.7.3 .4	MB	t		Desensitization (Dp) is defined as the ratio to measured sensitivity of the minimum amplitude of an interfering signal that causes the FER at the output of the receiver to be increased to 3% for MPDUs of 400 octets		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					generated with pseudo random data, when the desired signal is ~~-72~~ -74 dBm(3dB above the sensitivity specified in section ~~10~~ 11.7.15.4 6)		
	11.7.3 .4	CP	E		DELETE SECTION	Section unnecessary. A 2Mbps PMD must operate at 1Mbps, and therefore the Desensitisation performance has been specified in 11.6.15.6	
	11.8.2	MB	e		I would like to recommend that all of the PHY MIB Tables look the same. (ref: Tables 11-16;12-2 &13.4 (no table #))		
	11.8.2	MR o	E		Coordinate Formatting for Table 11-16 with other PHY's, eg. Table 12-2.		
	11.8.2	YI	E		Replace 'all PHYs' with 'FH PHYs' in the Operational Behavior column of Table 11-16.	The parameters specified in this table only apply to FH PHY and do not apply to all PHYs.	
	11.8.2 .1	DM	e		Change numbering to remove single subsections. There should always be more than 1 subsection.	If there is only one subsection then the 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.	
	11.8.2 .1.19	MB	e		2nd sentence. Specify the table..... The table 11-20 ~~below~~ shows the possible vales appearing in the list where N is a value < or = 255		
	11.8.2 .1.2	MB	e		last sentence. Upon activation of the PLCP and PMD, the information in this list must be		

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
					used to set the value of the aCurrent_Reg_Domain managed object.		
	11.8.2 .1.21	MB	e		last sentence. Specify the table.... The table 11-22 below shows the possible values appearing in the list where N is a value < or = 255.		
	11.8.2 .1.22	MB	e		2nd sentence. Specify the table..... The table 11-22 ~~below~~ shows the possible values appearing in the list		
	11.8.2 .1.22	ws	e		"The value 02h defines the" should be "The value 02h indicates that the"	wrong word	
	11.8.2 .1.23	MB	e		2nd sentence. Specify the table..... The table 11-23 ~~below~~ shows the possible values appearing in the list where N is a value < or = 255.		
	11.8.2 .1.24	ws	e		"The null terminate list" should be "The null terminated list"	typo	
	11.8.2 .1.25	MB	e		last sentence. Specify the table.... The table 11-25 below shows the possible values appearing in the list		
	11.8.2 .1.26	MR o	E		Delete:	This is implementation specific and of little meaning.	
	11.8.2 .1.28	MB	e		4th sentence. See section ~~10.x~~ 11.6.15.3 for more details.		
	11.8.2 .1.28	PP	E		Text "See section 10.x" should be changed to indicate correct section		
	11.8.2 .1.29	MB	e		2nd sentence..... to the table shown in section ~~10.6~~ 11.6 concerning the Operating Channel Center Frequency		
	11.8.2	ws	e		"Contains 3 set of hopping" should be	missing "s"	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.1.36				"Contains 3 sets of hoppin"		
	11.8.2 .1.4	MB	e		2nd sentence.....the state of the channel with the accuracy specified in section ~~10.7.x~~ 11.6.15.3		
63	11.8.2 .1.5	MR o	T	X	The aRxTx_Turnaround_Time for the FHSS PHY is defined as the time a station uses to place a valid symbol on the media from "PMD_TXRX.request= Transmit~~the start of the slot. The start of the slot is that point in time when the MAC sublayer must start transmitting if it has something to send~~. The aRxTx_Turnaround_Time is determined using the following equation. The aRxTx_Turnaround_Time for the FHSS PHY is defined as the time a station uses to place a valid symbol on the media from "PHY_TXSTART.request"	ambiguous. PHY has not concept of start of slot	Resolved 11/8/95
64	11.8.2 .1.5	MB	t		The last sentence does not make any sense. "Stations can use less time but not less than 20 usec. ". Does that mean that stations can use more time? Or must each station meet a time of 20 usec.? I would vote for each station have the same turn around time specification of 20 usec. Each of the components that make up the turn around time can be more or less than the nominal value so long as the total of all components is 20 usec.	Clarification is needed.	
	11.8.2	MR	E		For the FHSS PHY, the aTx_PLCP_Delay is	error	

Seq. #	Section number	your ini-tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal
	.1.5	o			1 usec., the aRxTx_Switch_Time is 10 usec., the aTxRamp_On_Time is 8 usec., and the aTx_RF_Delay is 1 usec, for a total of 20 usec. This is the maximum time for getting valid data on the media. Stations can use less time but not more ~~less~~ than 20 usec.		
	11.8.2 .1.5	ws	e		"Stations can use less time but not less than 20 usec." Should be "Stations can use less time for each component so long as the total is not less than 20 usec."	confusing construction	
65	11.8.2 .1.6	RJa	T	N	There may need to be two measures of delay within the transmitter. The delay as defined now is appropriate for Rx/Tx Turnaround. The MAC also uses the delay value to adjust the timestamp information they provide to the PHY so that time is referenced to the air interface. In this case, the delay must also include the delay through the whitening algorithm (at least 32 symbol times).		Ed and Jim to provide text changes for PHY MIB, PHY Section and MAC section 4
	11.8.2 .1.6	ws	e		"PLCP introduces to getting" should be "PLCP introduces in getting"	awkward	
66	11.x, 12.x, 13.x	TM	T		There should be a method in the standard whereby the basic rate of the network is fixed (ie., all data, PLCP headers, and control packets are transferred at a 2 Mb/s rate)	This will allow for maximum system throughput (at the expense of cell size)	
	11.XX	ws	e		Throughout 11, the internal section numbers are wrong and the word Section is used to describe them		
	Fig 11-7a	MB	e		change section reference next to Scramble {b(1), ...,b(N)} from 10.3.2.3 to 11.3.2.3		