doc.: IEEE P802.11-95/2. -1R_ Sept_aber 1995 **Corrected Text/Comment** Rationale **Disposition/Rebuttal** Cmnt Part Section Seq. your initype of # number NO E, e, tials T, t vote

Section 1 comments from Ballot on Draft Standard D2 (Vic Hayes, Chair, AT&T WCND)

1	1	ZV	E		Clause 1 should be labeled "Overview" and a distinct subclause, labeled "Scope" MUST BE ADDED in 1.1. "Purpose" should be numbered 1.2. It would be much better if you were to make clause and subclause numbering changes at this time rather than waiting until the standard is approved. This would give your working group the additional time necessary to ensure that all cross-references within text and graphics are correct.	normal document formatting	Accepted. Renamed clause 1 as Overview and put existing introductory test under heading 1.1 Scope.
2	1	FMI	e		page 1 should be a fight-facing page	normal document formatting	make it happen while editing this file.
3	1	FMi	t	N	Specifically the 802.11 standard: Describes the functions and services required by an 802.11 compliant device to operate within ad-hoc and infrastructure networks as well as the aspects of station mobility (transition) within those networks. DefinesDescribes the medium access control (MAC) procedures to support the asynchronous and time bounded-MAC service data unit (MSDU) delivery services and to allow future support for time bounded MSDU delivery services. Defines several physical layer (PHY) signalling techniques and interface functions that may be controlled by the 802.11 MAC. PermitsSupports the operation of an 802.11 conformantcompliant device within a wireless LAN which may coexist with multiple overlapping 802.11 wireless LANs. Describes the requirements and procedures services to provide privacy of user information being transferred over the wireless mediumconfidentiality and	Make this description match the actual content of the standard, especially to include a mention of the existence of the plurality of PHYs.	Accepted mostly. Reference to future time bounded services support was not included because that is predefining the actions of a future committee.

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	1	1		1	authentication of 802 11		1
					authentication of 602.11		
				1	<u>contormant</u> compnant devices.		l l
4	1.1	BA			Channel that can be used	Spelling Error.	Accepted
					simultaneouslysimultaniously		
				J			×
5	1.1	BPh	e		"(ad-hoc) network)."	Missing right paren.	Accepted
6	1.1	BTh	E		in definition of Ad hoc network there should be no	According to my dictionary the proper	Accepted
					hyphen in Ad hoc	use of word is "ad hoc network"	
7	1.1	BTh	Е		in definition of Channel.	Can't be the same PHY since a PHY is	Accepted, put use of channel in
					typo volume	only using one channel at a time. Could	parethesis. Added the word
					add wordsinstances of the same type of PHY	also say the same WM. This repairs the	instance to "same PHY".
						sentence as is but it would be far better	
						to craft a definition that didn't use the	×
						word to define itself.	
8	1.1	Bth	Е		in defintion of Channel.	Narrowband is an adjective of RF not	Accepted
					add words1 narrowband RF channel	channel.	*
					changeFDMFrequency Division Multiplexed	There is no place in document that	
					CDMACode Division Multiple Access	explains these acronyms so spell it out.	
9	1.1	BTh	Е		add definition	This is an essential definition that was	Accepted
					Clear Channel Assessment function (CCA). That	missed. My definition may be	-
	5				logical function in the PHY which determines the current	inadequate so roll your own.	
					state of use of the WM		
10	1.1	Bth	е		in definition of DCF	typo	Accepted
					changein the BSS at any any given time		
11	1.1	BTh	е		last line of ESS_BASIC_RATE_SET definition	typo	Accepted
					<pre><tab>For IR PHY: {1Mbs,2Mbs}</tab></pre> <pre>Solution</pre>		
12	1.1	BTh	е		in definition of ESS	typo	Accepted
				1.00	changeany station associated with one of those BSSs.	_	-
13	1.1	BTh	е		in definition of PCF	typo	Accepted
					change any given time that the network		
14	1.1	BTh	E		in definition of STATION_BASIC_RATE need	need to be consistent in usage throught	Rejected, see Dave Bagby
					underscores in ESS_BASIC_RATE_SET	document	comment later
15	1.1	DM	e		Change font for Independent Basic Service Set (IBSS) to be the same		Accepted
					as the rest of the document.		
16	1.1	DM	е		Typo in definition for DSS: instance		Accepted

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17	1.1 also all of 2–2.5	FMi	е	globally re-select Times New Roman font for this section	various words and phrases are coded as other fonts that print as Courier on systems without those fonts loaded	Accepted
18	1.1	FMi	e	Integration. The service which enables delivery of MAC service data units between the Distribution System and an existing. non-802.11 local area network (via a Portal).	Clarify that integration applies to wired LANs, not to other wireless LANs.	Accepted
19	1.1	FMi	E	Portal. : The logical point at which <u>MSDUsdata</u> from an <u>integrated</u> , non-802.11 LAN <u>enter connects with an</u> 802.11 LAN via the Distribution System of an ESS.	clarity, correctness	Accepted
20	1.1	FMi	e	Wireless Medium (WM). The medium used to implement <u>the transfer of PDUs between peer PHY</u> entities of a wireless LAN.	clarity	Accepted
21	1.1	FMi	Е	ESS_BASIC_RATE_SET: <u>TheA</u> set of <u>data transfer</u> rates <u>whichthat</u> all the stations <u>oin</u> <u>anthe given</u> ESS are required to <u>must</u> be capable <u>of using</u> to receive <u>frames</u> from the WM. According to the PHYs definitions t <u>T</u> he default ESS BASIC RATE SETs for the different PHYs <u>arewill be</u> :	grammar, consistency	Partly accepted but modified differently by other comments.
				For 2,4 Ghz ISM DS PHY-:_ {1Mbps,_2MbpBs} For 2,4 Ghz ISM FH PHY: _{1Mbps} For IR PHY: - {1Mbps, 2Mbps} <u>The ESS_BASIC_RATE_SET_Note that this data rates</u> <u>arevalue is preset for all stations in the ESS.</u>		
22	1.1	FMi	Е	EXTENDED_RATE_SET: The set of <u>data transfer</u> rates <u>supported by a station (if any) outside ofbeyond</u> the <u>ESS_BASIC_RATE_SET that a station supports</u> . This <u>set</u> <u>may include data transfer rates can be a speed</u> that <u>is are</u> defined in future PHY standards.	grammar, consistency	Accepted, except continued the use of the word beyond
23	1.1	MB	e	Channel.An instance in the same volume volume		accepted
24	-1.1	MB	e	Distribution System Services (DSS) The set ofwith		accepted

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				each other over a single instance of the WM		
25	1.1	MB	e	Point Coordination Function(PCF) A class at any given time that the network		accepted
26	1.1	RJa	e	Channel volumevoliume of space,	Spelling Error	accepted
27	1.1	RJa	E	Channel with an acceptably low frame error rate due to mutual interference. Some PHYs only provide one channel, whereas others provide multiple channels. single channel n-channel 1 narrowband channel FDM channels DSS with 1 code DSS with CDMA	As defined, DSS is multichannel PHY just like FH. Text is confusing and adds nothing to standard.	Rationale accepted but improved text by replacing DSS with one code with Infrared
28	1.1	RJa	e	Distribution System Services (DSS). <u>instance</u> instancfe	Spelling Error	accepted
29	1.1	RJa	e	Net Allocation Vector (NAV): transmissiontrasnmission	Spelling Error	accepted
30	1.1	RJa	e	Point Coordination Function (PCF). <u>that</u> tat	Spelling Error	accepted
31	1.1	SKy	e	A set of stations controlled by a single Coordination Function at any given time. A BSS can have one PCF and one DCF.	Clarification. One PCF and one DCF do not add up to a single coordination function.	accepted. Moved second sentence from BSS definition to CF definition
32	1.1	· <u>STh</u>	<u>e</u>	Capitalizations not consistent; various misspellings		accepted, hope that all were found during this edit.
33	1.1	<u>STh</u>	e	FDM channels not defined		Rejected. Don't know what paragraph is being referenced
34	1.1	<u>STh</u>	<u>e</u>	Under definition of Channel: should be DSSS		accepted
35	1.1	STh	e	BASIC_RATE_SET not defined		Rejected. Basic Rate Set is defined as ESS_BASIC_RATE_SET
36	1.1	<u>STh</u>	<u>e</u>	<u>CCA not defined</u>		Accepted, definition addel

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37	1.1	TM	e	Access Point (AP), via the wireless medium (WM) for associated stations.	this is the first occurrence of the WM abbreviation	accepted
38	1.1	TM	e	Channel, in the same volume (spelling)		accepted
39	1.1	TM	e	single channel n-channel one hop pattern multiple hop patterns DSSS with 1 code multiple frequencies	DSSS (not DS) is the abbreviation to use. these definitions apply to the standard as CDMA applies only to the FHSS PHY, the DSSS PHY only specs one code	Rejected. Already edited this definition based on some other comments.
40	1.1	TM	e	Distribution System Services (DSS) instance (<i>spelling</i>)		accepted
41	1.1	TM	e	remove extra lines between (DSS) description and ESS_BASIC_RATE_SET description		accepted.
42	1.1	TM	e	ESS_BASIC_RATE_SET: For 2.4 GHz ISM DSSS PHY: For 2.4 GHz ISM FHSS PHY: For IR PHY:	DSSS, FHSS, Mb/s are the abbreviations proper tabbing	Modified differently by another comment.
43	1.1	TM	e	Extended Service Area (ESA) and may involve BSAs in overlapping, disjoint or both configurations.	more accurate wording	accepted
44	1.1	TM	e	Extended Service Sete (ESS) with one of those	change 'on' to one	accepted
45	1.1	TM	e	(GFSK) baseband	change 'base band' to baseband	accepted
46	1.1	TM	e	(IBSS)	use correct font	accepted
47	1.1	TM	e	(NAV)transmission (spelling)		accepted
48	= 1,1	TM	e	(PCF) given time that	change 'tat' to that	accepted
49	1.1	TM	e	Portalvia the Distr	remove extra space between via and the	accepted
50	1.1	TM	e	(WEP)to the confidentiality	remove extra space between the and confidentiality	accepted
51	1.1	TM	e	choose a common separater. there is an abritrary usuage of the period and the colon	section uniformity	accepted
52	1.1	ws	e	Under "channel"- misspell volume - "voliume"		accepted
53	1.1	ws	e	Under "net allocation vector" - misspell transmission		accepted
54	1.1	ws	e	under PCF- misspell that - tat		accepted

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55	1.1	ws	E		Consistency - either place all definitions in 1.1 or put a definition section at the first of each chapter. Acronyms are used before they are defined	Clarity	agreed, but this request is beyond the scope of the clause 1 editor's job.
56	1.1	FMi	t		Authentication. The service used to <u>adequately</u> positively establish the identity of one station to another station.	The authentication function in 802.11 is not intended to provide "positive" proof of identity, just to provide a mechanism for authentication and a default algorithm which is "adequate" (e.g. "wired equivalent").	accepted
57	1.1	FMi	t		Distributed Coordination Function (DCF). A class of possible coordination functions where the same coordination function logic is active in every station in the BSS whenever at any any given time that the network is in operation.	clarity	accepted
58	1.1	FMi	t		Point Coordination Function (PCF). A class of possible-coordination functions where the coordination function logic is active in only one station in <u>thea</u> BSS for defined portions of theat any given time that the network is in operation.	clarity	accepted
59	1.1	FMi	t		STATION_BASIC_RATE: A <u>data transfer ratevalue</u> belonging to the ESSBASICRATESET; that is used by <u>athe</u> station for specific transmissions. (it <u>The</u> <u>STATION_BASIC_RATE may-could</u> change dynamically, as frequently as each MPDU transmission attempt, based on local considerations at that stationfor example the Station Basic Rate on the IR depends on the Power Consumption Mode of the Station).	grammar, correctness	accepted
60	1.1	BTh	E	N	in definition of DSS changeinstancfeinstance move sentence from Infrastructure definition to DSS definitionDS services are provided between pairs of 802.11 MACs.	typo There is a sentence in Infrastructure definition that obviously doesn't belong there; it appears to belong in DSS definition	accepted

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61	1.1	BD	E/T	N	ESS Basic Rate SetESS_BASIC_RATE_SET: A set of rates that all the stations on the given ESS are required to be capable to receive. According to the PHYs definitions the default ESS BASIC RATE SETs for the different PHYs will be: For 2,4 Ghz ISM DS PHY : {1Mbs,2MBs} For 2,4 Ghz ISM FH PHY: {1Mbs,} For IR PHY: {1Mbs, 2Mbs}Note that this value is preset for all stations in the ESS.	 Section 1.1 contains term definitions not MIB variable definitions. Hence the removal of and Caps in the term names. The language about the specific rates supported by different PHYs is not appropriate for sec 1.1, this information is already in the relevant PHY sections and should not be duplicated here. 	accepted but kept last sentence
62	1.1	BD	E/T	N	Extended Rate SetEXTENDED_RATE_SET : The set of rates beyond the <u>Basic Rate SetBASIC_RATE_SET</u> that a station supports. This can be a speed that is defined in future PHY standards.	 Section 1.1 contains term definitions not MIB variable definitions. Hence the removal of _ and Caps in the term names. The language about what may be defined in the future is irrelevant. 	first part accepted. last part rejected because the sentence about future speeds is an example for understanding
63	1.1	BD	E/T	N	Station Basic RateSTATION_BASIC_RATE: A value belonging to the ESS Basic Rate SetBASIC RATE SET, that is used by the station for specific transmissions (it could change dynamically, for example the Station Basic Rate on the IR depends on the Power Consumption Mode of the Station).	 Section 1.1 contains term definitions not MIB variable definitions. Hence the removal of and Caps in the term names. The language about how rates may change and when are not appropriate to the term definition section and is already in the relevant PHY sections and should not be duplicated here. 	accepted but also modified differently by other comments. Kept the last sentence as an example.
64	1.1	BTh	t	N	in defintion of Channel. correct two placesDSS <u>S</u>	Distribution System Services don't have codes. DSSS is correct abbreviation for Direct Sequence Spread Spectrum	not necessary because other comment removed the reference
65	1.1	FMi	t	N	Ad-hoc network. An ad-hoc network is a network comprised solely of stations within mutual communication range of each other via with wireless medium. An ad-hoc network is created for a specific	The purpose for which the network is created has nothing to do with ad-hoc vs. infrastructure. The key distinction is the limited temporal extent. The	accepted

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					purpose, typically created in a spontaneous manner. The principal characteristic of an ad-hoc network is <u>limited</u> temporal and spatial extent. These limitations allow-that the act of creating and dissolving the <u>ad-hoc</u> network to <u>be</u> is sufficiently straightforward and convenient so as to be achievable by non-technical users of the network facilities (i.e. no specialized 'technical skills' are required with little and/or no investment of time or additional resources required beyond the stations which are to participate in the (ad-hoc) network. The term "Ad-Hoc" is often used as slang to refer to an Independent BSS (IBSS).	related "simplicity" aspect precludes the distribution system, producing limited spatial extent. This is a more correct definition for the concept which we have been calling "ad-hoc" for many years. (Also, see the 2nd paragraph of 2.2.1, where the relationship between IBSS and ad-hoc is described in terms of limited temporal extent.)	1		
66 4	1.1	FMi	t	N	Basic Service Set (BSS). A set of stations controlled by a single Coordination Function. A BSS <u>mayean</u> have one PCF and <u>shall have</u> one DCF.	completeness	accepted but sentence was moved to CF definition by another comment		
67	1.1	FMi	t	N	Coordination Function (CF). <u>The That</u> logical function which determines when a station operating within a Basic Service Set is permitted to transmits and <u>may be able to</u> receives <u>PDUs on via</u> the wireless medium.	correctness	accepted except kept word via		
68	1.1	FMi	t	N	Distribution System Medium (DSM). The medium <u>or</u> <u>set of media</u> used by a Distribution System (for <u>communication between Access Points and Portals of an</u> <u>ESSinterconnections).</u>	correctness, completeness	accepted		
69	1.1	FMi	t	N	Distribution System Services (DSS). The set of services provided by the distributions system which enable the MAC to transport MSDUs between stations that are not in direct communication with each other over a single instancfe of the WM. <u>These servicesThis</u> includes transport of MSDUs between <u>the APs of BSSs</u> within an ESS, transport of MSDUs between portals and BSSs within an ESS, and the transport of MSDUs between stations in the same BSS in cases where <u>the</u> MSDU has a multicast or broadcast destination address	completeness	accepted		

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1					or where the destination is an individual address, but the station sending the MSDU chooses to involve DSS.		
70	1.1	FMi	Т	N	Extended Service Set (ESS). A set of one or more interconnected Basic Service Sets and zero or more integrated LANs, connected to a common Distribution System, allowing them to appear which appear as a single Basic Service Set to the logical link control <u>entity layer</u> at any station associated with on <u>e</u> of those BSSs and at any station attached to one of those integrated LANs. The DSM of an ESS shall be comprised solely of 802 LAN segments (including wireless LAN segments), and any physical layer repeaters and/or 802.1d MAC Bridges necessary to interconnect those LAN segments. <i>[add the following definition to retain a name for the broader extended service concept]</i> More Extended Service Set (MESS). An Extended Service Set in which the Distribution System operates above the data link layer and/or in which the DSM includes one or more routers, gateways, or non–LAN segments. Some distribution system services may be unavailable between arbitrary pairs of stations in a MESS, and some mobility transitions may be impossible between arbitrary BSSes in a MESS.	The current ESS concept is too broad, extending beyond that which can be reasonably provided by distribution system services appropriate for a set of interconnected BSSes in a local area, beyond what mangers of large-scale networks want a unified layer 2 entity to be, and beyond the charter of IEEE 802 (e.g. above layer 2). A more complete argument for this limitation to the extent of an ESS appears in document 95–188, Clause 1. By changing the definition of ESS in this manner, very few text changes are needed elsewhere in the document to avoid the problems with unrestricted service set extent (now called MESS).	REJECTED, SEE COMMENTS REGARDING THIS IN SECTION 2 BALLOT RESPONSE DISPOSITION
71	1.1	FMi	t	N	Independent Basic Service Set (IBSS). A BSS which forms a self contained network <u>, and in which no access to a Distribution System is available-independent of any other BSSs</u> .	The use of "independent" in the definition is circular, as well as not mentioning the key characteristic of an IBSS, which is the lack of DS access.	accepted
72	1.1	FMi	t	N	Infrastructure. The infrastructure includes the logical Distribution System Medium, Access Point and Portal entities, as well as being the logical location of <u>Distribution and Integration service functions of an ESS</u> . An infrastructure contains one or more Access Points and zero or more Portals in addition to the Distribution	Clarity — tie infrastructure to ESS (also, delete unrelated sentence which appears unnecessary and/or out of place)	accepted

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			1	1	System.		
					DS services are provided between pairs of 802.11 MACs.		
73	1.1	KJ	t	N	Add new definition for Kmicroseconds	This term is used in several time fields and should be made explicit as to its meaning/value	accepted
					Kmicroseconds. Units of 1024 microseconds.		
74	1.1	SKy	t	N	(i.e. no specialized 'technical skills' are required with little and/or no investment of time or additional resources required beyond the stations which are to participate in the (ad-hoc) network. In particular, the Access Point is not required for ad hoc operation.	The Association and the Distribution System Service functions of an AP is not required for an ad hoc network. Not requiring an AP for ad hoc is attractive in terms of cost as well.	A previous comment has added a sentence which performs the same purpose.
75	1.1	SKy	t	N	Add that ad hoc networks do not support all services/functionalities provided by infrastructure networks, including the Power Save mode, time bounded (TB) services and CF async data transfers.	The definition should identify up front any functional limitations of ad hoc as opposed to infrastructure networks. The limitation comes from the fact that PCF operation is restricted to infrastructure networks (per para. 6.3) and the DS service is required in buffering and transferring of PS mode frames at AP.	Good idea but no longer correct because of other decisions. There is now power saving operation in ad hoc. Even the PCF does not specify time bounded service operation at this time.
76	1.1, 1.2	SKy	e		Add definitions for the following: WDS, WDM, TIM, DTIM	Completeness	accepted, added to abbreviations section
77	1.2	BA	e		PSNP – Power Save Non-Polling (mode) PSP – Power Save Polling (mode)	No longer applicable (I think)	accepted
78	1.2	BA	e		Add: <u>IR = Infrared</u>	Missing	accepted
79	1.2	BTh	e		UNBOLD IF And Only IF Wireless Distribution System	consistency	accepted
80	1.2	BTh	е		add CFP = Contention Free Period	Seems that these should be added to list of abbrev. as they can be confused with	accepted

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			PC = Point Coordinator	others in Chapter 6 that are close.	en : 👻
1.2	BTh	E	add	Section 7.1 introduces these abbrev.	accepted
			MLME = MAC Layer Management Entity	that should be in 1.2. I don't know why	-
			PLME = PHY Laver Management Entity	the E shows up in the first two but not	
			SM = Station Management Entity	in the last one.	
12	BTh	E	Add	Section 8 introduces these abbrev, that	accepted
1.2	_	-	TSF = Timing Synchronization Function	should be in 1.2	1
		1	TBTT = Target Beacon Transmission Time		
12		P	All abbreviations should have a corresponding definition in section [.]	Makes for a more readable and complete	agreed that this would remove any doubt.
1.2		Ĩ		document.	however many abbreviations are explained
					adequately by their name so will not do
					this in interest of time.
1.2	DM	e	Change bold to normal type face for IF And Only If (IFF) and Wireless Distribution System (WDS)		accepted
1.2	EG	E	PS = Power Save	PSNP and PSP are now just PS	accepted
1.2	EG	Е	remove PSNP and PSP	have been replaced by PS	accepted
1.2	FMi	e	correct instances of bold text in the definitions column	visual consistency	accepted
1.2	FMi	E	remove entries for DCE, DTBS, PhL, and PhS	no longer used	accepted
1.2	FMi	e	DSAP = Destination <u>Service</u> Access Point	correctness	accepted
1.2	MB	e	Should add the following abbreviations to the list:		accepted
			ACK = Acknowledge		
			CTS = Clear to Send		
		<u> </u>	RTS = Request to Send		*
			DBPSK = Differential Binary Phase Shift Keying		
			DQPSK = Differential Quadrature Phase Shift Keying		
1.2	RJa	e	PSNP = Power Save Non-Polling (mode)	No longer applicable (I think)	accepted
			PSP = Power Save Polling (mode)		
1.2	RJa	е	Add: <u>IR = Infrared</u>	Missing	accepted
1.2	SKy	e	PHY = Physical layer	Clarity	accepted
1.2	SKy	e	DIFS = Distributed Coordination Function	Correction	accepted
			(DCF) Inter-Frame Space		
1.2	SKy	e	PIFS = <u>Point Coordination Function (PCF)</u>	Correction	accepted
			Priority-Inter-Frame Space		
	1.2 1.2	1.2BTh1.2BTh1.2BTh1.2DM1.2DM1.2EG1.2FMi1.2FMi1.2FMi1.2FMi1.2RJa1.2SKy1.2SKy1.2SKy	1.2BThE1.2BThE1.2BThE1.2DMe1.2DMe1.2EGE1.2FMie1.2FMie1.2FMie1.2FMie1.2FMie1.2SKye1.2SKye1.2SKye	CP = Contention Period PC = Point Coordinator1.2BThEadd MLME = MAC Layer Management Entity PLME = PHY Layer Management Entity 	CP = Contention Period PC = Point Coordinator others in Chapter 6 that are close. PC = Point Coordinator 1.2 BTh E add PC = Point Coordinator Section 7.1 introduces these abbrev. that should be in 1.2. I don't know why PLME = PHY Layer Management Entity SM = Station Management Entity Section 7.1 introduces these abbrev. that should be in 1.2. I don't know why in the last one. 1.2 BTh E Add TSF = Timing Synchronization Function TBTT = Target Beacon Transmission Time Section 8 introduces these abbrev. that should be in 1.2 1.2 DM c All abbreviations should have a corresponding definition in section 1.1 Wireless Distribution System (VDS) Makes for a more readable and complete document. 1.2 DM c Charge bold to normal type face for IF And Oaty If (IFF) and Wireless Distribution System (VDS) Makes for a more readable and complete document. 1.2 EG E PS = Power Save PSNP and PSP are now just PS have been replaced by PS 1.2 FMi e correct instances of bold text in the definitions column visual consistency 1.2 FMi e DSAP Destination Service Access Point correctness 1.2 FMi e DSAP Destindution subtreviations to the list: ACK = A

Seq.	Section	your	Cmnt	Part	Corrected Text/Comment	Rationale	Disposition/Rebuttal
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		tials	E, e,	NO			
			T, t	vote			

					2	
96	<u>1.2</u>	<u>STh</u>	<u>e</u>	CCA not listed		accepted
97	<u>1.2</u>	STh	e	ATIM not listed		accepted
98	1.2	TM	e	add the following to the abbreviations list as they areused in the document:BSSID = Basic Service Set IDentificationFC = Frame ControlIV= Integrity ValueIR = InfraRedPPDU = PHY Protocol Data UnitRA = Receiver AddressSFD = Start Frame DelimiterTA = Transmitter Address	document uniformity and completeness	accepted except IV has meaning as Initialization Vector and PPDU doesn't seem to be a term that should be used in document
99	1.2	TM	e	remove bold font on IFF and WDS	section uniformity	accepted
100	1.2	TT	е	Add: TBTT = Target Beacon Transmission Time		accepted
101	1.2	ZJ	Е	Add definitions for IFS and TBTT	Missing	accepted
102	1.2	BTh	t	change DSAP = Destination <u>Service</u> Access Point	Without "Service" it would be DAP wouldn't it?	accepted
103	1.2	FMi	t	PSNP =Power Save Non-Polling (mode)PSMP =Power Save Polling (mMode)	consistency with simplification of power save operation that eliminates the PSNP/PSP distinction	accepted
104	1.2	FMi	t	Add the following abbreviations:ACK = AcknowledgementCCA = Clear Channel AssessmentCFP = Contention Free PeriodCID = Connection IdentifierCTS = Clear To SendDBPSK = Differential Binary Phase Shift KeyingDIFS = Distributed Inter-Frame SpaceDQPSK = Differential Quaternary Phase ShiftKeyingDTIM = Delivery Traffic Information Map	other acronyms widely used in the document	accepted except for MESS and SMT which doesn't seem to be equivalent to proposed Station Management

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Seq. #	Section number	your ini- tials	Cmnt type E, e, T, t	Part of NO vote	Corrected Text/Comment	Rationale	Disposition/Rebuttal	
				j.	FH=Frequency HoppingIBSS=Independent Basic Service SetIFS=Inter-Frame SpaceIV=Initialization VectorLME=Layer Management EntityMESS=More Extended Service SetMIB=Management Information BasePLCP=Physical Layer Convergence ProcotolPLME=Physical Layer Management EntityPMD=Physical Medium DependentPPM=Pulse Position ModulationRTS=Request To SendRX=receive or receiverSMT=Station ManagementTBTT=Target Beacon Transmission TimeTIM=Traffic Information MapTX=transmit or transmitter		5	
105	1.2	BTh	E	N	add TIM = Traffic Indication Map	Term used in 4.2.3.1 with no explanation. The reader will not find a reference to this acronym for many pages, therefore should put it in Table 1.2 at least.	accepted	
106	1.2	BTh	E	N	add CFP = Contention Free Period TBTT = Target Beacon Transmission Time	Acronyms used in 4.3.2.5 with no explanation. I am guessing at the meaning of CFP. Readability demands that either: an explanation of terms is entered in 4.3.2.5 or terms are put in Table 1.2.	accepted	
107	1.2	BTh	Е	N	change PSNP = Power Save Non-Polling (mode) PSP = Power Save-Polling (mode)	No longer a PSNP mode and the other has devolved to just PS mode	accepted	
108	1.2	BD	Т	N	DTBS = Distributed Time Bounded Service PSNP = Power Save Non-Polling (mode) PSP = Power Save Polling (mode)	 DTBS is no longer part of the draft, the term can be removed. PSNP and PSP are no longer used since the poser save modes were simplified. 	accepted	

Seq.	Section	your	Cmnt	Part	Corrected Text/Comment	Rationale	Disposition/Rebuttal
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			T, t	vote			
109	12	BD	T	N	DSAP = Destination Access Point	This is a abbreviation that I do not	rejected other comments have

109	1.2		1		DSALDESIMATION ACCESS FORM	think is used. It also is poorly formed, the tendency is to read it as "D SAP", which is not the meaning of the abbreviation. The cleanest action is to simply remove it.	already changed this to mean Destination Service Access Point
110	1.3	BA	E		Add references to ETS 300-328; ETS 300-339; RCR STD-33; GL36; CFR47, Part15, Sections 15.205, 15.209, 15.247.	Appropriate regulatory references for Europe, Japan and North America.	Great idea. NEED complete titles of these documents to add to standard. EDITORS: can you handle this?
111	1.3	BTh	e		missing tab 4. <u><tab></tab></u> ISO	typo	accepted
112	1.3	FMi	E		add references: <u>IEEE Std 802.2–1994, IEEE Standards for Local and</u> <u>Metropolitan Area Networks: Logical Link Control</u> (second edition). <u>ISO/IEC 8824: 1990, Information Technology — Open</u> <u>Systems Interconnection — Specification of Abstract</u> <u>Syntax Notation One (ASN.1).</u> <u>ISO/IEC 8825: 1990, Information Technology — Open</u> <u>Systems Interconnection — Specification of Basic</u> <u>Encoding Rules for Abstract Syntax Notation One</u> (ASN.1)	completeness, usefulness of this section	accepted
113	1.3	FMi	е		add references to the basic RF regulations for each of the enumerated regulatory domains	If regulatory domain information remains in the standard itself, these references should be cited. If the regulatory domain information is moved to an annex, the references should appear in that annex.	 accepted BUT have no specific text (document names) to act on. EDITORS have been asked to attempt to find these documents.
114	1.3	TM	е		add tab to 4. ISO/	section uniformity	accepted
115	1.3	RJa	E	N	Add references to ETS 300-328: ETS 300-339; RCR STD-33; GL36: CFR47, Part15, Sections 15.205, 15.209,	Appropriate regulatory references for Europe, Japan and North America.	Neither do I have the citations. EDITORS have been asked to

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					<u>15,247.</u> -	(Sorry, I don't have full citation	find them.
						available as I do this.)	
116	1.4	BD	T	N	15.247 Entire section missing.	 (Sorry, I don't have full citation available as I do this.) D2 shall not be forwarded until the section on conformance requirements is complete and its contents proven to be meaningful. 1) A standard w/o conformance tests is not useful from an interoperability standpoint. 2) It would NOT be acceptable to split conformance testing into a separate clause as that would only entice companies to market non- Interoperable products while claiming 802.11 compatibility and pointing their finger at other manufacturers. The end users would be caught in the middle, resulting in market death for 802.11 WLANs. 3) In general D2 is much improved over D1. However, as a practical matter it is impossible to know with any certainty if the 802.11 spec is sufficiently tight, to result in two different Interoperable implementations, until there is an existence proof. There is no substitute for the detailed insight gained by actually making two implementations of a spec 	find them. agreed. EDITORS: the PICs pro formas are being worked on by other authors and should be incorporated here
						gained by actually making two implementations of a spec interoperate. I consider the draft insufficiently proven until this minimal	

Seq.	Section	your	Cmnt	Part	Corrected Text/Comment	Rationale	Disposition/Rebuttal
#	number	ini-	type	of			
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			T , t	vote			

117	1.4	DM	T	N	Need to define conformance requirements. Should include lockdown testing.	interoperability demonstration has been accomplished and will be unable to vote yes until that milestone is reached. Interoperability amongst vendors is critical to the success of this standard. I accept that the standard can not be made so clear that there will be no differing interpretation among the various vendors. Therefore it is crucial that conformance requirements are specified.	e agreed, being written by other autors and EDITORS will incorporate when available
118	1.4	WR	T	N	Must provide a conformance statement or The provide a reference to the appropriate Document.	e conformance clause is empty	agreed, being written by other autors and EDITORS will incorporate when available
119	1.5	BTh	Е		replace all existing text with 1. This standard represents fields as strings of one or more octets and fractions thereof. Each octet is represented with the most significant bit (MSB) on the left and the least significant bit (LSB) on the right. The MSB is defined as bit eight (8) and the LSB is defined a bit zero (0).	The two existing definitions say almost the same thing so they sould be combined.	accepted, but change made is combined with other comments
120	1.5	HV	T	N	1. This standard represents information fields as octet strings of various lengths. <u>Within fields, the bits are</u> <u>numbered.</u> In all figures of this standard, the lowest <u>numbered bit is represented to the right.</u> The least significant bit (LSB) of each <u>numeric valueoctet</u> is defined as <u>the lowest numbered bitbit zero (0) for that</u> octet. <u>All octets are represented in figures with the LSB</u> on the right.	When we define a field, like a control field the bits have no significance in relation to each other. Only if a filed describes a value, such as a counter, can one speak of a numeric value. In this subclause, I have defined the bit sequence.	accepted, but change made is combined with other comments
121	1.5	HV	Τ	N	2. This standard represents fields longer than a single octet as strings of octets and fractions thereof. <u>The octets</u> within a field are numbered. The octet with the lowest <u>number is depicted in this standard to the right.</u> A field longer than a single octet is represented in figures with the most significant bit (MSB) on the left. Each octet to the right of the MSB is of correspondingly lesser	This definition is needed because else one would not know how the octets in section 4.2.3 would be represented	accepted, but change made is combined with other comments

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Seq.	Section	your	Cmnt	Part	Corrected Text/Comment	Rationale	Disposition/Rebuttal
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			T, t	vote			X

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r T		r	1	1	disa ifi san as		
					significance:		
122	1.5	FMi		N	 PICS proforma for MAC and each PHY are needed. Recommendations which satisfy this "no" vote: Adopt material from 95–202 for initial MAC conformance statement. Adopt material from 95–200 for initial DS PHY conformance statement. Adopt corresponding submissions, if available, for the other PHY conformance statements. However, if initial conformance statements, of comparable or better relative completeness, are unavailable for the FH PHY and/or IR PHY prior to the close of the November, 1995 Plenary Meeting, the corresponding PHY specification clause(s) should be removed from the draft until such time as both the specification and the conformance statement can be provided for concurrent review. 	There is no benefit to forwarding for sponsor ballot a draft which lacks the minimal conformance statements required of a protocol standard.	accepted. When the plenary approves the referenced PICs proformas they will be added to this section.
123	1.6	HV	Т	N	 1.6 Order of bit transmission Unless otherwise specified (sections 4.1.2.7 and 4.1.2.4.1) the transmission is as follows: 1. The octets are transmitted starting with the leftmost octet 2. Within an octet, the bits are transmitted starting with the lowest numbered bit 	Need to be defined to make an interoperable standard	accepted
	1.X, 2.X, 3.X 4.X, 5.X, 6.X	BD	E	N	My editorial comments are contained in the files D2lb_edx.doc (where x is the relevant major section number) which were submitted along with this ballot response. All comments in these files are purely 100% editorial in nature (incorrect fonts, extra blank lines,	Doc D2 is of Insufficient quality. 1) There are numerous editorial errors in the D2 draft which need to be corrected before the draft can be forwarded for sponsor ballot. The editorial errors range from incorrect	accepted, I hope that we have caught all of these

Seq.	Section	your	Cmnt	Part	Corrected Text/Comment	Rationale	Disposition/Rebuttal
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1	7.X		misformatting etc). Any change for which there was	fonts in the middle of sentences &	
1	8.X		any question in my mind that anyone might think it	page formatting to a dire need to	
I			other than editorial, I have included as separate	have a spelling check run on the	
			comment in this table.	document.	
I				2) While no single item is enough to	
				prevent forwarding of the draft, in	
1				aggregate they impact the draft	
1				quality to such an extent that it	
I		1 1		would be embarrassing to forward it	
1				in this state. I have forwarded to the	
1				editors a marked up copy of the draft	
1				showing the editorial errors I noticed	
1				during review (this was at the editors	
1		1 1		request, for various obscure reasons	
1				a hard copy was requested over an	
1			341	electronic copy as being easier to deal	
1				with in this instance).	
I				3) Additionally all the section X.X,	
1			15	Y.Y etc place holder in the text need	
				to be found and changed to correct	
				section references.	
			541 15	 a hard copy was requested over an electronic copy as being easier to deal with in this instance). 3) Additionally all the section X.X, Y.Y etc place holder in the text need to be found and changed to correct section references. 	