

Results of Ballot on Draft Standard D3.0

Comments on clauses 1 through 6 and Resolutions

Seq. #	Section number	your initials	Comnt type E, e, T, t	Part of NO vote	Comment/Rationale	Corrected Text	Disposition/Rebuttal
1.	1.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Defines several physical layer (PHY) signaling techniques and interface functions that shall may be controlled by the 802.11 MAC.	Adopted - pelenary motion 8
2.	2	vz	E		In the references clause, some references aren't quite correct. Here are the correct versions:	ISO/IEC 7498-1:1994, Information technology -- Open Systems Interconnection -- Basic Reference Model: The Basic Model Delete the reference to IEEE Std 802.2 and use the following: ISO/IEC 8802-2:1994, Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- Specific requirements -- Part 2: Logical link control	corrected
3.	2	vz	E		Wrong order of reference documents	Please put the references in alphanumeric order: IEEE Std 802 first, followed by ISO 7498, and then ISO/IEC 8802-2, 8824, 8825, and 10039.	corrected
4.	3	vh	E		The style of the definitions are not in style with IEEE requirements	see doc 96/46 Definitions should be numbered to the	referred to editors

						second level, should be boldfaced, all lowercased, and followed by a colon. Definitions should not include the term itself. An example is provided below: 3.1 access point (AP): Any entity that ... 3.2 ad hoc network: A network comprised solely... 3.3 access control: The prevention...	
5.	3	ch	E		a search of each of the section file indicates that the word 'Masquerade' is not used anywhere. Its definition should be removed.	remove the definition of Masquerade	corrected
6.	3	ge	e		ESS Basic Rate Set should be on its own line		corrected
7.	3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	Basic Service Area (BSA). The conceptual area within which members of a Basic Service Set may communicate.	adopted - plenary motion 8
8.	3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	Channel. An instance of medium use for the purpose of passing protocol data units that may be used simultaneously, in the same volume of space, with other instances of medium use (on other channels) by	adopted - plenary motion 8
9.	3 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	ESS Basic Rate Set. The set of data transfer rates which all the stations in an ESS shall must be capable of using to receive frames from the WM.	adopted - plenary motion 8
10.	3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	Extended Service Area (ESA). The conceptual area within which members of an Extended Service Set may communicate. An Extended Service Area is larger or equal to a Basic Service Area and may involve BSSs in	adopted - plenary motion 8

						overlapping, disjoint or both configurations.	
11.	3 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Net Allocation Vector (NAV). An indicator, maintained by each station, of time periods when transmission onto the WM shall may not be initiated by the station whether or not the Station's CCA function senses the WM as being busy.	adopted - plenary motion 8
12.	3 "CF-Aware"	mif	E	N	There are two features that constitue "CF-awareness" both of which should be reflected in the definition of CF-Aware.	CF-Aware. A station able to respond to a CF Poll with a data frame, if such a frame is queued and able to generate, and interpret piggybacked acknowledgements on frames sent to or from the point coordinator.	adopted.
13.	3.	jz	e		Need paragraph before def'n of "ESS Basic Rate Set"		corrected
14.	4	ch	e		acronym used in 7.1 but not listed	CRC = Cyclic Redundancy Check	added
15.	4 "PDU"	mif	e	N	formatting	delete blank line below "PDU" entry	corrected
16.	5.1.1.2	ge	e		"Media" should be "Medium" to match the singular "impacts"	The Medium Impacts the Design	english corected
17.	5.1.1.2	jz	E		It should be in English	The <u>Media</u> um Impacts the Design	english corrected
18.	5.1.1.2	mif	e	N	grammar (I prefer alternative [1])	Chnge to either [1]: The Media Impacts the Design or [2]: The <u>Medium</u> Media Impacts the Design	suggestion 1 adopted
19.	5.1.1.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Because of limitations on wireless PHY ranges, wireless LANs intended to cover reasonable geographic distances may must be built from basic coverage	adopted by plenary motion 8

						building blocks.	
20.	5.1.1.3 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	Another aspect of mobile stations is that they may will often be battery powered and hence power management is an important consideration. For example, it cannot be presumed that a station's receiver	adopted by plenary motion 8
21.	5.2	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	It is useful to think of the ovals used to depict a BSS as the coverage area within which the member stations of the BSS may can remain in communication. (The concept of area, while not precise, is often good enough.) If a station moves out of it's BSS, it can no longer directly communicate with other	adopted by plenary motion 8
22.	5.2.1	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	The independent BSS is the most basic type of 802.11 LAN. A minimum 802.11 LAN may can consist of only two stations.	adopted by plenary motion 8
23.	5.2.1 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	The association between a STA and a BSS is dynamic (STAs turn on, turn off, come within range and go out of range). To become a member of an infrastructure BSS a station shall must become "Associated".	adopted by plenary motion 8
24.	5.2.2	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	PHY limitations determine the direct station to station distance which may can be supported. For some	adopted by plenary motion 8
25.	5.2.2.1	db			w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements. w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not	The key concept is that the ESS network appears the same to an LLC layer as an independent BSS network. Stations within an ESS may can communicate and mobile stations may move from one BSS to another (within	adopted by plenary motion 8

				<p>correctly convey operational requirements.</p>	<p>the same ESS) transparently to LLC.</p> <p>Nothing is assumed by 802.11 about the relative physical locations of the BSSs in Error! Reference source not found.</p> <p>All of the following are possible:</p> <ul style="list-style-type: none"> a) The BSSs may partially overlap. This is commonly used to arrange contiguous coverage within a physical volume. b) The BSSs could be physically disjoint. Logically there is no limit to the distance between BSSs. c) The BSSs may be physically collocated. This may might be done to provide redundancy. d) One (or more) independent BSS, or ESS networks may be physically present in the same space as one (or more) ESS networks. This may can arise for a number of reasons. Two of the most common are; an Ad hoc network is operating in a location which also has an ESS network and when physically overlapping 802.11 networks have 	
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						been set up by different organizations.	
26.	5.2.3	ch	e		dangling participle, sentence immediately preceding Figure 5	Consider Error! Reference source not found. , to which BSS do stations 6 and 7 belong to?	corrected
27.	5.2.3	RM	E		This text and figure are not necessary to understand concepts or implement the standard.	<p>Error! Reference source not found. shows a signal strength map for a simple square room with a standard metal desk and an open door way.</p> <p>Error! Reference source not found. is a static snap shot, the propagation patterns change dynamically as stations and objects in the environment move.</p> <p>In Error! Reference source not found. the red blocks in the lower left are a metal desk and there is a doorway at the top right of the figure. The figure indicates relative differences in field strength with different colors and indicates the variability of field strength even in a static environment.</p> <p><u>Delete Figure 4</u></p>	editorial change declined as it was felt that this might result in additional technical no votes.
28.	5.2.3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	For wireless PHYs, well defined coverage areas simply do not exist. Propagation characteristics are dynamic and unpredictable. Small changes in position or direction mayean result in drastic differences in	adopted by plenary motion 8
29.	5.2.3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	<p>Basic Service Area (BSA): The conceptual area within which members of a BSS mayean communicate.</p> <p>Extended Service Area (ESA): The conceptual area within which members of an ESS mayean</p>	adopted by plenary motion 8
30.	5.3	db	T	Y	w/o the requested change the Draft is technically	LAN. A DS mayean be created from	adopted by plenary motion 8

					incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	many different technologies including current 802.x wired LANs.	
31.	5.3 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	802.11 has chosen to use the IEEE 802 48 bit address space (see clause 4). Thus 802.11 addresses <u>shall</u> will be compatible with, and unique within, the address space used by the 802 LAN family. The 802.11 choice of address space implies that for many instantiations of the 802.11 architecture, the wired LAN MAC address space and the 802.11 MAC address space <u>may</u> will be the same. In those	adopted by plenary motion 8
32.	5.4.1.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Messages received from an integrated LAN (via a Portal) by the DS for an 802.11 STA <u>shall</u> will invoke the Integration Service before the message is distributed by the Distribution Service.	adopted by plenary motion 8
33.	5.4.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	required for the Distribution Service to operate is provided by the Association services. Before a data message <u>may</u> ean be handled by the Distribution service, a STA <u>shall</u> must be "Associated".	adopted by plenary motion 8
34.	5.4.2.1	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Extended Service Set to a Basic Service Set in an independent Extended Service Set. This case is supported only in the sense that the Station <u>may</u> ean move. Maintenance of upper	adopted by plenary motion 8
35.	5.4.2.2	ge	e		section reference near bottom should be 11.1.3	"... see clause 11.1.3 on scanning".	corrected
36.	5.4.2.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey	Before a STA is allowed to send a data message via an AP, it <u>shall</u> must first become associated with the AP. The	adopted by plenary motion 8

					operational requirements.	act of becoming associated invokes the Association service which provides the STA to AP	
37.	5.4.2.2	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	At any given instant, a STA may be associated with no more than one AP. This ensures that the DS may determine a unique answer to the question "which AP is serving STA X?" Once an association is	adopted by plenary motion 8
38.	5.4.2.2, 5.4.2.3	ch	E		last sentence - the associating STA is not necessarily 'mobile' by the definition of 'mobile station' in the definitions section, it could be portable or stationary. All we know is that it is on the WM.	Association is always initiated by the mobile-STA, not the AP.	90% adopted, a mobile station does not in fact have to be in motion - stationary is motion of a low magnitude. The additional clause re "not the AP" was added.
39.	5.4.2.3	BO	T	Y	This is outside the scope of 802.11. Delete it.	Mobile Stations shall be able to maintain existing sessions / connections during a Reassociation.	correction adopted
40.	5.4.2.4	RM	E		This contains one or more anthropromorism	STAs expected are encouraged to Disassociate whenever they leave a network. However, the MAC protocol does not depend on STAs invoking the Disassociation service (MAC management protects itself against STAs which simply die or go away is designed to accomodate loss of an associated station).	adopted.
41.	5.4.2.4 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	The Disassociation Service is invoked whenever an existing Association is to must be terminated. Disassociation is a Distribution System Service. In an ESS this tells the DS to void existing association information. Attempts to send messages to a disassociated STA shall will be	adopted by plenary motion 8

						<p>unsuccessful.</p> <p>The Disassociation Service may be invoked by either party to an Association (STA or AP). Disassociation is a notification, not a request. Disassociation cannot be refused by either party to the association.</p> <p>APs may^{might} need to disassociate STAs to enable the AP to be removed from a network for service or for other reasons.</p>	
42.	5.4.2.5	BO	T	Y	This is untrue as written.	Attempts to send messages <u>through the DS</u> to a disassociated STA will be unsuccessful.	corrected
43.	5.4.3	BO	E			Two Three services are required for 802.11 to provide functionality equivalent to that which is inherent to Wired LANs.	corrected
44.	5.4.3.1	BO	E			This service is used by all stations to establish their identity to with stations with which they wish to communicate.	corrected
45.	5.4.3.1	BO	E			(This use of authentication is independent of any authentication process that may be used in higher at upper levels of a network stack.)	corrected
46.	5.4.3.1	ch	t		STA do not associate with each other, only STA to AP - the sentence as is, is misleading.	If a mutually acceptable level of authentication has not been established between STA and AP two stations, an Association shall not be established	language improved
47.	5.4.3.1	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	If desired, an 802.11 network may be run without authentication. This may violate implicit	adopted by plenary motion 8
48.	5.4.3.1	db	T	Y	w/o the requested change the Draft is technically	A STA may be authenticated with	adopted by plenary motion 8

					incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	many other STAs (and hence APs) at any given instant.	
49.	5.4.3.1.1	BO	E			Pre-authentication is typically done by a STA while it is already associated with an AP (<u>with</u> which it previously authenticated- with).	corrected
50.	5.4.3.1.1	ch	e		dangling participle, 1st sentence, second para.	(<u>with</u> which it previously authenticated with)	corrected
51.	5.4.3.1.1	ch	t		authentication exists seperately from association because one is a SS and the other is a DSS, not for the reason given in the first paragraph. Since STA authenticate with each other, but do not associate with each other, the services must be independent. The reason given there is the reason for the existance of pre-authentication, nothing more.	Because the authentication process could be time consuming (depending on the authentication protocol in use), <u>a STA may pre-authenticate with an AP</u> the Authentication service can be invoked independently of the Association service.	language improved
52.	5.4.3.1.1 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	use), the Authentication service mayean be invoked independently of the Association service. Pre-authentication is typically done by a STA while it is already associated with an AP (which it previously authenticated with). 802.11 does not require that STAs pre-authenticate with APs. However, Authentication <u>shall be</u> is required <u>before</u> an Association mayean be established. If the Authentication is left until Reassociation time, this may impact the speed with which a STA mayean Reassociate between APs, limiting BSS-transition mobility performance. The use of Pre-authentication	adopted by plenary motion 8
53.	5.4.3.2	BO	E		Add further explanatory text	The Deauthentication Service can be invoked by either authenticated party (mobile STA or AP). Deauthentication is not a request, it is a notification.	adopted

						Deauthentication can not be refused by either party. <u>If an AP sends a Deauthentication notice to an associated station, the association must also be terminated.</u>	
54.	5.4.3.2	ch	E		second last sentence - the deauthenticating STA is not necessarily 'mobile' by the definition of 'mobile station' in the definitions section, it could be portable or stationary.	(mobile-non-AP STA or AP)	adopted
55.	5.4.3.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	The Deauthentication Service is invoked whenever an existing Authentication is to must be terminated.	corrected
56.	5.4.3.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	The Deauthentication Service may be invoked by either authenticated party (mobile STA or AP). Deauthentication is not a request, it is a notification. Deauthentication shall not be refused by either party.	adopted by plenary motion 8
57.	5.4.3.3	BO	T	Y	This is not required. All of the necessary keys and other attributes can be initialized such that nothing need ever be sent "in the clear".	All stations initially start "in the clear" in order to set up the Authentication and Privacy services.	The assertion given may be true wrt to Data frames, but for auth frames, the auth transaction sequences are carefully specified as to which frames are in the clear and which are not - this is not controlled by MIB variables as the attributes only control data frames, not the mgt frames for Authentication. Therefore this change is declined because it is based on an invalid assumption re mgt frames.
58.	5.4.3.3	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	In a wired LAN, only those stations physically connected to the wire may hear LAN traffic. With a wireless shared medium, this is not the case. Any 802.11 compliant adapter may hear all like PHY 802.11 traffic	adopted by plenary motion 8

						that is within range. Thus the connection of a single wireless link (without privacy) to an	
59.	5.4.3.3 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	The default privacy state for all 802.11 Stations is "in the clear". If the Privacy Service is not invoked, all messages shall will be sent unencrypted. If this default is not acceptable to one party or the other, Data frames shall will not be successfully communicated between the LLC entities. Unencrypted Data frames	adopted by plenary motion 8
60.	5.5	ch	t		frames missing from class 1	Management Frames: <ul style="list-style-type: none"> • Probe Request/Response • Beacon • Authentication • Successful Authentication enables a station to exchange Class 2 frames. Unsuccessful Authentication leaves the Station in State 1. • <u>ATIM</u> 	corrected - but, atim is class 2 as auth is required in IBSS so can not be class 1.
61.	5.5	ch	t		frames missing from class 3	c) Control frames: <ul style="list-style-type: none"> • CF-END+ACK • PS-Poll • <u>CF-End</u> 	corrected
62.	5.5	mif	e	N	misc. editorial fixes	Data frames: <ul style="list-style-type: none"> • Data Directed data frames only (FC control bits "To DS" and "From DS" both false). also: remove "c)" preceding control frames in next-to-last paragraph of section also:	correct4ed

						fix indentation under "Reassociation Request/Response", "Disassociation" and "Deauthentication"	
63.	5.5 7.3.1.7 7.3.1.9	sb	t	n	It is not clear what happens if a STA sends an Association Request to an STA that it is not authenticated with. The correct action I suspect is an Association Response with Status code 11 (STA requesting is not authenticated). Problem is Section 5.5 specifies that an STA can't send an Association Response since it would seem to be in state 1 wrt the originating STA. I think the solution to this is for the response to the association request to be a deauthentication (which gets the sending STA back to state 1). However, deauthentication can only have a reason code - so status code 11 needs to be moved to the reason codes.	Move status code 11 to a reason code.	adopted - see also comment 68 Death and disassoc have been changed to class 1 frames as they can always be received. Language similar to disassoc in class 3 was added to class 2 for death. The reason code needs to be handled in clause 7 work - to be consistent. don't move 11 from status to reason, dup 11 in reason list also.
64.	5.5 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	As noted previously some services <u>shall</u> must be completed successfully before others <u>may</u> can be invoked.	adopted by plenary motion 8
65.	5.5 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	<ul style="list-style-type: none"> Deauthentication Deauthentication notification when in state 2 changes the Station's state from 2 to 1. The Station <u>shall</u> must become Authenticated again prior to sending class 2 frames. 	adopted by plenary motion 8
66.	5.5 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not correctly convey operational requirements.	<ul style="list-style-type: none"> Disassociation Disassociation notification changes a Stations state from 3 to 2. This Station <u>shall</u> must 	adopted by plenary motion 8

						<p>become Associated again if it wishes to utilize the DS.</p> <ul style="list-style-type: none"> Deauthentication Deauthentication notification when in state 3 implies Disassociation as well, changing the Station's state from 3 to 1. The station shall<u>must</u> become Authenticated again prior to another Association. 	
67.	5.5	WD	T	Y	<p>There is a problem with authentication in an IBSS. Authentication is a bottleneck in an IBSS, since it requires stations to maintain Authentication State variables for all stations that are communicated with. There are further no provisions that allows stations to signal to each other that a Authentication state mismatch exists between two stations. The result is that one side is not ready to cimunicate, while the other side is sending messages that are acknowledged by the receiving station, but not forwarded. There is no means specified by the standard to notify the other station that a mismatch exists.</p> <p>It is further felt that the authentication function is not needed in an IBSS. If WEP is used there is an implicit authentication, because all stations do have the same secret key, in order for them to communicate.</p> <p>It is therefore suggested to delete the requirement for authentication in an IBSS.</p>	<p>Add the following to the bottom of the Class 1 frames list: - Data Frames Direct Data Frames only ("To DS" and "From DS" bits oth false)</p> <p>Add "ATIM" to the class 1 Management Frame list.</p>	<p>problem with deauthentication corrected - see resolution to comment 63, 68.</p>
68.	5.5	mif	t	Y	<p>Just as receipt of a class 3 frame from a non-associated station causes a disassociation notification (see last</p>	<p>Add just above "Class 3 frames ..."</p>	<p>adopted - see also resolution to commnet 63</p>

					paragraph of section), the receipt of a class 2 frame from a non-authenticated station should cause a DeAuthentication notification. This is also consistent with Figure 8.	<p><u>If STA A receives a class 2 frame from STA B which is not authenticated with STA A, STA A shall send a DeAuthentication frame to STA B.</u></p> <p>Modify last paragraph of section:</p> <p>If STA A receives a class 3 frame from STA B which is not associated with STA A, STA A shall send a Disassociation frame to STA B. <u>If STA A receives a class 2 frame from STA B which is not authenticated with STA A, STA A shall send a DeAuthentication frame to STA B.</u></p>	
69.	5.6	ge	t		The second paragraph should be eliminated, as it makes no sense.	Eliminate "The independent BSS LAN is a logical subset of an ESS LAN."	adopted.
70.	5.6 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	An independent BSS consists of STAs which are directly connected. Thus there is will (by definition) only be one BSS. Further, since there is no <u>physical</u> DS, there cannot be a Portal, an integrated wired LAN, or	adopted by plenary motion 8
71.	5.6	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Only the minimum two stations are shown in Error! Reference source not found. An IBSS may have an arbitrary number of members. In an IBSS, only class 1 and class 2 frames are allowed since there is no DS in an IBSS.	adopted by plenary motion 8
72.	5.7 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Each Service is supported by one or more 802.11 messages. This clause specifies the information items which shall must be minimally present in the messages to support the service.	adopted by plenary motion 8

73.	5.7.1 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	When a Station wishes to send data to another Station it sends a Data message. In an ESS the message shall will be handled by the Distribution Service. In an ad hoc case, the Data message is sent directly. The	adopted by plenary motion 8
74.	5.7.4 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	Information Items: IEEE address of the station which is being disassociated. This shall may be a broadcast address in the case of an AP disassociating with all Associated Stations.	adopted by plenary motion 8
75.	6.1.1 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	This service provides peer LLC entities with the ability to exchange MAC Service Data Units. To support this service, the local MAC shall use the underlying PHY-level services to transport an MSDU to a peer MAC entity, where it may be delivered to the peer LLC. Such asynchronous MSDU transport is performed on a best-effort connectionless basis. There are no guarantes that the submitted MSDU shall be delivered successfully. Broadcast and multicast transport is part of the asynchronous data	adopted by plenary motion 8
76.	6.1.2	ch	e		grammer	support for time bounded services is are also optional	corrected
77.	6.1.2	mif	e	N	grammar	change "are" to "is" in last sentence	corrected
78.	6.1.2	WD	T	n	This section specifies that TBS are implemented as	Change the text to read as follows:	moot - section deleted by

					<p>connection based data transfers. All mechanisms to establish a connection and maintain it are however deleted from the standard.</p> <p>The only thing that 802.11 can specify is that PCF implementations can provide provisions for reduced transfer delay variations that are beneficial for TBS traffic.</p>	<p>Time-Bounded services can be implemented within the Point Coordination Function (PCF). Implementations can make use of the ability of a PCF to minimise transfer delay variations, as is beneficial for Time-Bounded services.</p> <p>Time-Bounded services are optional, and therefore the PCF is optional.</p>	<p>adoption of folling two comments (79, 80)</p>
79.	6.1.2	BO	T	Y	Time-bounded services and "connections" are leftovers, delete.	<p>Time-bounded services are implemented within the Point Coordination Function (PCF) as connection based data transfers. The access point adds connections to the polling list in a best attempt to maintain the requested connection.</p> <p>Since the PCF is optional, support for time bounded services are also optional.</p> <p>Time-bounded Services</p>	<p>adopted</p>
80.	6.1.2	jz	t	Y	There is no such thing as Time-Bounded Services. Delete this section.		<p>adopted</p>
81.	6.1.3	mif	e	N	formatting	<p>indentation appears to be incorrect on last paragraph of this section.</p>	<p>corrected</p>
82.	6.1.4 A.4.4	db	T	Y	<p>w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.</p>	<p>intentionally reorder MSDUs. However, since MSDUs may transit a DS, and a DS may might reorder MSDUs, it is not possible for the MAC to guarantee MSDU ordering.</p>	<p>adopted by plenary motion 8</p>
83.	6.1.4	mif	t	Y	The statement in D3.0 is incorrect . Under certain circumstances, the MAC is required to reorder MSDUs, for particular, beneficial intent. Most of the existing cases are to support power management. If time-bounded services are ever re-introduced, they may also require	<p>The services provided by the MAC Sublayer permit, <u>and may, in certain cases require,</u> the reordering of MSDUs. The MAC does not intentionally reorder MSDUs, <u>except as</u></p>	<p>adopted as editorial clarification -the requested text does not change operation of D3.</p>

					MSDU reordering. The most that can be said about “not intentionally reordering” is that the MAC does not intentionally reorder MSDUs other than as may be appropriate to improve the deliverability of the MSDUs based on the power management mode of the station.	<u>may be necessary to improve the likelihood of successful delivery based on the current operational {or “power management”} mode of the designated recipient station(s). In addition</u> However, since MSDUs can transit a DS, and a DS might reorder MSDUs, it is not possible for the MAC to guarantee MSDU ordering, <u>even when no reordering is performed by the MAC entities themselves.</u>	
84.	6.2.1	ge	e		paragraph 3 has extraneous words “of the” - delete them	“.. an individual MAC sublayer address.”	corrected
85.	6.2.1.1	ch	e		extra words need deleting	The source_address parameter (SA) shall specify an individual MAC sublayer address. of the	corrected
86.	6.2.1.1	ch	t		must be changed to remain consistent with subclause 6.2.1.3	The service_class parameter specifies the service_class desired for the data unit transfer. 802.11 allows the <u>following</u> one values: asynchronous, or <u>asynchronous with encapsulated information</u> .	Accepted - clauses made consistent, but wording was removed as it should not have been present in D3.0 due to previous 802.11 decisions. See comments 96, 97
87.	6.2.1.1	WD	e	n	Correct end of first sentence below the MA-UNITDATA request specification.		corrected
88.	6.2.1.1	mif	e	N	misc. typos	in paragraph beginning “The priority parameter...” there is no space after the period ending the first sentence in last paragraph there are two periods at the end of the last sentence	corrected
89.	6.2.1.1	mif	E	N	part of the sentence is missing	The source_address parameter (SA) shall specify an individual MAC sublayer address. of the <u>MAC sublayer entity to which the MSDU is being</u>	corrected

						<u>transferred.</u>	
90.	6.2.1.1 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	When Generated This primitive is generated by the LLC sublayer entity whenever a MSDU <u>is to</u> must be transferred to a peer LLC sublayer entity or entities.	adopted by plenary motion 8
91.	6.2.1.2	ch	e		spelling	The routing_information parameter specifies the route desired for the data transfer. 802.11 shall always set this <u>field</u> filed to null.	corrected
92.	6.2.1.2	ch	E		sentances copied from previous sectin without having their sense changed from request to indication, plus a couple of typos	The priority parameter specifies the priority <u>at which</u> desired for the data unit <u>was received</u> transfer. (contention or contention free.) The service_class parameter specifies the service_class <u>at which</u> desired for the data unit <u>was received</u> transfer.	Corrected
93.	6.2.1.2	ge	e		paragraph 8 (on priority parameter) should read "contention or contention free"	contention or contention free	corrected
94.	6.2.1.2	mif	E	N	presentation inconsistent with the same items in section 6.2.1.1 and with the contents of the "When Generated" paragraph of this section	The routing_information parameter specifies the route desired for the data transfer. 802.11 shall always set this <u>field</u> filed to null. The data parameter specifies the MAC service data unit as received by the local MAC entity. The reception_status parameter indicates the success or failure of the incoming frame. <u>802.11 shall always set this field to successful.</u>	mostly adopted - some text already corrected, alternate wording adopted - author accepts resolution of comment.

						<p>The priority parameter specifies the priority used^{desired} for the data unit transfer. 802.11 allows this parameter to have two values: contention or contention-free. (contention of contention-free)</p> <p>The service_class parameter specifies the service_class used^{desired} for the data unit transfer. 802.11 allows one value: asynchronous.</p>	
95.	6.2.1.2 A.4.4	db	T	Y	w/o the requested change the Draft is technically incorrect - since approved "standard" language was not used the draft does not corectly convey operational requirements.	The source_address parameter shall ^{must} be an individual address as specified by the SA field of the incoming frame.	
96.	6.2.1.3	mif	E	N	consistency with 6.2.1.1 and 6.2.1.2	<p>The transmission_status-parameter shall be used to pass status information back to the local requesting LLC sublayer entity.</p> <p>802.11 specifies the following values for transmission_status:</p> <ul style="list-style-type: none"> a) successful, b) undeliverable (for unacknowledged directed MSDUs when the aRetry_Max is reached), c) excessive_data_length, d) non_null_source_routing, e) unsupported_priority (for priorities other than contention or contention_free), f) 	<p>corrected This is a editorial catch up to reflect previous 802.11 decisions.</p>

						<p> unsupported_service_class class (for service classes other than asynchronous; asynchronous_with_eneapsulated_information, time_bounded, or time_bounded, or time_bounded_with_eneapsulated_information), g) unavailable_priority (for contention_free when no point coordinator is available, in which case the MSDU is transmitted with a provided_priority of contention), h) unavailable_service_class (for time_bounded or time_bounded_with_eneapsulated_information under the current MAC definition). The provided_priority parameter specifies the priority that was used for the associated data unit transfer (contention or contention_free). The provided_service_class parameter specifies the class of service used for the associated data unit transfer: (asynchronous). </p>	
97.	6.2.1.3	BO	T	Y	These outdated bits must be deleted.	802.11 specifies the following values for transmission_status:	<p style="text-align: center;"> corrected This is a editorial catch up to reflect previous 802.11 </p>

						<ul style="list-style-type: none"> a) successful, b) undeliverable (for unacknowledged directed MSDUs when the aRetry_Max is reached), c) excessive_data_length, d) non_null_source_routing, e) unsupported_priority (for priorities other than contention or contention_free), f) <ul style="list-style-type: none"> unsupported_service_class (for service classes other than asynchronous; asynchronous_with_eneapsulated_information; time_bounded; or time_bounded; or time_bounded_with_eneapsulated_information;), g) unavailable_priority (for contention_free when no point coordinator is available, in which case the MSDU is transmitted with a provided_priority of contention), h) <ul style="list-style-type: none"> unavailable_service_class (for <u>service class</u> <u>other than</u> asynchronoustime_boundedor time_bounded_with_eneapsulated_information <u>under the current MAC definition</u>). 	<p>decisions.</p>
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