

| Seq. # | Section number | your initials | Comnt type E, e, T, t | Part of NO vote | Corrected Text/Comment | Rationale | Disposition/Rebuttal |
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General comments from Ballot on Draft Standard D2 (Vic Hayes, Chair, AT&T WCND)

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| | | SN | | | I voted "approve" despite the fact that I have a number of technical comments that in a normal case would require a disapprove vote. This time, I thought that a timely completion of a "less than perfect standard" is more important than fixing all minor technical details. If the technical issues I identified will be brought up by enough voting members then I will vote according to the importance of each one, in the appropriate working groups. The most important comment I would like to make is repetition of a general comment of major technical nature that I made in the previous ballot round and has never been addressed as part of the ballot responses !. The comment has to do with the fact that the standard does not address nor has any provisions to deal in an effective way with non IEEE 802.11 type radio interference which is the biggest threat to the IEEE 802.11 signals integrity and to the reliable operation of 802.11 networks. | | |
| | | TM | T | | The back-off algorithm should be better defined for the frequency hop case. It is not specified if the back-off timer continues during the hop time or not. If allowed to run during the frequency change period, many timers could expire and there will be a large collision at the start of the next dwell | | |
| | | <u>STh</u> | <u>T</u> | <u>N</u> | | Section incomplete | |
| | - | BPa | T | | Perform simulations | Before releasing the Standard we must simulate its behavior (e.g. hidden terminals, large quantities of stations, etc) | |
| | All | MW | | | 95/196 | Clarity & Correction for function | |

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| | | | | | | improvement | |
| | All | MW | | | 95/198 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/201 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/203 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/207 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/208 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/209r1 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/211 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/212 | Clarity & Correction for function improvement | |
| | All | MW | | | 95/2013 | Clarity & Correction for function improvement | |
| | all | ZV | E | | The figures in this standard are not consistent. Look at figures 6-1 and 6-2; they appear on page 75. You should at least try to maintain a consistent type font and size (Helvetica 8 point is preferred). Some of the type sizes are extremely small (e.g., figure 6-14 on page 89). Why use all bold in figure 6-xx(1) on page 102, figure 11-6 on page 212, figure 11-7 on page 213, and figure 11-9 on page 217, etc.? Also, some figures are missing from the standard (see clause 12). Consider redrawing the figures in clause 2. Some of the italic callouts in figure 11-8 on page 215 and figure 11-12 on page 221 are too hard to read. | | |
| | all | ZV | E | | If you intend this standard for the international arena, you must number all figures and tables consecutively throughout this document (e.g., figure 1, 2, 3, etc.). This is to comply with ISO requirements. DO NOT number by clause (figure 6-1, etc.). | | |
| | all | ZV | E | | Avoid using GRAY CODE in tables (e.g., table 12-1 on page 285). This may not show up when the standard is | | |

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| | | | | | printed. Also, color printing is not used. Therefore, do not refer to "red blocks" in figure 2-4 (see page 15). | | |
| | all | ZV | E | | What are the sources of the tables and figures within this standard? If they have appeared in an earlier published source (other than an IEEE standard), the working group must identify the source and obtain written permission to use copyrighted materials. | | |
| | all | ZV | e | | Some items labeled "figures" are actually tables, and should be relabeled (e.g., figure 4-13). The working group should review each "figure" and ensure that it is properly labeled as "table" where necessary. | | |
| | all | ZV | e | | Avoid use of the word "must." (see page 10, under "The Media Impacts the Design.") On page 31, line 2, change "which must..." to "that shall..." The word "must," according to the new style manual, is used to describe unavoidable situations. Be sure this is what is meant in each instance. You may want to change must to "should" or "shall" if the phrase is not meant to be in the context of an unavoidable situation. See 7.3.1 of the <i>IEEE Standards Style Manual</i> . | | |
| | all | ZV | e | | Are notes informational? (For example, see page 242.) If notes are an integral part of the text, they may be incorporated into the standard. Notes in the new style are not considered part of the standard, but are purely informational. If they are informational, they can stand as is. | | |
| | all | ZV | e | | Equations should be numbered consecutively throughout the body of the standard (see page 274). When referring to them in text, refer to equation (1), equation (2), etc. | | |
| | all | ZV | e | | On pages 27 and 28, you have used more than one lettered list within the same subclause. This is not acceptable because if you later need to reference one of the letters, e.g., item a), you will not be able to identify which list it is coming from. Please rework this, using an unordered list (dashed list), if possible. | | |
| | all | ZV | e | | On page, words are cut off. Please fix this. Also, consider running a spell check; I noticed a few words misspelled within the standard. | | |

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| | all | ZV | e | | Refer to clauses and subclauses, not "sections." Examples: See clause 4, see 2.3.1. | | |
| | all | ZV | e | | SI units of measurement and appropriate symbols should be used, such as min for minutes, s for seconds, V for volt, μ for micro ohm, etc. (Refer to IEEE Std 260-1978.) Also, separate number from unit by one (non-breaking) space, e.g., 120 V. | | |
| | All | MW | t | | Include "fixes" per submissions at Chicago as follows: 95/014r2 & A but words added in "multirate" per minutes to preserve this function as in doc 95/219 | Clarity & Correction for function improvement | |
| | ALL | BD | T | N | Absolutely no changes are to be made to any clause of D2 other than those I have requested in this LB response. Any changes other than those I requested are automatically considered by this voter to be additional reasons for my NO vote on this letter ballot. | <p>The letter ballot instructions claim:</p> <p>Do Not Approve (this vote requires specific reasons in sufficient detail so that the specific wording of the changes that will cause the negative voter to change his or her vote to "approve" can readily be determined. If the changes are made, then the vote automatically becomes affirmative)</p> <p>1) re automatic vote changing:</p> <p>The last clause is incorrect and to the best of my knowledge <i>NOT</i> a part of the IEEE rules. Simply making the alterations I comment on is NOT sufficient to change my vote, unless, at a minimum, <i>absolutely no other changes</i> are made to the draft. As I have raised this issue on each letter ballot, I am now getting rather irritated with the Chair's attempts to convince the group of (what I believe to be) his incorrect rule interpretation - any attempt to enforce this approach will be</p> | |

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| | | | | | | <p>brought before the 802 executive group. 2) Should these incorrect instructions be utilized to create any votes contributing to the passage of this letter ballot, the letter ballot shall have been incorrectly processed and therefore invalid - resulting in unnecessary delay while the LB is repeated.</p> | |
| | ALL | RC | T | Y | <p>My reasons for the NO vote do not fit this format. I have prepared a separate document with the explanation that is attached. I ask that copies of it be made available to the Committee as a whole. The following paragraph is a short summary of my objection:</p> <p>The minimum action to bring the system to an acceptable level would require change to an access point originated message for the channel monitoring CCA as the criteria enabling a station to transmit. It follows that the <u>infrastructure based access model</u> which is now permitted becomes primary. Peer-to-peer should be the permitted service within the infrastructure or a default when such infrastructure is not present. The minimum infrastructure is a local store-and-forward repeater with address filtering and a near ceiling height antenna.</p> | | |

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| | | | | | Chandos A. Rypinski | | |
| | Annex | ZJ | T | N | Put the MAC state machines into the Informative Annex. | To avoid confusion about whether the text or the SMs take precedence. | |
| | annexes | ZV | E | | Identify the TITLE of each annex. | | |
| | front matter | ZV | e | | The foreword in the front matter should be labeled "Introduction." Also, a list of the working group members will need to be provided for the front matter. | | |
| | General | YI | | | I vote yes to the proposed changes made in papers 95137r1, 95014r2, 95196, 95198, 95201, 95203, 95206, 95207, 95209r1, 95210, 95211, 94212, and 95213 | | |
| | page 151 | ZV | e | | On page 151, under "MLME Service Access Point Interface," please be sure to use complete sentences. | | |
| | Page ii | SKy | e | | Add the following to the keywords list: MAC, PHY, 802.11 and mobile | Words found in the title of the spec. Mobility is a key feature of wireless LANs. | |
| | tables | ZV | e | | Tables in the annexes should be labeled as table A.1, A.2, etc. Any figures or tables that appear in the annexes should be numbered consecutively within that annex. For example, table B.1, B.2, B.3, etc. Each table must have a table title. Please label the table on page 291 with a table number and a table title. | | |
| | title page | ZV | E | | There are two slightly different copyright statements used on the cover and title page of your draft. The following Draft Copyright Statement should appear : Copyright ©© 1995 by the Institute of Electrical and Electronics Engineers, Inc. 345 East 47th Street New York, NY 10017, USA All rights reserved. This is an unapproved draft of a proposed IEEE Standard, subject to change. Permission is hereby granted for IEEE Standards Committee participants to reproduce this | | |

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| | | | | | <p>document for purposes of IEEE standardization activities. If this document is to be submitted to ISO or IEC, notification shall be given to the IEEE Copyright Administrator. Permission is also granted for member bodies and technical committees of ISO and IEC to reproduce this document for purposes of developing a national position. Other entities seeking permission to reproduce this document for standardization or other activities, or to reproduce portions of this document for these or other uses, must contact the IEEE Standards Department for the appropriate license. Use of information contained in this <u>e</u> unapproved draft is at your own risk.</p> <p>IEEE Standards Department Copyright and Permissions 445 Hoes Lane, P.O. Box 1331 Piscataway, NJ 08855-1331, USA</p> | | |
| | TOC | ZV | e | | The table of contents should only go up to the second level, i.e., 2.1, 2.2, 2.3. | | |

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RTS/CTS discussion continued.... No studies have been presented to show the impact of CTS on adjacent or overlapping WLAN. In some cases, the CTS will have a negative impact on throughput at nodes in range of the CTS but out of range of the sending node and located in another BSS. This unit could send without deferring

Below is a recent note from the chair of 802.11, Vic Hayes

Patents

Patents can be a daunting subject, and caution is urged because of some of the legal situations that have arisen concerning them. For instance, standards developers have been held liable in cases where the balloting group was "packed" by certain manufacturers at the expense of others, or where a working group interpreted a standard in a manner that restricted a new company's ability to enter the field. You want to avoid this appearance at all costs.

You should pay attention to issues concerning patented material throughout your standard's development process. If you do choose to include patented material, it's essential that you create a document explaining the technical reasons for including the patented material, along with identifying alternative technologies that would achieve the same end, with their advantages and disadvantages. You should explain what the advantages are of the patented technology you've selected as well, if it satisfies a public need, and if it excludes any portion of your industry from meaningful competition. This document, which should show who the proponents of the patented technology are and what interest they may have in the standard adopting that technology, must be filed at the IEEE.

As far as I am aware, none of the above requirements have been met by this committee.

Within the working group, you should announce the patent policy periodically for any new members (for instance, every six months), and members should know that they need to disclose any patent issues that they know of. If the working group does discover patents involved with their standards project, the chair should contact the patent holder to determine if the patent holder will follow the IEEE Standards patent policy as outlined in the IEEE Standards Board Bylaws. If the patent holder is willing, the chair should obtain a letter stating this and place it on file with the IEEE Standards Department. The release letter does not need to include patent numbers, but it should cover patents pending as well as granted.

Once again, this requirement has not been met.

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