Seq. #	Clause number	your voter's ID code	Cmnt type E, e, T, t	Part of NO vote	Comment/Rationale	Recommended change	Disposition/Rebuttal

Results of LMSC Ballot on Draft Standard 802.11 D5.0 -

Resolutions for Comments on Clauses 0-4 and general comments

Seq. #	Clause number	your voter's ID code	Cmnt type E, e, T, t	Part of NO vote	Comment/Rationale	Recommended change	Disposition/Rebuttal
	2	**VZ**	**E**		Do you want the most current version of the references to be referenced? If so use the following introductory sentences in clause 2	This standard shall be used in conjunction with the following standards. When the following standards are superseded by an approved revision, the revision shall apply.	**Declines to change.** **We do not want the reference to be automatically updated to newer versions of thedocumnets as they are updated because future changes to those douments are unknown at the time 802.11 waswtitten.**
	3	**VZ**	**E**		Each definition should be numbered	Number the defintins 3.1, 3.2, 3.3, etc.	**Editor to do**
	3	**MT**	**e**		**Mobile Station definition requires a hard return to separate from the MinimallyConformant Network definition**	**add a hard return**	**corrected**
	3	**JD**	**e**		**new par missed**	**MinimallyConformant Network.** An IEEE 802.11 network in which two stations in a single BSA are conformant with IEEE Std-802.11. **Mobile Station.**A mobile station uses network communications while in motion.	**corrected**
	3.	**JMZ**	**e**		Typos	Change "ESS Basic Rate Set" to "BSS Basic Rate Set"; insert paragraph-break before Mobile Station definition; change ".11LAN" to ".11 LAN" in Portal definition	corrected

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	4	**MT**	**e**		**WEP = <…>**	**remove period from end**	**corrected**
	4, 15.1.3	**MT**	**e**		**add the abbreviations from clause 15 (DSSS PHY) this maintains consistency among clauses**	**add abbreviations from clause 15 and delete from clause 15**	**Editor to do.**
	various	**RS**	**T**	**Y**	Use of "shall" and PICS: The use of the word "shall" is critically important in IEEE standards. A "shall" mandates a conformance requirement. Therefore, the word should be used SPARINGLY, in precisely those clauses that absolutely require conformance for interoperability or correctness. In addition, EACH AND EVERY "shall" must have an associated entry in the PICS proforma. This has not been done in this standard. The PICS refers generally to sections that contain many shall statements. This in incorrect. There should be a 1:1 correspondence between the number of "shalls" in the document and the number of conformance requirements in the PICS.. Rather than have a lot of "shalls", it is common practice to have a complete detailed description of some desired behavior, either in prose or a formal language/state-machine, then have *ONE* statement, such as: "The MAC shall implement the requirements of the Transmit State Machine as specified in clause x.x.". This allows one PICS entry for a complex entity.	Eliminate and restructure the use of the term "shall" as indicated, or correct the PICS such that there is a 1:1 correspondence between "shalls" and PICS requirements entries.	**Comment respectfully declined.** **The group does not know how the reviewer would change the draft:: remove all "shalls" and simply say "it shall operate as specified in clauses 1 thru 14"?** **How many shalls are too many?** **The author is requested to inform 802.11 which Shalls he views as superflous.**
	Foreword	**VZ**	**E**		The foreword should be called Introduction	Change Foreword into Introduction	**Forwarded to editors**
	general	**CAR**	**T**		**See end of this document**		**For information**

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	general	**MT**	**T/e**		**This protocol is based on an assumption that all propagation delays are less than 1µsec. This implies a range of less than 978 feet. In order for this protocol to be used in longer range situations, such as building to building bridges, some adaptations will have to be made.** **Corrections must be made in order to maintain transmit slotting fairness and to adjust the time a station waits for an ACK**	**Add a disclaimer to an introductory section which highlights the range restrictions.** **Additional capability can be accomplished by adding a MIB variable which identifies the distance between to stations. (only useful in a point to point link and point to limited multipoint links) The protocol can be 'tweaked' to allow for the extra propagation time.** **A range determination method can be added to the ASSOCIATION protocol which will estimate the range between two stations and adjust the protocol timing accordingly. In the case of point to multipoint, the longest propagation time should be used by all stations in order to maintain fairness.**	**rejected in full plenary** **DaveBagby/KenZimmerman (21-2-6)** **It is felt that the title of the standard is enough to qualify the applications for this protocol.**
	general, 2.3.1, 4	**VZ**	**E**		Incorrect references to sections and paragraphs	Refer to clauses andsubclauses, not "sections" or "paragraphs" like in clause 4 and 2.3.1	**Forwarded to editors**
	Introduction	**VZ**	**E**		The Working Group will need to provide an introduction (giving the history of the standard and a description of its purpose) for the front matter	Vic Hayes: I have asked a copy of 802.12 as input material.	**Forwarded to editors**
	Table of contents for Figures and Tables	**VZ**	**E**		Redundancy in Table of Contents	Figures and Tables are not normally included in the table of contents	**Forwarded to editors**

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Comments from Chan Rypinski:

RC (?) T

Dear Colleagues:

My **Affirmative** vote on this matter is a response to the questions: "Should this document be published as a Standard?" It is not an opinion on whether it is technically adequate. In the past, I have repeatedly expressed to the 802.11 Committee my reservations about the power sensing deferral access method and distributed logic generally. The difficulties remain, and there is little to be gained by revisiting them now.

The difficulties that will be experienced will not occur for the case of one isolated system. There will be difficulty when there are numbers of units comprising numbers of contiguous coverage areas. Because use in contiguous coverages is not coordinated, the aggregate capacity will be much less than it might be and probably much less than is expected.

The ease with which this and any deferral system can be jammed is a major vulnerability. The frequency of occurrence of individuals with both malevolent motives and technical skill is underestimated. The actions of some otherwise normal individuals when frustrated will also find this opening for technical retribution. Also, some technicians will soon learn that strapping the RSSI input to a permanent no-signal condition will greatly improve a minority of users ability to access the channel.

There are additional technical difficulties which will be present if any attempt is made to provide a low bandwidth connection-type service as was announced in the first requirements document.

The high level of skill shown in the protocol workarounds and technical descriptions cannot undo the weaknesses of the physical medium concepts. The amount of effort expended to create this Standard could have produced something much better. The present result is a distributed logic system with a series of "patches" to provide the unavoidable necessary functionalities of a centrally managed system. Many of these necessary functions, I called to the attention of the Committee in '92 and '93 with little effect. My present concern is with the eventual disappointment of the using public and the consequential loss of confidence in radio systems generally.

If, at the halfway point, a central channel manager function had been defined as the norm with ad hoc as a necessary and useful subset, then a satisfactory standard could have been evolved, which at a minimum would have far fewer pages and management functions.

Publication of this document could well result in a useful standard showing the upward interface for a radio system to the higher layers. Different and better physical mediums can be designed to use it or a subset. I do not doubt that such products will appear on the market.

Chandos A. Rypinski,
Life Fellow IEEE