
**IEEE P802.11
Wireless LANs**

Comments received on 802.11b in Letter Ballot 17

Date:

March 4, 1999

Author:

Vic Hayes
Lucent technologies
Zadelstede 1-10
3431 JZ Nieuwegein, the Netherlands
Phone: +31 30 609 7528
Fax: +31 30 609 7556
e-Mail: vichayes@lucent.com

We received comments from the following persons:

Voter id	Full name
db	David Bagby
sl	Stanley Ling
mbs	Matthew B. Shoemake
tt	Tom Tsoulogiannis

The comments are provided in the following table starting on the next page:

Seq. #	Clause number	your voter's id code	Comment type E, e, T, t	Part of NO vote	Comment/Rationale	Recommended change	Disposition/Rebuttal
1	Cover letter	sl	T	yes	<p>I do not agree that a new SG be formed under 802.11 that purposely wants to define a new MAC than the currently defined MACs used in TGa and TGb.</p> <p>A common 802.11 MAC will allow interoperability between low-rate/low-cost WPAN devices and high-rate/higher complexity TGa and TGb devices. This will distinguish the WPAN study group from other groups such as Bluetooth and HomeRF, promoting the entire 802.11 market.</p>	Require a common MAC or MAC components to the WLAN PAR to be compatible with existing 802.11 standards	<p>We do not agree. Having a single common MAC does not guarantee Interoperability for example the FHSS, DSSS, and IR Physical Layers.</p> <p>The WPAN is not trying to distinguish itself from BT and HRF we are trying to come up with a standard that addresses the WPAN Functional Requirements and that has broad market place applicability.</p>
1	NA	mbs	T	YES	<p>The wireless home market is already occupied by HomeRF and low cost 802.11 solutions. The wireless POS market is being addressed by Bluetooth.</p> <p>Addition of a Task/Working Group to introduce a new standard into the same arena does not standardize the market place. It confuses the market place.</p>	Deny the request to make the WPAN study group a Task Group under 802.11 or a Working Group under 802.	<p>We do not agree. The view put forward is not substantiated in the market (there are no Bluetooth and HomeRF devices available today). The purpose of this Group is to provide a forum for standardization within the Personal Area Network space. The Bluetooth Special Interest Group and HomeRF Working Group are not standards development organizations.</p>
1	6	TT		Y	<p>The scope described states that only co-existence is required. If this is to be an 802.11 extension then some form of interoperability is required given that equivalent PHY's are used.</p> <p>Since co-existence with existing 802.11 LANs is deemed a "critical" success factor then this implies there must be the ability to be able to decode up to the end of the PLCP header. This would allow the duration of the frame to be decoded and a deferral done until the end of the frame. Since co-existence is a</p>	<p>State in scope that a level of interoperability sufficient to transfer data between a WPAN device and an 802.11 device will be possible.</p> <p>This comment stands from the last ballot. The SG's resolution of this comment was to replace the word "possible" above with "a goal".</p>	<p>In keeping with our comments of meeting critical WPAN requirements and seeking broad marketability we do not want to use the word "will" but rather the word "goal" in terms of interoperability. We note that the Task Group A Physical Layer does not mandate interoperability with the original IEEE 802.11 standard.</p> <p>There is no singular definition of</p>

Seq. #	Clause number	your voter's id code	Cmnt type E, e, T, t	Part of NO vote	Comment/Rationale	Recommended change	Disposition/Rebuttal
					<p>two way street, it is then equally vital that 802.11 defer to WPAN traffic, otherwise the WPAN network would always fail in the presence of a busy 802.11 network. This means that the PHY's for WPAN and for 802.11 must be very similar in modulation and channel allocation to allow this to happen. Simple energy detection is not sufficient to ensure co-existence.</p> <p>Since the PHY's are similar then this leaves the MAC as the only source of simple co-existence instead of interoperability.</p> <p>It was discussed how a subset of the 802.11 MAC can be used to simplify the implementation and reduce the cost of WPAN device, yet still allow SOME level of interoperability with an existing 802.11 device. Yet the PAR does not mention interoperability.</p> <p>I believe the interoperability goal should be stated in the PAR, otherwise a lot of time may be wasted with draft WPAN standards that are not 802.11ish and will most probably fail at the working group or Sponsor level.</p>	<p>If something isn't required it will probably be the first thing to be dropped.</p> <p>Therefore I would like, interoperability sufficient to transfer data between a WPAN device and an 802.11 device SHALL be a requirement and shall be stated clearly in the WPAN PAR.</p>	<p>co-existence. Interoperability can be used to assure co-existence, but that is not the only way. For reasons previously stated, we maintain that interoperability remains a goal but we cannot predict if interoperability will be feasible.</p> <p>It is inappropriate to commit to interoperability at this time without a definition of a Physical Layer for a WPAN.</p>
1 cont'd.	6	TT		Y	<p>I don't think this body should encourage the development of an incompatible MAC standard which this PAR seems to do.</p> <p>I don't understand the reluctance of committing to a course of action that will allow SOME interoperability with existing devices.</p> <p>If it can't be done or if a totally different MAC is desired for reduced cost or other reasons, then this should not be under 802.11.</p>		

Seq. #	Clause number	your voter's id code	Cmnt type E, e, T, t	Part of NO vote	Comment/Rationale	Recommended change	Disposition/Rebuttal
					Does it make sense to have two MACs that aren't interoperable be part of the same 802 standard?		

Re motion 3, WPAN: This project still has not addressed the issues raised in my LB 16 comments. They appear to insist on ignoring existing technology that would satisfy all the stated requirements. IEEE should not invent technology to simply create standards – it should be standardising existing technology instead so that the standard document specifies common, standardized practices. As the WPAn group appears to want to reinvent the wheel, I have to continue to vote no until I can be convinced that there is value in an alternative technical approach to problems that are already solved. Note that the existence or not of a de-jure IEEE standard is not justification for the creating one – particularly when satisfactory alternatives already exist.

Comments to accompany LB 16 vote from David Bagby.

Re the WPAN documents:

Vote: No

Reasons:

These documents are a mess. They appear to me to be a classic case of doing a document just to see if one can meet the minimum requirements to get by. In my view the documents are so seriously deficient they should never have been sent out for ballot.

For example:

- 1) They do not call out a defined need for WPAN devices (no defined user group, no market segmentation, no examples of industry need).
- 2) They do not identify any market uniqueness (as required) – in fact there already exist at least two other RF based technologies that the proposers have indicated would probably meet their needs (BlueTooth and HomeRF) – but they do address these technologies as part of the justification.
- 3) None of the criteria put forward are quantified. Vague opinions are offered in the criteria document about needs for WPAN stuff. The total lack of quantified, verifiable information is inadequate. I doubt that any VC firm would invest in a business plan based on this level of justification/motivation. The establishment of an additional part to 802.11 is an expensive exercise – consider the manpower involved in meetings and ballots alone.
- 4) The documents do not comply with requirements already placed on the study group by 802.11 (re interoperability, which I personally would deem a requirement). I have heard this 2nd hand but can not verify it as the minutes of the relevant meetings are not yet available. While this is the fault of the 802.11 management rather than the study group, because of the timing of the letter ballot I am forced to vote No until such time as the relevant meeting minutes are available.

<note as of 2/26/99 at <http://grouper.ieee.org/groups/802/11/Minutes/index.html> there are still no meeting minutes past may 1998! This is not acceptable>