IEEE P802.11

TITLE: **Review of RCR STD-33**

DATE: May 1995

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1. OVERVIEW

This submission compares the FH phy requirements in the P802.11D1 draft standard and comments collected in P802.11-95/77 to the technical requirements of the Japanese RCR STD-33 for spread spectrum low power data communication stations. The version of the RCR STD-33 that was used for comparison was the one circulated in the March 95 FH phy meeting.

Conflicts between these standards are listed below in Section 2. Discrepancies are only listed when the RCR STD-33 varied from the P802.11D1 in a manor that could make a 802.11D1 compliant product possibly fail compliance with RCR STD-33.

The general direction that the FH phy has been going is to eliminate from the standard the electrical requirements of various regulatory agencies, but rather require that 802.11 compliant products "meet all applicable requirements issued by the regulatory agencies for the geography of operation." The spirit of this may be carried forward in some of the following conflict areas to reconcile them with the draft.

2. DETAILS OF COMPARISON

The sections referenced below are section numbers in P802.11D1 Section 10 where the requirements are in conflict with some part of RCR STD-33.

Section 10.6.16 Transmit Power Levels

802.11 FH compliant products are not required to have multiple levels, but section 3.1(1) in STD-33 requires that "The antenna power is to be no more that 10mW". 802.11 products may require a second power level to operate under STD-33 regulations so as to reduce their power output below 10mW. There appears to be a +0.8dB/-7dB implementation allowance for this parameter. The specification for rf

power output level is a maximum of 10mW EIRP (with provisions for +20%/-80% error).

Call Sign Requirement (not currently part of P802.11D1)

RCR STD-33 has a requirement in its section 3.4.1 for a call-sign. It requires that the call-sign be stored in non-volatile memory in the station, and it should not be easily erased.

STD-33 is fairly explicit about the format that the call sign must be transmitted in. It can be interpreted that the call sign should be transmitted "in-the-clear" in exactly the frame for mat that is shown in the STD-33. Comments about this are welcome.

The question STD-33 does not answer is how it is to be transmitted. Can the call sign be embedded in a data packet and transmitted over the wireless LAN like any other data packet, or must it be a distinct frame type all its own?

In either case, it a method of storing a non-volatile 63 bit long call sign appears to be required. It would be a MIB parameter, and is not part of the FH phy.

The call sign memory device should not be easily removed nor easily altered.

Product Labelling

Technical Standard Compliance Certificate is required to be displayed on the product, along with the unit's call sign. Currently there are no product labelling requirements in the 802.11 draft standard.

10.6.5 Occupied Channel Bandwidth

Section 4.1(4)A of STD-33 indicates that the channel must contain 99.5% of the transmitted power. As a matter of information, an FCC compliant product may not meet this specification, but for compliance in Japan, the product must meet the 99.5%. The carrier must be down around -26dBc at +/-500KHz from the center of the channel.

Environmental

RCR STD-33 requires that a station operate reliably when subject to commonly occurring temperatures, humidity, and vibration. The P802.11D1 does not address the issues of humidity and vibration.

3. MOTION:

1. Add section to the draft standard saying:

The IEEE 802 48 bit address must be stored in a memory device internal to the product, and such memory device shall not be easily

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removed or altered by a user. Transmit shall be inhibited unless the memory device is programmed with the IEEE 802 48 bit address.

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