

**IEEE P802.11
Wireless LANs**

Fifth addition to report

Symbol

April 23, 1996

Mr. Victor Hayes
Chair IEEE P802.11
AT&T WCND Utrecht
Zadelstede 1-10
3431 JZ Nieuwegein
The Netherlands

Dear Mr. Hayes:

This letter is written in response to your letter of September 27, 1995, which requested that Symbol Technologies, Inc. ("Symbol") confirm to the IEEE that it will provide worldwide licenses under certain of its patents related to the proposed IEEE 802.11 standard. In this regard:

In the event the proposed IEEE 802.11 standard is adopted, and the standard cannot be practiced without the use of one or more patents which are now or hereafter owned by Symbol, Symbol would upon request be willing to negotiate a non-exclusive, worldwide license, under the relevant claims of such patent or patents, on a nondiscriminatory basis and on reasonable terms and conditions including its then current royalty rates.

This letter does not grant to the IEEE or any other party any right with respect to Symbol's copyrights or other intellectual property rights (whether now or hereafter in existence) that relate to the proposed standard.

Very truly yours,

Richard Bravman
Senior Vice President

NORAND

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March 1, 1996

Mr. Vic Hayes
Chairman, IEEE P802.11
AT&T
Zadelstede 1-10
3431 JZ Nieuwegein
the Netherlands

Dear Mr. Hayes:

I am writing in response to correspondence which Norand Corporation has received from the IEEE P802. 11 working group concerning the identification and disclosure of intellectual property relevant to the proposed standard. Norand has several concerns relating to the procedures and policies of the committee and it would like the committee to address these concerns before Norand replies directly to the correspondence. Norand Corporation believes that the future acceptance and success of the standard will be furthered by resolving these issues prior to final approval. Further, Norand has, and continues to develop, intellectual property rights in the general area of wireless data communications. Given the issues cited below, Norand believes it is premature to assess the relevance that any of its patents may have to the proposed standard.

It is not clear which set of bylaws and operations manual rules are intended to govern the submission of patents and assurances relating to the P802.11 standard. Norand has received copies of amendments that have recently been made to the bylaws and to the operations manual. If the amendments are to govern the P802. 11 proceedings, the prior submitted "assurances" should be required to be resubmitted in a form consistent with the new rules. We have seen no such directive from the committee. Further, although the patent policy could be interpreted to require submission of a copy of a license showing the terms and conditions expected to be imposed, the responses received by the committee do not appear to contain any such documents.

The language of the patent policy of the amended IEEE Standards Board Bylaws is vague and should be clarified. For instance, it is not clear whether a letter, a copy of a license or both are being requested. In addition, the bylaws prohibit "the known use of patent's (sic), including patent applications" unless certain contingencies are satisfied. One contingency for use is that there be a "compelling technical justification in the opinion of the standards-developing committee." Obviously, before the committee can determine whether such a justification exists, it must have specific knowledge of the identity of the relevant patents and patent applications. It appears, however, that the responses of several participants have been accepted even though they do not specifically identify their patents and patent applications. A response has also apparently been accepted even though it states that no search of the company's patents has been performed.

If the IEEE patent policy is to perform a useful purpose, the committee must enforce it by refusing to accept responses such as those detailed above. If it fails to follow through with this enforcement role, it is rewarding those who profess ignorance of their own patents. Also, the future use of the standard is unnecessarily made more expensive by enabling collection of royalties for features included without a compelling technical justification.

It is also unclear who is to determine the reasonableness of a license's terms and conditions. If the known use of a patent by the standard is to be contingent upon a promise of offering a license having reasonable rates, terms and conditions, the procedure for determining reasonableness should be specified. Several responding entities appear to be indicating that they alone will define the boundaries of what is reasonable in regard to the licensing of their particular intellectual property. This is certainly not an interpretation that the participants as a group should be willing to accept. Norand suggests that the P802. 11 committee consider developing a set of rates, terms and conditions which would be considered reasonable for the P802. 11 standard. Such a step would provide a basis for determining whether the contingency has been satisfied. It could also help avoid the detrimental gamemanship that may result if the patent holders are left to their own devices.

The policy, as amended, states as follows:

IEEE standards may include the known use of patent's, including patent applications, if there is compelling technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form either

- a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or
- b) A license that will be made available to all applicants without compensation or under reasonable rates with terms and conditions that are demonstrably free of any unfair discrimination .

Norand feels that several entities may not have disclosed patents relating to the standard because either 1) they believe they are not required to do so, or 2) they cannot discern what criteria should be employed in determining whether a patent relates to the standard. Norand Corporation is not a member of the P802.11 standard committee. Norand employees attend working group meetings in their individual capacities. Given these circumstances, Norand Corporation and the other similarly situated entities would not appear to have an obligation to disclose potentially relevant patents to the committee. Norand requests that the committee clarify its policy on these matters.

As the committee is aware, patent holders may exist who cannot be charged with knowledge of the development of the P802.11 standard. In light of the described complexities, Norand suggests that the committee perform an independent search for patents related to the standard. The bylaws and the operating manual do not appear to prohibit such activity. The committee could conduct, for example, a search and general analysis for the purpose of identifying patent holders that should be approached for assurances. If such steps are not taken, it may be discovered after approval that a multitude of patents apply to the standard.

Further, some patents may exist which are application specific and which, therefore, do not literally read on the standard. A claim may, by way of a simplified example, contain several elements which are embodied in P802.11 and one element which specifies a particular type of generic communicating device such as a commercially available computer. Such a claim may not read on the P802.11 standard, but it would cover use of a P802.11 Wireless LAN by the described device. Norand suggests that the committee specifically request disclosure of such patents and perform its own search for this type of art.

Norand Corporation has previously disclosed to the committee patents which may apply to the P802.11 standard. A copy of the prior communication is attached. Norand has not determined if it has additional patents that relate to the proposed standard. Norand's legal department has not completed its analysis of this question. Further, due to the uncertainty of the committee's policies in this area, Norand does not feel comfortable in disclosing additional patents at this time. Hopefully, the committee will take action to alleviate our concerns. We look forward to your response to these matters.

Sincerely,

Thomas O. Miller
Senior Vice President
Norand Corporation

attachment to Norand's letter

**IEEE P802. 11
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Notice of Patent Applicability

Date: November 8, 1993

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This paper is intended to inform the committee of patents held by Norand Corporation that are relevant to subject matter now under discussion by the committee These patents are:

US 4,910,794
Mobile Radio Communications System and Method
Ronald. L Mahany
Issued March 20, 1990

US 5,070,536
Mobile Radio Communications System and Method
Ronald. L Mahany, Marvin L Sojka, Guy J West
Issued: December 3. 1991

and the following international issues of the above:
Australia 632.055
Canada 1,316.218
Great Britain 2 223.914

The general subject matter of these patents is adaptive selection between higher and lower data radio link data rates.

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