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December 1, 2000

HAND DELIVERED

Ms. Magalie Salas, Secretary
Federal Communications Commission
445 12th Street SW, Room TW-B204
Washington DC 20554

ET Doc. No. 99-2311

Re: DA 00-2317
Reply of Wi-LAN, Inc.

Dear Ms. Salas:

Enclosed are an original and four copies of the Reply to Comments filed on behalf of Wi-LAN, Inc., in the above-captioned matter.

Please date-stamp and return the extra copy of this filing.

If there are any questions about the filing, please call me directly.

Respectfully submitted,



Mitchell Lazarus
Counsel for Wi-LAN, Inc.

ML:deb

Enclosures

cc: Service List
Eric Godberson, Wi-LAN, Inc.

Leonard R. Raish, Esq.

bcc: Jim Zyren, Intersil

File: Wi-Lan #4 23568-01
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Before the
Federal Communications Commission
Washington DC 20554

**"PLEASE STAMP"
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THIS COPY TO
FLETCHER, HEALD & HILDRETH**

In the Matter of)
)
Wi-LAN, Inc.,)
Application for Certification of an Intentional)
Radiator Under Part 15 of the Commission's)
Rules, FCC ID K4BAP01)

DA 00-2317

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

TO: The Commission

REPLY OF Wi-LAN, INC.

Pursuant to Section 1.115(d) of the Commission's Rules, Wi-LAN, Inc. (Wi-LAN) hereby replies to comments on its Application for Review in the above-captioned proceeding.

A. Procedural Background

On May 12, 2000, the Commission denied Wi-LAN's application (Application) for certification of a low-power radio transmitter (Device) under the Commission's direct sequence spread spectrum (DSSS) rules.¹ The Commission likewise denied Wi-LAN's Petition for Reconsideration on August 18, 2000.² On September 20, 2000, Wi-LAN filed a timely Application for Review, which the Commission placed on public notice.³ Three parties filed timely comments.⁴ Wi-LAN hereby replies.

¹ Letter from Joe Dichoso, FCC, to Eric Godberson, Wi-LAN (May 12, 2000) (May 12 Letter).

² Letter from Dale Hatfield, FCC, to Mitchell Lazarus, counsel for Wi-LAN (August 18, 2000) (August 18 Letter). Counsel later received an additional copy of the same letter date-stamped September 14, 2000.

³ "Application for Review Filed by Wi-LAN, Inc. Accepted for Filing," DA 00-2317 (released Oct. 17, 2000).

⁴ Comments of Metricom, Inc. (Metricom); Comments of Cisco Systems, Inc. (Cisco Systems); Opposition of Proxim, Inc. (Proxim) (all filed Nov. 16, 2000).

B. Substantive Background

OET does not dispute that the Device complies with the technical requirements of Section 15.247. Rather, OET contends the device does not conform to two of the definitions in Section 2.1. Specifically, says OET,

1. the Device is not a "spread spectrum system" because it minimizes the occupied bandwidth necessary to send the information transmitted;⁵ and
2. the Device is not a "direct sequence system" because it does not use a high speed spreading code and an information data stream to modulate a single RF carrier.⁶

In addition, OET's August 18 Letter (at 2) maintains that granting the Application would not be in the public interest, in light of prior denials of other OFDM type systems on similar grounds.

Wi-LAN's Application for Review showed that the Application conforms in all respects to the terms of the definitions as set out in the Commission's Rules. The grounds on which OET seeks to exclude the Device do not appear in the text of the Rules, and so cannot lawfully be applied against Wi-LAN. Wi-LAN also contests OET's reliance on documents that, by Commission Rule, are unavailable to Wi-LAN.⁷

C. Summary of Comments

Metricom and Cisco Systems agree with Wi-LAN that the Application conforms to the Commission's Rules. Metricom (at 3) argues that public policy favors a broad construction of the

⁵ May 12 Letter; August 18 Letter at 1-2.

⁶ August 18 Letter at 2. The May 12 Letter also cited Wi-LAN for not using a classic correlator to collapse the spread waveform. Wi-LAN challenged the relevance of this point in its Petition for Reconsideration. OET did not cite it as a ground in denying the Petition for Reconsideration, so that issue is not presently before the Commission.

⁷ Denied applications never become public. 47 C.F.R. Sec. 0.457(d)(1)(ii).

definitional requirements in Section 2.1, combined with rigorous enforcement of the technical requirements in Section 15.247. Cisco Systems (at 2-8) agrees that the Wi-LAN Device complies with the plain language of the Commission's Rules, and that its certification is fully consistent with the purpose of the Rules. Cisco Systems also notes, correctly, that OET's reliance on non-public prior denials violates specific provisions of both the Administrative Procedure Act and the Commission's own Rules.⁸

Proxim filed the sole opposition. Proxim (at 2-7) argues the Device does not qualify as a DSSS system under Section 2.1, and urges the Commission to enforce its Rules by denying certification. Proxim attaches a page from Wi-LAN's web site that refers to spread spectrum and OFDM as distinct technologies,⁹ which Proxim takes as an admission that the Device does not use spread spectrum. Finally, Proxim (at 3 n.4) says OET's citation of non-public precedents shows only that OET has not granted spread spectrum certification to non-spread-spectrum devices in the past, making it irrelevant (says Proxim) whether Wi-LAN has the opportunity to distinguish the denied applications from its own.

D. Reply to Comments

Wi-LAN agrees in full with Proxim that the Commission should enforce its Rules to the letter. If the Commission does so, it must grant Wi-LAN's Application. This does not require a rulemaking, as Proxim claims (at 2), for the Device complies in full with the Rules in their present form.

⁸ 5 U.S.C. Sec. 552(a)2); 47 C.F.R. Sec. 0.455(e), *cited in* Cisco Systems at 9.

⁹ "[T]he main difficulties in narrow band and spread spectrum are overcome by OFDM." <http://www.wi-lan.com>, as appended to *Opposition of Proxim, Inc.*

Proxim does not allege Wi-LAN's Device will cause interference to Proxim's products, or that Wi-LAN's Device will be unduly sensitive to interference from Proxim's products. Nor does Proxim contend the Device fails to meet any of the power, power density, or processing gain requirements of Section 15.247. Indeed, Proxim raises no practical issues at all. Rather, its objections to the Device are wholly doctrinal.

Proxim (at 4) insists OFDM is not DSSS, on the ground that OFDM uses multiple carriers. No Commission Rule, however, limits DSSS to single carrier systems.¹⁰ Proxim's sole authority (at 4) is a phrase from OET's August 18 Letter referring to "a single RF carrier" as characteristic of DSSS systems. But neither OET nor Proxim has cited support for that limitation in the Rules. No such support exists.

Wi-LAN has never said (as Proxim suggests, at 2) that the Commission should certify the Device because it previously certified CCK as a non-DSSS system. Wi-LAN agrees with Proxim that CCK fully qualifies as DSSS under the definitions, even though CCK uses transforms for the demodulation function. Wi-LAN's Device similarly, and independently, qualifies as DSSS.

Proxim suggests (at 4) that the Device occupies insufficient bandwidth to meet the spread spectrum definitions. Wi-LAN has shown the device spreads its signal by a factor of 3.6.¹¹ Neither OET nor Proxim has pointed to a rule that requires a higher spreading ratio.

The passage Proxim quotes from Wi-LAN's website consists, in context, of truthful marketing material that promotes the Device as overcoming certain deficiencies of conventional

¹⁰ OFDM multi-carrier is a special case of MultiCode-DSSS. U.S. Patent No. 5,555,268, *MultiCode Direct Sequence Spread Spectrum*.

¹¹ Application for Review at 8 (filed Sept. 18, 2000).

spread spectrum equipment. This is hardly a legal admission that the Device fails to qualify as spread spectrum equipment under the Commission's Rules. In any event, Wi-LAN cannot settle whether a product meets a particular regulatory definition just by posting statements one way or the other on its website.

Finally, Proxim misapprehends Wi-LAN's objection to OET's citing non-public precedents in support of its denial. A precedent can properly guide a subsequent decision only if the precedent was (1) rightfully decided, and (2) similar to the case at hand in the relevant respects. Proxim assumes (1) and ignores (2). Without access to the denied applications, Wi-LAN is barred from challenging the precedents in either respect.

CONCLUSION

Wi-LAN's Device complies with the Rules. OET's reliance on grounds outside the Rules in denying certification is unlawful. The Commission should grant Wi-LAN's Application expeditiously, and in advance of a written order on review, so as to minimize economic harm to Wi-LAN caused by further delay. If prompt action is not possible, then the Commission should grant Wi-LAN a waiver pending resolution of the proceeding.

Respectfully submitted,



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December 1, 2000

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
Application for Review of Wi-LAN)
Regarding Certification under Part 15) DA 00-2317
of the Commission's Rules)
To: The Commission)

**REPLY COMMENTS
OF
METRICOM, INC.**

Metricom, Inc. ("Metricom"), by its attorneys, hereby submits these reply comments to the comments filed in the above-captioned proceeding concerning Wi-LAN's request for Part 15 certification of its wideband orthogonal frequency-division multiplexing ("W-OFDM") system under the provisions of Section 15.247 governing spread spectrum transmissions.¹ Metricom filed comments in this proceeding arguing that Wi-LAN's W-OFDM equipment meets the threshold requirements for certification in accordance with Section 15.247.

To the best of Metricom's knowledge, two other parties filed comments, Proxim, Inc. ("Proxim") and Cisco Systems, Inc. ("Cisco").² Proxim opposes, and Cisco supports, Wi-LAN's efforts to obtain Part 15 certification.

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1. Public Notice, DA 00-2317 (October 17, 2000).
 2. Metricom encountered some difficulty in obtaining these comments from the Commission; therefore, Metricom is not certain as to whether others were filed. Metricom reserves the right to reply to any other comments filed but not yet available from the Commission.

Proxim's comments have two fatal flaws. First, Proxim states repeatedly that a direct sequence spread spectrum signal must occupy a "much" larger bandwidth than the bandwidth that would be required to transmit the information alone, unmodulated by any spreading function.³ Proxim cites no authority for this, and it is not found in any rule provision. A spread spectrum signal, according to the rules, must merely "deliberately widen" its bandwidth.⁴ Accordingly, this argument has no merit.

Second, Proxim repeatedly conflates the requirements of Section 15.247 with the definitional requirements of Section 2.1.⁵ The OET staff did not base its denial of Wi-LAN's application for certification and subsequent petition for reconsideration on a strict interpretation of Section 15.247, as Proxim suggests. Wi-LAN's compliance with the processing gain requirement of Section 15.247 is not at issue here, despite Proxim's efforts to make it an issue. What is at issue is whether Wi-LAN meets the definition of "direct sequence system," and Proxim offers no analysis that it does not.⁶ Accordingly, this argument is also without merit.

3. Proxim Comments at 3, 4.

4. 47 C.F.R. § 2.1.

5. See Proxim Comments at 4 ("OET's unwavering commitment to a strict interpretation of Section 15.247"), 6 ("FCC consistently has required strict compliance with the technical standards of Section 15.247").

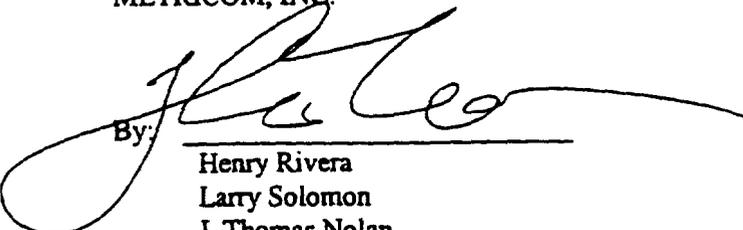
6. In its section entitled "Wi-LAN's OFDM Device is Not A DSSS System" Proxim draws entirely upon generalities found on Wi-LAN's web site, which has since been revised. This hardly counts as analysis.

Wi-LAN's submissions⁷ clearly affirm Cisco's position that the definitional issue involved in this matter "is really very simple."⁸ Wi-LAN's device meets the definition of "direct sequence system" and the Commission must analyze the device under the requirements of Section 15.247 applicable to such systems. Metricom also concurs with Cisco's conclusion that, under the Administrative Procedure Act, the Commission may not rely on non-public information in making its determination.⁹

WHEREFORE, Metricom urges the Commission to process Wi-LAN's request for certification of its W-OFDM equipment in accordance with Section 15.247.

Respectfully submitted,

METRICOM, INC.

By: 

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Its Attorneys

Dated: December 1, 2000

-
7. Because Metricom is not able to review the Wi-LAN test data submitted with its certification application, it can only assume that statements concerning the operation of the equipment are confirmed by the test data.
 8. Cisco Comments at 6.
 9. Cisco Comments at 8-9.

CERTIFICATE OF SERVICE

I, J. Thomas Nolan, do hereby certify that I have on this 1st day of December, 2000 caused to be mailed by first class mail, postage prepaid, copies of the foregoing "Reply Comments of Metricom, Inc." to the following:

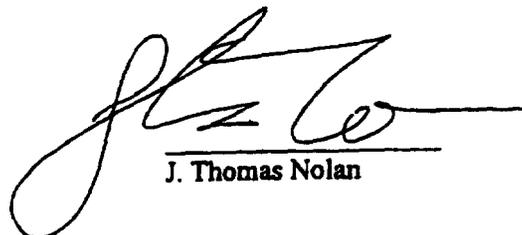
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