

**IEEE P802.11  
Wireless LANs**

**IP statements received during the 802.11a and 802.11b projects**

**Date:** Month Day, Year

**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

**Abstract**

| <b>Company</b>           | <b>Date</b>      | <b>Applicable to</b> | <b>Remarks</b>                                                   |
|--------------------------|------------------|----------------------|------------------------------------------------------------------|
| Alantro                  | March 10, 1998   | 802.11b              | Adopted as option                                                |
| Breezecom                | May 3, 1998      |                      | Related to a proposal not adopted                                |
| CSIRO                    | December 4, 1998 | 802.11a              |                                                                  |
| Golden Bridge Technology | March 3, 1998    |                      | Related to a proposal not adopted                                |
| Harris                   | March 6, 1998    | 802.11b              | Selected after change for compromise                             |
| KDD                      | March 3, 1998    |                      | Related to a proposal not adopted                                |
| Lucent Technologies      | January 13, 1998 | 802.11a and 802.11b  | Applies to draft 11a (selected) and draft 11b (see above)        |
| Lucent Technologies      | July 2, 1998     | 802.11b              | Selected                                                         |
| Micrilor                 | January 30, 1998 |                      | Related to a proposal not adopted                                |
| NEC                      | February 1998    |                      | Related to a proposal not adopted                                |
| NTT                      | June 24, 1998    | General              | Applies to draft                                                 |
| RadioLAN                 | March 10, 1998   |                      | Related to a proposal not adopted                                |
| Raytheon                 | March 11, 1998   |                      | Related to a proposal not adopted                                |
| WiLAN                    | July 7, 1998     | 802.11b              | Referred to the draft                                            |
| WiLAN                    | Sept 14, 1998    | 802.11b              | Withdrawal, not accepted by 802.11, but refers selected proposal |
| WiLAN                    | July 7, 1998     | 802.11a              | Applies to draft                                                 |
| WiLAN                    | November 9, 1998 | 802.11a              | Applies to draft                                                 |

---

IEEE P802.11  
Wireless LANs

---

March 10, 1998  
Alantro Communications, Inc.



141 Stony Circle, Suite 210  
Santa Rosa, California 95407  
(707) 521-3060 (voice)  
(707) 521-3066 (fax)  
<http://www.alantro.com/>

Mr. Victor Hayes  
Chairman, IEEE 802.11

Reference: *Standards Recommendation Relating to Technology Being Proposed by Alantro Communications, Inc., for Inclusion in the IEEE P802.11b (2.4 GHz) Standards Project.*

Dear Vic,

This letter is to confirm to the IEEE that Alantro Communications, Inc., will provide licenses for our patents with respect to the referenced proposals. In this regard:

***Alantro Communications hereby declares that if Alantro Communications' proposal is adopted by the IEEE, it is prepared to license existing patents, as well as patents now pending which may be issued, directed to and necessary for the practice of the referenced Technology, under reasonable rates, terms and conditions, that are demonstrably free of any unfair discrimination, for the purpose of implementing such standard. Such license negotiations will be held with the parties concerned, and will be performed outside of IEEE.***

This letter does not grant any right to the IEEE with respect to the company's intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Chris Heegard in writing to the address provided above, or by e-mail <mailto:heegard@alantro.com> or by facsimile at (707) 521-3066.

Yours Truly,

Was signed by

Chris Heegard

CEO, Alantro Communications

---

**IEEE P802.11  
Wireless LANs**

---

**BreezeCom's IP Statement re TGa Proposal**

**Date:** May 1998

**Author:** Naftali Chayat  
BreezeCOM Ltd.  
Atidim Technology Park, Bldg. 1, Tel Aviv 61131, Israel  
Phone: +972-3-645-6262  
Fax: +972-3-645-6290  
e-Mail: [naftalic@breezecom.co.il](mailto:naftalic@breezecom.co.il)

---

May 3, 1998

Mr. Victor Hayes  
Lucent Technologies, WCND  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands

Reference: Standards Recommendation Relating to Technology Being Proposed by BreezeCOM Ltd. for Inclusion in the IEEE P802.11a (OQM at 5 GHz band).

Dear Mr. Hayes:

This letter is to confirm to the IEEE that BreezeCom ltd. will provide licenses for our patents with respect to the referenced proposal. In this regard:

BreezeCOM hereby declares that if BreezeCOM's proposal is adopted by the IEEE P802.11a committee, it is prepared to license its existing patents, as well as patents now pending which may be issued, directed to and necessary for the practice of the referenced OQM Technology, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants, in accordance with IEEE Patent Policy and subject to reciprocity. Such negotiations will be held with the parties concerned and will be performed outside of IEEE.

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Smadar Shilo (BreezeCOM's Corporate Counsel) in writing at the address stated above, by phone on +972-3-645-6262 or, by facsimile on +972-3-645-6290.

Yours Truly,

Was signed by

Naftali Chayat,  
Chief Scientist, BreezeCOM Ltd.



4 December, 1998

Mr V Hayes  
Chair  
IEEE P802.11  
Lucent Technologies Nederland B.V.  
Zadelstede 1-10  
3431 JZ Nieuwegein the Netherlands

**Telecommunications & Industrial Physics**

**Principal Office**  
Cnr Vimiera & Pembroke Roads  
Marsfield NSW 2122  
PO Box 76  
Epping NSW 1710 Australia  
Telephone +61-2-9372 4222  
Facsimile +61-2-9372 4400

Bradfield Road, West Lindfield  
PO Box 218  
Lindfield NSW 2070 Australia  
Telephone +61-2-9413 7211  
Facsimile +61-2-9413 7631

Dear Mr Hayes,

This letter is written in response to your letter of 20 October 98, which requested that CSIRO confirm its position regarding our US Patent #5487069 with respect to the draft IEEE P802.11a standard. From the information available to CSIRO, it would appear that the patent may be needed to implement the standards.

In the event the proposed standard is adopted and the standard cannot be practiced without the use of the patent referenced above, CSIRO agrees upon written request to grant a nonexclusive license under such patent on a non discriminatory basis and on reasonable terms and conditions including its then-current royalty rates.

This letter does not grant any right to the IEEE with respect to CSIRO copyrights or other intellectual property rights that relate to the proposed standard. Any party interested in the license described above may write to Dr Terry Percival at the address on the letterhead.

Yours sincerely,

Was signed by

Dennis N Cooper  
Chief

**Dennis N Cooper** BE PhD FTS  
Chief of Division

---

**IEEE P802.11  
Wireless LANs**

---

**Golden Bridge Technology, Inc.**  
**185 Route 36, West Long Branch, NJ 07764**  
**Tel.: +1 732 870 8088 FAX: +1 732 870 9008**

March 3, 1998

Mr. Victor Hayes  
Chair, IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556

Reference: Standards Recommendation Relating to Technology Being Proposed by  
GBT Incorporation, for Inclusion in the IEEE P802.11b Standards Projects

Dear Mr. Hayes,

This letter is to confirm to the IEEE that Golden Bridge Technology ("GBT") will provide licenses for its patents with respect to the referenced proposal. In this regard:

GBT hereby declares that although no search has been conducted, it is prepared to negotiate licenses under its existing patents directed to and necessary for the practice of the referenced technology, if GBT's proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant GBT licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to GBT's copyrights or other intellectual property rights which cover contributions to the proposed standard, other than as provided above. However, any party interested in the license described above may contact the undersigned in writing at the address on the letterhead, by phone at +1 732 870 8088, or by facsimile at +1 732 870 8088.

Yours truly,

Was signed by

Feliciano Giordano  
President

---

**IEEE P802.11  
Wireless LANs**

---

**Harris Corporation Intellectual Property Statement**

**Date:** March 12, 1998

**Authors:** Al Petrick, John P. Yanas  
Harris Corporation, Semiconductor Sector  
P.O. Box 833  
Melbourne, Florida 32902-0883

Phone: 407-729-4944  
Fax: 407-724-7886  
e-Mail: apetrick@harris.com

---

March 6, 1998  
Mr. Victor Hayes  
Lucent Technologies, WCND  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands

Subject: Harris Semiconductor's Intellectual Property Position

Dear Mr. Hayes:

This letter is written notification of Harris Semiconductor's position regarding the use of the keying modulation scheme as proposed by Harris for the task defined, Wireless LAN High Data Rate.

In the event the proposed standard is adopted, Harris agrees not to restrict the IEEE802.11 Body and OEMs, for utilizing the M-ary-Bi-Orthogonal Keying scheme which was proposed by Harris.

This letter does not grant any right to the IEEE with respect to the Harris copyrights implementation intellectual property (IP) that relate to the proposed standard. However, Harris will grant licenses of our semiconductor implementation and applicable patents on a nondiscriminatory basis to any party interested. The licensing is governed by Harris' standard IP policy and licensed at reasonable fees and royalties. Any party interested in a license of our implementation may write to John P. Yanas, at the address listed above.

Regards,

Was signed by

Al Petrick  
Wireless Products Sr. Manager

**IEEE P802.11  
Wireless LANs**

Kokusai Denshin Denwa Co., Ltd.  
2-3-2, Nishishinjyuku, Shinjyuku-ku, Tokyo 163-03, Japan  
Tel: +81 3 3347 7100  
Fax: +81 3 3347 6362

March 3, 1998

Reference: Standards Recommendation Relating to Technology Being Proposed by Kokusai Denshin Denwa Co., Ltd.(hereinafter referred to as "KDD") for Inclusion in the IEEE P802.11b (2.4 GHz) Standards Projects.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that KDD will provide licenses for its patents with respect to the referenced proposals. In this regard:

KDD hereby declares that although no search has been conducted, it is prepared to negotiate licenses under its existing patents directed to and necessary for the practice of the referenced technology, if KDD's proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant KDD licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to KDD's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact the undersigned in writing at the address on the letterhead, by phone on +81 3 3347 7100, or by facsimile on +81 3 3347 6362.

Very truly yours,

Was signed by

Kenichi Kawaguchi  
Director  
Network Planning Department  
Network Headquarters



|                                                           |                                                                                                                                                                       |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roger E. Stricker<br>Intellectual Property Vice President | Suite 2000<br>P.O.Box 1995<br>150 Allen Road<br>Liberty Corner, NJ 07938-1995<br><br>Telephone 908 903 6271<br>Facsimile 908 903 6317<br>E-Mail rstricker@attmail.com |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

January 13, 1998

Reference: Standards Recommendation Relating to Technology Being Proposed by Lucent Technologies for Inclusion in the IEEE P802.11a (OFDM), and P802.11b (PPM) Standards Projects

Dear Mr. Hayes:

This letter is to confirm to the IEEE that Lucent Technologies Inc. will provide licenses for our patents with respect to the referenced proposals. In this regard:

Lucent Technologies hereby declares that although no search has been conducted, it is prepared to license its existing patents directed to and necessary for the practice of the referenced OFDM and PPM Technology, if Lucent's proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with IEEE patent Policy and subject to reciprocity. Such negotiations will be held with the parties concerned and will be performed outside of IEEE

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Peter Crefeld in writing at the address on the letterhead, by phone on 908-903-6262 or, by facsimile on 908-903-6329.

Yours Truly,

was signed by

Roger E. Stricker



**Lucent Technologies**  
Bell Labs Innovations



|                                                           |                                                                                                                                                                       |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roger E. Stricker<br>Intellectual Property Vice President | Suite 2000<br>P.O.Box 1995<br>150 Allen Road<br>Liberty Corner, NJ 07938-1995<br><br>Telephone 908 903 6271<br>Facsimile 908 903 6317<br>E-Mail rstricker@attmail.com |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

July 2, 1998

Mr. Victor Hayes  
Chair IEEE P802.11  
Lucent Technologies Inc. WCND Utrecht  
Zadelstede 1-10  
3431 JZ Nieuwegein  
The Netherlands

Subject: Lucent Technologies' Intellectual Property Rights Relating to the IEEE P802.11b  
(Higher Speed PHY in the 2.4 GHz band) Proposed Standard.

Lucent Technologies Inc. is not prepared to waive its patent rights. However, although no search has been conducted, if the submission from Lucent and Harris relating to the referenced standard is adopted, Lucent is prepared to make a license relating to the IEEE P802.11b (Higher Speed PHY in the 2.4 GHz band) Standard available to any qualified applicant, upon reasonable, non-discriminatory terms and conditions, to the extent that Lucent Technologies has existing patents or applications which are directed to and necessary for the implementation of the practice of that standard. This offer is subject to reciprocation by a putative licensee.

All license negotiations will be held with the parties concerned, outside the standards organization.

Please contact our representative, Mr. P.J. Crefeld (voice: +1 908-903-6262, fax: +1-908-903-6319) concerning any licensing matters.

Yours Truly,

was signed by

Roger E. Stricker

---

**IEEE P802.11  
Wireless LANs**

---

**MICRILOR, Inc.**

**Tel: (781) 246-0103      SIGNAL PROCESSING TECHNOLOGY      Fax: (781) 246-0157**  
**17 LAKESIDE OFFICE PARK**  
**WAKEFIELD, MA 01880**

January 30, 1998

Reference: Standards Recommendation Relating to Technology Being Proposed by MICRILOR, Inc., for Inclusion in the IEEE P802.11a (5 GHz), and P802.11b (2.4 GHz) Standards Projects.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that MICRILOR, Inc., will provide licenses for our patents with respect to the referenced proposals. In this regard:

MICRILOR hereby declares that if either of MICRILOR's proposals are adopted by the IEEE, it is prepared to license existing patents, as well as patents now pending which may be issued, directed to and necessary for the practice of the referenced Technology, under reasonable rates, terms and conditions, that are demonstrably free of any unfair discrimination, for the purpose of implementing such standard. Such license negotiations will be held with the parties concerned, and will be performed outside of IEEE. The United States Patent and Trademark Office has notified MICRILOR that at least one of the pending U.S. applications includes allowable subject matter.

This letter does not grant any right to the IEEE with respect to the company's intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Dr. Stanley Reible in writing to the address provided above, or by facsimile at 781-246-0157.

Yours Truly,

was signed by

Stanley Reible  
Vice President

---

**IEEE P802.11**  
**Wireless LANs**

---

NEC Corporation

7-1, Shiba, 5-chome, Minato-ku, Tokyo 108-01, Japan

Tel: +81 3 3454 1111 Fax: +81 3 3456 4903

February 20, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556

Reference: Standards Recommendation Relating to Technology Being Proposed by  
NEC Corporation for Inclusion in the IEEE P802.11a Standards Projects

Dear Mr. Hayes:

This letter is to confirm to the IEEE that NEC Corporation ("NEC") will provide licenses for its patents with respect to the referenced proposals. In this regard:

NEC hereby declares that although no search has been conducted, it is prepared to negotiate licenses under its existing patents directed to and necessary for the practice of the referenced technology, if NEC's proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant NEC licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to NEC's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact the undersigned in writing at the address on the letterhead, by phone on +81 3 3798 8420, or by facsimile on +81 3 3456 4903.

Very truly yours,

Was signed by

Naoki Kyomoto  
General Manager  
Intellectual Property Division

---

**IP Statement**

**Date:** May 4, 1998

**Author:** Masahiro Morikura  
NTT  
1-1 Hikarino-oka, Yokosuka, Kanagawa, 238-0847  
Phone: +81 468 59 3132  
Fax: +81 468 55 1172  
e-Mail: morikura@mosun.wslab.ntt.co.jp

---

Nippon Telegraph and Telephon Corporation (NTT)  
1-1 Hikarino-oka, Yokosuka, Kanagawa, 238-0847 Japan  
Tel: +81 468 59 3132 / Fax: +81 468 55 1172

May 4, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556

Reference: Standards Recommendation Relating to Technology Being Proposed by Nippon Telegraph and Telephon Corporation (NTT) for Inclusion in the IEEE P802.11a Standards Projects

Dear Mr. Victor Hayes:

This letter is to confirm to the IEEE that Nippon Telegraph and Telephon Corporation (NTT) will provide licenses for its patents with respect to the referenced proposals.

In this regard:

NTT hereby declares that although no search has been conducted, it is prepared to negotiate licenses under its existing patents directed to and necessary for the practice of the referenced technology, if NTT's proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant NTT licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to NTT's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact the undersigned in writing at the address on the letterhead, by phone on +81 468 59 3132, or by facsimile on +81 468 55 1172. Another official letter will be provided from IPR section of NTT.

Very truly yours,

Was signed by:

Masahiro Morikura  
Group Leader  
Wireless Systems Laboratories



---

NIPPON TELEGRAPH AND TELEPHONE CORPORATION  
20-2 Nishi-shinjuku 3-Chome Shinjuku-ku, Tokyo 163-1419 Japan

**June 24th, 1998**

*Mr. Victor Hayes*

Chair IEEE 802.11

Lucent Technologies, Nederland

Zadelstede 1-10

3431 JZ Nieuwegein, Netherlands

Tel: +31 30 609 7528

**Fax: +31 30 609 7556**

**Subject: NTT's patent licensing policy concerning the IEEE 802.11 Standard**

Dear Mr. Victor Hayes:

Nippon Telegraph and Telephone Corporation (NTT) believes that there is no NTT's patent concerning IEEE 802.11 - "Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications". However, NTT hereby declares that it is prepared to license its patents both granted and pending, which are necessary to manufacture, use, and sell implementations of the IEEE 802.11 Standard in the case where the standard includes the technology relating to NTT's patents. The license will be granted to an unlimited number of applicants throughout the world under reasonable and non-discriminatory terms and conditions.

However, in the case where such applicants does not agree to license their patents concerning the standard to NTT (including, but not limited to, have-made rights for its own requirement) under the above mentioned conditions, NTT may not grant the license concerning the standard to those applicants.

We would like to thank you for your organizational activities as Chairperson of IEEE 802.11.

Yours sincerely,

Was signed by:

Hiroshi Nakayama

Executive Manager

Intellectual Property Department

Contact Tel: +81-3-5353-4379

Contact Fax: +81-3-5353-5517

RadioLAN, Inc.

455 DeGuigne Dr.  
Sunnyvale, CA 94086, U.S.A.  
Phone: (408)-524-2600  
Fax: (408)-524-0600

March 10, 1998

Reference: Standards Recommendation Relating to Technology Being Proposed by RadioLAN, Inc. for Inclusion in the IEEE P802.11a (L-PPM) Standards Projects.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that RadioLAN Inc. will provide licenses for our patents with respect to the referenced proposal. In this regard:

RadioLAN hereby declares that although no search has been conducted, it is prepared to license its existing patents directed to and necessary for the practice of the referenced L-PPM Technology, if RadioLAN's proposal is adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with IEEE patent Policy and subject to reciprocity. Such negotiations will be held with the parties concerned and will be performed outside of IEEE.

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Clay Marr, CEO & president of RadioLAN, Inc. in writing at the address on the letterhead, by phone on (408)-524-2600 or, by facsimile on (408)-524-0600.

Yours Truly,

was signed by

Reza Ahy

---

**IEEE P802.11  
Wireless LANs**

---

**Microelectronics  
358 Lowell Street  
Andover, MA 01810**

**Raytheon Electronics**

11 March 1998

RLW:98:085

**Reference: Standards Recommendation Relating to Technology Being**

Proposed by RAYTHEON, Inc., for Inclusion in the P802.11b (2.4 GHz) Standards Projects.

To Whom It May Concern:

This letter is to confirm to the IEEE that the Raytheon Company has no patents, and knows of no patents, which cover techniques necessary to implement the waveform it has proposed in document doc:IEEE P802.11-98/20.

This letter does not grant any right to the IEEE with respect to the company's intellectual property rights that cover contributions to the proposed standard, other than provided above.

Yours Truly,

RATHEON COMPANY

\_\_\_\_\_(signed by)\_\_\_\_\_

Richard Winer  
Manager of Contracts  
Microelectronics and  
Commercial Electronics Group

cc: J. Langley  
B. Myers  
J. Schuss

---

**IEEE P802.11  
Wireless LANs**

---

**IEEE P802.11b (Multicode) IP Statement**

**Date:** July 7, 1998

**Author:** Hatim Zaghoul  
Wi-LAN Inc.  
300 – 801 Manning Road N.E.  
Calgary, Alberta, Canada T2E 8J5  
Phone: (403) 273 9133  
Fax: (403) 273 5100  
e-Mail: zaghoul@wi-lan.com

---

July 7, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556



Reference: Standards Recommendation Relating to Technology Being Proposed by Lucent Technologies and Harris Semiconductor for Inclusion in the IEEE P802.11b (Multicode) Standards Project.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that Wi-LAN Inc. will provide licenses for our patents with respect to the referenced proposals. In this regard, Wi-LAN Inc. hereby declares that although no search has been conducted, it is prepared to license its existing patents directed to and necessary for the practice of the referenced Multicode Technology, if Lucent and Harris' proposals are adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant Wi-LAN licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Hatim Zaghoul in writing at the address on the letterhead, by phone on 403-273-9133 or, by facsimile on 403-273-5100.

Yours Truly,

Was signed by

Hatim Zaghoul  
President and CEO



---

**IEEE P802.11  
Wireless LANs**

---

**IEEE P802.11a (OFDM) IP Statement**

**Date:** July 7, 1998

**Author:** Hatim Zaghoul  
Wi-LAN Inc.  
300 – 801 Manning Road N.E.  
Calgary, Alberta, Canada T2E 8J5  
Phone: (403) 273 9133  
Fax: (403) 273 5100  
e-Mail: zaghoul@wi-lan.com

---

July 7, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556



Reference: Standards Recommendation Relating to Technology Being Proposed by Lucent Technologies and NTT for Inclusion in the IEEE P802.11a (OFDM) Standards Project.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that Wi-LAN Inc. will provide licenses for our patents with respect to the referenced proposals. In this regard, Wi-LAN Inc. hereby declares that although no search has been conducted, it is prepared to license its existing patents directed to and necessary for the practice of the referenced OFDM Technology, if Lucent and NTT's proposal is adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE. Such negotiations will also be subject to the condition that if a potential licensee owns or controls patent rights, the potential licensee covenants to grant Wi-LAN licenses under these patents on fair, reasonable and non-discriminatory terms and conditions.

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the proposed standard, other than provided above. However, any party interested in the license described above may contact Hatim Zaghoul in writing at the address on the letterhead, by phone on 403-273-9133 or, by facsimile on 403-273-5100.

Yours Truly,

Was signed by

Hatim Zaghoul  
President and CEO

---

**IEEE P802.11b (Multicode) IP Statement**

**Date:** September 14, 1998

**Author:** Hatim Zaghoul  
Wi-LAN Inc.  
300 – 801 Manning Road N.E.  
Calgary, Alberta, Canada T2E 8J5  
Phone: (403) 273 9133  
Fax: (403) 273 5100  
e-mail: zaghoul@wi-lan.com

---

September 14, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556

Reference: Standards Recommendation Relating to Technology Being Proposed by Lucent Technologies and Harris Semiconductor for Inclusion in the IEEE P802.11b (Multicode) Standards Project.

Dear Mr. Hayes:

Wi-LAN Inc. hereby withdraws its previous IP statement dated July 9, 1998 to the extent that it implied that Wi-LAN's existing US patent on multicode technology, US patent # 5,555,268, or any other of its pending patents are necessary for the implementation of devices incorporating the IEEE802.11b draft standard.

Any party interested in the matter described above may contact Hatim Zaghoul in writing at the address on the letterhead, by phone on 403-273-9133 or, by facsimile on 403-273-5100.

Yours Truly,

Was signed by

Hatim Zaghoul  
President and CEO

---

**IEEE P802.11a (OFDM) IP Statement**

**Date:** November 9, 1998

**Author:** Hatim Zaghoul  
Wi-LAN Inc.  
300 – 801 Manning Road N.E.  
Calgary, Alberta, Canada T2E 8J5  
Phone: (403) 273 9133  
Fax: (403) 273 5100  
e-Mail: zaghoul@wi-lan.com

---

November 9, 1998

Mr. Victor Hayes  
Chair IEEE 802.11  
Lucent Technologies, Nederland  
Zadelstede 1-10  
3431 JZ Nieuwegein, Netherlands  
Phone: +31 30 609 7528  
Fax: +31 30 609 7556



Reference: Standards Recommendation Relating to the IEEE P802.11a (OFDM) Draft Standards.

Dear Mr. Hayes:

This letter is to confirm to the IEEE that Wi-LAN Inc. will provide licenses for our patents with respect to the referenced proposals. In this regard, Wi-LAN Inc. hereby declares that it is prepared to license its existing and future patents directed to and necessary for the practice of the referenced OFDM Technology, if the IEEE802.11a Draft Standard is adopted by the IEEE, on fair, reasonable and non-discriminatory terms and conditions to qualified applicants in accordance with the IEEE Patent Policy. Such negotiations will be held with the parties concerned and will be performed outside of the IEEE.

This letter does not grant any right to the IEEE with respect to the company's copyrights or other intellectual property rights that cover contributions to the draft standard, other than provided above. However, any party interested in the license described above may contact Hatim Zaghoul in writing at the address on the letterhead, by phone on 403-273-9133 or, by facsimile on 403-273-5100.

Yours Truly,

Was signed by

Hatim Zaghoul  
President and CEO