

**IEEE P802.11  
Wireless LANs**

**PAR 802.11 as approved**



**IEEE Standards Board:  
Project Authorization Request (PAR) Form**

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**1. Sponsor Date of Request:**  
1997-10-23

**2. Assigned Project Number:**  
802.11

**3. PAR Approval Date:**  
9 Dec. 1997

**4. Project Title, Copyright Agreement, and Working Group for this Project**

I will write/revise a Standards Publication with the following TITLE: **STANDARD [FOR] STANDARD for Information Technology-Telecommunications and information exchange between systems-Local and Metropolitan networks-Specific requirements-Part 11: Wireless LAN Medium Access Controp (MAC) and Physical Layer (PHY) specifications**

I hereby acknowledge my appointment as Official Reporter (usually the W.G. Chair) to the **IEEE P802.11, Working Group for Wireless LANs**

In consideration of my appointment and the publication of the Standards Publication identifying me, at my option, as an Official Reporter, I agree to avoid knowingly incorporating in the Standards Publication any copyrighted or proprietary material of another without such other's consent and acknowledge that the Standards Publication shall constitute a "work made for hire" as defined by the Copyright Act, and, that as to any work not so defined, I agree to and do hereby transfer any right or interest I may have in the copyright to said Standards Publication to the IEEE

Signature of Official Reporter: \_\_\_\_\_ was signed on \_\_\_\_\_ Date: Nov 14, 1997\*

Name of Working Group Chair: vic Hayes

Title: Chair, IEEE P802.11

IEEE Member No: 01550144

Telephone: +31 30 609 7528

FAX: +31 30 609 7556

email: vichayes@lucent.com

Company: Lucent Technologies Nederland B.V.

1-10 Zadelstede

Nieuwegein 3431 JZ

The Netherlands

**5. Describe This Project:**

I. Update an existing PAR Yes  No

(Indicate PAR Number/Approval Date.)

Is this project in ballot now? Yes No

II. NEW STANDARD

REVISION of an existing standard. (Indicate Standard Number and Year): **IEEE Std 802.11-1997**

SUPPLEMENT to an existing standard (Indicate Standard Number and Year):

III.  FULL USE (5-year life cycle)

TRIAL USE (2-year life cycle)

IV. TARGET COMPLETION DATE for submittal to IEEE Standards Review Committee (REVCOM): **June 1998**

**6. Scope of Proposed Project:** To rectify a number of errors in the current standard and to accommodate input from the JTC1 review to result in a single JTC1/IEEE standard

**7. Purpose of Proposed Project:** To correct the errors found in reviewing interpretation requests to the current standard and from JTC1 review

**8. Sponsor:** Computer Society  
Society/Committee: **Computer Society/LMSC**

**9.**

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- \*    **\*(a.1)** Are you aware of any patents relevant to this project? Yes (Attach Expl.)  
**X** No
- \*    **\*(a.2)** Are you aware of any copyrights relevant to this project? Yes (Attach Expl.)  
**X** No
- \*    **\*(a.3)** Are you aware of any trademarks relevant to this project? Yes (Attach Expl.)  
**X** No
- \*    **\*(b)** Are you aware of any other standards or projects with a similar scope? Yes (Attach Expl.)  
**X** No
- \*    **\*(c)** Is this standard intended to form the basis of an international project? **X** Yes  
No (Attach Expl.)  
Do not know
- \*    **\*(d)** Is this project intended to focus on health, safety or environmental issues? Yes (Attach Expl.)  
**X** No  
Do not know

**10. Proposed Coordination/Recommended Method of Coordination**

**I. Mandatory Coordination**

SCC 10 (IEEE Dictionary) and IEEE Staff Editorial Review by Circulation of Drafts  
SCC 14 (Quantities, Units and Letter symbols) by Circulation of Drafts

**II. IEEE Coordination requested by Sponsor: \***

**COORDINATION**

US TAG for JTC1/SC6/WG1

**METHOD OF COORDINATION**

**X** Circ./drfts      liais. memb.      com. memb.

**• Additional Coordination Requested by Others:**

*Leave Blank -- to be completed by staff \**

**COORDINATION**

**METHOD OF COORDINATION**

=====	Circ./drfts	liais. memb.	com. memb.
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**Submitted By:**

\*

Signature of Submitter: \_\_\_\_\_ was signed on \_\_\_\_\_

Date: 21 Nov 97

IEEE Member No: **05572953**

Name: **Jim Carlo**

Title: **IEEE 802/LMSC Sponsor Chair**

Company: **Texas Instruments**

Telephone: **+1 214 480 2524**

FAX: **+1 214 480 2611**

email: **jcarlo@ti.com**

**9208 Heatherdale Drive**

**Dallas TX 76243-6332  
USA**

DO NOT WRITE BELOW THIS LINE

Signature IEEE Officer: \_\_\_\_\_ was signed by Don Loughry on \_\_\_\_\_ Date: 9 Dec. '97

Title: \_\_\_\_\_ V.P. Standards \_\_\_\_\_

Revised:

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**Annex: Scope of original project:**

To develop a Medium Access Control (MAC) and Physical Layer (PHY) specification for wireless connectivity for fixed, portable and moving stations within a local area.

**Type of medium**

The goal is that the MAC shall support PHYs using electromagnetic waves through the air (i.e. radio waves as well as infra-red or visible light).

PHY layer suitable for use with the electromagnetic frequency spectrum as described in the following paragraph will be defined with this standard. If evidence of need and sufficient interest exists other PHY layers will be considered at a later time.

**Radio spectrum**

Currently the only available unlicensed spectrum is in the ISM bands in the USA provisionally 915 MHz band in Canada and Australia. Test programs are underway in the UK and elsewhere, evaluating license free operation.

The initial effort will be for the ISM bands and to consider the use of additional bands beyond ISM.

However, these ISM bands are already heavily used, and it is felt that service degradation from other users will happen, increasing with time. Therefore, in order to further development of the standard, the 802.11 committee should participate in the development of changed or new regulations for short distance radio services in which all authorized users of any new frequency allocation shall be permitted to radiate only a defined maximum power density. The goal is to provide regulations which allow for an easy approval process for the end-user.

To further enhance the standard the 802.11 committee will undertake to document the benefits of, and make recommendations for international spectrum allocation and use, where possible.

**Supported Stations**

The standard shall support stationary stations, movable stations, and mobile stations moving at pedestrian and vehicular (local premises environment) speeds. This is to be implemented with one PHY if feasible.

**Environment**

Because the range of wireless transmission / reception may be smaller than the physical coverage area desired, a distribution system designed to provide range extensibility will be addressed as part of this standard.

The standard will include support of the following:

- Basic Service Area (BSA) in which each station can communicate with any other station in the BSA.
- Extended Service Area (ESA) in which each station can communicate with any other station via the defined and managed Distribution System.
- Stations which interoperate in both BSA and ESA shall be defined if feasible.

Possible target environments include:

- \* in buildings and other premises such as offices, financial institutions, shops, malls, small and large industry, hospitals and residences,
- \* outdoor areas such as parking lots, campuses, building complexes and outdoor plants and storages.

Note: The definition of performance classes within a PHY may be necessary to support environments with benign or hostile characteristics.