IEEE P802.11 Wireless LANs

doc.: IEEE 802.11-98/162r7

Draft PAR for Wireless Personal Area Network (WPAN)

Date: October 26, 1998

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Abstract

The Wireless Personal Area Network Study Group has prepared the following Project Authorization Request (PAR) for submission to our Sponsor the IEEE 802.11 WG and we look forward to your comments.

We have provided the following history and contact information to assist the PAR reader. Finally, we have also forwarded under separate cover our response to the Five Criteria as called out in the IEEE PAR Submission Process as well as three (3) Medium Access Control and Physical Layer Protocol WPAN Proposals for your consideration.

At the March 1998 Plenary Meeting of IEEE's 802 LMSC, 802.11 established a Study Group for Wireless Personal Area Networks to support Wearable Computers.

The officers of the Study Group (SG) are:

Function: Chairman 802.11 SG Function: Vice-Chair 802.11 SG Function: Secretary/Tech Editor **WPAN** WPAN 802.11 SG WPAN Name: Dick Braley Name: Bob Heile Name: Ian Gifford Phone #: +1 901 375 6535 Phone #: +1 978 442 4650 Phone #: +1 617 873 4835 Fax #: +1 901 375 6757 Fax #: +1 978 442 4600 Fax #: +1 617 873 5470 E-mail: rcbraley@fedex.com E-mail: bheile@bbn.com E-mail: giffordi@macom.com

The objectives for the Study Group are:

- Review WPAN/WLAN Requirements
- Determine Need for Standard
- If warranted draft a PAR for submittal
- Seek appropriate Sponsorship within 802

Revision History:

Revision 0 January 15, 1998, the Wearables Ad Hoc Committee drafts the first version of the IEEE PAR

Revision 1 April 9, 1998, SG at the Interim Meeting in Irvine, Discusses and hands off the PAR to Rich

Revision 2 May 4, 1998, Major Edits by Rich converting the old PAR to the new PAR

Revision 3 May 21, 1998, SG at the Interim Meeting in Irving, Minor Edits led by Rich

Revision 4 May 27, 1998, Minor Edits by Rich

Revision 5 May 28, 1998, Minor Edits by Rich

Revision 6 May 28, 1998, Minor Edits by Ian

Revision 7 October 26, 1998, Minor Edits by Ad Hoc SG

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IEEE Standards Board Jan98 Project Authorization Request (PAR) Page1(Rev V9)
1. Sponsor Date 2. Assigned Project
                                              3. PAR Approval
   of Request
                         Number
    [ 2-1-99 ]
                         [ P
[ ] PAR Signature Page Received {IEEE Staff to check Box}
4. Project Title and Working Group/Sponsor for this Project
Document type : {Place an X in only one option below}
[X] Standard for {Document stressing the verb "SHALL"}
[ ] Recommended Practice for {Document stressing the verb "SHOULD"}
[ ] Guide for {Document stressing the verb "MAY"}
TITLE: [STANDARD FOR Telecommunications and Information Exchange Between
Systems - LAN/MAN Specific Requirements - Part 11: Wireless Medium Access
Control (MAC) and physical layer (PHY) specifications: Supplement for Wireless
Personal Area Networks (WPAN)]
{Copyright release at the end of this form must be submitted with appropriate
signatures by postal mail or FAX (1-732-562-1571)}
Name of Working Group(WG) : [WPAN Study Group (SG)]
Name of Official Reporter (usually the WG Chair): [Vic Hayes]
Title in WG: [802.11 Chair]
                                            IEEE/Affiliate Memb # [01550144]
Organization: [Lucent Technologies]
                                             Telephone: [+31 30 609 7528]
Address: [Zadelstede 1-10]
                                                       [+31 30 609 7556]
City/State/Zip: [Nieuwegein, NL NL-3431JZ]
                                             EMAIL: [vichayes@lucent.com]
Name of WG Chair (if different than Reporter): [Vic Hayes]
Title in WG: [802.11 Chair]
                                            IEEE/Affiliate Memb # [01550144]
Organization: [Lucent Technologies]
                                             Telephone: [+31 30 609 7528]
                                                        [+31 30 609 7556]
Address: [Zadelstede 1-10]
                                             FAX:
City/State/Zip: [Nieuwegein, NL NL-3431JZ] EMAIL: [vichayes@lucent.com]]
Name of Sponsoring Society and Committee: [IEEE 802 LAN/MAN Standards
Committee]
Name of Sponsor Committee Chair:
                                 [Jim Carlo]
Relationship to Sponsor: [IEEE 802 LMSC Sponsor Chair]
                                    Telephone: [+1-214-480-2524]
Organization: [Texas Instruments]
                                            FAX:
Address: [9208 Heatherdale Drive]
                                                       [+1-214-480-2611]
City/State/Zip: [Dallas, TX 76243-6332]
                                            EMAIL:
                                                         [jcarlo@ti.com]
5. Describe this Project by answering each of four questions below:
5a. Update an existing PAR? {Yes/No} [ No ]
   If Yes: Indicated PAR number/approval date [
   If YES: Attach letter indicating changes/rationale for changes.
   If Yes: Is this PAR in ballot now? [ ] {Yes/No}
5b. Choose one from the following:
   b1 -[ ] New Standard
   b2 -[ ] Revision of existing standard {number and year} [ ]
   b3 -[ X] Supplement to existing standard {number and year} [802.11 1997]
5c. Choose one from the following:
   c1 -[ ] Full Use (5-year life cycle)
   c2 -[ X] Trial Use (2-year cycle)
5d. Fill in Target Completion Date to IEEE RevCom [ November 2000 ]
6. Scope of Proposed Project
[To define derivative versions of the 802.11 PHY and MAC specifications for
wireless connectivity with fixed, portable and moving devices within or
entering a Personal Operating Space (POS).
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The 802.11 PHY and MAC have been reviewed to determine their suitability to meet the Functional Requirements of the WPAN Applications as specified in IEEE documents -98/295-298 and -98/352. Detailed suggestions on proposed changes to the IEEE 802.11 MAC & PHY Standard have been reported in documents -98/322r2, 323, 324.]

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PAR Form Page 2 of 3
                                                                (RevV9)
7. Purpose of Proposed Project:
[To provide a supplemental standard for low complexity, low power consumption
wireless connectivity to support interoperability among devices within or
entering the POS. This includes devices (see 12c) that are carried, worn, or
located near the body.]
8. Intellectual Property {Answer each of the questions below}
8a. Are you aware of any patents relevant to this project?
[ No ] {Yes, with detailed explanation below/ No}
  ] {Explanation}
8b. Are you aware of any copyrights relevant to this project?
[ No ] {Yes, with detailed explanation below/ No}
  ] {Explanation}
8c. Are you aware of any trademarks relevant to this project?
[ No ] {Yes, with explanation below/ No}
[ ] {Explanation}
9. Are you aware of other standards or projects with a similar scope?
[ Yes ] {Yes, with explanation below/ No}
[Infrared Data Association (IrDA), Home Radio Frequency Working Group (HRFWG)
Bluetooth Special Interest Group (SIG), Wireless Access Protocol (WAP) Forum]
10. International Harmonization
Is this standard planned for adoption by another international organization?
[Yes] {Yes/No/?? if you don't know at this time}
If Yes: Which International Organization [ISO/IEC JTC1/SC6]
If Yes: Include coordination in question 13 below
If No: Explanation [
11. Is this project intended to focus on health, safety or environmental
issues?
[ No ] {Yes/No/?? if you don't know at this time}
If Yes: Explanation? [ ]
12. Proposed Coordination/Recommended Method of Coordination
12a. Mandatory Coordination
SCC 10 (IEEE Dictionary)
                                               by DR
IEEE Staff Editorial Review
                                               by DR
SCC 14 (Quantities, Units and Letter symbols) by DR
12b. Coordination requested by Sponsor and Method:
             ] by [ ] {circulation of DRafts/LIaison memb/COmmon memb}
             ] by [ ] {circulation of DRafts/LIaison memb/COmmon memb}
             by [ ] {circulation of DRafts/LIaison memb/COmmon memb}
] by [ ] {circulation of DRafts/LIaison memb/COmmon memb}
{Choose DR or LI or CO for each coordination request}
12c. Coordination Requested by Others:
[ ] {added by staff}
Additional Explanation Notes: {Item Number and Explanation}
 [If necessary, these can be continued on additional pages]
      6 Scope:
      A Personal Operating Space (POS) is the space about a person that
      typically extends up to 10 meters in all directions and envelops the
      person whether stationary or in motion.
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The proposed WPAN Standard will be developed to ensure coexistence with all 802.11 Networks.

7 Purpose:

Examples of devices, which can be networked, include Computers, Personal Digital Assistants (PDAs)/Handheld Personal Computers (HPCs), printers, microphones, speakers, headsets, bar code readers, sensors, displays, pagers, and cellular & Personal Communications Service (PCS) phones.

PAR Copyright Release and Signature Page Page 3 Rev(V9)

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1. Sponsor Date 2. Assigned Project of Request Number [ 2-1-99 ] [P ] Title [ ]
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I hereby acknowledge my appointment as Official Reporter (usually the WG Chair) to the [WPAN Study Group] {Name of Working Group}

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 defined, I agree to and do hereby transfer any right or interest I may have in the copyright to said Standards Publication to IEEE.

| Signature of Official Reporter | Date |
|--|---|
| Name of Official Reporter (usually the WG Ch | air): [Vic Hayes] |
| Title in WG: [802.11 Chair] | <pre>IEEE/Affiliate Memb # [01550144]</pre> |
| Organization: [Lucent Technologies] | Telephone: [+31 30 609 7528] |
| Address: [Zadelstede 1-10] | FAX: [+31 30 609 7556] |
| City/State/Zip: [Nieuwegein, NL NL-3431JZ] | <pre>EMAIL: [vichayes@lucent.com]</pre> |

Submitted by: (This MUST be the Sponsor Chair or the Sponsor's Liaison Representative to the IEEE Standards Board)

Signature of Submitter_____ Date ____

Name of Sponsor Committee Chair: [Jim Carlo]

Relationship to Sponsor: [IEEE 802 LMSC Sponsor Chair]

Organization: [Texas Instruments] Telephone: [+1-214-480-2524]
Address: [9208 Heatherdale Drive] FAX: [+1-214-480-2611]
City/State/Zip: [Dallas, TX 76243-6332] EMAIL: [jcarlo@ti.com]

The submitter must be the sponsoring committee's liaison to the IEEE Standards Board or the chair of the sponsoring committee. The PAR will not be submitted to the Standards Board without the signature of the Official Reporter and the Sponsor Committee Chair. Once the PAR is completed, it shall be forwarded to the person designated by the sponsor as responsible for submitting it to the Standards Board New Standards Committee/NESCOM (normally the sponsoring committee's liaison to the IEEE Standards Board). Be certain to include all attachment sheets and supporting correspondence. The submitter will be notified in writing when the PAR is received and when the PAR will be considered for approval by the Standards Board. After the Standards Board meeting, the submitter and official reporter will be notified in writing of the action taken.

| Signature by IEEE Officer: | Date: |
|----------------------------|-------|
| Title: | |