# Proposed PAR for P802.11

**At its September meeting, IEEE P802.11 prepared a Project Authorization Request (PAR) for its work. The folowing motion was passed:**

**"that temporary document O/14 be circulated to the members of 802.11 and presented to the Executive Committee before their Monday meeting in La Jolla, Ca, November 12 for review and comments to enable 802.11 to prepare a final draft for the Thursday evening Executive Ccommittee meeting"**

**The contents of temporary document is as follows:**

6. Scope of proposed standard

**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.**

**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)**

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

**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.**

**PHY layer suitable for use with unlicensed RF equipment will be defined with this standard. If evidence of need and sufficient interest exists other PHY layers will be considered at a later time.**

**Currently the only available 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.**

**Therefore the initial work of this committee will be for the ISM bands.**

**However, these 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.**

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

**Supported environments include:**

* **in buildings such as offices, financial institutions, shops, malls, small and large industry, hospitals,**
* **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.**

**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.**

**The Wireless MAC shall support both connectionless service as defined in the MAC Service definition at rates between 1 and 20 Mbit/s as well as a service supporting packetized voice.**

**The specification shall meet the following standards and documents:**

- **the IEEE P802 Functional Requirements except that:**

  * **The proposed standard will meet all of the 802 Functional requirements, except that the probability that a MAC Service Data Unit (MSDU) reported at the MAC service interface contains an undetected error, due to operation of the conveying MAC and Physical Layer entities, shall be less than 5*10E-14 per octet of MSDU length and the MSDU loss rate will be less than 4*10E-5 for MSDU length of 512 octets, in a minimally conformant network.**

    **A minimally conformant IEEE 802.11 network will meet these requirements over a minimally conformant radio service area. IEEE 802.11 will define standard approaches to allow minimally conformant systems to be enhanced to achieve full 802 functional requirements over the radio service area.**

    **Definitions**

    **Minimally conformant radio service location - a physical location at which radio service is available at least 99.9% of the time on an daily basis.**

    **Minimally conformant radio service area - physical area in which at least 99.9% of the total geography consists of minimal conformant service locations.**

  * **transmissions of one node do not necessarily have to be received by all other nodes simultaneously.**

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|---|---|
| **IEEE 802.2/ISO 1003x,** | **the MAC service Definition** |
| **IEEE 802.1 A** | **Overview and Architecture,** |
| **IEEE 802.1 B** | **for LAN/MAN Management,** |
| **IEEE 802.1 D** | **for T and SRT bridges,** |
| **IEEE 802.1** | **F for Guidelines for the Development of Layer Management Standards,** |
| **IEEE 802.10** | **Secure Data Exchange.** |

**The MAC design shall anticipate restriction on low-frequency pulsing below 100 Hz of Electromagnetic fields due to biological hazards.**

**7 Purpose of proposed standard.**

**To provide wireless connectivity to automatic machinery, equipment or, stations that require rapid deployment, which are portable, or hand-held or which are mounted on moving vehicles within a local area**

**To provide a standard for use by regulatory bodies to control the shared use of one or more radio frequency bands.**

Note: **To make this purpose feasible, this PAR also authorizes IEEE 802 to petition or provide comments to requlatory bodies worldwide (e.G. the FCC in the USA, the Department of Communications in Canada, the RF agency of the Department of Trade and Industry in the UK and the Radio Frequency Commission of the CEPT of Europe)**

10 Target completion

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| **Architecture definition available** | **March 1991** |
| **First draft standard ready for ballot in 802.11** | **Nov 1991** |
| **First draft conf standard ready for ballot in 802.11** | **March 1992** |
| **TCCC ballot of MAC & PHY standard** | **July 1992** |
| **TCCC ballot for conf standard** | **Nov 1992** |
| **Submission to ISO of MAC & PHY standard** | **Dec 31, 1992** |

11 Proposed Coordination

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| **CCIR Interim Working Party trusted with q AM/8** | **draft circulation** |
| **CEPT/RFC/FM** | **draft circulation** |
| **ETSI** | **corresp/common membership** |
| **ECMA** | **corresp/participation** |
| **Worldwide Regulatory bodies** | **correspondence** |
| **ISA SC-50** | **Common membership** |
| **IEEE Vehicular Technology Society** | **Liaison** |
| **SCC10?** | **Liaison** |
| **ANSI X3S3** | **Liaison** |
| **IEC/TC83? fiber optics only** | |
| **ISO/IEC JTC1/SC6/WG1** | |
| **TCMM/MSC** | **circulation of drafts** |
| **ANSI ASC T1 advisory group in T1E1** | **correspondence** |
| **TIA telecom Industry Association** | **TBD** |
| **Include SAE, the society of Automotive Engineers** | **TBD** |
| **ACM? Association of Computing Machinery** | **TBD** |
| **ETSI RES ?** | **draft circulation** |