This PAR has already been submitted to the NesCom Administrator on 11 April, 2007

<div align="center">

Close Window   Print

</div>

PAR Submittal ID Number: 203665642_9772_195403
Submittal Email: stuart@ok-brit.com
Type of Project: Modification to a Previously Approved PAR P802.11s on 25 May 2006
1.1 Project Number: P802.11s
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
1.4 Is this project in ballot now? No

2.1 Title of Standard	Old Title
2.1 Title of Standard: Standard for Information Technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications Amendment: Mesh Networking	**Old Title:** Standard for Information Technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications Amendment: ESS Mesh Networking

3.1 Name of Working Group: Wireless LAN Working Group
Contact information for Working Group Chair Stuart J Kerry Email: stuart@ok-brit.com Phone: 408-474-7356
Contact Information for Working Group Vice Chair Email: Phone:
3.2 Sponsoring Society and Committee:IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) **Contact information for Sponsor Chair:** Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 **Contact information for Standards Representative:** Email: Phone:
3.3 Joint Sponsor:/ () **Contact information for Sponsor Chair:** Email: Phone: **Contact information for Standards Representative:**

Email: Phone:	

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: 2008-01

4.3 Projected Completion Date for Submittal to RevCom: 2009-01

5.1 Approximate number of people expected to work on this project: 400

5.2 Scope of Proposed Standard: The scope of this project is to develop an IEEE 802.11 Mesh with an IEEE 802.11 Wireless Distribution System (WDS) using the IEEE 802.11 MAC/PHY layers that supports both broadcast/multicast and unicast delivery over self-configuring multi-hop topologies.	**Old Scope:** The scope of this project is to develop an IEEE 802.11 Extended Service Set (ESS) Mesh with an IEEE 802.11 Wireless Distribution System (WDS) using the IEEE 802.11 MAC/PHY layers that supports both broadcast/multicast and unicast delivery over self-configuring multi-hop topologies.

5.3 Is the completion of this standard is dependent upon the completion of another standard: No
If yes, please explain:

5.4 Purpose of Proposed Standard: The IEEE 802.11 standard provides a four-address frame format for exchanging data packets between stations for the purpose of creating a Wireless Distribution System (WDS), but does not define how to configure or use a WDS. The purpose of the project is to provide a protocol for auto-configuring paths between stations over self-configuring multi-hop topologies in a WDS to support both broadcast/multicast and unicast traffic in a Mesh using the four-address frame format or an extension.	**Old Purpose:** The IEEE 802.11-1999 (2003 edition) standard provides a four-address frame format for exchanging data packets between Access Points (APs) for the purpose of creating a Wireless Distribution System (WDS), but does not define how to configure or use a WDS. The purpose of the project is to provide a protocol for auto-configuring paths between APs over self-configuring multi-hop topologies in a WDS to support both broadcast/multicast and unicast traffic in an ESS Mesh using the four-address frame format or an extension.

5.5 Need for the Project: At present, standard Wireless Local Area Network (WLAN) infrastructure is interconnected using Ethernet Local Area Networks (LANs) and is, therefore, fixed. One trend is toward increased information bandwidth, accompanied by a commensurate reduction in communication range, but with no lesser requirement for communication coverage. The other is the trend toward mobile computing applications that will require mobile infrastructure in addition to mobility for end users. In both instances, Mesh provides a solution via multi-hop wireless delivery among WLAN stations. Using Mesh, coverage within a house, a hospital, a hotel, an airport, a neighborhood, a campus, etc., may be extended wirelessly and without manual configuration other than setting the SSID (Service Set Identifier) and/or AP introduction. Mesh also supports a new class of IEEE 802.11 applications that require untethered/unlicensed infrastructure.

5.6 Stakeholders for the Standard: The stakeholders are the telecommunications industry.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes
If yes, state date: 2006-03-07
If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No
If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No
If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No
If yes, please explain:
and answer the following: Sponsor Organization:
Project/Standard Number:
Project/Standard Date: 0000-00-00
Project/Standard Title:

7.2 Future Adoptions
Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? Yes

If Yes, the following questions must be answered:
Technical Committee Name and Number: ISO/IEC JTC1 SC6
Other Organization Contact Information:
Contact person: Robin Tasker
Contact Email address: R.Tasker@dl.ac.uk

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No
If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)
This PAR modification is to revise multiple sections so that P802.11s (Mesh Networking) will be applicable to 802.11 stations, rather than being restricted to Access Points and Extended Service Sets. In addition, document references and the expected Sponsor Ballot and Completion dates are updated to reflect the current estimated schedule for P802.11s.

Item 5.2, Scope of the Project: An IEEE 802.11 Mesh is a collection of stations interconnected with wireless links that enable automatic topology learning and dynamic path configuration. The proposed amendment shall be an extension to the IEEE 802.11 MAC (Medium Access Control). The amendment will define an architecture and protocol for providing an IEEE 802.11 Mesh using the IEEE 802.11 MAC to create an IEEE 802.11 Wireless Distribution System that supports both broadcast/multicast and unicast delivery at the MAC layer using radio-aware metrics over self-configuring multi-hop topologies. A Mesh is functionally equivalent to a wired ESS, with respect to the non-Mesh Stations (STAs) relationship with the Basic Service Set (BSS) and ESS. The amendment shall enable interoperable formation and operation of a Mesh, but shall be extensible to allow for alternative path selection metrics and/or protocols based on application requirements. A target configuration is up to 32 devices participating as forwarders in the Mesh. However, larger configurations may also be contemplated by the standard. It is intended that the architecture defined by the amendment shall allow a Mesh to interface with higher layers and to connect with other networks using higher layer protocols. The amendment shall utilize existing IEEE 802.11 security mechanisms, or an extension thereof, for the purpose of securing a Mesh in which all of the stations are controlled by a single logical administrative entity for security. The amendment shall allow the use of one or more IEEE 802.11 radios on each station in the Mesh.

8.1 Sponsor Information:
Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

Contact the NesCom Administrator