P802.15.8

Submitter Email: bheile@ieee.org
Type of Project: New IEEE Standard
PAR Request Date: 08-Feb-2012
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

1.1 Project Number: P802.15.8
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Peer Aware Communications (PAC)

3.1 Working Group: Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)
Contact Information for Working Group Chair
　Name: Robert Heile
　Email Address: bheile@ieee.org
　Phone: 781-929-4832
Contact Information for Working Group Vice-Chair
None

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
　Name: Paul Nikolich
　Email Address: p.nikolich@ieee.org
　Phone: 857.205.0050
Contact Information for Standards Representative
None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2015
4.3 Projected Completion Date for Submittal to RevCom: 08/2015

5.1 Approximate number of people expected to be actively involved in the development of this project: 150
5.2 Scope: This standard defines the PHY and MAC specifications for Peer Aware Communications (PAC) optimized for peer to peer and infrastructureless communications with fully distributed coordination. It features: discovery for peer information without association, typical discovery signaling rate of greater than 100 kbps, the number of devices in the discovery of more than 100 devices, scalable data transmission rates of, e.g., typically 10 Mbps, group communications with simultaneous membership in multiple groups (typically up to 10), relative positioning, multihop relay, security, and operational in selected globally available unlicensed/licensed bands below 11 GHz capable of supporting these requirements.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: The purpose is to provide an international standard for scalable, low power, and highly reliable wireless communications for emerging services such as social networking, advertising, gaming, streaming, and emergency services, enabled by peer to peer and infrastructureless peer aware communications with fully distributed coordination.
Existing standards may be able to provide parts of the envisioned PAC services, but no single standard provides infrastructureless peer-aware communications with fully distributed coordination.

5.5 Need for the Project: There is a need for a standard optimized for burgeoning social networking and peer-to-peer applications for mobile devices with the awareness of their proximity for future wireless communications. Current communication infrastructure can support those applications but incurs unbearable signaling overhead and communication latency when used to support hundreds of devices in the proximity.

The fully distributed network without infrastructure is not only useful for crowded places such as mall, stadium, campus, amusement park etc. but also isolated places not supported by infrastructure. It is also useful for emergency situations such as flooding, earthquake, fire, etc.

5.6 Stakeholders for the Standard: The stakeholders include:
- Content/Internet service providers
- Telecom industry
- Mobile device manufacturers

- Consumer electronics industry

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

---

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

---

8.1 Additional Explanatory Notes (Item Number and Explanation): Note for section 5.2 Scope: It is possible that this standard will use more than one band to meet the features of PAC.
Note for Section 5.2 Scope: If needed, this standard also provides mechanisms that enable coexistence with other 802 systems in the same band.