P802.15.9

Submitter Email: bheile@ieee.org
Type of Project: Modify Existing Approved PAR
PAR Request Date: 05-Jun-2015
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, Modification to a Previously Approved PAR
Root PAR: P802.15.9 **Approved on:** 07-Dec-2011

1.1 Project Number: P802.15.9
1.2 Type of Document: Recommended Practice
1.3 Life Cycle: Full Use

2.1 Title: Recommended Practice for Transport of Key Management Protocol (KMP) Datagrams

3.1 Working Group: Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)
Contact Information for Working Group Chair
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 08/2015
4.3 Projected Completion Date for Submittal to RevCom: 02/2016

5.1 Approximate number of people expected to be actively involved in the development of this project: 100

5.2 Scope: This Recommended Practice defines a message exchange framework based on Information Elements as a transport method for key management protocol (KMP) datagrams and guidelines for the use of some existing KMPs with IEEE Std 802.15.4. This Recommended Practice does not create a new KMP.

Changes in scope: This Recommended Practice defines a message exchange framework based on Information Elements as a transport method for key management protocol (KMP) datagrams and guidelines for the use of some existing KMPs with ~~the~~ IEEE Std 802.15~~and IEEE Std 802~~.15.7~~4~~. This Recommended Practice does not create a new KMP.

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: This proposal uses facilities provided by amendment IEEE 802.15.4e. This standard has passed its first Sponsor ballot and is expected to be completed in early 2012.

5.4 Purpose: This Recommended Practice describes support for transporting KMPs datagrams to support the security functionality present in IEEE Std 802.15.4

Changes in purpose: This Recommended Practice describes support for transporting KMPs datagrams to support the security functionality present in IEEE Std 802.15.4~~and IEEE Std 802.15.7.~~

5.5 Need for the Project: IEEE Std 802.15.4 has always supported datagram security, but has not provided a mechanism for establishing the keys used by this feature. Lack of key management support in IEEE Std 802.15.4 results in weak keys which is a common avenue for attacking

the security system. Adding KMP support is critical to a proper security framework. This project will provide a Recommended Practice for the transport of KMP datagrams within these standards. It will also provide guidelines for KMPs like IETF's HIP, IKEv2, IEEE Std 802.1X, and 4-Way-Handshake.

5.6 Stakeholders for the Standard: The stakeholders include implementers and those who deploy IEEE Std 802.15.4 that need network security and thus need a mechanism for initiating and maintaining the security keys. The stakeholders include consumer electronics manufacturers, building automation, and utilities.

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?: Yes
If yes please explain: It is anticipated that a registry may be needed for KMP IDs. An initial list of KMPs and assigned IDs will be provided within the Recommended Practice. Over time, new KMPs will be develop, vetted elsewhere, then be added as supported KMPs through either an addendum to this Recommended Practice or through a KMP ID registry process.

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

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8.1 Additional Explanatory Notes (Item Number and Explanation): 5.2 and 5.3:
P802.15.4-2011Title: Standard for Local and Metropolitan Area Networks Part 15.4: Low Rate Wireless Personal Area Networks (LRWPANs)
P802.15.4e Title: Standard for Local and Metropolitan Area Networks Part 15.4: Low Rate Wireless Personal Area Networks (LR-WPANs)
Amendment to the MAC sub-layer