P802.15.9

Submitter Email: bheile@ieee.org
Type of Project: New IEEE Standard
PAR Request Date: 02-Oct-2011
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

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 a key management protocol (KMP) applied to IEEE 802.15 standards

3.1 Working Group: Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)
Contact Information for Working Group Chair
  Name: Robert Heile
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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
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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: 12/2012
4.3 Projected Completion Date for Submittal to RevCom: 08/2013

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 transport mechanism interface for key management protocols (KMPs) and guidelines for the use of some existing KMPs with IEEE 802.15 standards. 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. In addition, it provides a transport mechanism for IEEE 802.15.6. Both of these standards have passed their first Sponsor ballot are are expected to be completed in early 2012.

5.4 Purpose: This Recommended Practice describes support for transporting KMPs to support the security functionality present in IEEE Std 802.15.4, IEEE Std 802.15.6, and IEEE Std 802.15.7.

5.5 Need for the Project: 802.15 standards have always supported datagram security, but have not provided a mechanism for establishing the keys used by this feature and upper layer key management is complex to deploy. Lack of key management support in 802.15 standards 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 a KMP within 802.15 standards. It will also provide guidelines for commonly used KMPs like IETF's HIP, IKEv2, IEEE 802.1X, and 4-Way-Handshake.

5.6 Stakeholders for the Standard: The stakeholders include implementers and those who deploy 802.15 standards that need network security and thus need a mechanism for initiating and maintaining the security keys. The stakeholders include consume electronics manufactures, building automation, utilities and medical device manufacturers.

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):