P802.21a

Submitter Email: vivekggupta@ieee.org
Type of Project: Amendment to IEEE Standard
PAR Request Date: 29-Jul-2008
PAR Approval Date: 10-Dec-2008
PAR Expiration Date: 31-Dec-2012
Status: PAR for an Amendment to an existing IEEE Standard 802.21-2008
Root PAR: P802.21 **Approved on:** 27-Feb-2004
Project Record: 802.21a

1.1 Project Number: P802.21a
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Local and Metropolitan Area Networks: Media Independent Handover Services - Amendment for Security Extensions to Media Independent Handover Services and Protocol

3.1 Working Group: Media Independent Handoff Working Group (C/LM/WG802.21)
Contact Information for Working Group Chair
  Name: Vivek Gupta
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  Name: Subir Das
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3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM)
Contact Information for Sponsor Chair
  Name: Paul Nikolich
  Email Address: p.nikolich@ieee.org
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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: 11/2010
4.3 Projected Completion Date for Submittal to RevCom: 08/2011

5.1 Approximate number of people expected to be actively involved in the development of this project: 30
5.2 Scope: This standard defines mechanisms
(i) to reduce the latency during authentication and key establishment for handovers between heterogeneous access networks that support IEEE 802.21
(ii) to provide data integrity, replay protection, confidentiality and data origin authentication to IEEE 802.21 MIH (Media-Independent Handover) protocol exchanges and enable authorization for MIH services.

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: The completion of this standard is dependent upon the completion of IEEE 802.21 standard.

5.4 Purpose: The purpose of this standard is to improve the user experience of mobile devices by minimizing the delay during handover between heterogeneous access networks through optimization of network access authentication and key establishment. Security-related message exchanges during handover can increase the latency significantly and in many cases service continuity cannot be met without such optimization. Additionally, this standard will secure MIH protocol exchanges and enable authorization of MIH services. Without such security in place, MIH protocol entities and MIH services are vulnerable to various security attacks.

5.5 Need for the Project: - It is essential to reduce the latency of authentication and key establishment to realize session continuity for real-time applications. This is especially true in handover scenarios wherein the mobile node disconnects its active connection with the serving access network before making another connection with the target access network.

- Security of MIH protocol currently relies on the security of the underlying transport protocols without a mechanism to authenticate peer MIH entities. This lack of authentication of peer MIH entities does not provide proper authorization for MIH services. As such it is required to secure the MIH protocol and develop mechanisms to authenticate peer MIH entities.

5.6 Stakeholders for the Standard: Semiconductor manufacturers, mobile and wireless device manufacturers and network operators.

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: 14-Jul-2008

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.c. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No

7.2 International Activities

   a. Adoption

   Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: No

   b. Joint Development

   Is it the intent to develop this document jointly with another organization?: No

   c. Harmonization

   Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: No

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8.1 Additional Explanatory Notes (Item Number and Explanation): Type of Project: This is actually an Amendment to Existing Standard. Since the base IEEE 802.21 draft is not an Approved Standard at this time the myProject tool does NOT give the option of entering a request for amendment project.