

## P802.21c

This PAR is valid until 31-Dec-2013.

**PAR Extension Request Date:** 16-Mar-2013

**Extension Request Submitter Email:** [sdas@appcomsci.com](mailto:sdas@appcomsci.com)

**Number of Previous Extensions Requested:** 0

**1. Number of years that the extension is being requested:** 1

**2. Why an Extension is Required:** 802.21c TG meeting began in January, 2010. The first WG draft was completed in October, 2012. The WG Letter Ballot started in October 2012 and WG has completed two Letter Ballots re-circulations until February 2013. The draft is now 61% stable. While the WG is expecting to start the Sponsor Ballot after the IEEE 802 July, 2013 Plenary Session, it may take more than six months time before the draft is ready for submission to RevCom. Therefore an extension to the current PAR is necessary.

**3.1. What date did you begin writing the first draft:** 15-Jan-2012

**3.2. How many people are actively working on the project:** 15

**3.3. How many times a year does the working group meet?**

**In person:** 6

**Via teleconference:** 0

**3.4. How many times a year is a draft circulated to the working group via electronic means:** 3

**3.5. What percentage of the Draft is stable:** 61%

**3.6. How many significant work revisions has the Draft been through:** 3

**4. When will/did sponsor balloting begin:** 01-Sep-2013

**When do you expect to submit the proposed standard to RevCom:** 01-Aug-2014

**Has this document already been adopted by another source?:** No

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For an extension request, the information on the original PAR below is not open to modification.

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**Submitter Email:** [guptavivekg@gmail.com](mailto:guptavivekg@gmail.com)

**Type of Project:** Amendment to IEEE Standard 802.21-2008

**PAR Request Date:** 16-Oct-2009

**PAR Approval Date:** 09-Dec-2009

**PAR Expiration Date:** 31-Dec-2013

**Status:** PAR for an Amendment to an existing IEEE Standard

**Project Record:** P802.21c

**Root Project:** 802.21-2008

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**1.1 Project Number:** P802.21c

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Local and metropolitan area networks -- Part 21: Media Independent Handover Services  
Amendment:Optimized Single Radio Handovers

**3.1 Working Group:** Media Independent Handoff Working Group (C/LM/WG802.21)

**Contact Information for Working Group Chair**

**Name:** Subir Das

**Email Address:** [sdas@appcomsci.com](mailto:sdas@appcomsci.com)

**Phone:** 908 748 2483

**Contact Information for Working Group Vice-Chair**

None

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**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](mailto:p.nikolich@ieee.org)

**Phone:** 857.205.0050

**Contact Information for Standards Representative**

**Name:** James Gilb

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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:** 03/2011

**4.3 Projected Completion Date for Submittal to RevCom:** 03/2012

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 25

**5.2.a. Scope of the complete standard:** This standard defines extensible IEEE 802(R) media access independent mechanisms that enable the optimization of handover between heterogeneous IEEE 802 networks and facilitates handover between IEEE 802 networks and cellular networks.

**5.2.b. Scope of the project:** This amendment defines enhancements to enable optimized single radio handovers between heterogeneous IEEE 802 wireless technologies and extend these mechanisms for single radio handovers between IEEE 802 wireless technologies and cellular technologies. These enhancements are based on media access independent mechanisms.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** The purpose of this amendment is to enhance the user experience by enabling optimized single radio handover solutions between heterogeneous networks. This standard defines mechanisms to reduce latency and enable service continuity during handover.

**5.5 Need for the Project:** There is a need to develop optimized single radio handover solutions between heterogeneous wireless networks. Dual radio operation requires multiple radios to be transmitting and receiving at the same time. This leads to platform noise and co-existence issues for radios operating in close proximity frequency bands and generally leads to increased cost of mobile device due to need for RF isolation, sharper filtering or active cancellation, apart from increased design complexity. This amendment defines protocols that will mitigate these issues by enabling controls for having only a single radio transmitting at any time during the entire handover process. This will simplify design of mobile devices and reduce service interruption time during handovers.

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

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## 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

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**7.1 Are there other standards or projects with a similar scope?:** Yes

**If Yes please explain:** 3GPP Technical Specifications have implemented Single Radio Handovers between 3GPP Radio Access Technologies and between 3GPP and 3GPP2 technologies

**and answer the following**

**Sponsor Organization:** 3GPP

**Project/Standard Number:** TS 36.300

**Project/Standard Date:** 31-Mar-2009

**Project/Standard Title:** E-UTRA and E-UTRAN Overall Description Release-8, March-2009

**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 (Scope): Following definitions are provided for explanatory purposes:

Single Radio Handover: A multi-mode terminal where only a single radio is transmitting "on" at any given time during the handover process.

Dual Radio Handover: A multi-mode terminal where both the radios can be transmitting and/or receiving simultaneously at any given time.

Following item is included to clarify Scope of this amendment:

Security solutions as defined in 802.21a should apply to both dual and single radio handovers.