

<b>Draft PAR Confirmation Number</b>	
<b>Submittal Email:</b> bheile@ieee.org	
<b>Type of Project:</b> PAR for an amendment to existing Standard 802.15.4-2006	
<b>1.1 Project Number:</b> P802.15.4f	
<b>1.2 Type of Document:</b> Standard for	
<b>1.3 Life Cycle:</b> Full	
<b>2.1 Title of Standard:</b> IEEE Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low Rate Wireless Personal Area Networks (WPANs) - Amendment: Active RFID System PHY	
<b>3.1 Name of Working Group:</b> Wireless Personal Area Network (WPAN) Working Group(C/LM/WG802.15) <b>Contact information for Working Group Chair</b>	
Robert F Heile 11 ROBERT TONER BLVD SUITE 5-301 North Attleboro, MA 02763 USA bheile@ieee.org	
<b>3.2 Sponsoring Society and Committee:</b> IEEE Computer Society/Local and Metropolitan Area Networks(C/LM) <b>Contact information for Sponsor Chair:</b>	
Paul Nikolich 18 Bishops Lane Lynnfield, MA 01940 USA p.nikolich@ieee.org	
<b>Contact information for Standards Representative:</b>	
<b>4.1 Type of Ballot:</b> Individual	
<b>4.2 Expected Date of Submission for Initial Sponsor Ballot:</b> 2010-07	
<b>4.3 Projected Completion Date for Submittal to RevCom:</b> 2010-11	
<b>5.1 Approximate number of people expected to work on this project:</b> 150	
<p><b>5.2 Scope of Proposed Standard:</b> This amendment defines a PHY layer, and only those MAC modifications required to support it, for Active RFID (readers and tags). It allows for efficient communications with active RFID tags and sensor applications in an autonomous manner in a promiscuous network, using very low energy consumption (low-duty-cycle), and low PHY transmitter power. The PHY parameters are flexible and configurable to provide optimized use in a variety of active RFID tag operations including simplex and duplex transmission (reader-to-tags and tag-to-readers), multicast (reader to a select group of tags) uni-cast (reader to a single tag), tag-to-tag communication, and multi-hop capability.</p> <p>The PHY specification supports a large tag population (hundreds of thousands) which may consist of a number of densely populated (closely situated or packed) tags within a single reader field and supports basic applications such as read and write with authentication and an accurate location determination capability. The communication reliability of the system is very high for applications such as active tag inventory counting or auditing.</p> <p>The active RFID device frequency band(s) used are available world-wide, with or without licensing, and the active RFID PHY is capable of avoiding, or operating in the presence of interference from other devices operating within the Active RFID's frequency band of operation. Where unlicensed bands are utilized, this amendment also addresses coexistence with other 802 wireless standards operating in the same bands.</p>	<b>Old Scope:</b>

<b>5.3 Is the completion of this standard is dependent upon the completion of another standard: No If yes, please explain:</b>	
<b>5.4 Purpose of Proposed Standard:</b> To provide a standard for low cost, ultra low energy consumption, flexible and highly reliable communication means and air interface protocol for Active RFID and sensor applications. The air interface should be able to support a wide range of needs for which active RFID systems can be useful and enable improved performance and flexibility for future mass deployments of active RFID systems around the world.	<b>Old Purpose:</b>
<b>5.5 Need for the Project:</b> There is a need for a common international standard for an active tag RFID system. The fact that multiple non standard systems are in use today demonstrates the value of and interest in Active RFID but the lack of a standard has impeded the adoption of this technology as a global cross industry standard.	
<b>5.6 Stakeholders for the Standard:</b> Examples of industries requiring active RFID applications include Aerospace, Civil Aviation, Logistics, Transportation, Railways, Oil & Gas (upstream & downstream), Chemicals, Mining, Automotive, Equipment Hire, Tolls, Beverage, Airport Operations, Port Operations. Although these may seem like discrete industries with no direct connections in many instances their needs overlap considerably. For example, container transportation applies to each of these industries.	
<b>Intellectual Property</b>	
<b>6.1.a.</b> 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: 2008-09-09 If no, please explain:	
<b>6.1.b.</b> Is the Sponsor aware of any copyright permissions needed for this project? No If yes, please explain:	
<b>6.1.c.</b> Is the Sponsor aware of possible registration activity related to this project? No If yes, please explain:	
<b>7.1 Are there other standards or projects with a similar scope?</b> Yes Explanation: EPCglobal has started a process to develop an Active Tag standard. EPCglobal and IEEE 802.15 have agreed to liaise together on this project. Sponsor Organization: EPCglobal Incorporated/GS1 Project/Standard Number: TBD Project/Standard Date: 2010-12-01 Project/Standard Title: Active RFID	
<b>7.2 International Standards Activities</b>	
<b>a. Adoptions</b> Is there potential for this standard to be adopted by another organization? Yes Organization: Other EPCglobal Inc./GS1 Technical Committee Name: Active Tag Joint Requirements Group Technical Committee Number: N/A Contact person Name: Ian Robertson Contact Phone: 832-283-1790 Contact Email: <a href="mailto:irobertson@epcglobalinc.org">irobertson@epcglobalinc.org</a>	
<b>b. Joint Development</b> Is it the intent to develop this document jointly with another organization? Yes Organization: Other EPCglobal Inc./GS1 Technical Committee Name: Active Tag Joint Requirements Group Technical Committee Number: N/A Contact person Name: Ian Robertson Contact Phone: 832-283-1790 Contact Email: <a href="mailto:irobertson@epcglobal.org">irobertson@epcglobal.org</a>	
<b>c. Harmonization</b> Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? Yes Organization: Other EPCglobal Inc./GS1 Technical Committee Name: Active Tag Joint Req Technical Committee Number: N/A Contact person Name: Ian Robertson Contact Phone: 832-283-1790 Contact Email: <a href="mailto:irobertson@epcglobal">irobertson@epcglobal</a>	
<b>8.1 Additional Explanatory Notes: (Item Number and Explanation)</b> None	