**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title |  | |
| Date Submitted | [] | |
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| Re: | [PAR/5C comments received] | |
| Abstract | [] | |
| Purpose | [15.4q PAR approval] | |
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**802.11 comments to 802.15.4q:**

5C 3a Suggests that some existing 15.4 devices can operate with coin cell batteries.  This would imply that the existing standard is sufficient for building compliant devices operating with coin cell batteries.

Q: Why do you need a new Standard?  How is it unique from the existing standard?

A: 5C 3a says the current standard *cannot be used to power the majority of the existing 802.15.4 chipsets in these applications.* The operative word is majority. This amendment addresses a solution enabling a far broader set of applications than is currently possible

5C 3a seems to infer that the problem being solved is related  to pulse current, while 3b suggests the problem is average current.

Q: What is the actual problem?

A: 5C 3b says: *The proposed amendment to IEEE 802.15.4 will provide a unique solution for ultra low power applications.* This is the entire statement under 3b. It makes no reference to average power, nor is average power mentioned anywhere in the 5C so we are at a bit of a loss to understand the question. Clearly average power is important in achieving long battery life so the lower the average power the better. The primary issue with energy constrained sources, like coin cells, is their inability to deliver high peak power so that is also of primary interest here. If that can be achieved at lower average power too, so much the better.

**Paul Nikolich comment on purpose:**

The current purpose states:

5.4 Purpose: *The standard provides for ultra low complexity, ultra low cost, ultra low power consumption, and low data rate wireless connectivity among inexpensive devices. The raw data rate is high enough (250 kb/s) to satisfy a set of applications....*

Would it make sense to remove the complexity and cost parameters from the purpose to give the project some flexibility?  My concern is this, if the WG couldn't meet all three requirements, it may prevent the rapid completion of the project.  Additionally, you've sort of covered the low complexity/cost requirement by specifying "inexpensive devices" in Purpose.

Response: In the submission to MyProject, the group chose not to submit a purpose statement which is one of the MyProject options for amendments. The purpose statement appearing in the PAR, rather than being blank, was assigned by MyProject and is apparently one of the original statements. We can provide a more meaningful purpose statement for this amendment providing it does not then become the purpose statement for the entire standard due to a MyProject artifact.

Suggested Purpose if one is utilized:

This amendment provides a method to achieve a battery life of several years when utilizing energy constrained sources while maintaining the ability to deliver a raw data rate of up to 1 Mbps needed to effectively serve the wireless sensor applications.