Mr. Heile

Please accept these comments on the proposed P802.15 PARs. IEEE 802.3 chartered an open ad hoc committee to generate comments on proposed PARs. Most of the issues below were discussed during our opening Monday plenary. We look forward to your responses.

P802.15.4f

1. P1902.1 is an RFID project nearing (or in) Sponsor ballot. It isn't addressed in PAR 7.1, and it seems to have significant overlap in multiple functional areas: low data rate, high density of RFID tags, etc. As pointed out in the five criteria responses, there are many RFID efforts. With only EPCglobal specified in the PAR, it would appear that the WG has not performed sufficient due diligence to study what is happening in this field and related standards development. Would the 802.15 WG please address the differences in this proposed work that justify another RFID project.

> 802.15 RESPONSE: The scope of P1902.1 (RuBee) standard is to develop a PHY and data link layer protocol standard for long wave length (less the 450KHz), low speed (300-9600 baud), low power, medium range (50-100) industrial visibility networks. This is considerably different from the work within the 802.15.4f PAR.

2. This project does not seem to be within the scope of LMSC:

"The scope of the LMSC is to develop and maintain networking standards and recommended practices for local, metropolitan, and other area networks, using an open and accredited process, and to enable and advocate them on a global basis."

Please address why this project should be done within LMSC and how it falls within the scope of this Sponsor committee.

> 802.15 RESPONSE: 802.15.4 is being used by the industry today as the best starting point for active RFID, and given that 802.15.4 is a PAN standard residing within LMSC, then by definition an extension of 802.15.4 belongs within LMSC.
>
> Action: Added to 4b of the 5C document
>
> The purpose of 802.15.4f is to develop an active RFID standard. An active RFID standard requires first and foremost a two-way communication capability further requiring a globally available standard defining the PHY and MAC. Hence it is appropriate that it falls into the 802 wireless PAN standards group ensuring compliance with the 802 LAN/MAN architecture, 802 security, and overall 802 network management described in 802.1
>
> Action: Added to 3a of the 5C document

3. Some would assert that the most important characteristic unifying LMSC standards is the commonality provided by adherence to the 802 Overview and Architecture. One of the unifying features of the Overview and Architecture is that 802 LANs are bridgeable and that one network type may be substituted for another within the architecture. The 802 address space is insufficient to address the requirement of RFID. The cursory Five Criteria response to this issue is insufficient to understand how this technology fits within the 802 architecture.

> 802.15 RESPONSE:
> o   First, 802.15.4 provides 64bit MAC address space.
> o   The use of active RFID tags will not meet the potential prevalence of passive RFID tags. Passive tags are meant to identify all items/products and in some respects may replace a barcode. Active tags are more expensive by nature and are used to identify assets that have

a known depreciated value. Passive tags are generally used one time and are thrown away (again, identifying an item). Active tags have much more value and will be reused over and over within the enterprise or between multiple enterprises.

- o Today 802.15.4 is the most prevalent air interface standard for devices that require long battery life with limited maintenance. 802.15.4 is currently being widely deployed in sensor and control networks for which it was originally designed.
- o 802.15.4 is being used by the industry today as the best starting point for active RFID, and given that 802.15.4 is a PAN standard residing within LMSC, then by definition an extension of 802.15.4 belongs within LMSC.

4. The project documents do not describe if the project will address security and privacy concerns related to RFID technologies (something EPCglobal had some struggles with).

802.15 RESPONSE: This is already defined in the 802.15.4 standard which allows for the optional use of encryption.

5. Please include within the project documents a commitment to include a PICS proforma in the initial version of the standard.

802.15 RESPONSE: Yes, we commit to provide a PICS proforma in the initial version of the standard.

Action: Included in section 8.1 of the PAR

P802.15.4g

1. The span proposed in the PAR does not seem to be within the scope of the 802.15 WG as the distances are those covered by LAN/MAN standards. Please address how this project fits within the scope of 802.15 Personal Area Networks, when the PAR recognizes that fundamental characteristics of 802.15 (frame size and error protection) are insufficient for the proposed market. Similarly, the very low data rate is a significant departure from the scope of LMSC. Please also explain why this project belongs within LMSC.

802.15 RESPONSE:
- o One feature of this standard was its support for mesh networks, allowing the networks to cover large areas, and as a result these deployments have evolved to transcend "Personal" . The success of this standard has led to the deployment of longer range applications such as factory and industrial automation, and supervisory control and data acquisition (SCADA). Given that IEEE 802.15.4 already has considerable traction in the Smart Energy application arena (e.g., the broad adoption of ZigBee and the Smart Energy Profile) there is a strong industry push for deployment of this class of low data rate solutions for smart metering.
- o The frame size enhancement and error detection are within the scope of a PHY amendment to 802.15.4 and the MAC frame size is defined with respect to the PHY. The scope of LMSC no longer specifies a lower limit for data rates. The specified data rate (20kbps to 250kbps) is consistent with 802.15.4, first released in 2003, and now widely deployed The 802.15.4 (2003 and 2006) standard defines a short range device intended to serve applications requiring low cost/complexity wireless devices supporting very long battery lives.

2. Please include within the project documents a commitment to include a PICS proforma in the initial version of the standard.

802.15 RESPONSE: A commitment to provide a PICS will be included in the project documents.

Action: Add to section 8.1 "A PICS proforma will be included as part of the initial standard"

P802.15.7

1. The PAR scope is deficient in that it does not address the medium. This should not be addressed only in the PAR Purpose.

    802.15 RESPONSE: The phrase "optically transparent media" has been added to the PAR scope Section 5.2

2. Please include within the project documents a commitment to include a PICS proforma in the initial version of the standard.

    802.15 RESPONSE: Agree, commitment is included in Section 8.1 of the PAR

Bob Grow
802.3 PAR comments ad hoc chair

Mr. Gupta

Please accept these comments on the proposed P802.21b PAR. IEEE 802.3 chartered an open ad hoc committee to generate comments on proposed PARs. Both of the issues below were discussed during our opening Monday plenary. We look forward to your responses.

P802.21b

1. The project claims to be an enhancement of 802.21 protocols, yet it may be a restriction of 802.21 as described, being a simplex communication. Simplex communication is not consistent with the 802 Overview and Architecture

      802.21 RESPONSE:
- 802.21 baseline PAR already includes support for handovers to non-IEEE 802 technologies such as 3GPP and 3GPP2 radio access networks. In this sense 802.21b is not going beyond the scope of 802.21 nor restricting it.
- Also, DVB and most other downlink-only technologies support two-way communications e.g. for interactive services. UDLR (Unidirectional Link Routing) is an example of such two-way communication.
- We foresee relying on the current 802.21-supported interfaces as well as on the L3 transport for supporting two-way MIH communications related to downlink-only technologies.

2. Please include within the project documents a commitment to include a PICS proforma in the initial version of the standard.

      802.21 RESPONSE:
- In the base IEEE 802.21 specification, Annex M (PICS proforma) will be amended to support the new functionality as per ITU-T X.296 and ISO 9646.
- PAR/5C text has been changed accordingly.

Bob Grow
802.3 PAR comments ad hoc chair

Mr. Kraemer

Please accept this comment on the proposed P802.11 amendment PAR. IEEE 802.3 chartered an open ad hoc committee to generate comments on proposed PARs. The issue below was discussed during our opening Monday plenary. We look forward to your responses.

P802.11

It is noted that IEEE Std 802.11 includes PICS proforma, and believed that these have consistently been included with the initial addition of functionality to the base standard. The WG is asked to consider including a commitment to provide PICS on enhancements such as this within the project documents.

> 802.11 RESPONSE: 802.11 has included a statement into 8.1. We have added to the end of the last sentence:
>
> ...which will include a PICS proforma.

Bob Grow
802.3 PAR comments ad hoc chair

Mr. Klerer:

A general issue applicable to many PARS was discussed during our opening Monday plenary. IEEE 802.3 chartered an open ad hoc committee to generate comments on proposed PARs. In reviewing the PARs for this meeting P802.20b was found to be the exception to this general concern. We commend 802.20 on including a commitment to provide a PICS proforma in the initial project! Naturally, no response is required from the 802.20 WG.

Bob Grow
802.3 PAR comments ad hoc chair

Subject: IEEE 802.3 comments on P802.3 proposed PARs

Mr. Law

While reviewing the PARs, it was noted that though PICs are an expected and normal part of our 802.3 projects, it was noted that comments related to a commitment to do a PICS are equally applicable to our PAR and though we have consistently provided PICS Proforma in the initial standards that include new functionality, we do not make that commitment in the PARs submitted for this meeting.

P802.3bc

The WG should consider adding a statement to the PAR scope, possible language would be:

"A PICS proforma will be provided appropriate to the draft content."

P802.3at
Though this is a modification of an approved PAR, the WG should consider adding a commitment to inclusion of a PICs. The ad hoc did note that the current draft includes the clause 33 PICS. An appropriate commitment would be of the form:

"PICS proforma will be expanded and updated to cover the augmented capabilities provided by this project."