**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | 802.15 SG ULI Minutes for March, 2016 plenary meeting | |
| Date Submitted | [18 March, 2016] | |
| Source | [Charlie Perkins] [Futurewei] | Voice: [+1-408-330-4586] Fax: [ ] E-mail: [charliep@computer.org] |
| Re: | [SG ULI meeting minutes] | |
| Abstract | SG ULI minutes from the Macao Plenary Meeting | |
| Purpose | [Record the transactions of the SG ULI plenary meeting during March, 2016] | |
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**Minutes for IEEE 802.15 SG ULI Macao Plenary Meeting**

**14-18 March, 2016**

**Chair – Pat Kinney**

**Vice Chair - Charlie Perkins**

**Tuesday PM2 (March 15) (Room Florence 2206 [level 1])**

Chair called the meeting to order at 4:05pm. Attendance: 15

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| Pat Kinney | Kinney Consulting | Charles Perkins | Futurewei |
| Don Sturek | SSNI | Bob Heile | WiSun |
| Tero Kivinen | Inside Security | Gary Stuebing | Cisco |
| Kiyoshi Fukui | OKI | Noriyuki Sato | OKI |
| Hideoshi |  | Billy Verso | DecaWave Ltd |
| John |  | Kunal Shah | SSNI |

**Patent Policy and call for Essential Patents**

Chair called the group’s attention to the IEEE patent policy and made a call for notification of essential patents. There were no responses.

**Opening / Closing Report (DCN: 15-16-0196-03-0llc)**

Have comments from 802.1, 802.3, and 802.11 for consideration in 0196-03

**Meeting Objectives/Agenda**

* Tuesday, 15 March, PM2
  + Call meeting to order
  + Opening report, approve agenda, approve minutes from last session
  + Discussion on ULI PAR (15-15-760-07) and CSD (15-15-768-06)
  + Discussion on topics for tonight’s joint meeting with 802.1
    - 802.15.12 PAR&CSD, Ethertype, et al
  + Recess
* Wednesday 16 March, AM1:
  + Discussion on issues raised by WG comments or during joint 802.1 meeting
  + Modify ULI PAR and CSD, motion to WG to approve
  + Recess
* Wednesday 16 March, PM1:
  + Discussion on issues raised during mid-week plenary meeting,
  + Modify ULI PAR and CSD.
  + Motion to WG to approve.
  + Recess
* Thursday 17 March, AM1
  + Final edits to LLC PAR and CSD.
  + Motion to WG to approve.
  + Adjourn

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**Approve agenda (DCN: 15-16-0194-00-0llc)**

No objection; motion passes

**Approve minutes (DCN: 15-16-0119-00-0llc)**

No objection; motion passes

**Discussion and Changes Resulting from WG 802.1 and Joint Meeting Comments**

* 6.1.b: claims possible registration activity, but needs to specify what that is. Discussion about Dispatch codes, subtypes.
* 5.2: Discussion about what is optional?
* 5.5: eliminate L3 abstraction language, so does not refer to header compression
* 8.1 belongs in CSD
* Discuss relevance of 802.1AC
* Discuss relevance of EtherType Protocol Differentiation (EPD), defined in 802-2014; change instances of EtherType to be EtherType Protocol Differentiation (James Gilb).
* 30 active participants instead of 100

**Discussion and PAR Changes Resulting from WG 802.3 Comments**

* Use SAP instead of sub-layer
* Does not relate to 802 bridging; L2R is a layer-2 routing protocol
* Eliminate the term “sublayer”
* Too many acronyms; hard to read. But the information has to be presented somehow.
* Should not use text formatting that is not supported by the PAR tool; response: will be too complicated to spell everything out.
* Missing a period in 5.6
* Engage RAC early to avoid using EtherTypes as subtypes

**Discussion and CSD Changes Resulting from WG 802.3 Comments**

* Seems in possible conflict to PAR scope about regulation
* Does not relate to 802 bridging; L2R is a layer-2 routing protocol
* Wireless devices are *part of* IoT, not the same as
* *the* IoT marketplace
* remove “and many more”

Reminder to attend Joint Meeting in Milan 2105 at 6:30pm

Recess at 6:00pm

**Tuesday PM3 Joint meeting with 802.1 (Room Milan 2105 [level 1])**

Chair Pat Kinney called the Joint 802.1/802.15 Layer-2 Topics meeting to order at 6:36pm.

**Agenda:**

* Review of 802.15.12 PAR, CSD Comments

**Discussion and PAR Changes Resulting from WG 802.3 Comments**

* Registration activity does not mean allocation of new EtherType values.
* For Dispatch codes below value of 1500, the Multiplex ID 802.15.9 will be used

**Discussion and PAR Changes Resulting from WG 802.11 Comments**

* Use SAP instead of sub-layer
* Does not relate to 802 bridging; L2R is a layer-2 routing protocol

**Recess:** The Study Group went into recess (at 8:30pm) until the Wednesday AM1 session

**Wednesday AM1 (March 16) (Room Milan 2105 [level 1])**

Chair called the meeting to order at 8:09am. Attendance: 12

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| Pat Kinney | Kinney Consulting | Charles Perkins | Futurewei |
| Ed Gallaway |  | Ruben Salazar | Landis+Gyr |
| Tero Kivinen | Inside Security | Gary Stuebing | Cisco |
| Ben Rolfe | BCA | Bob Heile | WiSun |

**Agenda:**

* Review of 802.15.12 PAR, CSD Comments since joint meeting with 802.1

**Review of 802.1 comments**

* Clarification about meaning of registration in PAR 6.1.b
* Allow for fragmentation
* Clarify what is optional
* L2+ has been changed to L2
* L3 abstraction has been deleted
* 8.1 material does not belong in PAR
* Discuss the relevance of 802.1AC; agreement to carry on discussion at next 802.1/802.15 joint meeting
* Planning to use EPD – PAR and CSD changed to use EtherType Protocol Discrimination
* “new functionalities” deleted

**Review of 802.3 comments**

* 100 is too optimistic; changed to 30
* Scope uses language and reference architecture not appearing in 802.15.4; change to using SAPs. Also, phrase changed “Furthermore, the ULI integrates optional upper Layer 2 functionalities”
* PAR 5.2: L2R does not related to IEEE 802 bridging
* Number of acronyms is O.K. because not using acronyms makes the document harder to read
* Full stop added
* Changes for wordsmithing

**Review of 802.11 comments**

* Expand 6TiSCH
* Reference to IEEE 802.15.4 MAC should be made
* Accepted replacement text for 5.4 **Purpose** statement
* Replace with much shorter 5.4 **Need** statement
* Replace KMP with KMPs
* Suggest that 8.1 should be deleted
* Suggestion to use EPD
* Does not require *new* registration activity

**Review of revised PAR**

* Clarification about meaning of registration in PAR 6.1.b
* Discussion about whether “Std” needs a period, inserting “the” before IEEE, etc.
* Use EPD in more places

**Review of revised CSD**

* Discussion about 802.1AC using 48-bit addresses
* Use EPD in more places

**Motion to submit PAR and CSD to working group for approval**

* Moved by Ben Rolfe, seconded by Tero Kivinen
* Motion carries; no objections

**Recess:** The Study Group went into recess (at 8:58am) until the Wednesday PM1 session

**Wednesday Midweek 802.15 Plenary meeting AM2 (March 16) (Room Milan 2105 [level 1])**

Chair called the meeting to order at 10:33am. Attendance: ~50

**Agenda:**

* Review of 802.15.12 PAR, CSD comments from 802.1, 802.3, 802.11, and Paul Nikolich
* 802.15 WG approved PAR 15-15-0760-08-0llc-802-15-12-par-draft for EC consideration Friday.
* 802.15 WG approved CSD 15-15-0768-07-0llc-802-15-12-draft-csd for EC consideration Friday.

**Wednesday PM1 (March 16) (Room Florence 2205 [level 1])**

Chair called the meeting to order at 1:33pm. Attendance: 6

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| Pat Kinney | Kinney Consulting | Charles Perkins | Futurewei |
| Bob Heile | Wi-Sun | Noriyuki Sato | OKI |
| Fumihide Kojima | NICT | Kiyoshi Fukui | OKI |

**Agenda:**

* 802.15 WG already approved PAR and CSD; no other comments were received, and no other business was proposed.
* Recess at 1:34pm until Thursday AM1.

**Thursday AM1 (March 17) (Room Florence 2301 [level 1])**

Chair called the meeting to order at 8:12am. Attendance: 4

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| Pat Kinney | Kinney Consulting | Charles Perkins | Futurewei |
| Tero Kivinen | Inside Security | Gary Stuebing | Cisco |

**Agenda:**

* 802.15 WG already approved PAR and CSD; no other comments were received, and no other business was proposed.
* Adjourn at 8:13am