**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **IEEE 802.15.10 (L2R) Los Angeles Meeting Minutes** | |
| Date Submitted | [28 January, 2014] | |
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| Re: | [TG10 (L2R) session minutes.] | |
| Abstract | TG10 (L2R) meeting minutes from the Los Angeles Interim. | |
| Purpose | [TG10 (L2R) session minutes.] | |
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**Minutes for IEEE 802.15 TG10 (L2R)**

**Los Angeles Interim Meeting**

**19-24 January 2014**

**Chair - Clint Powell**

**Acting Secretary - Paul Chilton**

**Tuesday AM1 (1/21)**

Chair called the meeting to order at 8:07 AM.

**Review of agenda (doc# 15-13-0749-00)**

Chair outlined the planned activities for the TG in this meeting as shown in the Agenda. Items he drew attention to were the TG documents namely the Technical Guidance Document (TGD), Software Requirements Specification (SRS) and Statement of Work (SoW). These will be worked on with the aim to get to a call for Proposal as soon as possible.

Item 1.5 of the Agenda was corrected to show the approval of the November 2013 minutes rather than the September 2013 minutes to create -01 of the Agenda. This will be posted to the document server.

**Motion to approve the agenda**:

Moved: Pat Kinney (Kinney Consulting), seconded: Ben Rolfe (Blind Creek Associates). There was no discussion and no objections therefore the motion passed and the agenda was approved unanimously.

**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 in the meeting.

**Motion to approve the November meeting minutes (doc# 15-13-0710-00)**

Moved: Kunal Shah (Silver Spring Networks), seconded: Tim Godfrey (EPRI)  
There was no discussion and no objections therefore the motion passed and the minutes were approved unanimously.

**Preparation for joint session with 802.1**

Chair showed the minutes of the conference calls (doc# 15-13-0739-02) to acquaint the meeting with activities in December and January. Part of these activities was to provide input to the joint session with 802.1in the January meeting.

Chair summarised the discussions with 802.1 in the November meeting and some of the obstacles that need to be overcome to allow 15.4 networks to work with 802.1 bridging. There were no inputs during the November meeting from 802.1 but this task group (TG10) was to put together a list of questions to be addressed in the January joint session. As background it was suggested by Tony Jeffree (802.1 Chair) that the group read the presentation given by 802.1 at the March 2013 802 Mtg. The aim was to get a presentation to 802.1 before the end of the year which was not possible, but we still need something for tomorrow’s joint session.

Chair reminded all to complete their attendance for the session.

A document authored by Tim Godfrey was shown which contained preliminary topics for discussion with 802.1. The features of 802.15.4 networks which will cause problems for operating with 802.1 networks are low duty cycle devices and low data rates.

The group added more items to this document as part of a discussion around the topic of interworking with 802.1. The document was posted to the document management system as doc# 15-14-0048-00.

The Task Group went into recess until the Tuesday AM2 session.

**Tuesday AM2 (1/21)**

Chair called the meeting to order at 10:32 AM.

**Aims of the session**

Chair reminded the meeting of the aim of the session; to carry on with preparation for the joint session with 802.1 on Wednesday PM1. This may mean that the group would not get to discussion of the group documents (TGD, SRS and SoW) which were listed as items on the agenda for this session. Chair walked through the rest of the agenda and asked if there were any comments regarding moving the discussion of group documents to the Thursday AM1 session. There were no comments or objections from the floor.

**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.

**Continuation of preparation for the joint session w/802.1**

Reiterated discussion points generated from last session for discussion with 802.1. Clint Powell, Pat Kinney and Bob Heile to meet with Tony Jeffree over lunch to review what the group wishes to discuss in the joint session, and to set/agree on the outcome of the joint session.

Chair walked through a revised version of the document from the AM1 session (doc# 15-14-0048-01). The group continued to discuss the requirements and key features of routing in 802.15.4 networks and continued to add to the document. A number of key requirements were collected. The revised version of the document (doc# 15-14-0048-01) was posted to the document server.

The Task Group went into recess at 12:13pm until the Wednesday PM1session

**Wednesday PM1 (1/22)**

Chair called the meeting to order at 13:35.

**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 in the meeting.

Chair presented the paper constructed during the Tuesday AM1 & 2 sessions (doc# 15-14-0048-02).

There was discussion of the points raised in the document. It was pointed out by Norm Finn (Cisco) that the longer it takes to propagate route information in a 802.1 network, the more reliable the links must be. This is because the slower the propagation of route information across the network, the less link failures can be tolerated and still arrive at a stable route configuration. Today 802.1 propagates information across a network within about 1 sec; to get a stable configuration links need be reliable over timeframes of a minute or more. The rate of failure events needs to be significantly less often than the time to propagate control information. 802.1 algorithms need to know about everything changing in the network. TG10 routing may need an approach that localizes the changes to cope with the slow propagation of route information and high rate of link failures.

It was agreed that the next point of contact should be after submission of preliminary proposals within TG10.

The Task Group went into recess until the Thursday AM1 session.

**Thursday AM1 (1/23)**

Chair called the meeting to order at 8:07 AM.

**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 in the meeting.

Chair reminded all to complete their attendance for the session.

Chair showed agenda (doc# 15-13-0749-02) and summarized the topics dealt with in the Tuesday AM1 and AM2 sessions. Topics which have been moved from Tuesday are consideration of the TG documents: Technical Guidance Document, Software Requirements Specification and Statement of Work.

Chair showed a presentation from November meeting (doc# 15-13-0700-00) which asks the question of which features to support in the Recommended Practice. The discussion continued but there were many people who contributed to the initial list who were not available due to a clash with TG4q and SG4r. The group went through the different 15.4 amendments to identify any other features which should be supported; topics considered included which PHYs to include, bridging between different 15.4 PHYs and which addresses to use. Chair to consult with Pat Kinney and Ben Rolfe about the need for routing with the TG4k amendment. The list was added into doc# 15-14-0048-00.

Noriyuki Sato (Oki) showed the Technical Guidance Document skeleton (doc# 15-13-0753-01) and explained the headings and contents added so far. There was a discussion on the various clauses. Chair pointed out that the TGD contains requirements; he proposed that the SRS be rolled into the TGD. He also suggested that the Statement of Work would be prepared after the initial proposals are submitted, if at that point it is determined that there is a need for specific work activity to occur in 802.1. There was no discussion and no objections to this proposal.

**Timeline Discussion**

Chair showed the timeline document (doc# 15-13-645-01). He proposed the following adjustments to the timeline.

* Complete TGD by March meeting and issue Call for Proposals (CfP) at the conclusion of the March meeting
* Hear preliminary proposals in May meeting
* Final proposals to be heard in July meeting
* Generate baseline from July, work on draft until January 2015 and send for first ballot after January 2015 Mtg.

Chair to adjust the timeline document in line with the above milestones.

Chair proposed that there was currently no need to schedule a joint session with 802.1 at the March meeting. There were no objections. Chair will circulate the TGD to 802.1 when complete to keep them informed of TG10 activities.

There was a request from the floor to allow the presentation scheduled for the Thursday AM2 session to be given in this session. There were no objections; the agenda was not revised to reflect this.

Jaehwan Kim (ETRI) presented document 15-14-0073-00 describing the TMTCP architecture from the 15.4m amendment. It proposed the use of synchronized cluster-tree PANs with different hopping patterns to allow concurrent operation. Ruben Salazar (Landis and Gyr) pointed out this may infringe regulatory requirements in some jurisdictions since the conditions of use of unlicensed bands is that they are effectively random. Jaehwan Kim will review the regulatory conditions and reports at the next meeting.

The Task Group went into recess at 10:30 until the Thursday AM2 session

**Thursday AM2 (1/23)**

Chair called the meeting to order at 10:31 AM.

**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 in the meeting.

Chair reminded all to complete their attendance for the session.

Chair summarized the activities in the previous session; merging of SRS and TGD, modification to the project timeline, and the new revised target of completion of TGD before March meeting.

There are 4 sessions planned in the March meeting with no joint meeting with 802.1. After the Call for Proposals we will summarize the submissions and let 802.1 know the results.

Chair summarized the joint session with 802.1 – they were pleased with progress and direction, and not as concerned as they were before, since we have now outlined the issues. It is up to TG10 to reach out to them if there are any questions and concerns. The SoW will only be needed if there is work required from 802.1 The group is not intending to do anything on this document before the May meeting.

The presentation scheduled for this session was given in the AM1 session; if anyone has any questions they should contact the presenter, Jaehwan Kim (ETRI).

Chair gave a brief overview of the contents of the TGD (doc# 15-13-0753-02). The SRS will be merged with the TGD. Content from the PAR and from document 15-13-0048-02 has been incorporated. This document should be complete for March so that we can publish a Call for Proposals.

Chair made a call for volunteers to champion different parts of the document

The following people volunteered for these sections:

Section 1 Overview Tim Godfrey

Section 2 Definitions Paul Chilton

Section 3 Acronyms Paul Chilton

Section 4 no takers

Section 5 Functional requirements Paul Chilton

Section 6 Performance requirements Noriyuki Sato & Kiyoshi Fukui

Section 8 Evaluation methodology Soo-Young Chang

Some discussion took place during the compiling of this list. Fumihide Kojima (NICT) recommended that all interested parties should contribute to this effort. Phil Beecher (WiSUN Alliance) supported this pointing out that there are a number of stakeholders for this document and they should work on all sections to help add content.

There were no volunteers for section 4 General Requirements. Several sub-sections of this section have already been completed or have initial text. Chair to contact Mike McInnis (Boeing) to ascertain if support for the TG4f amendment should be required.

Section 7 Regulatory Considerations may not be needed. It may be sufficient for proposals to indicate that they have considered regulatory requirements.

We will use the first conference call after this meeting to summarize the current status and then use the mail reflector to solicit more contributions.

Chair noted that the 802.1Q Sponsor ballot pool is now open if anyone wants to participate.

**Conference Calls**

Wednesdays 2pm PST, 10pm GMT, Thursday 7am JST/KST starting from February 5th/6th

**AoB**

**Liaison reports**

IETF - Pat Kinney. Pat is attending the IETF 6tisch WG calls. He intends to find out how the RPL routing protocol would work with L2R, although it is expected they will be orthogonal. He intends to talk to Pascal Thubert about this.

802.1 - Noriyuki Sato, Kiyoshi Fukui. There was nothing to report as neither Sato-san or Fukui-san were able to attend any 802.1 sessions. There were no updates from the floor.

Chair called for suggestions of any other groups or organizations which the TG should have liaison with; there were no suggestions.

Chair reiterated the importance of obtaining a visa for the March meeting as soon as possible for all those who need one due to the impending shutdown of offices in China due to Chinese New Year.

**Motion to adjourn the meeting**:

Moved: Pat Kinney (Kinney Consulting), seconded: Paul Chilton (NXP Semiconductors). There was no discussion and no objections, therefore the motion passed and the meeting was adjourned at 11:28 AM.

**Action Items**

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| Item | Description | Status |
| 14-01-1 | Chair to consult with Pat Kinney and Ben Rolfe about the need for routing with the TG4k amendment | Open |
| 14-01-2 | Chair to adjust the timeline document in line with the updated milestones and post | Open |
| 14-01-3 | Chair will circulate the TGD to 802.1 when complete to keep them informed of TG10 activities. | Open |
| 14-01-4 | Chair to contact Mike McInnis (Boeing) to ascertain if support for the TG4f amendment is required | Open |