**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | November IEEE802.15.7r1 Minutes | |
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| Source | Tuncer Baykas | Voice: [ ] Fax: [ ] E-mail: [ ] |
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| Abstract | [Minutes of November 2015 Plenary Session] | |
| Purpose | [Description of what the author wants P802.15 to do with the information in the document.] | |
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**Task group 802.15.7r1 met for 5 sessions during the November 2015 meeting.**

Attendees:

* Rick Roberts – Intel
* Mohamed Abdallah Texas A&M University
* Hideki Aoyama – Panasonic Japan
* Yeong Min Jang – Kookmin University
* Tran Nguyen – Kookmin University
* Murat Uysal – Ozyegin University
* Tuncer Baykas Istanbul Medipol University
* Volker Jungnickel (Fraunhofer HHI)
* Shoichi Kitazawa – ATR
* Yu Zeng – China Telecom
* Soo Young Chang – California State University Sacramento ???
* Jaesang Cha – Seoul National University of Science & Technology ???
* Pei Liu Huawei
* Junwen Zhang, Fudan University
* Nan Chi, Fudan University
* Mohammed Nekool, Olympus
* Mitsukoshi Oshima, Panasonic
* Robert Moskowitz, (Self)
* Koji Horisaki (Toshiba)
* Yoshiho Gotoh Panasonic

***9 November 2015*\_\_**

**PM 2 (16:00 – 18:00)**

Meeting called to order TG Chair Yeong Min Jang

Chair informed attendees about patent policy

Minutes for the previous meeting approved by unanimous consent (15/0753r0)

Group discussed if the intent for proposal was late for Huawei.

Rick Roberts suggested that a motion would be necessary to accept the intent for proposal from the group.

Group worked on agenda (15/0767r1)

Agenda (15/0767r2) is approved with unanimous consent.

Motion to accept any intent for proposal submitted before November 5th 2015 as official 802.15.7r1 intent for proposal.

Rick Roberts Intel

Hideki Aoyama Panasonic Corp.

Yes 10

No: 0

Abstain: 0

Motion passed

Summary of Intent-for-Proposals (15/844r2) is presented by Hideki Aoyama

Rick Roberts (Intel) asked why multiple intents are sent by the same company?

The intents could not be combined.

Motion to change the agenda (767/r3) to enable intent for proposal presentations

Channel Model for Outdoor Free-space Transmission (886/r0) is presented by Junwen Zhang

Channel Model is for line-of-sight case.

Discussion on Channel Model for B4 (874r0) is presented by V. Jungnickel

Meeting recessed.

**10 November 2015**

**PM 1 (13:30 – 15:30)**

Meeting called to order.

Rick Roberts presented Intel Intent for Proposal (15/845r0)

Question was asked if the communication will be synchronous.

Rick Roberts answered that it is asynchronous.

Chair informed that it is possible to merge of proposals.

Soo Young Chang explained his proposals without a document.

He explained that he has multiple proposals for both outdoor and indoor communication systems.

He has both full rate and half rate communication.

His proposals will cover both high speed and low speed photodiodes.

His porposals will cover both physical layer and MAC layer.

Rick Roberts presented NTU intent for proposal (15/881r0)

The work is partly funded by Intel.

Volker: Are they complimentary?

Rick Roberts: Not at the moment. We don't have a rolling shutter proposal.

Chair: Why don't you have rolling shutter proposal?

Rick Roberts: We don't know how to make money out of it.

Volker Jungnickel presented Intent for Proposal from Albany U. and SUNY (15/883r0)

Jaesang Cha – asked about the procedure of how to present proposals.

Rick Roberts explained that proposals should be more in detail.

Rick Roberts asked what should be done for high rate PD proposals without simulations?

Murat Uysal mentioned that for high rate PD simulations should be included.

Jaesang Cha mentioned that he will work on LED-ID and OCC communication.

Information about ITU meeting in Seoul is discussed.

Jaesang Cha informaed that Huawei was present during the meeting.

Fudan University and Huawei are working together.

ITU-T chair is introduced to IEEE 802.15.7r1 chair.

Volker Jungnickel mentioned that there is existing standard of ITU-T (G.HN), which is for cables but is working in VLC as well. Some companies want to use that standard whereas Huawei wants to have another standard called G.VLC. Fraunhofer prefers that there should be one standard. Fraunhofer will study G.HN standard.

Group discussed if lasers are part of the scope. Rick Roberts indicated that as long as it is safe for eyes any light source can be used. Any proposals dealing with lasers should indicate how safe they are.

Robert Moskowitz mentioned that white lasers will be available soon ([http://spectrum.ieee.org/tech-talk/semiconductors/devices/the-first-white-laser](http://spectrum.ieee.org/tech-talk/semiconductors/devices/the-first-white-laser" \t "_blank))

and they mentioned that it could be used in LIFI.

Murat Uysal mentioned that there is academic paper about 100 Gbit/s VLC networks.

Rick Roberts mentioned that if a proposal comes with lasers, they should explain eye safety issues.

Mohamed Abdallah from Texas A&M University presented AMU-Qatar Intent of Proposal (15/908r0).

They have planning to monitor gas pipelines with VLC pipelines.

They work on interference management and resource allocation techniques for RF/VLC hybrid systems.

Rick Roberts asked should we change the channel models for pipeline usecase?

Murat Uysal mentioned that if it is added to TCD then a channel model can be added.

Chair asked if it can be explained why vlc can be used inside pipelines?

M. Abdallah mentioned that it is safer and more ecologically safe.

V. Jungnickel mentioned that acoustic waves are hard to use in pipeline information.

There is only gas inside the pipe, so RF is dangerous so VLC is safer.

Rick Roberts mentioned that TCD can be changed by %75 approval.

Soo Young Chang mentioned that TCD does not need to be changed to include such a proposal.

V. Jungnickel mentioned that this new application may change necessary channel conditions.

If there is new interesting applications it should be added.

Chair asked about under water VLC.

M. Abdalla said that they have some results in the area as well.

Meeting recessed..

**PM 2 (16:00 – 18:00)**

Meeting called to order.

Tran Nguyen presented intent for proposals from Kookmin University. (811r0, 812r0,813r0,814r0)

Hideki Aoyama presented (15/197r0) about Panasonic Intent for Proposal

The system will be for signages. Regular smart phones will be able to receive from signages and get the information.

200 meters is the communication distance.

Junwen Zhag presented Presentation of call for intent Channel Model for Outdoor Free-space Transmission (887r0)

Chair asked do you have presentation about your intent for proposal since this is mainly for a channel model.

Junwen Zhag explained that using the channel model they will get the best modulation.

How can we model the turbulence by V. Jungnickel?

Junwen Zhag explained that it is based on literature.

Murat Uysal did you confirm the turbulence values for visible wavelengths?

Junwen Zhag said no.

Murat Uysal asked if they checked the reflections?

Junwen Zhag said no.

Murat Uysal said that there will multipath components.

Group started to discuss how should the presentations should be presented?

V. Jungnickel suggested that OCC and Low rate PD should be presented in January and High rate should be presented in March.

Group decided 10 time slots is needed.

Group will discuss the order of the proposals later.

Yu Zheng presented 15/906r0 Proposal for OCC application using mobile devices

It is mentioned that technologies presented in his work is in trial.

Agenda (15/0767r3) is approved with unanimous consent.

Meeting recessed.

**11 November 2015**

**PM 1 (16:00 – 18:00)**

Meeting called to order.

V. Jungnickel Fraunhofer Preproposal in Response to TG7r1 CfPpresented (15/918r0)

It is asked if we need two access points for handover between a Wifi and OWC?

V. Jungnickel said” Yes but they can be combined.”

R. Roberts asked:” Some MAC functions are included in this presentation. Do we need to put interfaces to reach upper MAC layers?

V. Jungnickel: “Not necessarily. We can create a new architecture. We may need to create a new interface. ”

R. Roberts asked R. Moskovitz:” How it is done in 802.15.9?”

He replied:” Some part of it is put into informative annex to explain how to reach upper layers.”

R. Roberts asked:”How are your reducing power?”

V. Jungnickel: “We reduce DC.”

R. Moskowitz asked IN slide 6 Please check 802.11r and 802.11ai for handoff in 802.11.

V. Jungnickel We checked 802.16 and use them here.

R.Roberts Silde 7 None of you mentioned here is 802.15.7 please bring them in to 802.15.7 MAC.

V. Jungnickel Presented northumbria-university-and-czech-technical-university-intent-for-proposal.pptx (15/898r0)

R. Roberts claimed that there are no channel models for Vehicular communication.

V. Jungnickel agreed.

M. Uysal stated that if there is multiple proposals for vehicular communication then a channel model could be generated.

Group discussed how the proposals should be presented.

It is suggested to check how many proposals we have and then to discuss the proposals.

R. Roberts asked if we will let people present in March.

Chair said yes.

Soo Young Chang asked that how are going to divide proposal?

R. Roberts said that MAC and PHY should be divided

M. Abdalla asked can we be sure, do we know if we will make a presentation in January or March?

Chair said no.

V. Jungnickel Can we upate aour proposals between meeting?

Chair said we need to discuss.

R. Moskowitz said that in 802.15.6 chair pushed the groups to create one document.

R. Roberts mentions that he liked the 802.15.6 model and he thinks that merging is possible.

R. Moskowitz suggested that please merged right after the meeting.

In February some teleconferences can be set to facilitate in March.

July 2016 should be the deadline for merging.

H. Aoyama said that the schedule can be set between January 10-17.

Group asked that what happens of someone cannot attend the January meeting?

Chair said no.

Chair mentioned that people should join the meetings.

V. Jungnickel mentioned that people should be given the right to present in January or March.

Groups discussed when the proposals should be presented.

Group concluded that the authors who don't show up, will be handled case by case basis.

Meeting in recess

**PM 2 (16:00 – 18:00)**

Meeting adjourned…

Yeong Min Jang (Kookmin University) – Chair

T. Baykas asked how the proposals whould be submitted.

R. Roberts mentioned that powerpoint presentations is ok.

Group discussed about the proposal presentation procedure.

Strawpoll: Do you support the document shown in the screen as the official 802.15.7r1 Committee Rules in Jan Mar. meetings?

Yes: 9

No:5

Abstain: 0

Motion by Yu Zhang

Motion to approve: “Committee Rules for the Presentaion in the Jan.-Mar. meeting

# Jan. meeting schedule

- Proposers must send how many sub-probosals by 10 Jan.

- Committee will organize sessions by the 1st session of the Jan. meeting

- Presentation schedule will be organized by receiver types

# Merger process

- Proposers are urged to merge proposes between Jan. and Mar. meetings

# Jan. meeting presentation

- The committee strongly recommend that proposers show up and

present their proposal in Jan. meeting

- Those who will not attend the Jan. meeting.

\* They must show up the Mar. meeting

\* They must upload detailed materials that will be used for presentaion in Mar. meeting

by the 1st session of the Jan. meeting

(Productive revision will be accepted)

\* They must answer to questions within a week (until the Mar. meeting)

otherwise the proposal is regarded as withdrawed

- If a proposer will not show up, the committee will make a motion

about the proposal acceptance”

as committee rules for the presentations in Jan Mar. meeting?

Seconded by R. Roberts

Yes: 7

No:0

Abstain:1

Motion passed

Meeting adjourned.