IEEE P802.19
Wireless Coexistence

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| May 2011 TG1 Minutes |
|  Date: 9th to 13th May 2011  |
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The document records the IEEE 802.19 TG1 minutes of 802 Wireless Primary Session in San Francisco, CA, USA July 17-22, 2011

IEEE 802.19 TG1 Chair: Tuncer Baykas
IEEE 802.19 TG1 Vice Chair: Mika Kasslin
IEEE 802.19 TG1 Secretary: Junyi Wang

# MEETING MINUTES

First session of the meeting was called to order on PM1, July 18, 2011 at 1:30 PM.

### APPROVE AGENDA

The Chair called the meeting to order and presented the agenda in 802.19-11/74r0.

S. Filin indicated the intentions to upload chapter 7 later in this week, he suggested splitting down-selection, e.g., Clause 5-6 on Tuesday and 7 for Thursday. Wednesday is for technical discussion.

The chair made a call for any objection to accept this suggestion. No objection. Agenda is changed accordingly.

**Motion**

To approve the agenda 802.19-11/74r1.

Agenda approved with unanimous consensus.

### APPROVAL OF MINUTES FROM MAY MEETING

**Motion**

To approve the 802.19 TG1 MARCH minutes in 11/57r0, and teleconference minutes in 11/58r0, 11/60r1, 11/60r0, 11/63r0, 11/65r0 and 11/68r0.

Motion passed with unanimous concerns.

### IEEE IPR STATEMENT

The TG Chair informed the TAG about the IEEE patent policy and showed the set of 5 slides identified as “Highlights of the *IEEE-SA Standards Board Bylaws* on Patents in Standards” available at the IEEE PATCOM web site (<http://standards.ieee.org/board/pat/pat-slideset.ppt>). He directed the secretary to record the fact that this presentation was made in the minutes for the meeting.

* 1:40 PM – The Chair made a call for essential patents: No one came forwards with essential patent.

### 802.19 TG1 Opening Report

The chair presented opening report in 11/73r0.

**Chapter 4, 11/69r0 presented by Hyunduk Kang, ETRI**

S. Shellhammer: The algorithm session in Clause 4 is just an overview? YES, the details will be shown in Chapter 7.

S. Shellhammer: if CM is a server, do you think country will allow interface from CM to TVWS DB, I. Reede: it is allowed but is not mandated. J. Kwak: There are several ways to realize this. One way is an indirect interface; another way is that the database supplier mandates the interface for entity accessing database from the internet. Or the entity can get an FCC ID as a virtual TVBD since FCC does not require transmitting but receiving it.

**Chapter 5, 11/70r0 presented by Hyunduk Kang, ETRI**

**Chapter 6, 11/71r0 presented by Junyi Wang, NICT**

J. Kwak: Where do you describe the operation for CM? J. Wang: We will provide an amendment for chapter 6 in this week, where CE, CM and CDIS operations will be included.

J. Kwak: How does a CDIS know the domain information of CM, then how the CDIS calculate the neighbour list. J. Wang: The geo-location information during registration is provided by TVWS network or device, and then CDIS calculates the neighbour list. The domain information of CM is not necessary.

I. Reede: 802.22 has a spectrum manger who has interface with external systems, how does the proposed 802.19 system communicate with 802.22. J. Kwak: the contribution proposed the general message for any systems, the translation this generous message into some specified format to other system is assumed to be done in encoding phase.

J. Kwak: Why do we need Master CM selection? J. Jo provided some scenarios for the master CM selection

**The session recessed 3:00PM**

### Monday PM2

The task group chair called the meeting to order at 4:00PM

I .Reede indicated that AmeriSys has not discussed the merging possibility with other 5 companies, he will give a reply on this by will be given by tomorrow.

**The meeting recessed 4:10PM**

The WG chair S. Shellhammer initialled the discussions on operation manual in an ad hoc meeting.

### Tuesday AM1

The chair called the meeting to order at 8:05AM

The chair indicated that the down selection shall be done in this session.

The chair made a call for any other merged proposal for down selection. No one came forward.

The chair showed the current list of proposals.

The chair indicated that although we have only one merged contribution left, we have to have confirming voting

**Vote** to approve Clause 4 in 11/69r1 as the Clause 4 of the TG candidate draft.

YES 15 NO 0 Abstain 0

**Vote** to approve Clause 5 in 11/70r1 as the Clause 5 of the TG candidate draft.

YES 17 NO 0 Abstain 0

**Vote** to approve Clause 6 in 11/71r0 as the Clause 6 of the TG candidate draft

YES 17 NO 0 Abstain 0

Since we have 3 proposals for chapter 7, the chair suggested delaying the down selection for chapter 7.

J. Kwak: The down selection is a proposal issue; it needs to be resolved as soon as possible with a notice that none of chapters are complete. He suggested completing down selection today. I. Reede and S. Shellhammer supported.

 The chair suggested giving time for group to review the chapter. No objection

**Chapter 7 11/75r0 presented by M. Kasslin, Nokia**

I.Reede: Why do we force TVBD manufactory to have all coexistence entity inside? M. Kasslin: No. we did not. We should allow TVBD not to use management only, they can also do decision making for themselves

I. Reede: Do we need 75% to modify it? YES, the chair clarified that but we can change to the 50% if the group agree, but we have to have 75% of agreement until the phase of the letter ballot.

I. Reede suggested including spectrum management.

H. Kang requested a slot to present the negotiation algorithms between CMs.

**Negotiation between neighbour CMs 11/77r2, presented by Donghun Lee, ETRI,**

M. Kasslin: This is focusing on time domain, do you image that the same procedure could be used for the frequency domain adjustment. J. Junnel: it is possible.

P. Varshney: What is the different between round robin and competition? J. Wang: In the round robin mode, CM decide time slot for a exclusive use, while in the competition mode, the time slot is assigned to several networks by CM, and they share the time slot by competition.

J. Wang indicated that the negotiation could be endless.

The group had a discussion on the term of “TVBD network or device”

The chair suggested completing chapter 3 which will include the deification of all terminology.

**The meeting recessed at 9:30 AM**

### Tuesday AM2

The chair called the meeting to order 10:30AM

I.Reede explained his version of the neighbour discovery algorithm

I.Reede indicated that the manager of a TVBD responses to the requester about the details of possible interferences

M. Kassilin: Negotiation between CDISs may solve the same problem. I.Reede: CDIS may decide whether it would like to expose the CM to the requester. If not, CDIS itself becomes the final node.

M. Kasslin: Why does CDIS need to access to another CM. I.Reede: we can decide whether to access it. CDIS may be in charge of a lot of CMs, CDIS may be like to distribute the system load.

I.Reede: If you move from one location to another, the device has to tell the location again, this is required by the law. Based on the updated location, new neighbour list will be indicated by the system. Otherwise we have nothing to do.

J. Kwak: It is a two step process: (1) you get the address of CDIS or CM (2) you get your interference environment.

The neighbour discovering shall include service discovering and interference environment discovering.

**The session recessed 11:32AM**

### Tuesday PM1

The chair called the meeting to order 1:32PM

The chair initialled the discussion on the use of geo-location information in 802.19

J. Kwak: 19 is not providing geo-location for any one, as long as the TVBD has geo-location information, 19 requires them to provide it for neighbour discovery if devices register 19 service. M. Kasslin supported. The chair objected since he thought the neighbour discovery accuracy may be improved if we know the way that how they obtain the geo-location information.

S. Shellhammer amended that If the network operator could not provide geo-location information they are not allowed to operate in TVWS.

The chair called for volunteer to prepare the chapter 3. No one came forward.

**Motion**

To remove the down selection from the down selection for chapter 3

Moved by I.Reede

Seconded by M. Kasslin

Motion approved with unanimous consensus.

The chair called any objection to cancel PM2 session. No objection. Agenda was changed accordingly and approved.

### Wednesday AM1

Meeting was called to order 8:15AM

S. Shellhammer initialled the discussion to provide the comments for 802.15.4m

Comment 7 is the last comment for 802.15.4 , that is, “In the compatibility section of the 5C please include text as to how 802.15.4m will enhance compatibility with the upcoming 802.19.1 standard”

S. Shellhammer wants some specific text for above statement.

I.Reede provided the following text:

“802.15.4m shall contain the required elements to interface to 802.19.1 system. “

The chair made a call for any objection to provide above text to 802.15. No objections

“802.22a shall contain the required elements to interface to 802.19.1 system. “

The chair made a call for any objection to provide above text to 802.22. No objections

S. Shellhammer initialled the discussions on comments from Sherman Matthew for operation manual

Strawpoll: Which option do you prefer?

Option 1: if 50% of the return vote approve, vote approve, else, vote disapprove, No return rate stated (3)

Option 2: 50% return rate required, if not get, do not vote (abstain), if >-75% approve, vote approve, <75%, approve, vote disapprove (5)

S. Filin: What is the question for these two options? S. Shellhammer clarified that the question is “Do you approve the CA document”

It is indicated that 75% percent does not include abstain, it is the rate of app/(app+disapp)

**Discovery system proposal 11/78r0 presented by M. Kasslin, Nokia**

I.Reede: How does a transmitters know interference area. M. Kasslin: It is the signal level from the BS, not the receive signal level.

J. Wang: do you assume a centralized structure for the new entity. No

J. Wang: How do those entities share the information? It is hierarchy system, like DNS sever.

J. Wang: Why can CDIS not play as this new entity? It is logic entity for some functionality.

**The meeting recessed 9:50AM**

### Wednesday AM2

The chair called the meeting to order 10:35AM

Discussion on neighbour discovery continued.

I. Reede gave a brief speech on DNS operation.

J. wang: How do those . com servers share information. I. Reede: they are master/slave to each other.

S. Shellhammer: Does resolver have initial iP addresses. I.Reede: They may have no IP address at all.

M. Kasslin believed that the DNS sever can be easily used for neighbour discovery without much change.

T. Baykas: Does a Mater push the data to the slaves. I. Reede: Slave has to check by himself whether the data is updated.

I. Reede: Different from DNS, the last parts of addresses are the range, like 45,123-45.234. 74.111-74.345. xx.xx.xx

Then CDNS gives all CDIS/CMs over that area

**The meeting recessed at 11:10AM**

### Wednesday PM1

Meeting called to order 1:45PM

I. Reede presented neighbour discovery by CDNS in Page 22-23, 10/111r4

I. Reede: The CDIS tells you what energy is going to hit you.

M.Kasslin: what is missing is what will happen after that inquiring. He wants the text for that.

S. Filin: How is important that CM is bonded to some geo-location area. I.Reede: No it is not bonded.

M. Kasslin: What does the URL mean? I. Reede: URL is the area to find the CM and CDIS

M. Kasslin: How do you determine this area? I. Reede: They are TVBD area.

I. Reede: The feedback of this inquiring is a list of CMs and CDISs, which are serving the inquiring area.

J. Kwak: The rule is various over different domain, the server is country by country, like . jp, .cn. We do not take the whole world as a domain.

J. Kwak we need to use the different rule for different country.

I.Reede: It is the inquiring from CDIS to DNS, just to find the neighbour CMs and CDISs, just discovery who you are going to talk to.

I.Reede: How does a CDIS decide they have information for some area. M. Kasslin: During registration CDIS knows.

M. Kasslin: We need to specify the interface and functionality for the new entities.

The chair called any presentation? S. Filin came forward with 11/79r0.

Update to Chapter 6, 11/79r0 presented by S. Filin, NICT

P. Varshney: Is this a substitute of original 6.1. S. Filin: No, It is an amendment to chapter 6.

**Meeting recessed 3:08PM**

### Wednesday PM2

The chair called the meeting to order 4:03PM

The chair made a call for any presentation for this session. No one came forwards

The chair introduced the agenda of tomorrow and future procedure.

R. Gloger : When are we going to have a combined draft. The chair clarified that as soon as we finish the downselection, we will combine them.

J. Wang: Do we need to have chapter 3 before group review. T. Baykas: No we do not need.

**The meeting recessed 4:10PM**

### Thursday AM1

The chair called the meeting to order 8:10AM

Down selection of the proposals continued.

**Down selection:** Please choose one from 11/75r2 and 11/146r1 as Clause 7 of the TG candidate draft.

Vote to support 75r2: 10, Vote to support 146r1: 0, Abstain 0

**Vote** to approve Clause 7 in 75r2 as the Clause 7 of the TG candidate draft

YES 12, No: 0, Abstain 0

**Motion**

To insert subclause 6.1 of 11/79r0 as an addition to Clause 6 of the 802.19 TG1 candidate draft

Moved by I.Reede

Seconded by S.Filin

YES 12 NO 0 ABSTAIN 1

The WG agenda was changed to reschedule the WG closing from PM2 to PM1. It was approved with unanimous consensus.

### Thursday AM2

The chair called the meeting to order 10:35AM

Protocol to access WS databse (PAWS), presented by Gabor Bajko, Nokia

The more information can be found at [www.ietf.org](http://www.ietf.org)

There are some discussions on liaison from 802.19 to IETF PAWS group. G. Bajko explained that the group needs to indicate this request in the maillist.

J. Kwak: How many FCC selected database contractor are participating in this group. G. Bajko: 2 of 8.

J. Kwak: Is there any plan to have collaborated with those contractors to built database? G. Bajko: NO

J. Kwak: Do you think your group need to have this plan? G. Bajko: YES

J. Kwak: Do you address anything about Interfaces from database to management entity? G. Bajko: It is out of scope.

G. Bajko: We have separated the protocol and data model. The protocol between databases is out of scope.

J. Kwak questioned on the schedule of this group, and whether they can finish this with the same schedule of database contractor or can finish before them. G. Bajko: We will try our best to finish on time.

S. Filin: Is there any possible to have interface between database and management entities. G. Bajko: It is impossible to include in current chart, however if you are interested in it, you should subscribe mail list and raise the question, we may consider to work in the next version of the chart.

G. Bajko: The database may include information for all regulatory domains.

**Motion** to adjourn the meeting

Moved by M. Kasslin

Seconded by J.Wang

Motion passed with unanimous consensus

The 802.19 TG1 primary session adjourned 11:40AM.