IEEE P802.19
Wireless Coexistence

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| Mar 2011 TG1 Minutes |
|  Date: 13th to 18th Mar. 2011  |
| Author(s): |
| Name | Company | Address | Phone | email |
| Junyi Wang | NICT | 3-4 Hikarino-oka, Yokosuka, 239-0847, Japan | +81 46 847 5088 | junyi.wang@nict.go.jp |

The document records the IEEE 802.19 TG1 minutes of 802 Wireless Plenary Session in Singapore, Mar 13-18, 2011

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

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# MEETING MINUTES

First session of the meeting was called to order on PM2 15 Mar. 2011 at 2.25 PM.

### APPROVE AGENDA

The Chairman opened the meeting and presented the agenda in Doc 802.19-11/29r1.

**Motion**

To approve the agenda Doc 802.19-11/29r2.

Moved by M. Kasslin

Seconded by I. Reede

Agenda approved with unanimous consensus.

### APPROVAL OF MINUTES FROM JANURARY MEETING

**Motion**

To approve the 802.19 TG1 minutes in Doc 18r0, and teleconference minutes in Doc 23r0 and 27r0.

Moved by I. Reede

Seconded By J. Wang

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.

* 2:28 PM – The Chair made a call for essential patterns: none made.

### 802.19 TG1 Opening Report

The chair presented opening report Doc 11/31r0.

There were discussions on the TG1 liaisons in 802.11af, 802.15.4 SGTV, 802.22, 802.18 and CEPT SE43 and Wireless Innovation Forum.

802.11af (P. Varshney)

802.15.4 SGTV (TBD)

802.22 (I. Reede)

802.18 (TBD)

Wireless Innovation Forum : Need to set up an official relationship with the wireless innovation forum

CEPT SE 43 (M. Kasslin)

ETSI RRS (P. Varshney)

### STATUS OF THE MERGING PROCESS

M. Kasslin summarized the status of the merging process: still working and trying to have a merged proposal.

### WS IETF ACTIVITY PROPOSAL

**Protocol to work on WS database access 11/32r0**

**Presented by Gabor Bajka**

I. Reede: US , CA, and Ofcom etc have already defined database, Ofcom has complete it and US will finish, they defined different database interfaces, so what is going to do in IETS. G.Bajka: One common database protocol

J. Kwak: The database interfaces are different in US defined by 9 different companies. If one failed, the product from that company will be no use. If they have one common interface, they can transfer from one company to the other. For reliability reason and for compatible reason, there should be a common interface.

I.Reede: The database protocol is not selected by the manufacture but selected by the devices.

The meeting recessed 3:15 PM

### Tuesday PM2

Called to order 4:05AM

**IEEE 802.19-11/33r0 Discussion Topics**

Presented by M. Kasslin, Nokia

The merging group brought some topics for online discussion.

The discussion is summarized as follows also in Doc 11/33r2

* Spectrum etiquette is to avoid co-channel interference (Seek and avoid).
* If the spectrum fails, we go to the next level down which is to try to put networks of the same types into one channel. (PHY/MAC aggregation)
* If Homogeneous grouping fails, we fall back to generalized coexistence (channel splitting).

H. Kang presented on coexistence scenarios which includes

* Individual TV channel use
* Shared TV channel use: (1) By TVBD networks of the same type; (2) By TVBD networks of dissimilar type

There were some discussions on whether the basic channel unit is the TV channel. No conclusion

AM1 session is cancelled with unanimous consent and agenda is revised accordingly in Doc 802.19-11/29r3.

The session was recessed 5.45PM

### Wednesday AM2

**IEEE 802.19-11/33r0 Discussion Topics**

Presented by M. Kasslin, Nokia

M. Kasslin continued the presentation for coexistence solutions.

I. Reede: CM may ask CE for TVBD capabilities.

S. Shellhammer: The assumption for coexistence solutions in all these is that the decision making entity has knowledge about TVBD capabilities.

H. Kang: Who makes this decision in a 19 system? M.Kasslin: We here intentionally avoid using word CM since we have different proposal for this question.

H. Kang: Space domain shall also be added as one way of channel splitting.

S. Filin: The coexistence solution in 11/33r2 is one of way to do that. M.Kasslin agreed.

N. Sato: Channel spitting is not the only way, they may some other possible ways to share channel. M. Kasslin agreed.

The coexistence solution in 11/33r2 is reworded due to the above discussions.

11:10AM The discussion changed to scalability and NAT traversal.

I.Reede opened the discussion by introducing a hierarchical network structure, where there are brokers to manage resource over dissimilar networks.

The discussion was summarized as follow also in 11/33r2 that

* coexistence system discovery
1. Coexistence system availability (how a TVBD finds out a CM to connect)
2. How a CM finds other CDISs
3. what role a broker has in the system
* NAT traversal
1. How to provide communication links
* Trust
1. How to build and maintain trust
2. How to anonymous sensitive information

The session recessed 0:10PM

### Wednesday PM1

Called to order 1:32PM

**IEEE 802.19-11/33r0 Discussion Topics**

Presented by M. Kasslin, Nokia

M. Kasslin continued the presentation on the discussion on propagation, power disparity, convergence, stability.

I.Reede opened the discussion by showing some figures of field amplitude diagrams

The discussion is summarized as follows also in 11/33r2

Propagation

1. What kind of propagation models should be used in the coexistence system as an example in neighbour discovery
	* Free space propagation model is the extreme. As accurate and realistic models as possible should be used
	* How to accommodate factors like building penetration loss and indoor/outdoor operating evironment
2. A related question is what information a TVBD needs to provide on itself to the coexistence system for propagation model calculations
3. Power disparity

The topics is initialled by S. Shellhammer on the parameters that a coexistence can configure or can get form TVBD

The discussion is summarized as follows also in 11/33r2

What are parameters a coexistence system can configure (i.e. knob to turn?)

1. List of possible carrier frequencies (TVBD tells its carrier frequencies)
2. List of possible bandwidths
3. Range of Tx power levels (TxP\_Min TxP\_Max)
4. Synchronization

What are parameters a coexistence system can get from TVBD

1. Rx sensitivity (in dBm)
2. Minimum SNR
3. TVBD location
4. FCC ID, Serial number (Regulatory ID)
5. Tx Antenna HAAT, Altitude, orientation, directivity
6. Rx Antenna HAAT, Altitude, orientation, directivity
7. Geo-locaiton dabase information : available channel list, etc, and when the information was last updated
8. TVBD technology/Standard
9. Capabilities: List of carrier frequency , List of bandwidths, Synchronization, EIRP Tx power range (TxP\_Min, TxP\_Max)
10. Indoor/Outdoor /Device class
11. Intended range
12. Operation mode

**Motion**

To cancel Wednesday PM2 and Thursday AM1 and change the agenda accordingly

By M.Kasslin

Seconded by I. Reede

Motion passed.

* **Thursday AM2**

Called to order 10:37

**IEEE 802.19-11/35r0 Update on European/UK Regulatory situation on cognitive access in the White Spaces**

Presented by M. Kasslin,Nokia

J. Kwak: Will White space be licensed in Europe. M. Kasslin: As long as it is provided the database for protection, it would be license-free.

J. Kwak: TVWS may also be used as licensed second use.

I.Reede: Canada is going to have unlicensed use in TV band, high power internet transmission will be incumbent in a harmonised database.

I.Reede: The database can cover the spectrum by specifying the starting and ending frequency and transmit power.

**IEEE 802.18-11/29r0 FCC TV Bands administrator workshop**

Presented by T. Baykas,NICT

**IEEE 802.18-11/27r1 IITB Proposal TV White Space**

Presented by T. Baykas, NICT

The main push in India is the licensed use of TVWS.

**Motion**:

To change PM1 starting time to 1PM.

By M.Kasslin

Seconded by I. Reede

Motion passed

* **Thursday PM1**

The chair called for clarification from the merging group the plan in May.

M. Kasslin: we are doing the job; it takes longer time than we expected, and we would like to continue the merging process. May would be the deadline for the merging proposal. H. Kang agreed.

R. Pirhonen suggested cancelling the TG1 meeting in May if the merging process is not finished. Mika objected it and explained that if merging is not success, there would several proposals to go to the down selection.

J. Kwak: It is not good to have down selection in May, since there is no good and dominated proposal for a standard.

H. Kang: If down selection happens, it will be hard for letter ballot.

M. Kasslin: It may be no need to modify the procedure. If in May, we could not come with a merged proposal, it is one possible approach to have down selection. S. Shellhammer agreed.

R. Pirhonen suggested listing up all issue the group has. I.Reede agreed.

R. Gloger: suggested to clarify the main issue to go further. I. Reede: one way is to list up all difference between proposals, and to build consensus in the group and suggest changes to those the group who do not want to adopt.

J. Kwak: The other option is to fall back to SDD and modify it., he is against making decision right now but decide in May.

 **Straw poll:**

Which option do you prefer, if merger process fails until May?

Option 1: To open up the merging process to the TG (1)

Option 2: To revise and update the SDD document to be more complete (3)

Option 3: Abstain (12)

**Straw poll (withdrawn)**

Would you like that the merger process is opened up to TG1 immediately, using the list of topics

Yes

No

Abstain

M. Kasslin: We could not force the contributor to open

R. Gloger (owner of the strawpoll) : withdraw the straw poll

**Straw poll (withdrawn)**

Is it possible to make a list of topics that could be used as basis for teleconferences and May meeting.

Yes

No

Abstain

I. Reede claimed that we have already had the list on the mentor.

It is shown that everyone in group agreed that we should do it in the teleconference, the straw poll is therefore withdrawn.

**Motion**

Move to place on the agenda to revise and update the SDD document to be more complete in May based on the differences between proposals. ~~, if the private drafting group does not provide a merged proposal before May session~~?

By I.Reede

Seconded S. Shellhammer

Yes: 8

No: 16

Abstain: 0

J. Jo: What do you mean by “updating the SDD”, which part are you going to modify?

I.Reede: There is no clear part, it will document decision, take something from merger and make decision on that items, and drop the decision into the SDD.

J. Kwak suggested a friendly modification on moving the condition in the motion. Motion is revised accordingly as shown above.

M. Kasslin: If the merging process is not complete in May, we will go to down selection

Before running the motion, the chair clarified that this is procedure issue, we need 50% to approve.

**Motion**:

If the private drafting group fails to provide a merged proposal before May meeting, move to discuss and revise the procedures of this stalled task group.

By J.Kwak

Seconded by P. Varshney

YES: 5

NO: 16

Abstain:1

**IEEE 802.19-11/34r0 Report from liaison of 802.11af.**

 Presented by P. Varshney

**I.Reede reported the 802.22 status.**

* **Closing Report by the Chair.**

**Motion**

To adjourn the TG meeting

Moved By I. Reede

Seconded by S. Shellhammer

Motion passed.

TG meeting adjourned. 2:40PM