**August 22nd, 2013 Telecon Meeting Minutes**

Agenda:

* IEEE 802.22 Revision PAR
* IEEE 802.22 New PAR Ideas
* Call for Participation

Attendees

Apurva Mody (BAE Systems), Dr. Chang-woo Pyo (NICT), Zhang Xin (NICT), Dr. Chunyi Song (NICT), Tom Gurley (IEEE-BTS), Jerry Kalke (CBS), Prof. Shigenobu Sasaki (Niigata University)

Apurva presented Document 22-13-0137 Rev 0 on the 802.22 Revision PAR.

There were quite a few discussions

New PAR Ideas

Using existing spectrum sensing schemes in 802.22 to aid Spectrum Observatories was another idea that was discussed.

**September 5th, 2013 Telecon Meeting Minutes**

Agenda:

* IEEE 802.22 Revision PAR
* IEEE 802.22 New PAR Ideas
* Call for Participation

Attendees

Apurva Mody (BAE Systems), Zhang Xin (NICT), Dr. Chunyi Song (NICT), Jerry Kalke (CBS), Prof. Shigenobu Sasaki (Niigata University), Dr. Masayuki Oodo (NICT), Dr. Keat-beng Toh (Hitachi Kokusai), Dr. Sunghyun Hwang (ETRI)

New PAR Ideas

1. Radio Environment MAP was discussed as one of the new PAR ideas.
2. Authorized Shared Access – Licensed Shared Access - Small cell spectrum sharing in 3.5 GHz – Spectrum sharing for mobile applications
3. There were some discussions on Authorized Shared Access. The 802.22 attendees wanted to understand what Authorized Shared Access meant. Dr. Hwang (ETRI) made the 802.22 participants aware of what was going on in CEPT (The European Conference of Postal and Telecommunications Administrations).
4. The question was whether 802.22 should focus on new PHY/ MAC, new supporting technologies or enhancing the 802.22 capabilities to operate in other bands that operated on the ASA principles.
5. It was decided to adopt the last two approaches. That is, not to create new PHY/ MAC but provide ways in which existing 802.22 may be used in other bands that required spectrum sharing and also to create other supporting technologies
6. Apurva reviewed this presentation on Radio Environment Map that was available on the internet at the following URL: <http://www-syscom.univ-mlv.fr/~najim/gdr-ecoradio/sayrac.pdf> .

**October 3rd , 2013 Telecon Meeting Minutes**

Agenda:

* IEEE 802.22 Revision PAR
* IEEE 802.22 New PAR Ideas
* Call for Participation

Attendees

Apurva Mody (BAE Systems), Zhang Xin (NICT), Dr. Chunyi Song (NICT), Jerry Kalke (CBS), Prof. Shigenobu Sasaki (Niigata University), Dr. Masayuki Oodo (NICT), Dr. Keat-beng Toh (Hitachi Kokusai), Dr. Sunghyun Hwang (ETRI), Ivan Reede (AmeriSys)

**MOTION**

Motion to Approve the Agenda

Move to Approve the Agenda

Move: Apurva N. Mody

Second: Chang-woo Pyo

Any objection to approving the agenda. No objection heard. Motions Passes.

Motion to Approve the August 22nd and September 5th Meeting Minutes

**MOTION**

Move to Approve the August 22nd and September 5th Meeting Minutes

Move: Apurva Mody

Second: Sunghyun Hwang

Any objection to approving the meeting minutes. Motion Passes

**MOTION**Move to approve the contents of the document:22-13-0138Rev2 (802.22 Revision PAR) <https://mentor.ieee.org/802.22/dcn/13/22-13-0138-02-0000-802-22-revision-par.docx> as the contents of the P802.22 Revision PAR to be forwarded to the IEEE 802 EC. To allow the Chair to make a motion during the November Closing EC Meeting seeking approval to submit the PAR form to IEEE SA NESCOM. To allow the Chair to make subsequent submission of the PAR form to the IEEE SA NESCOM upon its approval from the EC. To allow the Chair to make the necessary changes to the PAR form at his discretion based on the comments from IEEE 802 EC or the IEEE SA NESCOM
members and submit the revised PAR to the NESCOM.

Move: Chang-woo Pyo
Second: Sunghyun Hwang
For: 11
Against: 0
Abstain: 0

New PAR Ideas

1. Radio Environment MAP was discussed as one of the new PAR ideas. Apurva reviewed this presentation on Radio Environment Map that was available on the internet at the following URL: <http://www-syscom.univ-mlv.fr/~najim/gdr-ecoradio/sayrac.pdf>
2. There were many discussions on what radio environment map meant. Did it mean spectrum sensing? Did it mean messaging, or did it mean creation of a map of the radio frequency usage patterns using spectrum sensing information. Apurva explained that this was the latter.
3. Ivan suggested that this could be very useful to understand who is using what frequencies.
4. Ivan also suggested that the implementation of this through a network or radios or sensors was possible. One of the questions was that who is likely to be the customer.
5. Apurva suggested that database providers could really benefit from this information. In fact Microsoft is already implementing a Spectrum Observatory.

October 10th, 2013 Telecon Meeting Minutes

Agenda:

* IEEE 802.22 Revision PAR
* P802.22a Sponsor Ballot Comment Resolution

Attendees

Apurva Mody (BAE Systems), Jerry Kalke (CBS), Dr. Sunghyun Hwang (ETRI), Dr. Chang-woo Pyo (NICT), Dr. Chunyi Song (NICT), Lin Hsuen (NICT)

**MOTION**

Motion to Approve the Agenda

Move to Approve the Agenda

Move: Apurva N. Mody

Second: Chang-woo Pyo

Any objection to approving the agenda. No objection heard. Motions Passes.

Motion to October 3rd Meeting Minutes

**MOTION**

Move to Approve the October 3rd Meeting Minutes

Move: Apurva Mody

Second: Sunghyun Hwang

Any objection to approving the meeting minutes. Motion Passes

Meeting Minutes

* Apurva discussed document 22-13-0138 Rev 2 (<https://mentor.ieee.org/802.22/dcn/13/22-13-0138-02-0000-802-22-revision-par.pdf>) on revision PAR
* P802.22a Sponsor Ballot 1 Comment Resolution
	+ The second half of the call was used to resolve Sponsor Ballot Comments on P802.22a Draft Standard
	+ Sponsor Ballot Pool: 78
	+ Number of Comments Received: 5
	+ Response Ratio: 80%
	+ Approval Ratio: 100%
	+ All 5 comments were Accepted.
	+ Ranga Reddy will prepare corresponding changes
	+ The comments and resolutions are as follows -



**October 31st, 2013 Telecon Meeting Minutes**

Agenda:

* IEEE 802.22 Revision PAR – 5C

Attendees

Apurva Mody (BAE Systems), Tom Gurley (IEEE BTS), Jerry Kalke (CBS), Dr. Chang-woo Pyo (NICT), Dr. Keatbeng Toh (Hitachi Kokusai), Peter Flynn (Texas Instruments), Dr. Bingxuan Zhao

**MOTION**

Motion to Approve the Agenda

Move to Approve the Agenda

Move: Apurva N. Mody

Second: Peter Flynn

Any objection to approving the agenda. No objection heard. Motions Passes.

Motion to October 10th Meeting Minutes

**MOTION**

Move to Approve the October 10th Meeting Minutes

Move: Apurva Mody

Second: Jerry Kalke

Any objection to approving the meeting minutes. Motion Passes

Meeting Minutes

* Apurva discussed document 22-13-0138 Rev 2 (<https://mentor.ieee.org/802.22/dcn/13/22-13-0138-02-0000-802-22-revision-par.pdf>) on revision PAR
* Document Number 22-13-0156 Rev 0 was introduced as the 5 Criteria for the 802.22 Revision PAR
* There was constructive feedback and discussions.
* Following motion was made to approve the 5C.

MOTION

Move to approve the contents of the document:22-13-0156Rev0 (802.22 Revision PAR 5C) <https://mentor.ieee.org/802.22/dcn/13/22-13-0156-00-0000-802-22-revision-par-5c.docx> as the contents of the P802.22 Revision PAR 5 Criteria to be forwarded to the IEEE 802 EC. To allow the Chair to make a motion during the November Closing EC Meeting seeking approval to submit the PAR form to IEEE SA NESCOM. To allow the Chair to make subsequent submission of the PAR form to the IEEE SA NESCOM upon its approval from the EC. To allow the Chair to make the necessary changes to the PAR form at his discretion based on the comments from IEEE 802 EC or the IEEE SA NESCOM
members and submit the revised PAR to the NESCOM.

Move: Chang-woo Pyo
Second: Peter Flynn
For: 7
Against: 0
Abstain: 0

MOTION PASSES