|  |
| --- |
| Minutes of the IEEE 802 5G SC meeting at the July 2016 IEEE 802 plenary |
| **Date: July, 29th 2016** |
| **Author(s):** |
| **Name** | **Affiliation** | **Phone** | **email** |
| Max Riegel | Nokia | +49 173 293 8240 | maximilian.riegel@nokia.com |

## Abstract:

Minutes of the two sessions of 5G SC at the July 2016 plenary in San Diego on July 25th and July 26th.

# Monday, July 25th, 2016

Chair: Glenn Parsons

Recording secretary: Max Riegel

## Call to order

* Chair called meeting to order at 07:30pm PT
* Guiding slides with agenda proposal by EC doc#118r0
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0118-00-5GSG-5g-sc-agenda-july-2016.pdf>
* IEEE SC Guidelines
* Chair showed mandatory slide for IEEE standing committee meetings and explained duties of participants

## Participants

* Registered in IMAT

## Agenda

* Chair brought up agenda proposal contained in guiding slides
* Monday
* Introduction (5gsc-118) – Glenn Parsons
* Role of this standing committee
* Activity since March
* Plan for this week
* IEEE ≥ 5G – Paul Nikolich
* Draft report (5gsc-94-06) – Roger Marks
* Tuesday
* Next Steps for the SC
* Rescope or conclude
* Chair explained that Monday session is aimed for concluding on the report, and Tuesday session will focus on creating recommendations to the EC how to proceed.
* No further requests were made and group agreed on agenda.

## Introduction

* Glenn provided introduction to the 5G SC activity by walking through the guiding slides:
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0118-00-5GSG-5g-sc-agenda-july-2016.pdf>
* Glenn explained the role of the 5G standing committee and provided information about ‘What is 5G’.
* When Glenn concluded the views on 5G with the ‘IEEE ≥5G initiative’ slide Paul stepped in and provided background information about the 5G initiative in IEEE
* IEEE recognized that most of 5G discussion is very academic oriented. Therefore IEEE collected the academic portion for taking care to create a balance to the industry mainly focusing on products. He announced that IEEE will establish a number of SIG in August
* Glenn continued with the slides on 5G SC report development and concluded his introduction with mentioning the challenges of the activity. It came out that there is reduced interest in 5G in 802, in particular there was no value seen in an independent submission to IMT-2020 and there were doubts about the value of describing an IEEE 5G end2end solution.
Nevertheless there would be still interest in sufficient spectrum for IEEE 802 technologies and there is confidence that IEEE 802 technologies would be used anyhow in 5G.
* No comments or questions were raised on Glenn’s report

## Draft report

* Roger presented the draft report as updated shortly after the last conference call
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0094-06-5GSG-proposed-draft-report-ieee-802-ec-5g-imt-2020-sc.pptx>
* Roger’s presentation was concluded with the two prongs of the proposed approach
* Follow action B3 to have world class IEEE 802 technology included,
* Action A would focus on solution applicable to multitude of cases,

next steps for both of the directions and the two slides showing a summary and draft conclusions.

* Discussion and comments on report:
* Vinko brought up thoughts to emphasize B1 addressing the weak acceptance of IEEE 802 proposals by 3GPP and 3GPP itself stepping into 802 domains. He would highly encourage an IEEE 802 only submission potentially not addressing all use cases but only a subset
* Roger responded that it may not be too late to consider such approach but the final conclusions about standardization work is up to working groups and Glenn added that he would be open to amend the report if that proposal has broad support.
* Stephen made a comment about the meaning of ‘incumbent mobile operators and others’ in Action A. He explained that the intention was more on others/independent operators, but not to address the incumbent operators
* Roger responded that independent would not be conclusive, but rewording would be possible if another term would fit better.
* Andrew expressed support for Stephen’s comment to focus on incumbent operators and added that relying on some external organizations on interfacing towards IMT-2020 may not lead to the preferred solution intended by IEEE 802; it would be desirable to have some internal solution for interfacing into IMT-2020.
* When Glenn pointed out that option A might bring the IEEE kind of solution, Andrew supported the view that action A would provide more control to IEEE 802 how its technologies are used.
* Joe questioned the necessary efforts to address action B1.
* Vinko wondered whether Action A would only provide an interface specification to a core network not bringing the MAC and PHY specifications into the picture.
* When Roger explained that action A would show interfaces for integration into a core network, Vinko expressed the wish to include more PHY and MAC specifications into the approach.
* Glenn pointed out that action A would indeed include support for multiple MACs.
* Hassan wondered whether Action A would be the heaviest effort towards ITU.
* Glenn asked what would be necessary in addition to the activities towards WP5A as already existing.
* Hassan responded that spectrum wouldn’t be the heavy effort but there would be more necessary and Joe amended that the communication infrastructure would have to be somewhere defined.
* Glenn pointed out that initial thoughts were about defining the network for application to ITU, but it might be different when the networking spec is aimed for IEEE 802.
* Peter explaining that 802.21 is an example to create a common interface across all wireless technologies. Such common interface would fail as it would not scale across all 802 technologies and focus should be on the few/only interfaces that are necessary for ITU-R.
* Paul stepped in and asked to focus on the conclusion
* Glenn pointed out that different preferences were brought up in the meeting with more interest in an independent IEEE proposal and he would like to first ask about agreement that the actions would not be mutually exclusive.
* Several participants stated that there is lack of understanding of the universal management interface of Action A and more time would be required to settle the opinion. Roger responded that 802.1CF would provide an underlying foundation for creating of detailed interoperability specifications, leaving it open whether there would be a single profile or multiple profiles
* Glenn asked whether modifications to the background information would be necessary and when no demand was raised, continued to conclude on the agreement that the actions are not exclusive.
* As no comment came up, he declared agreement, that actions are not exclusive.
* Glenn announced a straw poll for preference of actions, with potentially repeating the same straw poll again on Tuesday evening. Each participant could vote for many actions as supported
* Mark suggested that Chicago voting should be amended by an exclusive vote about single way forward and Fujio asked to add the option to do nothing.
* First straw poll w/ Chicago rules
* Action A: 30
* Action B1: 6
* Action B2: 2
* Action B3: 46
* Nothing: 6
* Second straw poll – exclusive:
* Action A: 22
* Action B1: 0
* Action B2: 0
* Action B3: 29
* Nothing: 2
* Glenn expressed that outcome of straw polls would support the emphasis of the report and recessed the meeting.

Meeting recessed at 09:30pm PT

# Tuesday, July 26th

* Glenn called meeting to order at 07:35pm PT

## Agenda update

* Glenn brought up proposed agenda in revised meeting slides, slightly amended to adopt outcome of the previous session and the results of the OmniRAN special meeting.
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0118-01-5GSG-5g-sc-agenda-july-2016.pdf>
* Tuesday
* Draft report (94-07) – Roger Marks
* OmniRAN summary (OmniRAN-45) – Max Riegel
* Next Steps for the SC – Glenn Parsons
* Rescope or conclude
* No additional requests were brought up. Chair declared agenda as approved.

## Draft report

* Glenn presented the updated version of the report containing the edits introduced in the Monday meeting.
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0094-07-5GSG-proposed-draft-report-ieee-802-ec-5g-imt-2020-sc.pptx>

## OmniRAN summary

* Max reported about the OmniRAN TG special session on Action A and the conclusions coming out of the session by showing last two slides of session slides
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0045-01-00TG-july-26-special-session-on-5g-sc-action-a.pptx>
* Conclusions as summarized on the last slide:
* There are limited possibilities to establish IEEE 802 as complementary 5G technology in ITU WP-5A
* ”5G” is a marketing term not used by ITU-R
* IEEE 802 is already prominently represented in M.1450 maintained by WP-5A
* Could potentially be even more enhanced
* IEEE 802.18 is already active, but might require more input
* There are plenty of options to establish an IEEE 802 “5G” specification
* But we are currently missing the objectives for such an effort
* We need a customer for the IEEE 802 “5G” specification
* Like 3GPP has strong relationship with mobile operators on 5G/IMT-2020
* We have to work on industry relations for IEEE 802 “5G”
* Ideas and proposals wanted!
* Joe added to the report that there would be many potential ways forward by e.g. addressing the hotspot operators, car industry or other stakeholder about desired enhancements to the IEEE 802 technologies.
* Andrew supported the view that Action A would IEEE 802 allow to keep control of the directions IEEE 802 technologies are deployed, and Peter proposed to base Action A on ITU-R recommendation M.1801-2 instead of M.1450 mentioned in the OmniRAN slides. M.1801-2 would cover a much wider range of deployments.

## Next steps for the SC

* Glenn opened the discussions about the directions of the 5G SC by asking whether the straw polls of last day’s meeting should be repeated. When no demand was showing up, he stepped into the updated meeting slides showing various proposals for next steps.
* Glenn presented the slides 33 – 37 of the updated meeting slides
* Proposal for Action A
* Proposal for Action B3
* Possible re-scope of SC
* Introducing Industry Connections
* Chair’s Recommendations
* Discussion and comments:
* Peter mentioned that there is no demand for an entity to coordinate cooperation between 3GPP and 802.11. The group have direct relations working well for more than 10 years.
* Andrew questioned why Action A is going with 802.1
* Glenn explained that 802.1 is the home of overall architecture questions in IEEE 802, and Action A would be closely related to end2end architecture questions.
* Roger appreciated the chair’s proposal in particular for Action A and expressed that the conclusion for Action B3 would not necessarily have to go with Industry Connections
* Glenn amended that it would be left to 802.11to define the necessary activities
* Paul stepped in and offered to pull in John D’Ambrosia for a short introduction of Industry Connections and asked whether Action A would already be ready for Industry Connections
* Glenn showed slide 33 and explained that it would be the logical extension
* Peter wondered about the meaning of “5G” as there would be no IEEE 802 “5G”
* Glenn agreed.
* Joe wondered whether there would be need for Industry Connections for Action B3. 802.11 could start Action B3 with a LS to 3GPP followed by some standardization phase.
* John stepped in and explained shortly the experiences from 3 industry connections, which he did for 802.3
* Can be either individual based or entity based
* Aimed to make industry participating, providing requirements and input
* Allows to invite industry by providing room, resources, a reflector and web space, and distribution of announcement,
* Helped to run CFI and to get input from industry
* Directly led to formation of a study group
* Potential material to be shared with industry are either records of the meetings, or white papers, or CFIs.
* There is no cost for submitting ICAIDs. A simple form to be filled out to get resources, and approval by a WG needed similar to PAR
* Roger asked whether IEEE recognition is essential, or whether the quality of the distributed material would be more important.
* John explained that in his cases first a IEEE press release was send out. It was good that it was presented as an IEEE activity as analysts got aware and stepped in for further input. An IEEE whitepaper is received as more reliable as it is not vendor specific but a result of a joint activity.
* Glenn brought back focus of the discussion to his recommendations for Action A and Action B3
* Paul expressed his support that 802.1 should start an ICAID for action A, and that 802.11 should potentially send out a liaison for action B3
* Hassan expressed that an ICAID could also be used for Action B3
* Joe demanded that 802.11 should be closely involved in the Industry Connections activities for Action A
* Paul explained that 802.1 would be just the home of the activity with everybody allowed to participate
* Joe amended that a group of champions would be needed to make Industry Connections working including likely a group of experts of 802.11
* Stephen also supported to have 802.11 more involved in the Industry Connections for Action A
* Roger explained that Action A would have a much bigger scope exceeding the scope of 802.11, and added that 802.1 would probably be the best choice.
* Paul proposed that the Industry Connections activity could meet at the wireless interim meetings to allow 802.11 to attend all the meetings.
* George raised the question about the role of the WGs in the Industry Connections process.
* Glenn explained that the EC will make the decision in the closing EC meeting and inform the WGs about proposed actions; finally, the WGs decide about the execution of the Industry Connections.
* Glenn envisioned that there would be a joint meeting in November to trigger the process.
* Joe stressed the need for coordination among the Action A and Action B3 activities
* Glenn rephrased wording on last slide to make more clear that both actions are handled in coordination.
* Hassan proposed that 802.18 should be included in the coordination
* Joe and Peter expressed that 802.18 is already coordinating efforts among WGs
* Scott brought up the issue how IEEE 802 is handling its spectrum issues and how it could be achieved that IEEE 802 actively protects its 60 GHz spectrum against other assignment. The following discussion about the various aspects concluded that 802.18 is already in charge of the necessary actions. Paul offered to consider further support for the spectrum issues in ITU-R.
* The discussion led to reordering and some edits to the last slide of the meeting slide, re-titled to ‘Recommendations’. The modified slide set is available on mentor:
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0118-02-5GSG-5g-sc-agenda-july-2016.pdf>
* Glenn concluded the discussions through the initiation of a straw poll on the commitment of the participants. He asked the participants to show their support for the ‘Recommendations’ as well as their commitment for contributing to the proposed actions.
* The straw poll result:
* Support of ‘Recommendations’
* 40 people supporting, none opposing and about 10 attendants did not vote
* Commitment to contribute:
* Commitment for A: 13
* Commitment for B3: 13

## AOB

* Paul thanked Glenn for leading the 5G SC activity.

## Adjourn

* The meeting was adjourned by the chair at 09:32pm PT