|  |
| --- |
| Minutes of the IEEE 802 5G SC May 25th F2F Meeting |
| **Date: May, 27th 2016** |
| **Author(s):** |
| **Name** | **Affiliation** | **Phone** | **email** |
| Max Riegel | Nokia | +49 173 293 8240 | maximilian.riegel@nokia.com |

## Abstract:

Minutes of the IEEE 802 5G SC Budapest F2F meeting on May 25th, 2016

# F2F Meeting on Wednesday, May 25th, 2016 09:00-12:00AM CET

Chair: Glenn Parsons

Recording secretary: Max Riegel

## Call to order

* Chair called meeting to order at 09:00 CET
* Guiding slides with agenda proposal by EC doc#77r1
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0077-01-5GSG-5g-sc-agenda-may-2016.pdf>
* IEEE SC Guidelines
* Chair showed mandatory slide for IEEE standing committee meetings and explained duties of participants

## Participants

| **Name** | **Affiliation** | **Name** | **Affiliation** |
| --- | --- | --- | --- |
| Glenn Parsons | Ericsson | Janos Farkas | Ericsson |
| Max Riegel | Nokia | Antonio de la Oliva | UC3M |
| Kiwin Palm | BRCM | Tero Mustala | Nokia |
| Roger Marks | EtherAir Assoc. | Yasuhiko Inoue | NTT |
| Akira Yamada | NTT DOCOMO | Wang Hao | Fujitsu |
| Michael Mayer | Huawei Canada |  |  |
| Hakan Persson  | Ericsson  |  |  |
| Hassan Yaghoobi  | Intel  |  |  |

## Agenda

* Chair brought up agenda proposal contained in guiding slides
* Chairs intro
* Updates on other activities
* Plan for report (65)
* Other contributions
* 802.1CF – Max Riegel (83)
* 802.1CM – Janos Farkas (update on 38)
* Chair explained that minutes of previous F2F meeting on May 20th in Waikoloa would not be available yet, but a short summary would be provided as part of the Chairs intro.
* Agenda was approved as no further comments were made.

## Chair’s introduction

* Summary of May 20th meeting
* Glenn provided verbal report about the May 20th meeting
* 3 contributions
* 802.21 framework and applicability
* Presentation indicated that 802.21 would fit into 5G scenario in particular for handoffs between 802 technologies as well as between 5G cellular and 802 technologies. It was concluded that technology would well fit into cellular technologies but did not find adoption yet.
* Yonggang Fang (ZTETX) presented an alternative IEEE 802 5G proposal
* Presentation included comprehensive overview about eco system also stretching out into WP5A option with focusing on RLAN approach bypassing the IMT-2020 in WP-5D
* 802.11 contribution addressed the various options with cost/value assessments
* Clear preference to go for option 4 under the assumption that industry would clearly follow 3GPP for defining the 5G system.
* 802.11 would like to avoid an own IEEE 802 submission through cooperation with 3GPP for creating an integrated proposal
* Scope and organization of 5G SC
* Glenn went through 5G SC overview slides contained in the meeting slides
* Chartered until end of July F2F
* Voting rights to any voting 802 member, but Glenn does not expect explicit voting to happen
* Document archive on mentor
* Dedicated mailing list
* Portal page on ieee802.org
* Meeting schedules
* Next F2F meeting on Friday, June 24th in Ottawa focusing on the creation of the report
* Currently reserved for the full day, potentially having an official 5G SC meeting only in the morning and an editor’s session with some volunteers in the afternoon
* Jul Plenary
* Tutorial slots reserved on Mon and Tues for presentation and discussion of the report
* Presentation and discussion in closing EC
* Weekly conference calls at alternating times 10am/6pm ET
* Update on other 5G activities
* Glenn reported about 5G related activities in IEEE (more details provided by May 11th minutes)
* IEEE 5G initiative
* Cross IEEE coordination
* http://5g.ieee.org/
* http://www.5gsummit.org/
* GSC-20 – April 26-17, Delhi
* 5G as a “hot topic”
* IEEE-SA 5G workshop – April 22, Tokyo
* MIT, 5GMF, IEEE-SA, IEEE 802

## Plan for the report

* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0065-06-5GSG-5g-sc-report-layout.pdf>
* Glenn presented plan for the layout of the report by going through the slides
* Philosophy
* Expand cost and benefits for each of the options to get involved into 5G
* Starting with option 4, then option 1 (as per documents #78 and #81 presented in Waikoloa)
* Concluding with a SC proposal for going forwards
* What are cost & benefits
* Cost benefits analysis with relative costs, but not with monetary costs
* Proposed ToC
* Also expanding the list of related 802 projects as identified in the Macau meeting
* Tero wondered whether 5G would go beyond wireless access, which would make more TSN projects relevant for 5G.
* Chair responded that current 5G scope is limited to wireless access technologies. Fixed access as frequently listed on 5G marketing slides would address fixed wireless access, but not wireline access
* What is 5G?
* IEEE 5G
* Not specified so far, can comprise nearly everything
* IMT-2020
* Make contribution to ITU-R to include IEEE 802 technologies into IMT-2020 candidate technologies
* Requirements and scope described in ITU-R M.2083
* Possible cooperation with 3GPP
* IEEE 5G
* No focus on IMT-2020, but joint definition together with 3GPP of the overall architecture and of the interfaces between 3GPP and IEEE 802 technologies
* This could be equivalent or a subset of 3GPP 5G
* IMT-2020
* Submission of IEEE 802 technology by either 3GPP or IEEE 802
* Many derivative options
* Glenn walked through the lengthy list of derivative options
* Approach analysis of (4.a)
* Benefits:
* IEEE 802.11 is a component in ITU-R/3GPP 5G architecture
* Aligned with industry 5G branding momentum
* Aligned with scope of 802.11 limited on PHY and MAC
* Michael mentioned that it would also provide a solution for the MGMN requirement to include Wi-Fi into future mobile networks
* The least effort among four approaches; IEEE 802 could just let 3GPP include IEEE 802.11 technology autonomously
* Costs:
* IEEE 802.11 needs to coordinate with 3GPP for their submission of IMT-2020 proposal in ITU-R
* Approach analysis of (1.b.i)
* IEEE 802 5G as ITU-R non-IMT technology
* Submit 5G proposals to ITU-R WP5A WAS/RLAN as a complementary solution of IMT-2020
* Possible IEEE 802 technologies for component of 5G
* Radio interface
* IEEE 802.11, IEEE 802.15, etc
* Network management and control
* Back haul and front haul
* IEEE 802.1/.3, IEEE 802.11
* Benefits:
* Align ITU-R WP5A scope for non-IMT systems: WAS/RLAN
* May identify some use cases and requirements for non-IMT 5G
* Support new spectrum sharing mechanisms with other technologies
* Promote IEEE 802 in ITU-R 5G as non IMT 2020 technology
* Cost:
* More efforts
* Contributions required to provide more details
* First feedback from 802.11
* IEEE 5G does not provide sufficient benefits to qualify for the efforts
* IEEE 802.11 prefers to focus on external IMT-2020 contribution
* No questions raised

## Other contributions

* OmniRAN presentation by Max
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0083-00-5GSG-omniran-tg-perspective-on-5g-sc-options.pptx>
* Contribution created by OmniRAN TG in its first session the day before
* Glenn asked about the required efforts for the RLAN approach as proposed in doc #78
* Max offered to address question in OmniRAN TG to clarify network specification requirements for doing complementary approach to IMT-2020
* 802.1CM verbal update by Janos
* No major new information available compared to what was presented in doc #38
* Common agreement that fronthaul is a major aspect of 5G
* Janos wondered how to match the various 5G SC options
* Most likely the project proceeds completely independent of 5G SC outcome
* All requirements are addressed anyhow and Janos does not expect additional efforts
* 802.1CM does not focus on 802 wireless technologies but was aimed from the beginning on 3GPP base station splits between RRH and BBH
* Starting point was the CPRI interface, but when 3GPP will start activities on fronthaul, .1CM will have to align with 3GPP to address their upcoming requirements
* Glenn concluding that there would some marketing benefits of being included in 5G activities of IEEE
* Janos offered to provide written input to the 5G SC report

## Q&A

* Max asked about the format of the report, whether slides or text is expected and hinted to keep efforts low for creating the report of the SC as there is not much time left and all input provided so far was provided on slides
* Glenn mentioned that he would see a presentation slide deck in addition to some kind of written report and tends to create a document but having a presentation as summary and considered whether essential information could be assembled in a number of tables
* Tero requested that the expectations regarding the addressed options should be clearly spelled out, e.g. whether only an IMT-2020 stamp is desired or there is expectation to get access to further spectrum by the IMT-2020 application
* Glenn explained that the template will explicitly request to explain the desired outcome of the option. It may become much more difficult to engage external organizations to address the interests of IEEE 802 in their submissions.
* Max hinted that the report should focus only on the options, to which contributions were delivered. IEEE 802 is a contribution driven organization, and it is important information to show to which options participants are willing to contribute.
* Glenn responded that he proposed such approach from the beginning but he would like to see details for all the most important options
* Glenn announced that he would provide a template for the report and the final decision about the format of the report will be taken in the Jun 24th meeting. As the report is aimed for the EC members, a slide deck would be sufficient as output of the effort. He will create a slide template for cost/benefit comparison and will fill in existing content. First draft should be available next week.

## Adjourn

* No further comments or topics were raised. The chair adjourned the meeting at 12:15 CET.