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| Minutes of IEEE 802.1 OmniRAN TG Meeting in Budapest, HU |
| **Date: May 24th – 26th , 2016** |
| **Author(s):** |
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## Abstract

Minutes of the IEEE 802.1 OmniRAN TG meeting at the IEEE 802.1 Interim Meeting in Budapest, HU on May 24th – 26th, 2016

# Tuesday, May 24th, 2016

Chair: Max Riegel

Recording secretary: Wang, Hao

## Call to order

* Meeting called to order by Max Riegel at 13:30 CET.
* Meeting was guided by the slides uploaded and maintained by the chair:
<https://mentor.ieee.org/omniran/dcn/16/omniran-16-0028-00-00TG-may-2016-meeting-slides.pptx>

## Minutes

* Wang, Hao volunteered to take notes.

## Attendance

* IEEE 802.1 meeting IMAT page was used for recording of attendance
* Participants

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| **Name** | **Affiliation** |
| Max Riegel | Nokia Networks |
| Wang, Hao | Fujitsu |
| Antonio de la Oliva | UC3M |
| Michael Mayer | Huawei Canada |
| Glenn Parsons | Ericsson |
| David Chen | Nokia |
| Yonggang Fang | ZTE TX |

## IEEE WG Guidelines

* The chair presented the mandatory IEEE SA guideline slides and asked for anybody willing to make an IPR announcement.
* No IPR declarations were brought up.

## Agenda approval

* Agenda as proposed in the chair’s meeting was presented and discussed.
* The following agenda resulted from the agenda bashing:
* Review of minutes
* Reports
* Revised and new P802.1CF contributions
* Network reference model amendments
* Deployment models
* Functional design and decomposition
* Backhaul representation
* SDN
* Review of 802.1CF-D0.0 editor’s draft
* Comment resolution and plan for next revision
* Project planning
* Contributions to 5G SC
* Status report to IEEE 802 WGs
* AOB
* Agenda approved without further comments.

## Schedule of the topics during the week

* Chair proposed to rearrange the agenda topics in a slightly different order to allow presenters to create and present revisions for final conclusion during the week.
* Group agreed to arrange the discussion topics according to the following plan over the week:

***Tuesday***

* Revised and new P802.1CF contributions
* Network reference model amendments
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0025-02-CF00-nrm-for-nms-and-virtualization.docx>
* FDM
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0008-02-CF00-text-proposal-for-fdm.docx>
* Contributions to 5G SC
* Creation of small contribution to 5G SC meeting on May 25th

 ***Wednesday***

* Review of minutes
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0027-00-00TG-apr-2016-confcall-minutes.docx>
* Reports
* Revised and new P802.1CF contributions
* SDN
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0030-00-CF00-sdn-chapter.docx>
* Network reference model amendments
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0029-00-CF00-network-function-virtualization.docx>
* Review of 802.1CF-D0.0 editor’s draft
* Comment resolution and plan for next revision
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0006-00-CF00-jan-2016-d0-0-comment-resolution.xls>

 ***Thursday***

* Revised P802.1CF contributions
* Network reference model amendments
* FDM
* SDN
* Monitoring and Accounting (Wang Hao)
* Association (Max Riegel)
* Project planning
* Status report to IEEE 802 WGs
* AOB

## Revised and new P802.1CF contributions

* Network reference model amendments
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0025-02-CF00-nrm-for-nms-and-virtualization.docx>
* The group reviews the changes on network reference model for network management service and network virtualization.
* Max explains the concerns and considerations when OmniRAN group created the network reference model and defined the function blocks.
* The group agrees to include the amendments on Chapter 6 into next OmniRAN draft.
* FDM
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0008-02-CF00-text-proposal-for-fdm.docx>
* Wang Hao went through his text proposal on fault diagnostics and maintenance (FDM).
* The group suggests to explicitly address the function of element manager which resides in ANC.
* The group suggests to merge the texts describing the following basic functions into the basic procedure section, i.e. remote failure indication, link monitoring, testing, and aggregation.
* The group suggests to keep the term as ‘network element’ in use and describe it in Chapter 6.

## Contributions to 5G SC

* Creation of small contribution to 5G SC meeting on May 25th
* Chair drafted a small presentation based on the slides presented in Macao and brought the slides up for discussion.
* Edits were made during the discussions and the final outcome was agreed by the group.
* After some editorial clean up the chair uploaded the presentation to the 5G SC archive on mentor for presentation on Wednesday.
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0083-00-5GSG-omniran-tg-perspective-on-5g-sc-options.pptx>

Recessed at 18:02

# Wednesday, May 25th, 2016

Reconvened at 13:35

* Call for IPR: No response

## Revised and new P802.1CF contributions

* SDN
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0030-00-CF00-sdn-chapter.docx>
* Antonio walking through the revised text. A couple of edits were introduced and amendments were invited in particular in the introductory section. The 3-layer architecture of SDN should be presented with a figure.
* Max suggested to further explain the limitations of openflow when applied to IEEE 802 networks.
* Glenn brought up concern about mentioning fronthaul on Chapter 1.5.9, however the discussion did not lead to a final conclusion.
* Antonio will create and submit an updated version with a conclusion section, which was missing yet in the contribution. The conclusion section may summarize the chapter and highlight that the P802.1CF architecture is well suited for SDN, with ANC being the obvious place for the SDN controller.

## Review of minutes

* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0027-00-00TG-apr-2016-confcall-minutes.docx>
* No comments received. Affiliation of Yonggang Fang will be corrected In the version on mentor.

## Reports

* 5G SC
* Chair reported about the outcome of the 5G SD session in the morning. OmniRAN slides created in the previous session were well received, however the slides do not provide information for the alternative RLAN/ITU-R WP5A approach, brought up in the Waikoloa meeting and presented by Glenn Parson in his meeting slides
* TG agrees to search for answers regards network standardization demand for the alternative RLAN/WP5A approach. It is intended to held a special session in the upcoming plenary meeting together with the Waikoloa presenter and the regulatory chair of IEEE 802.

## Review of 802.1CF-D0.0 editor’s draft

* Comment resolution and plan for next revision
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0006-00-CF00-jan-2016-d0-0-comment-resolution.xls>
* TG decides to currently remove the text about dynamic AN instantiation out of the draft and have more discussion in July meeting.
* TG suggests to revise the texts for better fitting the new draft taking the new terminology and new NRM defined in Chapter 6 into account. The TG will review revised proposal in the Thursday session, when available.

## Network reference model amendments

* NFV
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0029-00-CF00-network-function-virtualization.docx>
* Proposed edits to NRM text were discussed. Agreement that showing NMS in introduction/figure 6.5 makes sense. Text proposal on inclusion of NFV caused many comments and concerns about not addressing NFV in the scope of P802.1CF
* Max proposed to create update to NRM text amendment incorporating the agreed changes and adding dedicated section for filling in the NFV description in the scope of P802.1CF

Recessed at 18:03

# Thursday, May 26th, 2016

Reconvened at 13:35

* Call for IPR: No response

## Revised P802.1CF contributions

* Network reference model amendments
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0025-03-CF00-nrm-for-nms-and-virtualization.docx>
* Max walked through the modifications introduced into the Chap 6 amendment after yesterday’s discussions. The overview figure was extended by the NMS and the related text was rearranged according to the new sequence in the figure. Explanation was added to the definition of the NMS to clarify the meaning of network element (NE) in the specification. A new section ‘6.8 NFV’ with three subsections was added to provide for the inclusion of a refined text on making use of NFV within the scope of the specification.
* All proposed modifications were accepted and the group agreed that the text is ready for adoption to the draft.
* FDM
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0008-04-CF00-text-proposal-for-fdm.docx>
* Wang Hao went through the edits to the FDM text, which mainly reflect the changes discussed the day before and some additional editorial clean-ups to align terminology within the draft
* The group agreed that the FDM text is ready for adoption to the draft.
* AN setup
* <https://mentor.ieee.org/omniran/dcn/15/omniran-15-0042-04-CF00-an-setup-over-unlicensed-band.docx>
* The group reviewed the updated contribution aimed to close the open comments from Jan 2016 on corrections to 7.1.4.
* It was discovered that the text contains major mismatches, explaining orchestrator and set-up of virtualized networks in the beginning and stepping over to description of a kind of automatic network initialization in the revised section. The group was struggling to understand the scope and intention of the revised section and concluded that the text is completely unclear and potentially erroneous, thereby rejecting and closing the related comments from January.
* Furthermore, the current text of 7.1.4 on instantiation of a virtual network (network slice) was considered valuable, but not in scope for the functional description section. Antonio proposed to move the current text into some informative section, and Max emphasized that initialization of a access network is an important aspect, which should be covered in the AN set-up section. It was agreed to rename 7.1.4 to Access network initialization, and the chair will reach out to Yonggang to discuss the creation of a text proposal for the new 7.1.4.
* Monitoring and Accounting (Wang Hao)
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0032-00-CF00-investigation-on-accounting-and-monitoring.pptx>
* Wang Hao presented his initial thoughts on the content of chap 7.7 on monitoring and accounting. During the presentation it was concluded to adopt the 3-tier description of the accounting process with many cross-relations into other functions of network management. The 3 GPP architecture as well as the WiMAX approach mainly focusing on input for billing was not considered to match well with the majority of the IEEE 802 networks. Furthermore the description should focus on the access network and mention monitoring and accounting functions in the access router only for information.
* Wang Hao will create a text proposal based on the agreed direction, and he also will provide an updated presentation based on the slide template for chap 7 sections for introduction of the text proposal to the group.
* Association (Max Riegel)
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0031-00-CF00-key-concepts-of-association-and-disassociation.pptx>
* Max presented his initial thoughts on the association and disassociation section. The process is available for all IEEE 802 technologies, but in widely varying ways and descriptions. The presentation was mostly following 802.11 concepts.
* A text version mainly following 802.3 and 802.11, and briefly mentioning the other 802 technologies will be provided for the upcoming conference call for review and consideration.

## Project planning

* The project plan as outlined in the last meeting was reviewed. Plan is to create a new draft revision after the June 21st conference call with most time spend in the San Diego meeting to clean-up and complete the draft. The resulting revision created directly after the San Diego F2F would then be send out for the initial 30 days TG ballot, with comment resolution starting in the September interim meeting.
* Currently predictions about the further timeline are only vague, as the initial TG ballot will provide indications about the diversity of the views and the amount of time for convergence, and the interest of the 802.1 WG in a fast completion of the project.

## Status report to IEEE 802 WGs

* The chair drafted the usual slideset, which was amended and complemented by group discussions. The agreed status report has been uploaded:
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0033-00-00TG-may-2016-status-report-to-802wgs.pptx>

## AOB

* No other topics were brought up.

Meeting adjourned by chair at 17:03