IEEE 802.1 OmniRAN

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| Minutes of 802.1 OmniRAN TG Meeting in San Antonio, TX, USA  |
| Date: November 3 - 7, 2014 |
| Author(s): |
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Abstract

Minutes of the 802.1 OmniRAN TG meeting from face to face meeting in San Antonio, TX, USA, from Novermber 3 to 7, 2014.

**Monday, November 3rd, 2014**

Chair: Max Riegel

Recording secretary: Juan Carlos Zuniga

**Call to order**

* Meeting called to order on Monday November 3, 2014 by Max Riegel at 14:05 hrs (EST).

**Attendence**

* Attendence was recorded by registering to the IEEE 802.1 meeting IMAT page.
* Roll call

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| **Name** | **Affiliation** |
| Max Riegel | Nokia Networks |
| Juan Carlos Zuniga | InterDigital |
| Walter Pienciak | IEEE-SA |
| Behcet Sarikaya | Huawei |
| Jim Welch | IneoQuest |
| Yonggang Fang | ZTE |
| Weiying Cheng | Coriant |
| Youn Kwan Kim | Catholic University |
| Roger Marks | EthAirNet, ETRI |
| Hesham Elbakoury | Huawei |
| Paul Bottorff | HP |
| Ching-Tanng Hsieh | ITRI |
| Harry Bims | Bims Labs |
| Kathryn Bennett | IEEE SA |

**IEEE WG Guidelines**

* The chair read the IEEE guidelines and no IPR declaration was made.

**Appointment of secretary**

* Juan Carlos Zuniga volunteered to take notes.

**Agenda**

* Agenda as proposed in the chair’s meeting slides:
	+ <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0074-00-00TG-november-2014-f2f-meeting-slides.pptx>
* Review of minutes
* Reports
* SDN & NFV Considerations
* P802.1CF contributions
	+ Network reference model
	+ Functional design and decomposition
	+ SDN Abstraction
* Project planning
* Status report to IEEE 802 WGs
* AOB
	+ The proposed agenda was approved.

**Approval of minutes**

* <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0073-00-00TG-oct-21st-meeting-minutes.docx>
* Chair asked for any comments on the minutes as available on mentor
	+ No comments were raised
* **Reports**
	+ Juan Carlos Zuniga reported status and progress of Privacy EC SG
		- <https://mentor.ieee.org/privecsg/dcn/14/privecsg-14-0017-00-ecsg-update-to-802-ec-at-nov-open-plenary-meeting.pptx>
		- Special EC session scheduled for Mon 21:30-22:30 to exchange different views on segmentation and randomization of MAC addresses
		- Juan Carlos explained about the challenges to submit PAR comments on the 802c PAR. The EC SG Tuesday session will be used to provide comments on the PAR
* **P802.1CF Contributions**
	+ **Functional design and decomposition**
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0076-00-CF00-key-concepts-of-data-path-establishment-relocation-and-teardown.docx>
			* Behcet presented contribution with extended scope for the whole chapter
			* Discussion about general chapter structure
				+ Next revision should mainly focus on more detailed structure
				+ Chapter structure may even be worked out on slides before creation of text submission
			* More detailed content may be added after agreeing on general structure and basic concepts
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0078-00-CF00-updated-text-for-an-setup.docx>
			* Yonggang presented updated text on AN set-up and raised the question whether the P802.1CF specification should be aligned with non-IEEE technologies
			* Chair responded that 802.1CF is limited to IEEE 802 technologies
			* P802.1CF models may not fit well with 3GPP approaches, however comparison to3GPP may be considered when the IEEE 802 related specification is complete.
			* A revision of the text was invited focusing initially on plain IEEE 802 technologies.
* As one of the main contributors on backhaul representation in NRM indicated unavailability for the Tue PM1 session, the group decided to cancel the PM1 session and continue on Tue PM2 with the SDN & NFV presentations.
* Recess of the meeting at 17:50

**Tuesday, November 4th, 2014**

* The meeting reconvened at 16:05
* **SDN & NFV**
	+ **SDN&NFV**
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0079-00-CF00-sdn-nfv.pptx>
		- Hesham Elkakoury presented the slides showing the meaning of NFV in relation to SDN
		- Discussion:
			* Max: Does it make sense to virtualize functions like a bridge, as P802.1CF only covers functions within IEEE 802?
			* Paul: higher layer functions such as billing, which sit avobe the infrastructure, would be the candidates to virtualize
			* Max: L2 functions?
			* Paul: the difference is that these functions run in standard CPUs, not dedicated processors like in the past. You want to have standard software that can run in different platforms
		- While the meaning and concepts of NFV were well understood, its relevance for P802.1CF is not clear. For the time being, it seems to be a method to address complex higher layer network functions.
	+ **L2 OpenFlow**
		- Hesham ElBakoury presented slides of Huawei showing the development of a layer 2 transport protocol for OpenFlow
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0080-00-CF00-l2-openflow-onf-update.pptx>
		- ONF ongoing developments are considering different openFlow transport mechanisms than TCP/TLS.
* Recess of the meeting at 18:00

**Wednesday, November 5th, 2014**

* The meeting reconvened at 13:35
* **P802.1CF contributions**
	+ **Network reference model**
		- Juan Carlos introduced the updated specification text on NRM submitted as a revision to the contribution to the Athens meeting in September.
			* [https://mentor.ieee.org/omniran/dcn/14/omniran-14-0068-02-CF00-generic-ieee-802-network-reference-model.docx](https://mentor.ieee.org/omniran/dcn/14/omniran-14-0081-00-CF00-nrm-backhaul-considerations.pptx)
		- A couple of edits were made until group expressed agreement with the presented text on the basic NRM. The extension for backhaul was considered preliminary and subject to the follow-on discussions of the meeting.
		- Behcet presented a proposal for another reference point R10 in order to facilitate interworking with hybrid networks as proposed by BBF WT348.
			* [https://mentor.ieee.org/omniran/dcn/14/omniran-14-0075-00-CF00-nrm-refinement-for-hybrid-access.pptx](https://mentor.ieee.org/omniran/dcn/14/omniran-14-0081-00-CF00-nrm-backhaul-considerations.pptx)
		- As the 3GPP network does not provide Ethernet transport, it became clear that the proposed R10 is out of scope of P802.1CF. Further considerations regards hybrid access may come up at a later stage of the project, when the P802.1CF specification is more complete.
		- Max presented his thoughts regards backhaul representation in the NRM and outlined the challenges from his perspective.
			* <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0081-00-CF00-nrm-backhaul-considerations.pptx>
		- The contribution did not provide a proposal but a number of requirements to cope with multi-operator deployments and stacked VLAN bridging.
		- Roger provided his thoughts and proposal regards representation of backhaul in the NRM mainly based on concepts and approaches of MEF on Metro Ethernet.
			* [https://mentor.ieee.org/omniran/dcn/14/omniran-14-0077-00-CF00-updated-omniran-network-reference-model-with-backhaul.pdf](https://mentor.ieee.org/omniran/dcn/14/omniran-14-0081-00-CF00-nrm-backhaul-considerations.pptx)
		- Discussion provided further insights into possibilities to leverage MEF results for specification of backhaul for the P802.1CF NRM. In particular agreement was reached to denote user plane interfaces differently towards AP/BS and CNS like MEF differentiates between NNI and UNI. Leveraging MEF results also provides the tools to hide the complexity of multi-operator backhauls while still enabling an interface for SDN based controls. Configuration of multi-operator environments finally has to be enabled by the data structures carried over the R7c interface.
		- It was concluded to capture the results of the discussion in an agreed document based on the text contribution
* Recess of the meeting at 18:00

**Thursday, November 6th, 2014**

* The meeting reconvened at 09:10
* **P802.1CF contributions**
	+ **Functional design and decomposition**
		- Max presented his first draft for the NDS section of P802.1CF by explaining the logical structure and the content, which is not yet complete
			* <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0082-00-CF00-network-discovery-and-selection.docx>
		- As an outcome of the initial drafting the following modifications would be preferable:
			* Move ‘Roles and Identies’ out of the NDS chapter into a global chapter, as such content may apply to many chapters the same way.
			* Instead of mapping the functions to particular IEEE 802 technologies in a summary section, the mapping should be distributed. Each of the section may have a paragraph to map the content to the capabilities of individual technologies
		- A revised draft should be submitted for the next F2F meeting.
	+ **Network reference model**
		- To conclude and capture the agreed outcome of the NRM discussions, Juan Carlos created proposed text on the NRM including the agreements on representation of backhaul
			* <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0083-00-00TG-p802-1cf-network-reference-model.docx>
		- It was commonly agreed to use the term ‘Node of Attachment (NA)’ instead of ‘Point of Attachment (PoA)’ to better reflect the physical nature of the entity.
		- There was common agreement to accept the proposed text as agreed specification text of the NRM. The text is aimed for building the base for specification text on further NRM details and applications.
	+ **SDN Abstraction**
		- No new contributions available
* **Project planning**
	+ Next steps to create initial specification text were discussed by Max highlighting in red in the tentative ToC the chapters which already have some content. The following list of actions was considered as the potential way forward:
		- Mature sections on NDS, datapath establishment and dynamic spectrum access until Mar 2015
			* ToC of datapath chapter to become topic of next confcall
		- Create initial text on other sections
			* Backhaul, entities and identifiers, authentication and SDN abstraction
		- Initiate discussion with 802.1 Security TG in Mar 2015 F2F for getting the security chapter matured
		- Create initial 802.1CF editors draft after Mar 2015
		- Population of all sections of draft may take until about Mar 2016
		- Balloting for about a year
		- Going to sponsor ballot about Mar 2017
	+ Updated meeting slides with future plans
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0074-02-00TG-november-2014-f2f-meeting-slides.pptx>
* **Status report to IEEE 802 WGs**
	+ Reporting slides on the outcome of the week and the potential way forward were drafted by the chair and put up for discussion and approval.
		- <https://mentor.ieee.org/omniran/dcn/14/omniran-14-0084-00-00TG-nov-2014-status-report-to-802-wgs.pptx>
	+ The text was finalized during the discussion and uploaded to mentor for approval. No objections were raised against the uploaded document to be used as agreed reporting slides for the meeting.
* **AOB**
	+ Following conference calls were agreed until Mar 2015
		- December 16th, 10:00 AM ET
		- February 10th, 10:00 AM ET
	+ The chair was unanimously authorized to bring up the motion to approve the conference calls in the 802.1 closing plenary.

**Meeting adjourned at 11:49 hrs.**