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| Draft Minutes, Nendica Meeting, 2019-01-09 |
| **Date: 2019-01-15** |
| **Author(s):** |
| **Name** | **Affiliation** | **Phone** | **email** |
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## Abstract

Minutes of the IEEE 802 Network Enhancements for the Next Decade Industry Connections Activity (Nendica) teleconference of 9th January 2019.

## Background

As previously agreed, a Nendica teleconference meeting was scheduled for 9th January, 09:00 ET. The announced venue was <<https://join.me/Nendica802>>.

## Call to order

Chair called the meeting to order at 09:00 when the video display was operational.

Hao Wang volunteered to record the minutes.

Chair announced the mandatory IEEE-SA guidelines and IEEE 802 meeting participation rules. He also reviewed some IEEE ICCOM requirements, as embedded in the agenda.

## Agenda

Chair proposed the draft agenda, precirculated and posted at <<https://1.ieee802.org/802-nendica/agenda-ieee-802-nendica-telecon/>> and reproduced below. The agenda was approved, and Chair indicated the group to mark attendance by filling out the online form.

## Minutes and Reports

The group reviewed the minutes of Nendica conference call of 4th January 2018:

* <https://mentor.ieee.org/802.1/dcn/19/1-19-0003-00-ICne-minutes-of-nendica-meeting-of-2019-01-04.docx>
* There are no comments, and minutes are approved, without objection.

## Work Items

**• Follow-up on the publicity of Lossless Data Center Networks (LLDCN)**

Paul Congdon, editor of the paper, stated that he had been invited to present the LLDCN report in a webinar series. Presentation slides are still in progress. Links to this webinar will be provided to the Nendica reflector.

Chair led the group to review document 1-19-0004r0 as prepared for submission toward NANOG meetings in February. There are potential opportunities for both NANOG and 802 Nendica to collaborate on topics related to data center networks.

* It was suggested to add 802.1Qcz progress as one of the next step items. It was agreed to incorporate this into 1-19-0004r1:
* <https://mentor.ieee.org/802.1/dcn/19/1-19-0004-01-ICne-proposed-nendica-presentation-to-nanog-75.pptx>
* The group approved to submit the revised document to NANOG as a proposed presentation.

**• Flexible Factory IoT (FFIOT)**

Nader Zein, editor of FFIOT draft, took the lead and led the group to continue the comment resolution from 09:30.

Resuming from comment #237, the debate on counterpart proposals triggerred discussions on re-constructing this section:

* It was suggested to add an introduction of 802.1Qat before jumping to 802.1Q perspective from 802.11aa descriptions.
* It was assumed that the wired network portion on the factory floor is a TSN capable network, so an introductory text on TSN framework would be appropriate before explaining the gaps.
* It would be better to clarify the problems when incorporating wireless to the TSN architecture by walking through how TSN benefit the wired factory networks.
* Usually for standards, requirement comes before the architecture. The principle should work for this paper as well.
* Compared to P60802, introducing wireless in factory networks leads to other types of the problems which are essentially different from the ones in wired case, so that the solution could not be covered in the TSN-IA project.

In conclusion, the following list of actions items are agreed to guide the revision of the document:

* “Concept of Architecture” and moving it as a section before the current section titled “Technological Enhancement of Networking for Flexible Factory IoT”.
* The title and contents of this new section: “Network Architecture for Flexible Factory Applications” which will include:
	1. State the factory service requirements (summary from the applications and scenarios sections)
	2. Start from Current brownfield networks are based on legacy network such as fieldbus. (Figure 2 and related text is updated by Maruhashi san.)
	3. Factory networks need to evolve to a more common standardised IEEE802.1 TSN network. Adopting TSN features into legacy network can meet these service requirements.
	4. Mentioned P60802 Profile projects which gives guidance on using TSN to meet factory requirements in wired layer 2 network using TSN features and functionalities.
		1. Describe and show a typical factory architecture from contribution [new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf](http://www.ieee802.org/1/files/public/docs2018/new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf) slide#8 with added boundary domain and applying TSN domain for each of the LAN segment (domain)).
		Since we are doing this, we need to update Figure 2 by using the same figure in slide#8 without additions but adding various connectivity types as per current figure 2. (See bullet#2 above)
		2. List the functions and protocols of TSN. Same as we had before in the early drafts of the report. Or from Roger contribution 1-18-64-02-ICe
	5. Say that for flexibility, wireless needs to be introduced in factory network. Maybe add figure from slide#8 in [new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf](http://www.ieee802.org/1/files/public/docs2018/new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf)
	6. At this stage, we then can introduce the figure from Maruhashi slide comparing P60802 with flexible factory requirements. For this use figure in slide#6 in [new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf](http://www.ieee802.org/1/files/public/docs2018/new-FFIoT-maruhashi-enhancement-considerations-for-flexible-factories-1118-v00.pdf)
	7. Say that TSN protocols and functions do not do well with integrated wired/wireless network. This will be the lead to the next section on gap analysis.

* The subsection titled “Concept of architecture” will be deleted since the above section replacing it.
* The section title “Technological Enhancement of Networking for Flexible Factory IoT” will be renamed to “Gaps and enhancements to TSN functionality for Flexible Factory Network” (or “flexible factory requirements”).

Roger led the group to review his contribution of 1-0064-02, which is proposed to resolve comment #242, #243 by replacing current section of ‘redundancy’.

* <https://mentor.ieee.org/802.1/dcn/18/1-18-0064-03-ICne-proposed-revision-of-ffiot-redundancy-section.docx>
* The group agreed to adopt the contribution and replace current section of ‘redundancy’

## Potential New Work Items

• None

## Future Plans

• Revision and extension of ICAID

Chair review the proposed draft of a renewed ICAID and encouraged the group to comment:

<https://mentor.ieee.org/802.1/dcn/18/1-18-0079-01-ICne-icaid-extension-and-revision-proposed-draft.docx>

Nendica group will seek to finalize the document in 15 January face-to-face meeting and submit to 802.

## Future Meetings

Chair reviewed the draft agenda of the next Nendica face-to-face meeting at 802 Wireless Interim and 802.1 interim meeting in the next week.

## Conclusion

The meeting was adjourned at 11:00 ET.

## Attendance

Participation was recorded by filling the online form provided by a link in the agenda. The resulting attendance log is represented below.

|  |  |  |
| --- | --- | --- |
| **Name, Family (“last name”)** | **Name, Given (“first name”)** | **Affiliation** |
| Maruhashi | Kenichi | NEC |
| Zein | Nader | NEC Lab Europe - NLE |
| Marks  | Roger | Huawei |
| Wang  | Hao | Fujitsu |
| Ohue | Hiroshi | Panasonic |
| Koto | Hajime | NICT |
| Congdon | Paul | Huawei |

## Agenda

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Topic** | **Subtopic** | **Subtopic Detail** | **Doc/Link** | **Type\*** | **Lead** | **min** |
| Information | Date/time |  | [2019-01-09, 09:00-11:00 ET](https://www.timeanddate.com/worldclock/fixedtime.html?msg=Nendica+Teleconference&iso=20190109T09&p1=179&ah=2) |  |  |  |
|  | join.me connection link | Note: Meeting open to anyone interested | <https://join.me/Nendica802> |  |  |  |
| Opening | Call to Order | Nendica Meeting Overview |  | I | Marks | 2 |
|  | Identify secretary |  |  |  | Wang Hao | 1 |
|  | Introductions |  |  | I |  | 1 |
|  | [Guidelines for IEEE-SA Meetings](https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf) |  |  | I |  | 3 |
|  | [IEEE 802 Participation](https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180.pptx) |  |  | I |  | 1 |
|  | [IEEE ICCOM requirements](https://1.ieee802.org/802-nendica/ieee-iccom-requirements/) |  |  | I |  | 1 |
| Agenda | any modifications to the Agenda | approval of the agenda as displayed |  | V |  | 1 |
| Update | [Nendica Web Site](https://1.ieee802.org/802-nendica) |  |  | I |  | 0 |
|  | [Nendica Mentor Server](https://mentor.ieee.org/802.1/documents?is_group=ICne) |  |  | I |  | 2 |
|  | Membership: none |  |  | I |  | 0 |
|  | Attendance | [Log Attendance here](https://forms.office.com/Pages/ResponsePage.aspx?id=rxP5CJot_Uq-JmG5No1M0LV6oY5k9-RPr7c6vZe3D-pUQjNJWEk2V1ZNVkhFTzRMR1VYN0pQV0w3RC4u) | [See attendance log](https://tinyurl.com/yd2cnw8p) | I |  | 1 |
| Minutes |  |  |  |  |  |  |
|  |  | approval of the minutes of the Nendica meeting of 2019-01-04 | [IEEE 802.1-19-0003-00](https://mentor.ieee.org/802.1/dcn/19/1-19-0003-00-ICne.docx) | V |  | 1 |
| Work Items |  |  |  |  |  |  |
|  | Lossless Data Center Networks (LLDCN) | any followups to recent publicity | [IEEE-SA Beyond Standards](https://beyondstandards.ieee.org/networking/laying-the-foundation-for-the-lossless-data-center/)  | I | Marks | 1 |
|  |  |  | [Jan 24 talk on "The Next Generation Lossless Network in the Data Center"](https://www.brighttalk.com/webinar/the-next-generation-lossless-network-in-the-data-center/) | I | Congdon | 3 |
|  |  | Proposed Nendica Presentation to NANOG 75 | [IEEE 802.1-19-0004-01](https://mentor.ieee.org/802.1/dcn/19/1-19-0004-01-ICne.pptx) | I,D,V | Marks | 10 |
|  | Flexible Factory IoT (FFIOT) | Continuation of comment resolution | [IEEE 802.1-18-0052-08](https://mentor.ieee.org/802.1/dcn/18/1-18-0052-08-ICne.xlsx) | I,D | Zein | 60 |
|  |  | Plans |  | D |  | 5 |
|  | Potential new Work Items |  |  | D |  | 5 |
| Future Plans | Revision and extension of ICAID | Review updated contribution | [IEEE 802.1-18-0079-01](https://mentor.ieee.org/802.1/dcn/18/1-18-0079-01.docx) | D |  | 5 |
| Future Meetings |  | Teleconferences | to be planned at next in-person meeting | I,D |  | 1 |
|  |  | St. Louis: 2019-01-15, 19:30; connection to IEEE 802.1 Interim (Hiroshima, 2019-01-16 10:30) | [draft agenda](https://1.ieee802.org/802-nendica/agenda-ieee-802-nendica-meeting/) | I,D |  | 5 |
|  |  | Vancouver (IEEE 802 Plenary): 2019-03-12, 19:30; possible additional time slots | agenda to include responding to comments on ICAID |  |  | 1 |
| New Business |  |  |  |  |  |  |
|  |  | Any other business |  | I,D |  | 5 |
| Adjournment |  |  |  |  |  |  |
|  |  | \*I=Information D=Discussion A=Action V=Vote/Decision |  |  |  | 115 |