



IEEE 802 “*Network Enhancements for the Next Decade*”

Industry Connections Activity (Nendica): Status Report

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21 November 2019 (updated post-session)

Nendica Overview

About IEEE 802 Network Enhancements for the Next Decade Industry Connections (IC) Program

The goal of this activity is to assess, outside of the IMT activity, emerging requirements for IEEE 802 wireless and higher-layer communication infrastructures, identify commonalities, gaps, and trends not currently addressed by IEEE 802 standards and projects, and facilitate building industry consensus towards proposals to initiate new standards development efforts. Encouraged topics include enhancements of IEEE 802 communication networks and vertical networks as well as enhanced cooperative functionality among existing IEEE standards in support of network integration. Findings related to existing IEEE 802 standards and projects are forwarded to the responsible working groups for further considerations.

Project activities and deliverables

There will be two deliverables:

- Records of the meetings, including minutes and supporting presentations.
- A set of reports documenting the findings of the IC activity, with recommendations regarding new standardization topics, documentation of use cases and user needs for those topics, and proposed organizational approaches to ensure effective participation from user communities

Stakeholders - Who should join

Stakeholders identified to date include but are not limited to: users and producers of systems and components for networking systems, data center networks, high performance computing, cloud computing, telecommunications carriers, automotive, intelligent transport systems, eHealth, smart cities, smart buildings, Internet of Things (IoT), factory automation, and industrial applications. External standardization bodies and industry organizations, such as the Internet Engineering Task Force (IETF), North American Network Operators Group (NANOG), and Telecommunications Industry Association (TIA), have been engaged with Nendica activities and will be encouraged to participate in enhanced cooperation.

Nendica Leadership

- Nendica Chair
 - Roger Marks
- Meeting Secretary
 - tbd
- Report editors
 - Nader Zein & Paul Congdon
- IEEE 802.1 Chair
 - Glenn Parsons

Nendica Overview

- Voting
 - While operating as a subgroup under IEEE 802.1, any person attending a meeting may vote on all motions (including recommending approval of the deliverables). A vote is carried by 75% of those present and voting Approve or Disapprove.
- Attendance
 - log: IMAT, under 802.1 <<https://imat.ieee.org>>
 - “reciprocal” attendance policy is per home WG
- Nendica Activity Authorization
 - Until March 2021
- Document storage – 802.1 website & mentor
 - <http://1.ieee802.org/802-nend/>
 - https://mentor.ieee.org/802.1/documents?is_group=ICne
- Mailing List
 - STDS-802-NEND@LISTSERV.IEEE.ORG
 - Archive: <https://listserv.ieee.org/cgi-bin/wa?Ao=STDS-802-NEND>
 - Join: <http://listserv.ieee.org/cgi-bin/wa?SUBED1=STDS-802-NEND&A=1>

Nendica Meeting, 11/14 November 2019

- Tue, 19:30-22:30; Thurs 08:00-10:00
- Detailed agenda:
 - <http://1.ieee802.org/802-nendica/agenda-ieee-802-nendica-meeting/>
- Key meeting topics:
 - Confirm approval of Flexible Factory IoT report
 - Study Item: Managed LAN as a Service
 - Lossless Network for Data Centers
 - Contributions; possible update to Nendica Report
 - New Topics:
 - Deterministic Wireless & HPC Ethernet
 - Future meetings
 - Teleconferences
 - January meetings
 - 802.1 interim (Geneva)
 - Wireless interim (Irvine) possible

Nendica Work Item Schedule

Stage	LLDCN	FFIoT	MLaaS
	<u>Lossless Data Center Networks</u>	<u>Flexible Factory IoT</u>	<u>Managed LAN as a Service</u>
Study Item Proposal	-	-	<u>2019-07-18</u>
Study Item initiation	-	-	2019-07-18
Proposed Work Item, submitted to 802.1 WG for confirmation	-	-	2020-02-14?
Work Item Initiated	-	-	2020-03-19?
First Editor's Draft	2017-11-07	2018-01-10	
Final Editor's Draft	2018-02-28	2018-07-12	
Draft Nendica Report	2018-04-11	2018-08-03 2019-03-20 2019-07-17	
Call for Comments	2018-04-13	2018-08-03 2019-07-19	
Call for Comments completed	2018-05-13	2019-08-18	
Draft Nendica Report agreed by Nendica vote	2018-05-24	2019-08-28	
Draft Nendica Report, submitted to 802.1 for confirmation		2019-10-31?	
Draft Nendica Report, approved by 802.1 WG vote		2019-11-14?	
Published Nendica Report	<u>2018-08-17</u>	2019-11-22?	

Flexible Factory IoT (FFIoT)

- Nendica Draft Report: “Wired/Wireless Use Cases and Communication Requirements for Flexible Factories IoT Bridged Network,” 2019-03-12
 - [802.1-19-0026-00-ICne](#)
- Call for Comments: 2019-03-22 through 2019-04-15
- Comment Resolution completed in teleconferences
- Comment Resolution completed in teleconferences
- Draft approved in Nendica teleconference 2019-08-28
 - [Awaiting confirmation by 802.1 WG this week](#)
- Publication process underway with IEEE staff editor

Procedural Updates under Consideration

- <https://1.ieee802.org/802-nendica/ieee-802-nendica-procedures>
- Clarify the confirmation role of the IEEE 802.1 WG
- Clarify the deadlines to presumbit new Work Item proposals to IEEE 802.1 and IEEE 802

Nendica Report following session (1/2)

- Met Tue, 19:30-22:30 & Thurs 08:00-10:00
- Detailed agenda:
 - <http://1.ieee802.org/802-nendica/agenda-ieee-802-nendica-meeting/>
- Key meeting outcomes:
 - Agreed on update of procedures
 - Approved of Flexible Factory IoT report, pending confirmation
 - See details on following slide
 - Discussed Study Item: Managed LAN as a Service
 - Lossless Network for Data Centers: possible revision
 - 4 contributions
 - Contributions toward potential new Work Item topics:
 - Deterministic Wireless
 - HPC Ethernet
 - Future meetings
 - Teleconference 2019-12-12, 09:00 ET
 - January meetings
 - 802.1 interim (Geneva)
 - Wireless interim (Irvine) possible

Nendica Report following session (2/2)

- FFIoT status:
 - Nendica approved Flexible Factory IoT report 802.1-19-0026-03, pending confirmation by 802.1 WG
 - 802.1 WG did not confirm on 2019-11-14
 - Next opportunity for 802.1 WG confirmation is either
 - 2019-03-19 in Atlanta
 - Earlier via ePoll
 - Nendica Chair and FFIoT Editor have agreed on
 - Post 802.1-19-0026-04, based on IEEE SA staff editorial inputs
 - a new Call for Comments, closing before next teleconference
 - Comment resolution on next teleconference
 - Possibly continued with additional teleconferences and 802.1 interim (Geneva, 2020-01)

Nendica Work Item Schedule (2019-11-21)

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Draft Nendica Report, submitted to 802.1 for confirmation		2020-01-23?	
Draft Nendica Report, approved by 802.1 WG vote		2020-03-19?	
Published Nendica Report	2018-08-17		