



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

## Industry Connections Activity (Nendica): Status Report

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20 January 2019

# 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
- Current/Prior 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](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 Update (1 / 3)

- Met in two slots at IEEE 802 Plenary in Waikoloa (11/14 Nov 2010)
- Key meeting outcomes:
  - Agreed on update of procedures
  - Approved of Flexible Factory IoT report, pending confirmation
    - See details on below on (3/3)
  - 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 sessions
      - 802 Wireless interim (Irvine) [see next slide]
      - 802.1 interim (Geneva)

# Nendica Update (2/3)

- 802 Wireless interim (Irvine)
  - Nendica met 2020-01-15, two hours
  - Agenda mainly devoted to discussion of two Potential new Work Item topics:
    - Revision of “The Lossless Network for Data Centers”
    - Network Streams and Flows
  - Neither was proposed for approval; both were forwarded to the Geneva meeting for discussion
  - Proposals should be pre-submitted by 2020-02-14
    - 30 days prior to March 802 Plenary
  - Could finalize this week
  - Could refine in a teleconference
    - e.g. 2020-02-06

# Nendica Update (3/3)

- Flexible Factory IoT (FFIoT) status:
  - Nendica approved FFIoT 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
  - Followup
    - Posted 802.1-19-0026-04, based on IEEE SA staff editorial inputs
    - Call for Comments (2019-11-21 through 2019-12-06)
    - Comment resolution
      - Teleconference 2019-12-12, 09:00 ET
      - Teleconference 2020-01-16, 09:00 ET
      - 802.1 interim (Geneva, 2020-01)

# 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	-	-	<b>2020-02-14?</b>
Work Item Initiated	-	-	<b>2020-03-19?</b>
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 2019-03-22 2019-07-19 2019-11-21	
Call for Comments completed	2018-05-13		
Draft Nendica Report agreed by Nendica vote	2018-05-24	<b>2020-01-23?</b>	
Draft Nendica Report, submitted to 802.1 for confirmation		<b>2020-01-23?</b>	
Draft Nendica Report, approved by 802.1 WG vote		<b>2020-03-19?</b>	
Published Nendica Report	<u>2018-08-17</u>		