

Planning for IEEE Std 802 Revision

Note: Rev 7 changes slides 10 compared to Rev 6
Rev 6 changes slides 5, 9, 10, 11 compared to Rev 4

Roger Marks
(EthAirNet Associates; Huawei)
roger@ethair.net

+1 802 capable

14 December 2021

IEEE Std 802: Overview and Architecture

- Maintained by 802.1 WG
- Originally IEEE Std 802-1990
 - Note: IEEE 802 was initiated ten years earlier.
 - originally known as IEEE Std 802.1A
- Revision IEEE Std 802-2001
- Revision IEEE Std 802-2014
- Amendments
 - IEEE Std 802d-2017: Allocation of Uniform Resource Name (URN) Values in IEEE 802 Standards
 - IEEE Std 802c-2017: Local Medium Access Control (MAC) Address Usage
 - P802f: Amendment: YANG Data Model for EtherTypes (WG ballot)

Procedural issues mandate a revision, now

- Reason:
 - No new amendments beyond three, per SA Standards Board
- Bigger Reason:
 - *an IEEE standard may remain continuously active only if a revision process for that standard is completed and approved within 10 years from the date that the standard was approved or last revised*
 - *If the revision project has not been completed and approved by Year 10, the approved standard will be transferred to inactive-reserved status.*
- Need to complete a revision within 3 years.
 - Pressure to open a PAR ASAP (March 2022)
- Do we need more than a maintenance roll-up?
 - Many discussions indicate that we do.
 - Recommendation to be made by Nendica.

IEEE 802 Restructuring ad hoc

- IEEE 802 Restructuring ad hoc opened a Technical Coherence sub-ad hoc, which met 3 times in June/July, discussed ELLA, and agreed unanimously:
 - *A project to revise IEEE Std 802 should be initiated.*
 - *The project should be charged with ambitious but documented goals.*
 - *The goals should be specified in a consensus report to accompany the PAR.*
 - *The report and PAR could be generated by a focused pre-PAR activity, conducted in, for example, a Study Group or an Industry Connections Activity such as Nendica.*

802.1 WG Technical Plenary

- See “Nendica issues at IEEE 802.1 Technical Plenary Meeting of 2021-12-02”
 - https://mentor.ieee.org/802.1/documents?is_group=ICne&is_year=2021&is_dcn=0075

IEEE 802.1 WG Motion, 2021-11-16

- *802.1 authorizes Nendica to generate a PAR and, if appropriate, CSD for pre-circulation to the March IEEE 802 Plenary Session for a revision to IEEE Std 802, taking into account information from the 802.1 Technical Plenary*
 - Proposed: Ludwig Winkel
 - Seconded: Dieter Pröll
 - WG vote (y/n/a): 41/1/8
 - Approved by IEEE 802.1 WG, 2021-11-16
- Notes:
 - Development of the standard, following PAR approval, would be in an 802.1 Task Group (e.g., Maintenance TG)

ELLA Study Item

- Initiating Motion (2021-07-22):
- *For Nendica to initiate a Study Item on Evolved Link Layer Architecture (ELLA), with the goal of producing, by the November 802 Plenary, an informal report documenting:*
 - *Summary of aspects missing from current IEEE 802 Architecture documentation*
 - *Potential benefits enabled by additional architectural details*
 - *Impact of new and evolving technologies on architecture*
 - *Architectural optimization in specific network environments*
 - *Possible standardization recommendations*

PAR/CSD Preparation Issues

- Per <<https://standards.ieee.org/industry-connections>>, *Industry Connections Activities do not develop standards. Industry Connections Activities may propose a new standard by submitting a project authorization request (PAR). If the PAR is approved, the standard is developed in an IEEE standards development Working Group.*
- Report including PAR & CSD recommendations is within the Nendica ICAID
 - *document emerging requirements and directions for IEEE 802 networks*
 - *identify commonalities, gaps, and trends not currently addressed by IEEE 802 standards and projects*
 - *facilitate building industry consensus towards proposals to initiate new standards development efforts*
 - *Encouraged topics include ... 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.*
 - *Deliverables... “reports and other consensus outputs documenting the findings of the IC activity, with recommendations regarding overviews of current industry practice and trends, new standardization topics, documentation of use cases and user needs for those topics, and proposed organizational approaches to ensure effective participation from user communities*
- Proposal: Nendica should submit a report with recommendations, per ELLA guidelines, including PAR and CSD content recommendations.
 - Not draft the PAR, per se

Schedule demand

- Schedule, to get a PAR activated in March 2022
 - SASB vote: March 24
 - NesCom vote: March 23
 - EC decided 2021-12-07 to cancel March 2022 venue for Plenary
 - Likely electronic Plenary, 4-18 March 2022
 - 802 submittal deadline: Feb 4
 - Date posted 2021-02-08 to <http://ieee802.org>
 - CSD and other report (if submitted) due to 802 with PAR
 - NesCom submittal deadline: Feb 11
- Need final report with proposed PAR/CSD content by Feb 4 for submittal to 802 (and PAR to NesCom by Feb 11)
 - 57 days from December 9
 - 8 weeks
 - with many holidays and January interims to work around
- Draft report with proposed PAR/CSD content to Technical Plenary of January 13
 - 35 days (5 weeks)

Schedule details - proposal

- Dec 2 – 802.1 Technical Plenary
- Weekly meetings (Thursday, or alternative date/time)
 - Dec 9
 - Dec 16
 - Dec 23
 - Dec 30
 - Jan 6: complete draft Nendica report
 - Jan 13: 09:00 ET slot taken by 802.1 Technical Plenary
- Jan 13: 802.1 Technical Plenary – preview draft Nendica report
- Jan 17-21: 802.1 interim session – produce draft PAR & CSD
- Jan 27: possible revisions
- Feb 3: finalize report
- Feb 4: 802.1 Chair pre-submits PAR/CSD to EC
- Feb 11: 802.1 Chair pre-submits PAR to NesCom
- Mar 3: 802.1 Technical Plenary – review presubmitted PAR
- Mar 9: PAR comments due within 802
- Mar 16: comment responses and final PAR due from 802.1
- Mar 18: 802 EC meets and votes on forwarding PAR

CSD Applicability

- Is a CSD [Criteria for Standards Development statement] needed?
 - *“PARs that which introduce no new functionality are exempt from the requirement to provide a CSD statement. Examples of such PARs are: ... PARs to consolidate documents.”*
 - Significant gaps in IEEE Std 802 have been suggested.
 - Recent precedent: P802.15.3ma (under review Nov 2021) is a revision project that included a CSD.
 - If the intent is to add functionality, a CSD should be submitted.
 - Consider the feasibility of completing a significant revision by the end of 2024, and the implications of missing the deadline.
 - Consider possible backup PAR or hardened deadline.

IEEE Std 802 Revision Report

- Develop the report within ELLA
 - Include PAR content, and CSD content if appropriate
- Find suitable meeting times
 - Separate ELLA-focus meetings from generic Nendica meetings.
 - Alternate weeks? Different time slots?
 - Select meeting time for wide availability across 802 WGs and worldwide participants.
 - *802.1 authorizes Nendica to hold additional meetings as announced at least 10 days in advance.*
 - *Dates, times and agenda to be announced subject to notice of at least 10 days to the 802.1 Minutes email list*
 - *Access and agenda information are provided on the calendar at <https://1.ieee802.org/802-nendica/>.*
- Accommodate those unable to attend.
 - Encourage recorded contributions.
 - Encourage asynchronous discussion and comments.