

Planning for IEEE Std 802 Revision

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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.
 - To be decided within 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

- 802.1 Chair announced Technical Plenary series
 - starting Dec 2, 16:00 – 18:00 ET
- This series of meetings would:
 - Provide wider awareness for the need to revise IEEE Std 802
 - Provide an opportunity to discuss the content – notably should it be the same or should it add more architecture
 - Provide examples of the current 802 architecture (i.e., spread around in 802, .1Q, .1AC, .3, .11, .15.x, ...)
 - Identify gaps in the current architecture
- In addition, this would provide the opportunity to discuss technical points across all WGs, for example:
 - MAC service interface (and its support of 802 MAC/PHYs)
 - 48 and 64 bit bridging
 - Protocol IDs and their encoding – Length/Type and LLC
- Attendance is open to all 802 WG participants. WG chairs are invited to identify at least one voting member to attend.
- Topics for discussion can be proposed to the 802.1 WG chair. The agenda and topics for this meeting will be posted 14 days in advance.

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 vote: March 18
 - 802 submittal deadline: Feb 11 (30 days before Plenary Session)
 - if 802 Plenary runs per current schedule
 - CSD and other report (if submitted) due to 802 with PAR
 - NesCom submittal deadline: Feb 11
- Need a draft PAR by Feb 11 for submittal to both 802 and NesCom
 - 85 days from November 16
 - 12 weeks
 - with many holidays and January interims to work around
 - 10 weeks from December 2

Schedule details - proposal

- Schedule, to get to Feb 11 submittal
 - Dec 2 – Technical Plenary
 - Weekly meetings (Thursday, or alternative date/time)
 - Dec 9
 - Dec 16
 - Dec 23
 - Dec 30
 - Jan 6
 - Jan 13: complete draft Nendica report
 - Jan 13?: Technical Plenary - preview draft Nendica report
 - Jan 17-21: 802.1 interim session – produce draft PAR & CSD
 - Jan 27: possible revisions
 - Feb 3: possible revisions
 - Feb 10: finalize report
 - Feb 11: 802.1 Chair pre-submits PAR to EC & NesCom

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.

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.