Editor's Report
60802 Draft 1.0

March, 2019
IEEE802 Plenary, Vancouver, BC

Jordon Woods, Analog Devices

Respondents

Table 1—Table of responses

STATUS	VOTE	NAME	COMMENTS
N	O	Abdul, Amin	Y
V	E	Assmann, Ralf	N
V	T	Boiger, Christian	N
V	T	Canchi, Radhakrishna	N
V	T	Chen, David	N
N	Y	Chen, Lihao	Y
V	N	Cummings, Rodney	Y
N	N	Dorr, Josef	Y
N	N	Enzinger, Thomas	Y
V	N	Farkas, János	Y
V	N	Garner, Geoffrey M.	Y
V	T	Haddock, Stephen	N
V	N	Hantel, Mark	Y
N	N	Hotta, Yoshifumi	Y
V	N	Kehrer, Stephan	Y
N	Y	Koto, Hajime	N
N	N	Leurs, Ludwig	Y
V	N	Mangin, Christophe	Y
V	Y	Maruhashi, Kenichi	Y

STATUS	VOTE	NAME	COMMENTS
V	Y	Ohsawa, Tomoki	N
V	Y	Ohue, Hiroshi	N
V	N	Osagawa, Daisuke	Y
V	O	Randall, Karen	N
V	N	Riegel, Maximilian	Y
V	N	Sato, Atsushi	Y
V	T	Schewe, Frank	N
V	Y	Seewald, Maik	Y
N	N	Stanica, Marius-Petru	Y
N	N	Steindl, Günter	N
V	N	Tarui, Isao	Y
V	N	Wang, Hao	Y
V	N	Weber, Karl	Y
V	O	Weis, Brian	Y
V	N	Winkel, Ludwig	N
N	Y	Wood, Graeme	Y
V	N	Woods, Jordon	Y

Ballot Statistics

Table 2—Results

CATEGORY	All Respondents	
	TOTAL	%
Yes	4	23.53%
No	13	76.47%
Voting Yes or No	17	100.00%
Abs. Time	5	14.29%
Abs. Expertise	1	2.86%
Abs. Other	3	8.57%
Respondents	35	
Voting members	25	
Non-voting	10	
No. of commenters	23	65.71%
No. of comments	621	

Proposed order of resolution

- Start with Clause 6 and the structure of the document (technical comments only)
  - 579, 509, 80, 233, 147, 381, 68, 67, 240, 81, 517, 518, 1, 2, 84, 519, 209, 210, 211, 212, 213, 128, 274, 156, 155, 520, 284, 285, 596, 305, 101, 326, 214, 215, 325, 323, 223, 324, 410, 599, 54, 373, 388, 266, 303, 526, 621, 224.

  - **“The conformance statements are ambiguous, not precise, difficult to read and figure out”.**
  - **“The differentiation between end stations and bridges is not exposed in this document but there is a significant difference in regards to IEEE 802.1 Standards for end stations.”**

Proposed order of resolution

- Clause 6 – Required vs. Optional
  - How many device classes?: 536, 148, 45, 185, 606, 128.
    - **“The PCS is a list with many optional features, is this really what someone would call a 'Profile'? Conformance to this PCS is not of much value for interoperability.”**
    - **“General required bridge features: These should only be required for multiport bridges, not for two-port switches integrated in end-devices used to build the line topologies necessary for industrial applications”.**
  - The editor agrees with the commenters. Ultimately, the purpose of the profile is to ensure compliance and interoperability.
  - It is the editor’s opinion that clear delineation of different device classes, both in the conformance section and in the PCS, will greatly enhance understanding and readability of the profile.

Proposed order of resolution

- Clause 6 – Required vs. Optional
  - What should be optional?: 576, 273, 619, 172, 378, 379, 386, 150, 152, , 153, 154, 173, 521, 52, 328, 243, 158, 33, 71, 157, 160, 161, 163, 164, 169, 162, 568, 620, 120, 43, 149, 151, 44, 397, 124, 125, 46, 126, 70, 83, , 279, 278, 277, 280, 607, 137, 618, 584, 119, 69, 242, 532, 11, 327, 400.
    - **“Preemption should be optionally chosen based on system requirements, not required for all system components.”**
    - **“end station requirement - enhancements for scheduled traffic should be more than optional”.**
  - The editor is hopeful, based upon the comments that a small number of profiles will be sufficient to satisfy the various commenters and reach consensus.

Proposed order of resolution

- Clause 4 - Overview of TSN in Industrial Automation
  - It was the editor's intent that this clause be informative. No normative behavior was intended. To the extent normative language appears, it is unintentional
- Clause 4.1 – Control Loop Basic Model
  - Various comments along the line of: "Description and figure need improvement".
  - The nature of "improvement" varies significantly from commenter to commenter particularly w.r.t. figure 1 and table 5
  - Received one contribution that proposes replacement text and associated figures.
  - The editor is concerned that resolving this in the room will consume a significant amount of the group's time.
  - The editor requests the assistance of the various automation experts in the room to reconcile these approaches.

Proposed order of resolution

- Clause 4.2 - Industrial Traffic Types
  - We need definitions:
    - The properties for the traffic types "Configuration/diagnostics" and "Internal/Pass-through" are identical. Why are they then listed as two separate traffic types.
    - The traffic type "Brownfield" is very confusing. The understanding of "brownfield" for this commenter is, that it encompasses a multitude of already existing real-time traffic schemes.
  - Traffic type description: There should be a reference to the detailed description of the traffic types
    - IIC, LNI,
  - What is the goal of this section?
    - The section 4.2 is helpful information but seems to be not related to the normative part of the specification.

Proposed order of resolution

- 6.2.4 Clock synchronization selection
  - 188, 288, 289, 495, 291, 189, 292, 190, 191, 522, 192, 293, 294, 193, 295, 296, 297, 86, 298, 299, 87, 48, 523, 130, 301, 302, 524, 89, 499, 88, 304, 90, 500, 306, 91, 501, 131, 307, 502, 309, 310, 504, 312, 313, 314, 95, 253, 50, 92, 93, 94, 525, 315, 318, 319, 250, 316, 317, 505, 320, 51, 321, 322, 6, 3, 8, 7, 194, 609, 195, 537, 165
- Mixing of normative and informative information
- Mixed or confusing terminology
- Lack of clear separation between network, bridge and end station requirements.
- The editor requests assistance from a time-synchronization expert to reconcile these comments.

Proposed order of resolution

- 6.2.5 Security
  - 196, 132, 197, 198, 527, 96, 17, 9, 10.
  - While .1AE is certainly an option, I've identified no use case which requires MacSec, so this information is not particularly helpful to users of this document. Further guidance regarding security is desirable.Mixed or confusing terminology
  - See contribution: http://ieee802.org/1/files/public/docs2019/60802-woods-SecurityConsiderations-0319-v01.pdf

Requests for the next ballot

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Please include a clause number

Please do not include table or figure numbers with the clause number

	A	B	C	D	E	F	G
1	Task Force Review and Working Group Ballot comment input form						
2	First name				Surname	Affiliation	
3	Jordon				Woods	Analog Devices Inc.	
4	Click on column headers for help						
5	Category	Page	Sub-clause	Line #	Comment	Proposed Change	Must Be Satisfied
6	Technical	13	6.1.2	249	In table 7, the contraint "Applies only if 6.1.1fulfilled" is non-specific.	As 6.1.1 is mandatory in the sense that one PHY must be selected, the constrain should be changed to "applies only if this PHY is selected"	Yes
7	Technical	14	6.1.2	251	In table 8, the contraint "Applies only if 6.1.1fulfilled" is non-specific.	As 6.1.1 is mandatory in the sense that one PHY must be selected, the constrain should be changed to "applies only if this PHY is selected"	Yes
8	Technical	19	6.2.4.4	331	In table 14, the maximum number of hops in a network is not a bridge or end station requirement.	Either remove the table or change the language to indicate that the text/table is informative	Yes
9	Technical	19	6.4	377	Table 21 indicates bridge delay is measure MII to MII. Figure 2 seems to indicate bridge delay is measure from time on the wire.	Update figure or table to be consistent.	Yes
10	Technical	12	4.2	218	in Table 6, the terms bounded, seamless and regular need definitions	Expand the notes below the table or add definitions to clarify the terms	Yes
11	Technical	18	6.2.4.4	313	The terms TAI and arb are taken from IEEE802.1AS.	Add these terms to table2 in section 3.2	Yes
					The text calls for a maximum working clock deviation between 2 devices of <2 uS while table		

Thank you