IEEE 802.3 Ethernet Working Group
<mark>DRAFT</mark> Liaison Communication

Source: IEEE 802.3 Working Group[1]

To:	Glenn Parsons	Chair, 802.1 Working Group
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	Mick Seaman	Chair, 802.1 Security Task Group
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	Paul Congdon	Chair, 802.1 Maintenance Task Group
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CC:	Konstantinos Karachalios	Secretary, IEEE-SA Standards Board
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	Jon Lewis	Secretary, IEEE 802.3 Ethernet Working Group
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From:	David Law	Chair, IEEE 802.3 Ethernet Working Group
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Subject: Liaison: Status of IEEE P802.3cx Task Force

Approval: <mark>Agreed to at IEEE 802.3 [plenary | interim] meeting, [where], [date]</mark>

Dear Mr. Parsons/Seaman/Congdon,

It had become apparent that the implementation flexibility permitted by IEEE Std 802.3-2018 could lead to timestamp accuracy impairments that might not satisfy high accuracy timing requirements. Specifically, timestamping accuracy can be impaired when timestamping implementations do not account for a varying physical layer device (PHY) path data delay in the same manner. Examples of PHY functions that cause variation in the PHY path data delay include alignment marker or codeword marker insertion/removal, Idle insertion/removal, and multi-physical coding sublayer (PCS) lane distribution/merging. Timestamping accuracy can also be impaired when timestamping implementations do not use the same message timestamp point. There is a discrepancy between the message timestamp points specified by IEEE Std 1588 / IEEE Std 802.1AS and by IEEE Std 802.3-2018.

The IEEE P802.3cx Improved PTP Timestamping Accuracy Task Force was launched to address this subject.   The IEEE P802.3cx draft addresses the above-mentioned impairments, along with an informative annex to describe the potential limitations and

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solutions. Note that the specific recommended solution to the message timestamp point discrepancy impairment is to provide the option of using the same timestamp reference point as IEEE Std 802.1AS when improved accuracy is desired.

The IEEE P802.3cx Task Force is currently in the IEEE 802.3 Working Group ballot phase. Current draft D2.2 is attached for your information. Links to the project scope, objectives and adopted timeline can be found at https://www.ieee802.org/3/cx/index.html. Note that the timeline is subject to updates.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group