IEEE 802 Tutorial follow up:
Cut-Through Forwarding (CTF)

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IEEE 802 Plenary Tutorial: Brief Recap. (1)

Upfront

- See https://mentor.ieee.org/802.1/dcn/21/1-21-0037-00-ICne-ieee-802-tutorial-cut-through-forwarding-ctf-among-ethernet-networks.pdf for details.
- **This is a summary - proposed for technical <u>discussion in subsequent</u> meetings, not today's administrative meeting.**

Markets, so far

- Industrial Automation
- Professional Audio/Video
- Data Center Networks

CTF is already present in products - why standardizing CTF?

- Interoperability
  - Data plane (especially in case of errors)
  - Unified management
- Addressing new challenges on the Network Level

IEEE 802 Plenary Tutorial: Brief Recap. (2)

802.1 Considerations

- Specific Stds proposal: Dedicated base 802.1 Standard
  - Network Aspects
  - Bridge Operation
→ Straight forward to me, at least on the higher layers

802.3 Considerations

- Open questions
  - Proper interpretation of IEEE Std 802.3 (e.g., Model vs. Implementation/MAC Service Interface)
  - Invalid MAC frame handling (appear to only affect the optional MAC control sublayer)
  - Minimum frame size

Open technical issues

- Questions on the lower layers for IEEE 802.3 WG, but partially affecting IEEE 802.1 WG, too.
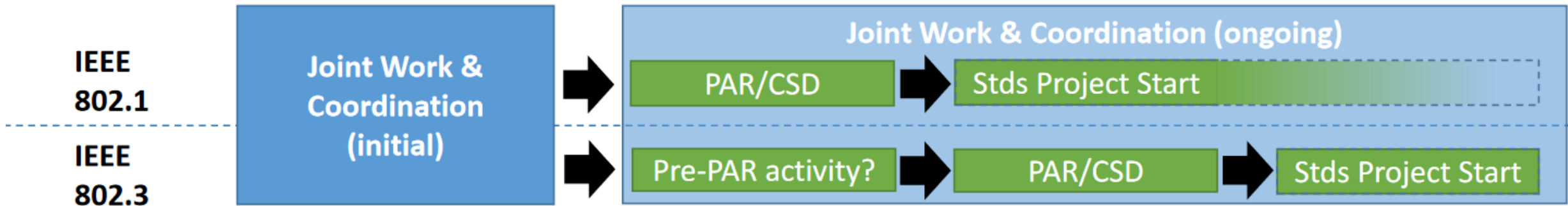→**Today's motivation**
  - **Best results are expected if both WGs work together!**
  - **Administrative discussion of the setup/how this can be done.**

Administrative Discussion

IEEE 802.1 and IEEE 802.3 joint pre-PAR activities

From the Tutorial

Moving Forward Proposal

Joint work & coordination

- CTF needs the expertise of two IEEE 802 WGs.
- It appears vital to have some level of joint work & coordination on technical aspects and logistics (interfaces, meetings, etc.).
- A possible forum for initial joint work & coordination: IEEE 802 Nendica.

Administrative discussion (separate meeting)

- Topics
  - Which pre-standards activities can and should be done in a (significant) initial joint work & coordination phase?
  - What are the logistics?
  - ...
- Meeting identified to plan followup: IEEE 802 Nendica weekly call schedule for **August 5, 2021 09:00-11:00 ET (tentatively)**, pending **finalization on July 20, 2021**.
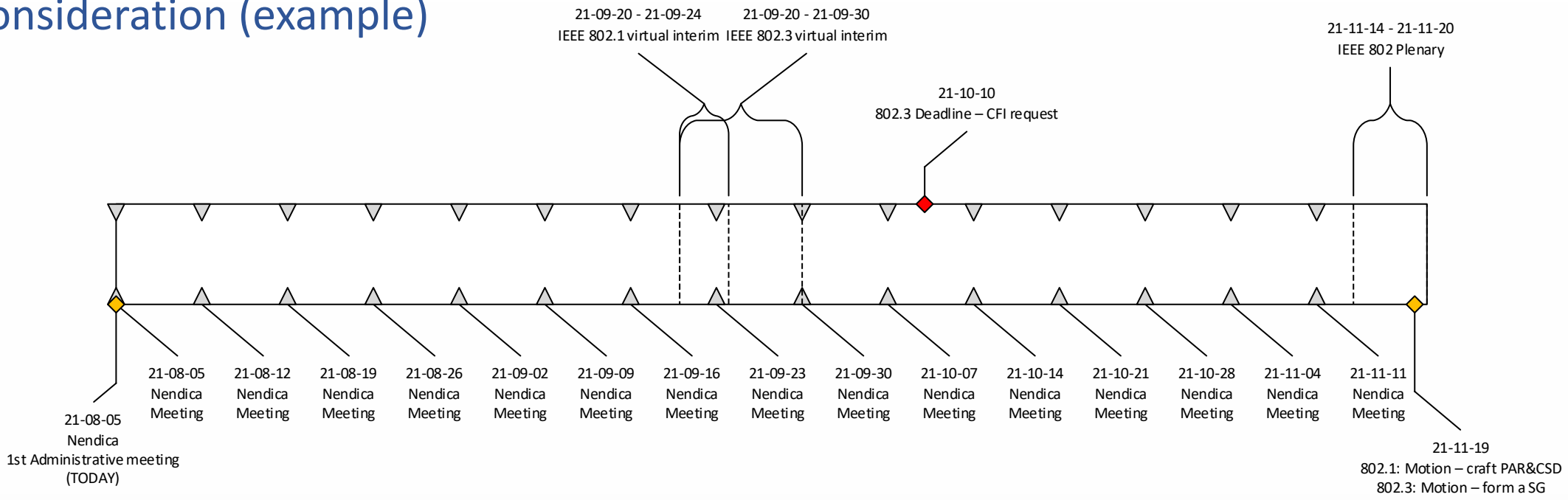
→ *If you are interested in this discussion you are very welcome!*

Review: Regular procedures of both WGs

Procedural aspects/differences – kicking off individual Stds activities (to my knowledge)

- IEEE WG 802.1
  - The motion to craft PAR/CSD **indicates interest** of the group
- IEEE WG 802.3
  - A call for interest (CFI) to form a study group **indicates interest** of the group
  - The motion to craft PAR/CSD **indicates interest** of the group

Time consideration (example)

21-09-20 - 21-09-24
IEEE 802.1 virtual interim

21-09-20 - 21-09-30
IEEE 802.3 virtual interim

21-10-10
802.3 Deadline – CFI request

21-11-14 - 21-11-20
IEEE 802 Plenary

21-08-05 Nendica Meeting
21-08-12 Nendica Meeting
21-08-19 Nendica Meeting
21-08-26 Nendica Meeting
21-09-02 Nendica Meeting
21-09-09 Nendica Meeting
21-09-16 Nendica Meeting
21-09-23 Nendica Meeting
21-09-30 Nendica Meeting
21-10-07 Nendica Meeting
21-10-14 Nendica Meeting
21-10-21 Nendica Meeting
21-10-28 Nendica Meeting
21-11-04 Nendica Meeting
21-11-11 Nendica Meeting

21-08-05
Nendica
1st Administrative meeting
(TODAY)

21-11-19
802.1: Motion – craft PAR&CSD
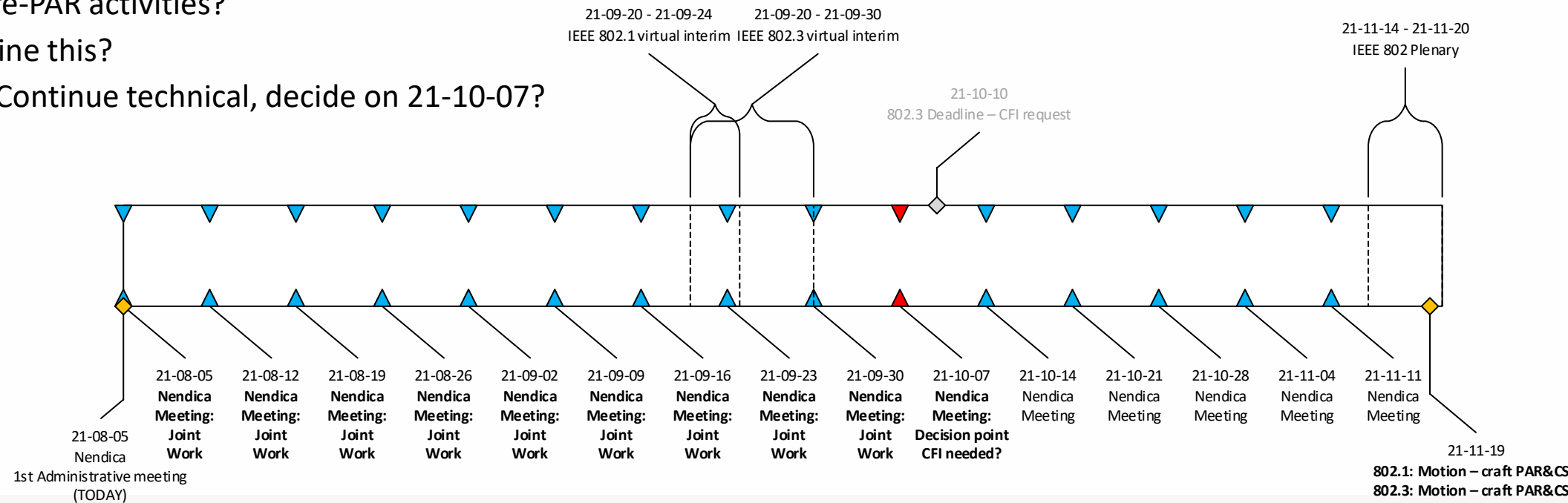802.3: Motion – form a SG

Inter-WG Activities

Again: Joint technical pre-PAR work expected to yield the best results

- Technical clarifications
  - Proper interpretation of IEEE Std 802.3
  - Relationship across IEEE Std 802.3 and IEEE Std 802.1AC/802.1Q
- What needs to be done in IEEE Std 802.3

Questions/Discussion

1. Is joint work (Nendica) a reasonable/acceptable approach for pre-PAR activities?
2. How to determine this?
3. Hybrid option: Continue technical, decide on 21-10-07?

Subsequent Meetings on CTF

Opportunities

- IEEE 802 Plenary Meetings
- Regular Web-based Meetings

Proposal (Regular web-based meetings)

- 1h/week
- 1st half of regular Nendica Meetings: Thursdays, 9:00am – 10:00am ET/13:00 – 14:00 UTC
- Option: Re-schedule the time slot with 10 days notice in advance (Nendica Ad-Hoc)

Questions/Discussion

1. 1h/week appropriate?
2. Start according to the proposal, or re-schedule now?
3. Next date to meet again?

Calendar Links

- IEEE 802.3:   https://www.ieee802.org/3/calendar.html
- IEEE 802.1:   https://1.ieee802.org/wg-calendar/
- IEEE 802 Nendica: https://1.ieee802.org/wp-content/uploads/2021/03/cal-nendica.html

Who is driving/coordinating this

Studying in 802.1, 802.3 and Nendica

- 802.1: "New work" - migration towards vetting all 802.1 new work in 802 Nendica
- 802.3: Study Groups, usually followed by a passed CFI

802 Nendica Study Item on CTF (https://1.ieee802.org/nendica-ctf/)

- Lead by myself
  - johannes.specht.standards@gmail.com
  - Primary focus on 802.1 considerations

Discussion (WG Leadership): Steps/Tasks/Roles?

- Pre-PAR?
- Beyond pre-PAR?
- **Volunteers, help & supporters welcome!**

Thank you for your Attention!

Questions, Opinions, Ideas?

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