

## Minutes IEEE 802.3 10SPE SG AdHoc meeting AUGUST 31 2016

Prepared by Peter Jones

### Proposed Agenda:

1. Agenda/Admin Peter Jones

### Presentations posted at:

<http://grouper.ieee.org/groups/802/3/10SPE/public/adhoc/index.html>

### Agenda/Admin Peter Jones:

Meeting began at 8:05am PT.

1. Reviewed the Attendance information related to the ad hoc.
2. Displayed and read pre-par patent slide deck.
3. Reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes.
4. Reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes.
5. Approval of minutes from 22 August 2016?
  - a. Approved without objection.
6. Presented the proposed agenda.
  - a. Approved without objection.

### Presentations/Discussion.

**Start and Administrivia** Peter Jones Cisco

**Chair's Comments** George Zimmerman CME

- Goal is to get to Task Force.
- First make sure we understand the problem.
- Then think about possible solutions.
- Contribute and build consensus early.
- Formal documents tend to fall out of this process if done well.

**Industrial Automation and Emerging Single-pair Ethernet Automation** David Brandt Rockwell

- Sourced from a presentation produced for 802.24.
- Need to think about connector diversity. How does this impact economic feasibility?
- There was a comment from the call re the standard describing the installation of industrial automation (IA): IEC 61918 and the associated IEC 61784-5x profiles. These are documents

referring to ICT standards (RJ45) with improved or extended requirements that matches the needs of IA.

### **Use cases for the Process Automation**      **Jörg Hähnliche**      **Endress+Hauser**

- Question about specifications of existing links (e.g. IL, RL, etc)? Can these be provided for consideration by the Study group?
  - Presenter will see what can be done, the earlier the better.
- Two types of links, Trunk and Spur? Do they have different requirements for power? Do Trunks deliver power?
  - Yes delivering power via trunk is desirable, amount of power needs presentation/discussion.
- Sometimes end devices hang directly off trunks (slide 3).

### **Long Reach Issues**      **Mathias Fritsche & Dieter Schicketanz**      **HARTING Electronics & Reutlingen University**

- Looking for ideas of bandwidth needs? 10 MHz, 15 MHz?
  - Comment from call, should be less than 50 Mhz. Depends on how we optimize and what the link segment is. More discussion of IL, RL, etc.
  - Possible to see very long links with a number of segments with connectors between them (e.g., 1000m made up of 5x200m segments).
  - More data requested.

### **10SPE Link Segment**      **Chris DiMinico**      **MC Communications /Panduit**

- Q about scaling, channel and connectors? Can slide 4 be directly scaled? What level of error?
  - Should be close, relatively small error depending on connector details.
- Channels are very different between single to multi drop, long vs short.
  - Comes back to “what are the target networks we want to build?”.

### **10SPE Strawman Objectives Discussion**      **George Zimmerman**      **CME**

- Noncontroversial – ready to accept
  - No objection.
- Usual – may be ready to accept
  - Frame size - no objection.
  - BER –discussion of 10<sup>-9</sup> vs 10<sup>-10</sup>.
    - BER often scales based on link speed, testing time becomes an issue with low BER and low speed.
  - Autoneg, - no objection`
  - EEE, - no objection
  - What types of environments – contributions please?
    - Are “automotive” and “industrial” both well enough defined and not overlapping? What about other user cases?
- Duplex
  - needs discussion – presentations please

- HARD stuff
  - Link segments - How many inline connectors for long runs? Controversial. Contributions please.
  - EMC standards/regulations in IA, BA, Automotive – Do we need an explicit objective, or can this be covered another way?
    - needs discussion – presentations please
- Special Application requirements
  - PTP over specific cable (e.g. IEC 61158 Type A)
    - Do we need to call out lots of specific cables?
  - IS – 60079 – probably keep this as a “do not preclude)
  - PTP – automotive
  - Fast start
- Special issues
  - Half/full duplex, one or both?
  - PTP or PTMP
- Power
  - Detailed Requirements and proposals needed
- Big Ticket
  - Reaches and Use cases.
  - Need Technical and Economic Feasibility presentations for reaches/environments

**Plan for next meeting      Peter Jones George Zimmermam      Cisco CME**

- Note that next week we are in the Wednesday 7-9am PT slot as a result of the Monday Labor Day holiday in the US.
- Requests for presentation time in Fort Worth are due Thursday, September 1 (AoE)
- Presentations for Fort Worth are due Wednesday, September 7 (AoE)

Meeting closed – 9:10am PT

## Attendees (from Webex + emails)

Name	Affiliation	attended 8/31
Ahmad Chini	Broadcom	y
Bob Lounsbury	Rockwell Automation	y
Brett McClellan	Marvell	y
Chris Diminico	MC Communications/Panduit	y
Claude Gauthier	OmniPHY	y
Daniel Wiesmayer	DRÄXLMAIER	y
Dave Karpenske	PCN Technology	Y
David Abramson	TI	y
David Brandt	Rockwell Automation	y
David Høglund	Johnson Controls	y
David Law	HPE	y
Dayin Xu	Rockwell Automation	y
Dieter Schicketanz	Consultant, Reutlingen University	y
Eric DiBiaso	TE	y
George Zimmerman	CME Consulting / Commscope, LTC & Aquantia	y
Jay Cordaro	Broadcom	y
Jeff Marvin	Linear Technology	y
Jens Gottron	Siemens	y
Joe Byrne	NXP	Y
Joerg Haehnicke	Endress+Hauser	y
Kirsten Matheus	BMW	y
Laura Schweitz	Turck	y
Lennart Yseboodt	Phillips	y
Ludwig Winkel	Siemens	y
Maris Graube	Relcom Inc.	y
Masood Shariff	CommScope	y
Matthias Fritsche	HARTING Electronics GmbH	y
Matthias Wendt	Phillips	y
Mick McCarthy	Analog Devices	y
Mohammad Ahmed	TE	y
Peter Jones	Cisco	y
Peter Wu	Marvell	y
Stefan Buntz	Daimler	y
Steffen Grabber	Pepperl+Fuchs	y
Steve Carlson	HSD	Y
Attendee count		35

