Minutes IEEE 802.3 10SPE SG AdHoc meeting September 26th

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 9:05am PST.

1. Reviewed the Attendance information related to the ad hoc.
2. Displayed pre-par patent slide deck, Asked if we needed to review patent policy.
    a. No one requested review.
3. Reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes.
4. No need to approve September 7th minutes, done in Ft Worth
5. Presented the proposed agenda.
    a. Approved without objection.

Presentations/Discussion.

Chair's Comments   George Zimmerman   CME etc

- Ft Worth was a good meeting, progress was possibly better than expected.
- Still a lot to do to finalize objectives, and to provide data to back up our CSDs (e.g. Market size, Economic & Technical feasibility).
- Bring forward ideas/presentations/data early. It makes building consensus much easier. Waiting till San Antonino is not a simple path to success.

Fieldbus-Cabling in Standards   Bernd Horrmeyer   Phoenix Contact

- Covered a survey of some currently defined industrial fieldbus definitions, standards and physical characteristics.
- Has information compiled into MS-WORD and MS-EXCEL files. Will work with SG/AH chairs to figure out where this can help stored/shared.
    o   From SG chair – please discuss with other interested parties about how channel characteristics are specified, so that we have a common way to describe attributes.
- This presentation is focused on a subset of industrial use cases, particularly the "Conversion of bus topologies".

- - Presenters opinion – a link segment of up to 300m satisfies most industrial use cases, expect some additional discussion in the process control industry.
- SG chair encourages attendees to be clear about their uses cases in presentations, to help the group understand tradeoffs.

Objectives Update   George Zimmerman   CME etc

- Presenter walks though what's already been agreed, and what's still open.
- Avoid terms that imply we know the answer, e.g., use "optional power delivery" vs "Power over Data Line".
- Discussion about "Optional Low Power Mode". Is this just EEE, or something else?
- Discussion about "Fast Startup time" and "Max Startup time". Need more on this.
- Discussion about "full duplex only" vs the media topology required. Point to point vs bus/ring/tree is the key point here. It's more about Media Access Control than full vs half duplex.
- Ground Fruit (strawberries) - "Do not preclude"
  - "Intrinsic Safety" and "Automotive Safety" are covered.
  - Are there any other "do not precludes" from other industries (e.g. Building Control)?
- Low Hanging Fruit - BER
  - Working assumption – 10^{-10}
  - Need to figure out how to test this without requiring excessive test time (economic/ technical feasibility CSDs)
  - Presentation from Ahmad
- Link Segment/PHY dependent
  - Discussion on proposals.
  - 1000m (this presentation) vs 1200m (CFI). Presentation requested, including connector count.
  - Check language on "at least one PHY at 15m" with "a PHY at 1000m". Make sure that this is generally understood.
    - Presenter thinks this says one PHY to 1000m, and allows multiple PHYs for the 15m reach.
    - Need to check that this is clear to the broader group.
  - Presentation to be coordinated by Ludwig
- Powering – review 802.3bu objectives to see what we need to say.
  - One project or two?
  - PoDL reuse? PoDL doesn't go over 40m (correction – 6.5ohms), so we need something new, at least for the 1km reach.
  - Is the ability to operate with power and without data a key objective?
  - Interaction between short reach power (PoDL – 6.5 ohms) vs long reach power (1000m).
    - Can there be more than one power delivery specified?
    - General agreement: change "a power distribution technique" to "one or more" or "at least one".

- o What about daisy chain topology and impact on power? Call for presentations.
    - Need to include both data and power on the topology presentations
- o We need examples of devices to be powered, e.g. what are they, how much power, what is the distance/resistance/cable loss.

- Discussion Items/Work Items
    - o Power
        - Do we need an objective for "optional classification of power requirements" to support "plug and play power delivery" in additional to engineered systems (e.g. a car).
        - Support for daisy chain/bus/multipoint gets interesting with supporting power. Needs careful thought. Complexity tradeoff coming.
    - o Bus/Multipoint topologies
        - Needs careful evaluation.
        - Data and power complexity may drive Multipoint into a separate project
        - Would probably need a tutorial to explain/teach people how this would work in the 802.3 environment.
        - Deadline for formal tutorial to 802 at plenary has already passed.
        - Can be done as "802.3 presentation" as part of NG-ECDC AdHoc, or evening meeting of Study Group.
            - Evening Study group session most likely. SG chair to investigate scheduling.
            - Participants in favor of Bus/Multipoint topologies need to drive towards building this material to explain why and how to the broader 802.3 group.
            - Proposals need to come forward QUICKLY, and before the November meeting.
    - o Fast Startup vs Cold start
        - Automotive listed these – fast_startup vs max_startup
        - What about building/industrial?
        - If this is a key requirement, presentations are requested so that we know how to right our objectives.
        - Is there an additional "fault-recovery" startup requirement?

Meeting closed – ~10:30 PT

Attendees (from Webex + emails)

Name	Affiliation	attended 9/26
Amrik Bains	Cisco	y

Ahmad Chini	Broadcom	y
Andy Gardner	Linear Technology	n
Bob Lounsbury	Rockwell Automation	n
Bernd Horrmeyer	Phoenix Contact	y
Brett McClellan	Marvell	y
Chris Diminico	MC Communications/Panduit	n
Chad Jones	Cisco	y
Ching-Yao Su	Realtek	y
Claude Gauthier	OmniPHY	y
Daniel Wiesmayer	DRÄXLMAIER	y
Dave Karpenske	PCN Technology	n
David Abramson	TI	y
David Brandt	Rockwell Automation	y
David Hoglund	Johnson Controls	y
David Law	HPE	y
David Malicoat	HPE	y
Dayin Xu	Rockwell Automation	n
Derek Cassidy	ICRG	n
Dick Caro	CMC Associates	n
Dieter Schicketanz	Consultant, Reutlingen University	y
dingdong53224	???	y
Eric DiBiaso	TE	y
Frank Schewe	Phoenix Contact	n
Geoff Thompson	Independent	n
George Zimmerman	CME Consulting / Commscope, LTC & Aquantia	y
Hans-Peter Schmidt	OTH Amberg-Weiden	n
Harald Müller	Endress+Hauser	n
Heath Stewart	Linear Technology	n
Helge Zinner	Continental Corp.	y
Hossein Sedarat	Aquantia	y
Jacky Chang	HPE	y
James Withey	??	n
Jay Cordaro	Broadcom	n
Jean Picard	TI	n
Jeff Marvin	Linear Technology	y
Jens Gottron	Siemens	y
Jim Bird	TI	y
Joe Byrne	NXP	n
Joerg Haehniche	Endress+Hauser	n
Kirsten Matheus	BMW	n

Laura Schweitz	Turck	y
Lennart Yseboodt	Phillips	n
Ludwig Winkel	Siemens	y
Maris Graube	Relcom Inc.	y
Markus Wucher	Endress+Hauser	y
Masood Shariff	CommScope	n
Matthias Fritsche	HARTING Electronics GmbH	y
Matthias Wendt	Phillips	n
Mehmet Tazebay	Broadcom	n
Mick McCarthy	Analog Devices	y
Mohammad Ahmed	TE	n
Paul Mooney	Sprirent	n
Peter Jones	Cisco	y
Peter Wu	Marvell	y
Qing Xu	Belden	y
Richard Mei	CommScope	n
Ron Muir	JAE	n
Stefan Buntz	Daimler	n
Steffen Grabber	Pepperl+Fuchs	y
Steve Carlson	HSD	n
Theo Brillhart	Fluke	y
Woo-Suk Ko	LGE	n
Yong Kim	Broadcom	n
Attendee count		33