



# PSMA

## Reliability Committee

**TIME:** Wednesday, 10/14/20, 11-12pm CST

**PLACE:** Zoom (669-900-6833 or 408-638-0968), 272 780 335, <https://zoom.us/j/272780335>

**MINUTES:** [https://www.pdma.com/technical-forums/reliability/meeting\\_minutes](https://www.pdma.com/technical-forums/reliability/meeting_minutes)

**ATTENDEES:**

PRESENT?	COMMITTEE MEMBER
	<b>TBD – Co-Chair</b>
X	Brian Zahnstecher, PowerRox – Co-Chair
X	Joe Horzepa, PSMA – PSMA Representation
	Lisa Horzepa, PSMA – PSMA Representation
X	John Horzepa, PSMA – PSMA Representation
X	Ada Cheng, AdaClock – Member
X	Rick Fishbune, IBM – Member
X	Patrick Le Fèvre, Powerbox – Member
	Tim McDonald, Infineon – Member
	Steve Miller, SL Power ( <b>RETIRED</b> ) – Member
	Kevin Parmenter, Taiwan Semi – Member
	Shane Callanan, AEI – Member
	Greg Miller, Silanna – Member
	Mike Seeman, Eta One Power – Member
X	Ed Massey, Ed Massey Consulting – Member
X	Eric Swenson, IBM – Member
	Finbarr Waldron, Tyndall National Institute – Member CONFIRM MAILING LIST
X	Bill Mallory, SL Power – Member
	Jon Fifield, Astronics – Member
	Burak Ozpineci, ORNL – Member – CONFIRM MAILING LIST
	Dao Zhou, Aalborg University – Member
	Huai Wang, Aalborg University – Member
	Shobhana Punjabi, Cisco – Member
	Patrick McCluskey, Univ of MD, CALCE Lab – Member
	Abhijit Dasgupta, Univ of MD, CALCE Lab – Member
	Hamish Laird, ELMG Digital Power – Member
	Francesco Carobolante, IoTissimo – Member
X	Nitish Agarwal, SL Power – Member
	Manish Bhardwaj, TI – Member
	Evan Lucore, Artesyn – Member
	Gary Gong, Cisco – Member
X	Denis Downey, Cisco – Member

\* Attending APEC

GREEN = NEW MEMBER, 1<sup>st</sup> MEETING (i.e. – introduce yourself)

**ACTIONS (w/OWNER) HIGHLIGHTED BELOW**

**ACTION COMPLETED**

**AGENDA:**

**REMINDER: PSMA ANNUAL PLANNING MTG ON TUE, 10/20/20, 10AM – 3PM CDT. ALL ARE WELCOME, PLEASE LET BZ KNOW IF WANT INVITE AND DID NOT RECEIVE.** Quick review of Comm update PPT, solicit immediate feedback.

**IF ANYONE IS INTERESTED IN CO-CHAIR ROLE, THEN PLEASE REACH OUT TO BZ RIGHT AWAY.**

- **New Comm Introductions / Membership**
  - Elevator pitch intros, roundtable.
    - NEW MEMBERS =
  - New Member Recruiting
  
- **Comm Website / Purpose Statement**
  - Comm website up and running on PSMA.com ADA REPORTS FULL PSMA WEBSITE REVAMP UP BY END-JAN
    - **COMM = IF HAVE ANY GOOD RESOURCES, LINKS, PAPERS, ETC. TO POST ON WEBSITE (REMINDER, OPEN TO PUBLIC), THEN PLEASE SEND TO BZ & TO FOR POSTING VIA LISA.**
  
- **Initiatives**
  - New Committee Execution Strategy
    - Separate champions for key initiatives, run meetings accordingly.
    - 1. PS Comm Bus Reliability (*Brian*), 2. PTR Webinar(s) (**CHAMPION NEEDED**), 3. APEC '21 IS (**CHAMPION NEEDED**)
  
  - **Power Supply Communication Bus Reliability (BRIAN SPEARHEADS)**
    - Schedule (**BZ WILL COMMUNICATE TO BoD IN MTG THIS FRI**)
      - **1/6/20**: Project Kickoff Meeting
      - **PROJECT FROZEN PENDING BOB RESCHEDULING**
      - ~~5/18/20~~: Chapter 3 Completion Target
      - ~~5/25/20~~: Project Meeting (target CH. 2-3 REVIEW)
      - ~~6/1/20~~: Chapter 4 Completion Target
      - ~~6/8/20~~: Project Meeting (target CH. 4 REVIEW)
      - ~~6/15/20~~: Chapter 5 Completion Target
      - ~~6/21/20~~: Project Meeting (target CH. 5 REVIEW)
      - ~~7/6/20~~: Chapter 6 Completion Target
      - ~~7/13/20~~: Project Meeting (target CH. 6 REVIEW)
      - ~~7/13/20~~: Chapter 7 Completion Target
      - ~~7/20/20~~: Project Meeting (target CH. 7 REVIEW)
      - ~~7/20/20~~: Chapter 8 Completion Target
      - ~~7/27/20~~: Project Meeting (target CH. 8 REVIEW)
      - ~~7/31/20~~: Presentation of Draft Deliverables for Final Editing (**END OF SPECIAL PROJECT**)
      - ~~8/31/20~~: Presentation of Final Deliverables
      - ~~???~~/20: Webinar Target
    - Actions
      - SubComm Review Needs: **no team support requested until project back on-track**
      - TO notes we can hone expectation and “editing quality level” so **NEEDS TO PROVIDE FIRST-PASS REVIEW BEFORE PUSHING OUT RAW CAPTURE.**
      - Steve m. Notes proj should be sure to capture content/app exams outside of ICT (auto, medical, other common busses).
      - Project in frozen status, need to workout pivot/recovery offline with bob. **BZ/TO WILL ADDRESS WITH BOB DIRECT.** Bob reached out on 7/20 to report he is back with a major focus on our project, but has been unresponsive since so not sure what is going on. **BZ + JOE H. TO REACH OUT OFFLINE AND FIGURE OUT SITUATION, PLAN MOVING FORWARD.** NO CHANGE AS OF 9/9/20, **JOE ESCALATING WITH BOB, WILL REVISIT AS APPROPRIATE.**

- **TENTATIVELY** back on as of 9/18/20. Chapters 1-3 on Dropbox for review, BUT NO REVIEW REQUESTS BEING MADE UNTIL **BZ CAN VERIFY MATERIAL LOOKS TO BE MEETING EXPECTATIONS**. Comm needs to review proposed, updated project schedule. Comm finds general schedule acceptable, though expresses desire for hybrid version in which off-line reviews may occur as content is written and before formal review sessions (can also be requested earlier, as appropriate).
- Project Subcomm preferences for providing feedback (i.e. - .DOC Track Changes, .PDF Comment/Markup, etc.)? No strong opinions either way so all can accept either. **BZ WILL INFORM BOB PDF MARKUP WILL BE THE POR**.
- For APEC '21 support, Comm is supportive of IS proposal, but feels it is not solid enough to submit PES at this time so will wait for future opportunities.
- **PTR Webinars (NEED NEW CHAMPION SPEARHEADS):**
  - Topics? Speakers? Schedule? **FOR ANY WEBINAR, DECIDE IF PROPOSE TO PTR OR IF RELIAB COMM INDEPENDENT EVENT**. TO PREFERS TO PRIORITIZE FOR PTR, DEFAULT TO INDY IF JUSTIFIED.
    - **COMM ACTION: WEBINAR TOPICS, PERHAPS FROM WITHIN COMM.**
    - Bob White, Power Supply Communication Bus Reliability (pending special project activities **ON-COMING OFF HIATUS**)
      - Bob is back "in play" again after getting project going again. Initial priority for APEC '21 IS session, then webinar after that.
    - Steve Miller recommends Red Tiger Security, Jonathan Pollet (APEC/PSMA/EPRI '13 "Are you smart enough for the Smart Grid?" Workshop...see full report here: <https://www.pdma.com/technical-forums/energy-management/resources>)...Ada also attended and confirmed interest. **TO WILL REACH OUT TO JONATHAN TO GAUGE INTEREST, SOLICIT PROPOSAL, DET. IF APPROPRIATE FOR PTR OR STANDALONE**. No action taken, **TO WILL ATTEMPT THIS MONTH**. **BZ WILL ATTEMPT THIS MONTH**.
      - "He presented a great high level view of IoT security applied specifically to malicious hacks of industrial and grid controllers."
      - BZ reached out to Jonathan and got an affirmative on 9/10/20 for interest. Now still waiting on talk abstract, sent ping 10/13/20.
      - Initial priority for APEC '21 IS session, then webinar after that.
  - **Charles Hymowitz, AEI Systems**
    - "Test vs. Analysis; what's the right ratio?"
    - **Consider for PTR webinar? BZ TO REACH OUT. CHARLES CONFIRMS PRELIM INTEREST, ASKING FOR TIMEFRAME...ADA MENTIONS MAY HAVE ALREADY PRESENTED, JOHN/BZ WILL INVESTIGATE** Has not given before so free to do so. PTR Comm requested more detail to justify as part of supporting PTR series. **BZ WILL PING AGAIN FOR RESPONSE TO PTR CLARIFICATIONS**. PTR Co-chairs now pinging (last 8/9/20) Charles direct for date. **BZ WILL CHECK ON STATUS WITH PTR TEAM** Charles now has schedule conflicts...looking to date in early '21.
  - **Doug Kirkpatrick, CEO, Eridan Communications**
    - "System Reliability for Small Cells Enable 5G"
    - **Consider for PTR webinar? BZ TO REACH OUT. GIVING COMP TIME TO WORK OUT LOGISTICAL ISSUES FIRST, REVISIT IN LATER NOVEMBER.**
- **APEC '21 INDUSTRY SESSION (NEED NEW CHAMPION SPEARHEADS):**

- Prelim proposal for 4-slot session abstract submitted to APEC for consideration, **BZ WILL SHARE WITH MTG MINS.**
- Ada notes importance to highlight interests of academics that need help understanding how to transition developments from research to production (particularly through lens of reliability). **COMM WILL NOTE AS FOCUS FOR SPEAKER SEARCH.**
- Potential Speaker Chase List (**TARGET CLOSE ON SPEAKERS/TOPICS BY END-NOV**) –
  - Ada suggests we consider highlighting collaboration efforts with IPC (particularly IPC-9592 or other investigation spearheaded by Rick/Eric). **Rick open to it with buy-in from (and potential co-present with) IPC's Matt K. BZ TO HELP CULTIVATE DISCUSSION BETWEEN RICK/ERIC/MATT.**
  - Bob White, Embedded Power Labs (representing PSMA Reliab Comm) = Special Project Overview (major assumption on sufficient project status and APEC slippage past April). **BZ WILL SOLICIT TALK PROPOSAL.**
  - Jonathan Pollet, Red Tiger Security = Grid Security topic. **BZ WILL SOLICIT TALK PROPOSAL.**
  - Ada notes PSMA newsletter (<https://www.psmas.com/HTML/newsletter/page17.html>) recently highlighted iNemi article about the impacts COVID needs have on equipment reliability. **BZ WILL FIGURE OUT WHOM TO SOLICIT FOR TALK PROPOSAL.**

### - General

- Post-mortem PS SW/FW Reliability Report Update
  - Powerbox: given to design teams, lot of interest, inhibited by language barrier (Japanese in this case).
  - SL: given to teams, already have Reliab stakeholders involved, driving change in FW review process.
  - IBM: presented to some suppliers, neutral response so far, awaiting next major project kickoff for true assessment.
  - Patrick notes similar activities kicking-up within EPSMA, **PATRICK WILL INQUIRE FURTHER TO SEE IF THERE ARE ADDITIONAL COLLABORATION OPPORTUNITIES.** **Patrick reports no response as of 10/14/20.**
- Any other revenue-generating thoughts for PSMA?
  - Virtual Workshop (recent '20 Cap & Mag Virtual Workshop success as example)
    - Very well-received thus far, most seem to be ok with virtual format.
    - Joe notes guidance to reduce proposed event budget by ~20% for offset, F2F expenses, and pass through to attendee registration. Also, consider turning PS SW/FW Reliability Report into workshop theme.
    - Viability determined by success of existing webinar efforts.
  - Standards (primarily through conversion of existing project outputs)
    - Input into IPC-9592B standard update. Consider SW/FW input? **Rick former colleague of IPC CTO (Matt Kelly), will work with IPC/PSMA efforts to cultivate opportunity here. BZ to facilitate email discussion with Mike Hayes as part of overall PSMA/IPC collaboration efforts.** SW/FW report currently with IPC for review/feedback/suggestions. Eric also notes deep experience with this and interest in efforts. IPC currently reviewing with their committees to determine best course of action.
  - Offer supporting resources to enable utilization of PS SW/FW Reliability Report. **COMM ACTION TO SUGGEST OTHER POTENTIAL RESOURCES/TOOLS TO CREATE TO SUPPORT THIS.**

- For example, extract a checklist from report to simplify barrier to entry (i.e. – team code review checklist). **COMM ACTION (ADA SPEARHEADING) TO PROPOSE LIST OF POTENTIAL TOOLS FOR DETERMINING ACTIONABLE PRIORITIES**. White paper? Checklist?
    - Thoughts from Nitish: commonly challenged by disconnect between SW/FW & HW stakeholder expectations...could be helped by Process Checklist (for code reviews, functional flowchart/review, test plan, etc.).
    - Thoughts from Ada: “Dashboard” of Metrics, Process Diagram, Prototyping & BIST...**ADA WILL EMAIL LIST w/ DESCRIPTIONS**. Ada sent analysis to Comm list 9/9/20, captured below for convenience (**REVIEW NXT MTG**):
      - **Those already in the report are as follows:**
        - \* Sources of Coding Standards (p. 80)
        - \* SW Development Process Audit Checklist (p. 85)
        - \* Safety Assessment using a Risk Matrix to determine acceptable and unacceptable risks (p. 93)
        - \* Regulatory inputs for software quality (p. 98)
        - \* Example Software Quality Specification (pp. 98-100)
        - \* Software Development Process Assessment Template (pp. 101-104)
        - \* Software Security Assessment Specification (pp. 104-105) includes security checklist (also on p. 150)
        - \* Digital PSU Verification Test Plan Example (pp. 106-109)
        - \* Development Team Specifications (pp. 110-112) includes PSU Functional Partition Specification Template, & SW Interface Specification Template.
        - \* Testing Checklist example (p. 159)
      - **Some proposed resources/tools that are not currently in the report: (COMM PRIORITIES?)**
        - \* Process Flow Diagram **(1)**
        - \* Design checklist? **(2)**
        - \* BIST examples? **(3.1)**
          - **Functional examples very enabling to new users.**
        - \* “Dashboard” of metrics **(3.2)**
          - **Propose hybrid dashboard of HW and SW metrics.**
        - \* Code review checklist? **(5)**
        - \* Software release checklist? **(6)**
      - **Some inputs on the report for next phase/revision:**
        - \* Add prototyping?
        - \* Need to define code escrow
- **Next Meeting**
- Wed 11/11/20, 11am CST.
  - Regular Schedule = 2<sup>nd</sup> Wed of each month, 11am-12pm CST