

SECTION 305 TECH SUB COMM

MINUTES

MARCH 23, 2017

3:00PM EASTERN

CONFERENCE CALL

FACILITATOR	<i>Dale Engelhardt, Vice Chair, NGENC Technical Subcommittee</i>
ATTENDEES	Core Team Members: Dale Engelhardt for Mario Bergeron, Jeff Gordon, Allan Paul, Jeff Schultz for Marci Petterson, Jennifer Bastian, Eric Curtit, Momo Tamaoki, Tammy Krause, Michael Burshtin, Curtis McDowell, Larry Salci, Steve Hewitt, Industry Members: Paul Jamieson, Richard Stegner, Dick Bruss, Tom Hunt, Josh Coran, Wulf Dickie, James Michel, Tom Sisler, Kevin Myles, Richard Curtis, Steve Morrison, Pat Sheeran, Joe Kenas, Tom LaMano, Glen Rees
ABSENTEES	Mario Bergeron, Charlie Poltenson, Phil Meraz, Marci Petterson, Jason Biggs, Andrew Wood, Melissa Shurland, Sal DeAngelo, Jonathan Hines, Jay Gilfillan, Art Peterson, Devin Rouse, Anand Prabhakaran, Charles Bielitz, Nico Lindenau, Michael Coltman, Brian Marquis

DISCUSSION/DECISIONS MADE

1.	<p>Subcommittee Vice Chairman Dale Engelhardt, Amtrak, called today's meeting to order and asked Steve Hewitt to call the roll.</p> <p>After calling the roll, the presence of a quorum was confirmed.</p> <p>As always, industry participants are asked to email a notification of their attendance to Steve Hewitt at shewitt109@aol.com</p>
2.	<p>Review of the Meeting Agenda – Dale Engelhardt, Amtrak:</p> <p>Dale Engelhardt provided a brief overview of today's meeting agenda.</p>
3.	<p>Review of Action Items that are not on the agenda – Steve Hewitt:</p> <p>Steve Hewitt reviewed the open action items, providing a brief update on only those items that were not to be specifically covered on the agenda:</p> <p>Maintaining Industry Participation List: Status: There are currently about 260 registered industry participants. Steve is updating the industry list – and is asking members to review it and let him know of any updates or changes they may be aware of.</p> <p>Requesting Backgrounder educational document: Copies have been printed, subcommittee members (core team and industry) who would like a hard copy (copies) should contact Steve at shewitt109@aol.com with the number requested and an address to send them to. Everyone attending the Annual Meeting received a copy in their meeting packet. To date over 300 have been distributed and a second printing has taken place.</p> <p>Updating ECP Standards This is an ongoing item which the Technical subcommittee is tracking – it is anticipated that status updates will take place on every other call. (Ongoing)</p> <p>Status: Paul Jamieson provided the following update:</p> <p><i>APTA PRESS standards PR-M-S-020-16 ECP Emulation and PR-M-S-021-16 ECP Performance are in the final approval phase and should be issued in late April or May (2017).</i></p> <p>Bi-Level Car Procurement: As Caltrans and IDOT are working out some contract issues with the contractor there will be nothing to report for now. As this is expected to be the status for a while, on the last call (1-12-17) Chairman Bergeron asked that this item be removed from the bi-weekly agenda until such time that Caltrans feels that it has an update to provide to the subcommittee.</p>

Distribution of TRB Session presentations: On the 1-12-17 subcommittee call, Jack Madden reported that the TRB session presentations will be made available in March, 2017, by TRB, to those who were registered attendees at the TRB Annual Meeting. Jack has confirmed that, if the presenters agree, it is ok to distribute the presentations beyond the TRB registrants. Jack Madden has received permission from all but one of the speakers on the NGEC – TRB panel – to distribute their presentations. As soon as he confirms with the last panelist, he will let Steve Hewitt know.

Status: Jack Madden is unavailable today, but has reported to Steve Hewitt that he has permission from all but one the presenters at the TRB session on the NGEC Specs to distribute their presentations. Jack will be sending the approved presentations to Steve Hewitt for distributions to NGEC members.

Accessibility Update – Melissa Shurland, FRA: Melissa Shurland, FRA, agreed to give the Accessibility presentation, (originally prepared for the Annual Meeting) on the Technical subcommittee call of 4-6-17. She will also provide a status update on comments received to the Accessibility report. Melissa asks that comments on the report be sent to her and Steve Hewitt in advance of the 4-6-17 call.

4.
Approve Minutes from 3-9-17 – Dale Engelhardt:

On a motion offered by Allan Paul, NCDOT, and a second by Jennifer Bastian, IDOT, the minutes from the last call held on 3-9-17 were approved as presented.

5.
Update: Diesel-electric Locomotive Procurement – Jennifer Bastian, IDOT:

Jennifer Bastian provided the following update for inclusion in today's minutes:

- *JPEs continue to work with Siemens on schedule and conduct weekly conference calls.*
- *IDOT Locomotive 4604 is in Chicago.*
- *IDOT Locomotive 4611 has completed 238.111(b) testing at WSDOT and will ship to Chicago 3/24/2017.*
- *Meeting scheduled in Chicago Tuesday to sign conditional acceptance on IDOT units: 4603, 4604, 4605, 4606, 4607, 4608, 4609, 4610 & 4611. These units have all completed the 500 mile burn in at TTCI in Pueblo.*
- *All Maintenance Demonstrations have been successfully completed.*
- *IDOT and Amtrak now have signed agreements for storage, testing and commissioning the locomotives.*
- *WSDOT and IDOT continue to meet with Amtrak to finalize their respective leases.*
- *Amtrak/JPE insurance issues have come to resolution and are in the signature phase.*
- *IDOT locomotive 4611 has been successfully completed at WSDOT for 238.111(b) testing and 213.345 testing on the Cascades route.*
- *Six Caltrans units have been delivered to Oakland*
- *Caltrans 238.111(a) testing is underway and will conclude next week. The first two units 2101 and 2103 have completed their tests. 2102 & 2105 are in progress.*
- *WSDOT units 1400-1401 have been delivered to TTCI and 1400 has completed the 500-mile burn in at TTCI.*
- *WSDOT units 1402-1403 are scheduled to ship from Siemens next week.*
- *IDOT static testing will start on 3/28 and 238.111(a) corridor testing will commence in early April.*
- *Siemens warranty service locations are now established at the JPE's.*
- *Wi-Tronix application, as required by Amtrak is being applied by FMI. One Caltrans unit has been equipped and IDOT units at TTCI are being equipped. Siemens projects Wi-Tronix will complete software in June.*
- *LED Headlight issues have been resolved with UP and JPEs, Amtrak and Siemens will keep in contact with AAR technical group for future review.*
- *All Document Change Requests (DCR) have been processed.*
- *IDOT and its' Fleet Manager Contractor is now functioning in Chicago on a daily basis.*

6.
Document Control Update –Tammy Krause, Amtrak:

Tammy Krause and Richard Stegner provided an overview of the Locomotive DCRS table of changes as distributed earlier today:

The spreadsheet of all the changes to revision A1 of the locomotive specification have been sent out. These changes, if

approved by the executive board, will be used to create revision B. I would ask that everybody look over the changes. Richard Stegner will give us an overview of the changes that were approved by the locomotive working groups. At the next meeting, I would like to address any concerns with these proposed changes and hopefully approve the changes so it can be sent to the Executive Board.

Rich Stegner, team leader of the Locomotive Working Group, gave a brief overview of the list of changes. He noted that these changes are the result of over two years of design review and about six months of vetting by the locomotive working group. Rich acknowledged Brian Marquis, Jack Madden and Al Bieber, for their work as team leaders of the sections of the specification. He also acknowledged the efforts of Paul Jamieson, as well as all members of the working group.

Rich also noted that, in the end, most of the changes are "of the housekeeping nature" and are revised to state "or as approved" or as approved by customer".

Richard offered to answer any questions members may have on the next call.

7.

Presentation/Discussion: "The Future of Electronics on Trains" - Dale Engelhardt:

Dale Engelhardt reprised his presentation on the Future of Electronics on Trains given during the NGEC Annual Meeting:

Utilizing Today's Available Systems and Planning for Future Advancements

Overview:

Today's computers and electronic systems provide numerous methods by which passenger trains can enhance:

*Customer's Experience
Fleet Maintenance/Improved Reliability
Transportation Management*

The following presentation is to provide design concepts for the NGEC to consider and possibly integrate into the NGEC specifications for new rolling stock

Agenda

- Issues to Consider
- Enhanced Customer's Experience
- On-Board Fleet Maintenance Locomotives
- On-Board Fleet Maintenance Cars
- Transportation Management
- Intra Train Communication
- Summary
- Recommendations

Issues to Consider

- Life Cycle
 - Rolling Stock –Planned Approximately 30 Years
 - Electronic Hardware-Upgrades every 3-5 Years
 - Software-Upgrades – variable timelines
- Software
 - Unique to the Application
 - Proprietary Formats
 - Licensing Fees

Enhanced Customer's Experience

- WiFi- High speed connection to the Internet
 - Control Data Streaming?
- Entertainment- movies, TV shows, music to passenger owned devices (on board server to WiFi)
 - Licensing Agreements with Entertainment Providers
- On Board Information Systems – Train status updates
- Location, speed, arrival time, schedule performance
- Train schedule connection opportunities

- An ADA enhancement
- Features of the Future-Unknown

Fleet Maintenance On-Board Status Locos

- Fault Codes
 - Engine
 - Propulsion
 - Air Compressor
 - Cab Signals
- Equipment/Operational Status Updates
- Ride Quality
- External Cameras
- Internal Cameras
- Engine Idling or on ground power

Amtrak communicates these faults wirelessly to terminals and stations in advance of locomotive arrival and to a data server to analyze potential fleet failures.

Fleet Maintenance On-Board Status Cars

- Passenger Cars Faults
 - HVAC Systems Automatic Doors
 - Ride quality Toilets
 - Public Address Systems Refrigeration
 - Wheel Slip ot Box
 - TADs
- Equipment Status Updates
 - Temperature Monitoring of Cars in the Yard/Station
 - Freezing (Winter)
 - Cabins too Warm (Summer)

These faults could be stored for maintenance troubleshooting, can be electronically communicated to terminals in advance of train arrival, and stored on servers to analyze failures

Transportation Management

- Train Location and Speed
- On Time Performance
- Diesel Fuel Level
- Ticket Processing
- Customer Head Count
- Train Inventory
 - Food
 - Consumables
- Security
 - Internal Facing Cameras

Intra-train Communication

Digital Train Line Communication

- Increased bandwidth
- Standardize cabling and connectors
- Future expansion for safety systems
- Utilize one WiFi/Cellphone connection per train

Software

- Standardized format and language (internet approach)
- Open Source Code

To support interchangeability of rolling stock

Summary

- Electronic/ Computer Systems Are Becoming an Integral Part of Rolling Stock Equipment. Influencing:
 - *Customer's Experience*
 - *Fleet Maintenance*
 - *Transportation Management*

- Planning Required for Life Cycle Differences Between Rolling Stock and Computer Systems
 - Multiple Computer System Upgrades During Life Cycle of Rolling Stock
- Rolling Stock Specifications Need to Include Provisions for Computer System Applications and Inter-Car Communications

Recommendations

- Create Technical Team to Define Enhancements
 - For Customer’s Experience
 - For Fleet Maintenance
 - For Transportation Management
- Interface with IT Organizations
- Edit existing new rolling stock specifications
- Investigate retrofit capabilities

Discussion:

Paul Jamieson commented that an eye should also be on security regarding potential hacking into software. It would be wise to think about what can be done “to prevent things from happening that we don’t want to.”

Dale agreed and noted it would be something to be considered as well.

Dale is recommending to the Chair that a working group be formed within the Technical subcommittee to address the topic of electronics on trains in the future. Subcommittee members interested in participating should send an email to that effect to Steve Hewitt prior to the next call (4-6-17). In the meantime, Dale will get Chairman Bergeron’s input on how he wishes to proceed.

8. AAR Committee Update – Jeff Gordon:

Jeff Gordon reported that there was nothing new to report on since his presentation given at the Annual Meeting.

Dale Engelhardt asked if the LED issue on the new Charger has been resolved. Jeff responded that it has been resolved for now. The Class 1s, upon who’s tracks the locomotives will run, are ok with the Charger going into testing and service at least until AAR has formed a Technical Advisory Group (TAG) to look at this, and that group has issued its determination.

9. Other Issues:

Adjourn:

With no further issues to come before the subcommittee today, Dale Engelhardt adjourned this conference call meeting at 3:37PM Eastern.

Next Call: April 6, 2017 – 3:00pm Eastern

Decisions and Action Items

Updating ECP Standards: This is an ongoing item which the Technical subcommittee is tracking – it is anticipated that status updates will take place on every other call.

Status: Paul Jamieson provided the following update:

APTA PRESS standards PR-M-S-020-16 ECP Emulation and PR-M-S-021-16 ECP Performance are in the final approval phase and should issue in late April or May (2017).

AWG Update: Melissa Shurland prepared an update for the NGEC Annual Meeting, but was unable to attend. The presentation has been distributed to all Tech SC members and posted to the website. It was also distributed with the materials for this call.

<p>Melissa will present the Annual Meeting Presentation to the subcommittee on 4-6-17. She will also provide an update on the Accessibility Report and the comments submitted.</p>
<p>Requesting Backgrounder educational document: Copies have been printed, subcommittee members (core team and industry) who would like a hard copy (copies) should contact Steve at shewitt109@aol.com with the number requested and an address to send them to. Everyone attending the Annual Meeting received a copy in their meeting packet. To date over 300 have been distributed and a second printing has taken place.</p>
<p>Maintaining Industry Participation List: This remains an ongoing action item. There are currently around 260 registered industry participants. Steve Hewitt requests that industry members review the industry contact list and provided him with any changes they are aware of.</p>
<p>AAR Committee: Ongoing – There was nothing new to report on today’s call.</p> <p>Next Update: 4-20-17</p>
<p>Procurement Updates:</p> <p>Diesel-Electric Locomotive Procurement: Progress reports from the lead state on the PRIIA multi-state locomotive procurement is provided on each technical subcommittee call. See agenda item 5. (ongoing)</p> <p>Bi-Level Car Procurement: As Caltrans and IDOT are working out some contract issues with the contractor there will be nothing to report for now. As this is expected to be the status for a while, on the last call (1-12-17) Chairman Bergeron asked that this item be removed from the bi-weekly agenda until such time that Caltrans feels that it has an update to provide to the subcommittee. Momo Tamaoki, Caltrans, will contact Steve Hewitt and the Chair when there will be something to report and an agenda item will be added to the subsequent conference call.</p>
<p>Document Control Update: The spreadsheet of all the changes to revision A1 of the locomotive specification have been sent out. These changes, if approved by the Executive Board, will be used to create revision B. Tammy would ask that everybody look over the changes.</p> <p>Richard Stegner gave an overview of the changes that were approved by the locomotive working groups. At the next meeting,</p> <p>On the next call, (4-6-17) Tammy Krause would like to address any concerns with these proposed changes and hopefully approve the changes so it can be sent to the Executive Board.</p> <p>Comments and questions on the changes should be sent to Tammy Krause and Rich Stegner in advance of the 4-6-17 call.</p>
<p>Siemens/All Aboard Florida NGEC specification use – feedback/presentation:</p> <p>Follow up action items:</p> <p>Ray Ginnell will provide the subcommittee with the actual weight of the cars once they have been weighed.</p>
<p>Distribution of TRB Session presentations: On the 1-12-17 subcommittee call, Jack Madden reported that the TRB session presentations will be made available in March, 2017, by TRB, to those who were registered attendees at the TRB Annual Meeting. Jack has confirmed that, if the presenters agree, it is ok to distribute the presentations beyond the TRB registrants. Jack Madden has received permission from all but one of the speakers on the NGEC – TRB panel – to distribute their presentations. As soon as he confirms with the last panelist, he will let Steve Hewitt know.</p> <p>Status: Jack Madden was unavailable today, but had reported to Steve Hewitt that he has permission from all but one the presenters at the TRB session on the NGEC Specs to distribute their presentations. Jack will be sending the approved presentations to Steve Hewitt for distributions to NGEC members.</p>
<p>Future of Electronics on Trains: On 3-23-17, Dale Engelhardt reprised the presentation he gave at the Annual Meeting and a follow-up discussion will take place. (agenda item 7)</p> <p>Dale is recommending to Chairman Bergeron that a working group be formed within the Technical subcommittee to address the topic of electronics on trains in the future. Subcommittee members interested in participating should send an email to that effect to Steve Hewitt prior to the next call (4-6-17). In the meantime, Dale will get Chairman Bergeron’s input on how he wishes to proceed.</p>

ATTACHMENTS



PRIIA Section 305 Tech Sub Committee Meeting

March 23, 2017

The agenda for the meeting is below:

- | | |
|---|------------------|
| 1. Roll Call | Steve Hewitt |
| 2. Review meeting agenda | Dale Engelhardt |
| 3. Review Action Items | Steve Hewitt |
| 4. Approve Minutes from 3-9-17 | Dale Engelhardt |
| 5. Update: Diesel-Electric Locomotive Procurement | Jennifer Bastian |
| 6. Document Control Update | Tammy Krause |
| a. Review/overview D/E Locomotive Table of DCRs | Rich Stegner |
| 7. Presentation/Discussion: "The Future of Electronics on Trains" | Dale Engelhardt |
| 8. AAR Committee Update | Jeff Gordon |
| 9. Other Issues | All |
| 10. Review this meeting: | Steve Hewitt |
| a) Decisions | |
| b) New Action Items | |

***Technical Sub Committee Conference Call Meeting:
Thursday 3-23-17 / 3:00 Eastern / 1-866-209-1307 / passcode 6486648#
Please call in a few minutes early so all is in attendance for Roll Call.
Thank you
Next Call -4-6-17 at 3:00pm Eastern***