

# SECTION 305 TECH SUB COMM

MINUTES

MAY 11, 2023

3:00PM EASTERN

CONFERENCE CALL

<b>FACILITATOR</b>	<i>Joe Paul, Vice Chair, NGENC Technical Subcommittee</i>
<b>ATTENDEES</b>	<b>Core Team Members:</b> Joe Paul for George Hull, Jeff Gordon, Jodi Lehmkuhl, Ray Hessinger, Curtis McDowell for Matthew Simmons, Jennifer Bastian, ED Engle, Jason Biggs, Mike Jenkins, Art Peterson, Tammy Krause, Larry Salci, Steve Hewitt <b>Industry Members:</b> Richard Stegner, Paul Jamieson, Jack Madden, Jonathan Michel, Kevin Sudano, Dick Bruss, Guido, Jack Martinson, James Michel, Ed Golitko, Paul Arnone, Kevin Myles, Josh Coran, Tom LaMano, Joe Kenas, Joanna Hallisy, Julie Desrosiers, Dave Warner
<b>ABSENTEES</b>	<i>George Hull, Marci Petterson, Matthew Simmons, Troy Hughes, Tarek Omar, Mike Murray, Barley Fields, Blair Slaughter</i>

## DISCUSSION/DECISIONS MADE

### 1.

Technical subcommittee Vice Chair Joe Paul, Amtrak, called the meeting to order and asked Steve Hewitt to call the roll of core team members.

After calling the roll, Steve Hewitt confirmed the presence of a quorum.

**As always, industry participants are asked to email a notification of their attendance to Steve Hewitt at [shewitt109@aol.com](mailto:shewitt109@aol.com).**

### 2.

**Review Action Items – Steve Hewitt, NGENC Program Manager:**

#### **2023 NGENC Backgrounder educational document:**

The 2023 NGENC two-pager is available in hard copy by request of Steve Hewitt at [shewitt109@aol.com](mailto:shewitt109@aol.com).

To date 332 copies have been distributed.

#### **Maintaining Industry Participation List:**

There are just over two hundred industry participants.

**Any updates or changes to this list should be sent to Steve Hewitt at [shewitt109@aol.com](mailto:shewitt109@aol.com).**

#### **Connecticut DOT Rail Car Procurement:**

On 1-5-23, Marci Petterson reported that they expect to receive proposals by the end of January at which point they will enter the "cone of silence."

**Next Update: As Appropriate**

#### **Metro-North Dual Mode Locomotive Procurement:**

On 4-27-23, Ray Hessinger, NYSDOT provided the following update:

Production on car shells 301 and 302 is progressing ahead of schedule with car shell 301 being ready for the first FAI inspection.

Metro-North and Siemens closed the Final Design Review (FDR) on third rail current collection and have scheduled FAI's for several components.

Ray also reported that there has been a change at the Project Engineer Level, but it should not impact the project.

**Next Update:5-25-23**

**Amtrak Vehicle Procurements as of 4-27-23:**

On the new Acela:

Work continues on completing qualification and acceptance.

On the Charger Locomotives:

Twenty-four are in service. They are averaging about two per month.

On the Airo trainset:

They are finishing Final Design Review (FDR).

The first car shell is in production.

**Next Update:5-25-23**

**Working Group on Vehicle Weight Issues:**

On 3-30-23, Jeff Gordon, FRA reported that he intends to update the document based on working group feedback rather than schedule a meeting. He will then ask for input from the members via email. His issue is that he has been called for Jury duty and if enpaneled could be servibg for 3 months and he would not be able to hold a working group meeting. If he is not enpaneled, this may change, but for now he inetends to begin updating the document based on feedback received to date.

Steve Hewitt asked Jeff to let him know when he is ready to present an update to the technical subcommittee and he will add it to the agenda at that time.

**Next Update: As Appropriate**

**Communications on Rail Cars Working Group as of 4-13-27:**

Ken Martin, Sharma and Associates and team leader for the Communications on Rail Cars Working Group, reported that they are working on writing a DTL specification to include in the single level Rail car specification once completed and approved.

Ken is working on the first draft and will distribute it to the working group members in advance of their next meetin (a week or week and a half from now). It will be a few months down the line before it will be ready for review outside of the Working Group. Ken noted that this spec may well be applicable to some of the other PRIIA specs. There are similarities but also some differences. Ken noted that he was able to get the updated Amtrak specification and is including it.

Additionally, Ken noted that there have been some requests that the Working Group also look at developing a CCTV specification. Ken would welcome input from leadership on whether this is something that the Working Group should do.

Joe Paul commented that he believes a CCTV specification is a good idea. Amtrak is working on video surveillance for the Venture cars and it is clear that there is a need for standardization.

Ken asked if this should be a "global spec"?

Joe responded that there will need to be further discussion to determine how to approach this. He invited input form subcommittee members - "feel free to reach out".

**Carbody Materials working group:**

**Next Update:5-25-23**

**Next Update – As Appropriate**

**University of Nebraska/FRA High Speed Wireless Study as of 4-13-23:**

Hamid Sharif provided the following update on 4-13-23:

=====

*Our work at the University of Nebraska-Lincoln has been in the area of better utilization of RF resources for the rail industry. In short, it is becoming harder and harder to locate available spectrum resources for rail industry applications. Our work has been to*

concentrate on better utilization of 160 MHz. So, we have designed and built a computer simulation model for the 160 MHz. We have verified this model and have done a number of application tests in the lab.

Currently, we are transitioning our transceiver design into a prototype implementation using a software radio platform, in preparation for extensive field testing to evaluate the accuracy of our prediction models and the reliability of our design. It also provides the basis for the exploration of cognitive radio principles in the pursuit of a unified communications architecture for the rail industry. We continue our work on the transceiver implementation, by evaluating and refining our receiver synchronization capabilities to be more robust against phase, frequency, and timing offsets. We also have begun our work to implement the higher-layer functionalities of our protocol stack. These are all ahead of our field tests next month.

For any questions, please contact Hamid Sharif at:

[hsharif@UNL.edu](mailto:hsharif@UNL.edu)

### **Next Update – As Appropriate**

### **3. Approval of the Minutes from 4-27-23 – Joe Paul, Amtrak:**

On a motion by Jennifer Bastian, IDOT, and a second by Jason Biggs, WSDOT, the minutes from 4-27-23 were approved as submitted.

### **4. Update: 5-11-23 - Multi-State Rail Car Procurement – Jodi Lehmkuhl, Caltrans:**

Jodi Lehmkuhl, Caltrans, provided the following update for inclusion in today's (5-11-23) minutes:

- *The remaining Cab Car FDR submittals are in the final closure stage with nearly all subsystems ready for approval. The Cab Car dynamic framing representative approach has been submitted to FRA, with comments from FRA under review. IDOT Café Car system level FDR reviews are nearly closed.*
- *The Cab Car Collision and Corner Post Appendix F test reports are approved. The Cab Car Complete FAI is tentatively scheduled for June, to be followed by the FRA Sample Car Inspection.*
- *129 cars are in production or have been produced at Siemens Sacramento Facility. IDOT coaches are currently in revenue service and Caltrans is targeting revenue start in first half of 2023 once all necessary agreements are in place.*

Jennifer Bastian, IDOT, added that the first Café Car arrived in Chicago and this means that atleast one of each of the four styles have arrived. Not all are yet in service, but this is a great step in that direction.

### **5. Update Document Control Management - Tammy Krause:**

Tammy Krause provided the following plan/overview of the steps to be taken to acquire and review changes made to PRIIA specifications by various entities:

*We need to reach out to the entities that have used the PRIIA specifications as a base for their own specifications.*

*1 Who has used the Specifications, which ones and a Contact:*

- |                              |   |
|------------------------------|---|
| <i>a. Connecticut DoT –</i>  | <i>i. Single Level<br/>ii. Marcy Petterson</i>                          |
| <i>b. Amtrak</i>             | <i>i. Single level, Diesel Locomotive, Trainset<br/>ii. George Hull</i> |
| <i>c. California DoT</i>     | <i>i. Single level, Diesel Locomotive<br/>ii. Gurleen Boparai</i>       |
| <i>d. North Carolina DoT</i> | <i>i. Single Level<br/>ii. Curtis McDowell</i>                          |

e. *Brightline*

i. *Single Level, Trainset*

ii. *?*

f. *MTA*

i. *Dual Mode Locomotive*

ii. *Ray Hessinger*

2 *Reach out to the contact person and request:*

*Copy of their revised specification*

*List of changes that were made to it.*

*Ask the users to provide the changes in a DCR spreadsheet, but I doubt that is going to happen.*

3 *Analyze the changes – I will work with the Technical Writer to create a chapter-to-chapter comparison and provide the technical differences.*

4 *Create DCRs and process them as normal DCRs.*

*If anybody knows of additional uses of our specs and/or contact information for the above, please let me know!*

Steve Hewitt added VIA Rail as an entity that used PRIIA specs and noted that he would provide Tammy with several potential contacts.

Steve also reaffirmed that the bulk of this effort will be part of a SOW for whatever new funding is provided and will need to include the work plan and budget. The intent, for now, is to develop the plan and begin the outreach.

Steve added the next specification to be reviewed and the first to include changes made by other entities is the Charger Locomotive specification.

Tammy also added that the status of finalizing all technical writing of the approved Revision D of the Bi-Level Specification is on track for the end of this month (May 2023).

## **6.**

**Status: NGEC Funding – CRISI Grant Timeline – potential next steps – Steve Hewitt:**

### **Balance/Spend Rate Through March 2023**

Total Initial Grant Amount: \$1,250,000.

Expenses Incurred through January 2023: \$1,160,400.67

Balance remaining: \$89,599.33.

Estimated spend at current rate for balance of the Grant: \$89,261.59

Current Spend Rate per month (as info and used in calculating): \$14,876.93.

Estimated Balance at the end of the Grant Period: **\$337.74**

### **CRISI Grant Awards Timeline:**

Timeframe: Announcement of CRISI Grant Awards: August-September 2023

Timeframe for receiving funds if awarded a Grant – about 6 months.

### **Path Forward:**

As of 5-2-23, Amtrak is looking into the possibility of providing bridge funding for the period between the end of the current Grant as well as other potential sources. If Amtrak is able to develop a plan to fund the NGEC while awaiting a CRISI Grant award or, as an option if a CRISI Grant is not awarded, it will need to present the plan and its costs to the FRA for its approval. To even get to that step, Amtrak, internally, will need approvals up through senior management.

## **7.**

### **Adjourn:**

With no other business forthcoming on today's call Joe Paul adjourned the meeting at 3:22pm Eastern.

**Next meeting – 5-25-23**

## Decisions and Ongoing Action Items

### 2023 NGEC Backgrounder educational document:

The 2023 NGEC two-pager is available in hard copy or electronic copy. Send requests to Steve Hewitt at [shewitt109@aol.com](mailto:shewitt109@aol.com)

To date 332 copies have been distributed.

It is also posted on the NGEC website – [www.ngec.org](http://www.ngec.org)

### Maintaining Industry Participation List:

There are just over two hundred industry participants.

Any updates or changes to this list should be sent to Steve Hewitt at [shewitt109@aol.com](mailto:shewitt109@aol.com).

### Update: Multi-State Railcar Procurement as of 5-11-23:

- *The remaining Cab Car FDR submittals are in the final closure stage with nearly all subsystems ready for approval. The Cab Car dynamic framing representative approach has been submitted to FRA, with comments from FRA under review. IDOT Café Car system level FDR reviews are nearly closed.*
- *The Cab Car Collision and Corner Post Appendix F test reports are approved. The Cab Car Complete FAI is tentatively scheduled for June, to be followed by the FRA Sample Car Inspection.*
- *129 cars are in production or have been produced at Siemens Sacramento Facility. IDOT coaches are currently in revenue service and Caltrans is targeting revenue start in first half of 2023 once all necessary agreements are in place.*

Jennifer Bastian, IDOT, added that the first Café Car arrived in Chicago and this means that atleast one of each of the four styles have arrived. Not all are yet in service, but this is a great step in that direction.

### Next Update – 5-25-23

### Document Control Management as of 5-11-23:

On 5-11-23, Tammy Krause provided the following plan/overview of the steps to be taken to acquire and review changes made to PRIIA specifications by various entities:

*We need to reach out to the entities that have used the PRIIA specifications as a base for their own specifications.*

5 *Who has used the Specifications, which ones and a Contact:*

- |    |                    |     |   |
|----|--------------------|-----|---|
| a. | Connecticut DoT –  | i.  | Single Level                              |
|    |                    | ii. | Marcy Petterson                           |
| c. | Amtrak             | i.  | Single level, Diesel Locomotive, Trainset |
|    |                    | ii. | George Hull                               |
| d. | California DoT     | i.  | Single level, Diesel Locomotive           |
|    |                    | ii. | Gurleen Boparai                           |
| e. | North Carolina DoT | i.  | Single Level                              |
|    |                    | ii. | Curtis McDowell                           |
| f. | Brightline         | i.  | Single Level, Trainset                    |
|    |                    | ii. | ?   |
| g. | MTA                | i.  | Dual Mode Locomotive                      |

ii. Ray Hessinger

6 Reach out to the contact person and request:

*Copy of their revised specification*

*List of changes that were made to it.*

*Ask the users to provide the changes in a DCR spreadsheet, but I doubt that is going to happen.*

7 Analyze the changes – I will work with the Technical Writer to create a chapter-to-chapter comparison and provide the technical differences.

8 Create DCRs and process them as normal DCRs.

*If anybody knows of additional uses of our specs and/or contact information for the above, please let me know!*

Steve Hewitt added VIA Rail as an entity that used PRIIA specs and noted that he would provide Tammy with several potential contacts.

Steve also reaffirmed that the bulk of this effort will be part of a SOW for whatever new funding is provided and will need to include the work plan and budget. The intent, for now, is to develop the plan and begin the outreach.

Steve added the next specification to be reviewed and the first to include changes made by other entities is the Charger Locomotive specification.

Tammy also added that the status of finalizing all technical writing of the approved Revision D of the Bi-Level Specification is on track for the end of this month (May 2023).

#### **Working Group on Weight Issues:**

Jeff Gordon reported that he intends to update the document based on working group feedback rather than schedule a meeting. He will then ask for input from the members via email. His issue is that he has been called for Jury duty and if enpaneled could be serving for 3 months and he would not be able to hold a working group meeting. If he is not enpaneled, this may change, but for now he intends to begin updating the document based on feedback received to date.

Steve Hewitt asked Jeff to let him know when he is ready to present an update to the technical subcommittee and he will add it to the agenda at that time.

#### **Next Update – as appropriate**

#### **University of Nebraska/FRA High Speed Wireless Study:**

On 4-13-23, Hamid Sharif provided the following update for inclusion in the minutes:

=====

*Our work at the University of Nebraska-Lincoln has been in the area of better utilization of RF resources for the rail industry. In short, it is becoming harder and harder to locate available spectrum resources for rail industry applications. Our work has been to concentrate on better utilization of 160 MHz. So, we have designed and built a computer simulation model for the 160 MHz. We have verified this model and have done a number of application tests in the lab.*

*Currently, we are transitioning our transceiver design into a prototype implementation using a software radio platform, in preparation for extensive field testing to evaluate the accuracy of our prediction models and the reliability of our design. It also provides the basis for the exploration of cognitive radio principles in the pursuit of a unified communications architecture for the rail industry. We continue our work on the transceiver implementation, by evaluating and refining our receiver synchronization capabilities to be more robust against phase, frequency, and timing offsets. We also have begun our work to implement the higher-layer functionalities of our protocol stack. These are all ahead of our field tests next month.*

*For any questions, please contact Hamid Sharif at:*

[hsharif@UNL.edu](mailto:hsharif@UNL.edu)

Hamid was asked if there were interim reports that have been published. He responded that interim reports went to FRA in August (2022) He will check with FRA and provide to anyone in the subcommittee who is interested. He added that two papers were published last year.

Hamid agreed to provide links to Steve Hewitt for distribution to NGECC members. Steve Hewitt will also re-send the Annual Meeting presentation that Hamid gave in February 2023. (It is also posted on the NGECC website).

**Next Update – As Appropriate**

**Metro North Dual Mode Locomotive Procurement –4-27-23:**

Production on car shells 301 and 302 is progressing ahead of schedule with car shell 301 being ready for the first FAI inspection.

Metro-North and Siemens closed FDR on third rail current collection and have scheduled FAI's for several components.

Ray also reported that there has been a change at the Project Engineer (Siemens), but it should not impact the project.

**Next Update – 5-25-23**

**Connecticut DOT Rail Car Procurement:**

On 1-5-23, Marci Petterson reported that they expect to receive proposals by the end of January. At that point they will enter the "cone of silence."

**Next Update - As Appropriate**

**Amtrak Vehicle Procurements as of 4-27-23:**

On the new Acela:

Work continues on completing qualification and acceptance.

On the Charger Locomotives:

Twenty-four are in service. They are averaging about two per month.

On the Airo trainset:

They are finishing Final Design Review (FDR).

The first car shell is in production.

**Next Update: 5-25-23.**

**NGEC Funding – CRISI Grant Timeline – potential next steps as of 5-11-23:**

**Balance/Spend Rate Through March 2023**

Total Initial Grant Amount: \$1,250,000.

Expenses Incurred through January 2023: \$1,160,400.67

Balance remaining: \$89,599.33.

Estimated spend at current rate for balance of the Grant: \$89,261.59

Current Spend Rate per month (as info and used in calculating): \$14,876.93.

Estimated Balance at the end of the Grant Period: **\$337.74**

**CRISI Grant Awards Timeline:**

Timeframe: Announcement of CRISI Grant Awards: August-September 2023

Timeframe for receiving funds if awarded a Grant – about 6 months.

**Path Forward:**

As of 5-2-23, Amtrak is looking into the possibility of providing bridge funding for the period between the end of the current Grant as well as other potential sources. If Amtrak is able to develop a plan to fund the NGEC while awaiting a CRISI Grant award or, as an option if a CRISI Grant is not awarded, it will need to present the plan and its costs to the FRA for its approval. To even get to that step, Amtrak, internally, will need approvals up through senior management.

**Next Meeting – 5-25-23**

**ATTACHMENTS**



*Our Vision: The NGEC will provide national leadership in standardization, acquisition, and management of passenger rail equipment.*

**PRIIA Section 305 Tech Sub Committee Meeting**

**Web Ex video/audio information:**

By Computer: <https://stephenhewitthewittconsulting.my.webex.com/meet/shewitt109>

by phone: 1-415-655-0001

Access code: 126-073-1531

**Agenda**

**5-11-23**

- |   |               |
|---|---------------|
| 1. Roll Call  | Steve Hewitt  |
| 2. Review Action Items                              | Steve Hewitt  |
| 3. Approve Minutes from 4-27-23                     | Joe Paul      |
| 4. Update: Multi-State Venture Rail Car Procurement | Jodi Lehmkuhl |
| 5. Document Control Management –                    | Tammy Krause  |

Status: Current activities

Developing a plan to acquire specifications from entities that used the PRIIA specs as a baseline and made changes:

1. List of entities that have used PRIIA specs and made changes.
2. Develop plan to reach out (need contacts) to entities for changes made to the Charger Specification.
3. Begin with the Charger Locomotive Specification as the first – next specification update.
4. Utilizing the NGEC DCR process/NGEC Procedures 305-100

- |                         |          |
|-------------------------|----------|
| 6. Status: NGEC Funding | Steve    |
| 7. Adjourn              | Joe Paul |

**Next Meeting 5-25-23**