

SECTION 305 TECH SUB COMM

MINUTES

MAY 12, 2022

3:00PM EASTERN

CONFERENCE CALL

FACILITATOR	<i>George Hull Chair, NGENC Technical Subcommittee</i>
ATTENDEES	Core Team Members: <i>George Hull, Jeffrey Gordon, Ray Hessinger, Jennifer Bastian, Gurleen Boparai, Curtis McDowell for Matthew Simmons, Ed Engle, Troy Hughes, Mike Jenkins, Art Peterson, Blair Slaughter, Tammy Krause, Steve Hewitt</i> Industry Members: <i>James Campbell, Dave Warner, Joanna Hallisey, Marko Kroenke, Steve Ojalvo, Richard Curtis, Paul Arnone, Ed Golitko, Rich Bowie, Jack Madden, Marco Weber, James Michel, Martin Bloedt, Jeff Schultz, Tom O'Brien, Jack Martinson, Brian Ley</i>
ABSENTEES	<i>Matthew Simmons, Jason Biggs, Marci Petterson, Larry Salci, Mike Kraft, Mike Murray, Rebecca Anger, Mike Murray, Joe Paul</i>

DISCUSSION/DECISIONS MADE

1.

Technical subcommittee Chair George Hull, Amtrak, and called the meeting to order asking 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.

2.

Review Action Items – Steve Hewitt, NGENC Program Manager:

2022 NGENC Backgrounder educational document:

The 2022 NGENC two-pager is available in hard copy by request of Steve Hewitt at shewitt109@aol.com

To date 125 hard copies and 450 electronic copies have been distributed.

Maintaining Industry Participation List:

There are just over 200 industry participants.

Any updates or changes to this list should be sent to Steve Hewitt at shewitt109@aol.com.

Connecticut DOT Rail Car Procurement:

On 5-12-22, Marci Petterson, CT DOT was unavailable, but provided the following update for inclusion in the meeting minutes and asked Steve Hewitt to read it into the record:

Stepping out of the Cone of Silence for now. Connecticut's Coach Procurement RFP was rescinded. A new RFP was released yesterday (5-11-22).

Update: University of Nebraska/FRA High Speed Wireless Study – Steve Hewitt for Hamid Sharif:

Hamid Sharif was not available for the call today, but provided the following for inclusion in the minutes and to be read into the record by Steve Hewitt:

In our study, we have been exploring the properties and capabilities of the 160 MHz RF band, and its suitability for a variety of applications, including Wireless Digital Trainline. This includes a key factor of investigating if 160MHz can alleviate the pressure on the 220MHz.

In this process, we designed and evaluated both a single-carrier transceiver architecture and an OFDM-based transceiver

architecture, and conducted evaluations of both designs.

This quarter we expanded on our efforts by incorporating Forward Error Correction (FEC) Coding into these architectures. FEC is a way to improve the receive-side bit error rate, and thus communication distance, by sacrificing throughput capacity. The released throughput is instead used to carry additional information that the transmitter inserts into the data stream.

We plan to publish our results this summer.

Please contact Hamid Sharif @ University of Nebraska-Lincoln for any additional information.

Next Update: 5-26-22

3. Approval of the Minutes from 4-28-22 – George Hull, Amtrak:

On a motion by Troy Hughes, MODOT, and a second by Ed Engle, Iowa DOT, the minutes from 4-28-22 were approved as submitted.

4. Update: Multi-State Railcar Procurement as of 5-12-22 – Jennifer Bastian for Gurleen Boparai, Caltrans:

On 5-12-22, Gurleen Boparai provided the following for inclusion in the minutes:

The Cab Car shell final design has been approved and the cab cars are in production. Remaining Cab Car FDRs are in the final submittal and review stage. Cab Car Safety Appliance documents have been sent to the FRA for review, and the Cab Car Clearance information has been approved by Amtrak. IDOT Café Car FDRs are in the closure stage with Galley open items expected to close in June.

The Cab Car Collision and Corner Post Appendix F testing is complete, and the test report is in review with FRA and the states. The revised cab car Compression test report is also in review. The Cab Car Coupler and Carrier FAI is scheduled for June. 108 cars are in production or have been produced at Siemens Sacramento Facility. Revenue Service relevant FMIs are in progress and open items related to Conditional Acceptance are being addressed. IDOT coaches are currently in revenue service and Caltrans plans on a July revenue start.

5. Update: Metro-North Dual Mode Locomotive Procurement – Ray Hessinger, NYSDOT:

On 5-12-22, Ray Hessinger, NYSDOT, reported that Metro-North and Siemens have completed the Preliminary Design Review phase and are entering into the Final Design Review phase.

6. Update: Amtrak Vehicle Procurements – George Hull, Amtrak:

On 5-12-22, George Hull reported:

On the Acela 21: working through the qualification – anticipated revenue service in Fall of 2023.

On the Charger Locomotive: This is going well. There are 6 locomotive in service. 3 are on the Empire Builder and "a couple more are running on the City of New Orleans.

On the Intercity Trainset (ICT): Preliminary Design Review is finished, and work is beginning on Intermediate Design Review. First Article Inspections (FAI's) on several items will begin in the next few months.

7. Update: Working Group On Weight Issues – Jeff Gordon, FRA:

On 5-12-22, Jeff Gordon, FRA, provided the following update for inclusion in the meeting minutes:

The NGEC Vehicle weight Working Group had its 12th meeting on May 11 at 11am ET.

There were 9 members in attendance.

The group discussed ways to reconcile how P2 forces are characterized in the various NGEC specifications.

Two versions of the P2 formula are in general use. The NGEC specifications do not use a common formula, nor do they use common values for certain of the input parameters related to track stiffness and damping.

On the last call, the group requested that a sensitivity study be performed to assess the impact of these parameters on the calculated P2 forces.

This was done and we learned that some of the parameters have very little influence on the result and the parameter affecting P2 the most is the value chosen for the rail dip angle.

Additional work will be done on this, and the draft write-up being prepared by the group will be revised based on these discussions. Members also suggested that the procedures described in the APTA Recommended Practice (RP) on Truck Design be referenced in the NGEC Specifications as it includes comprehensive guidance on how to calculate the unsprung mass term used in the equation. The APTA RP also identifies the British Rail version of the P2 formula as the current best practice. The Working Group will recommend this version as the standard for use in the NGEC Specifications.

The next meeting of the Working Group will be during the week of June 6. A poll has been distributed to the members to assist in selecting the meeting date and time.

**8.
Update: Document Control Management – Tammy Krause:**

On 5-12-22, Tammy Krause provided the following update for inclusion in today's minutes:

The revised DMU specification has been provided to Steve Hewitt. He will now be able to provide the revised version to requestors.

The new and improved DCR form and the ability to update the Review Panels as needed was approved by the Executive Board at the 5-3-22 meeting. The Technical Writer is going to update the Document Control Procedures (305-100) accordingly.

The Carbody Material Working Group met yesterday (5-11-22) under the direction of Michael Gill and he will be scheduling the group meetings going forward.

The Electronics on Trains Working Group is now under the leadership of Ken Martin and their next meeting is 6-14-22 @ 2:00pm.

I am updating the Document List to include the revised version of the DMU specification and the Document Control Procedures.

**9.
Adjourn:**

With no other business forthcoming on today's call, George Hull adjourned the meeting at about 3:20pm Eastern.

Next Tech subcommittee Call: 5-26-22– 3:00pm Eastern

Decisions and Action Items

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Maintaining Industry Participation List: There are about 200 industry participants.

There have been several updates/changes to the list that have been provided to Steve Hewitt and those changes were made. Any further updates or changes should be sent to Steve Hewitt at shewitt109@aol.com.

Update: Multi-State Railcar Procurement:

Gurleen Boparai, Caltrans, provided the following update for inclusion in the 5-12-22 meeting minutes:

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The next meeting of the Working Group will be during the week of June 6. A poll has been distributed to the members to assist in selecting the meeting date and time.

If interested in participating on this working group, contact Jeff Gordon at Jeffrey.gordon@dot.gov or Steve Hewitt at

shewitt109@aol.com

Next Update – 6-9-21

University of Nebraska High Speed wireless study as of 4-28-22:

The following update was provided by Hamid Sharif on 4-28-22:

In our study, we have been exploring the properties and capabilities of the 160 MHz RF band, and its suitability for a variety of applications, including Wireless Digital Trainline. This includes a key factor of investigating if 160MHz can alleviate the pressure on the 220MHz.

In this process, we designed and evaluated both a single-carrier transceiver architecture and an OFDM-based transceiver architecture, and conducted evaluations of both designs.

This quarter we expanded on our efforts by incorporating Forward Error Correction (FEC) Coding into these architectures. FEC is a way to improve the receive-side bit error rate, and thus communication distance, by sacrificing throughput capacity. The released throughput is instead used to carry additional information that the transmitter inserts into the data stream. We plan to publish our results this summer.

Thank you.

Please contact Hamid Sharif @ University of Nebraska-Lincoln for any additional information.

Next Update: - 5-26-22

Metro North Dual Mode Locomotive Procurement –4-14-22

Metro-North and Siemens have completed the Preliminary Design Review phase and are entering into the Final Design Review phase.

Next Update: 6-9-22

Connecticut DOT Rail Car Procurement:

The status as of 5-12-22, the Connecticut Coach Car RFP was rescinded, and a new RFP was released on 5-11-22.

Next Update: As appropriate

Amtrak Equipment Procurement as of 5-12-22:

On the Acela 21: working through the qualification – anticipated revenue service in Fall of 2023.

On the Charger Locomotive: This is going well. There are 6 locomotive in service. 3 are on the Empire Builder and "a couple more are running on the City of New Orleans.

On the Intercity Trainset (ICT): Preliminary Design Review is finished, and work is beginning on Intermediate Design Review. First Article Inspections (FAI's) on several items will begin in the next few months.

Next Update: 6-9-22

Next call 5-26-22

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

5-12-2022

The agenda for the meeting is below:

- | | |
|--|-----------------|
| 1. Roll Call | Steve Hewitt |
| 2. Review Action Items | Steve Hewitt |
| 3. Approve Minutes from 4-28-22 | George Hull |
| 4. Update: Multi-State Rail Car Procurement | Gurleen Boparai |
| 5. Update: Metro-North Dual Mode Locomotive Procurement | Ray Hessinger |
| 6. Update: Amtrak Vehicle Procurementa | George Hull |
| 7. Update: Working Group on Weight Issues | Jeff Gordon |
| 8. Document Control Management | Tammy Krause |
| - Update– Technical writing – Finalizing Updated DMU Specification | |
| - Update – Bi-Level Specification Update | |
| - Update - Carbody Materials working group | |
| - Update- Electronics on Trains working group | |
| - Status: Updating PRIIA 305-100 per Executive Board approval 5-3-22 | |
| 9. Other | All |
| 10. Adjourn | George Hull |

Next – meeting 5-26-22