

CCSDS Navigation WG Telecon	16-Jul-2025
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Attendees: David Berry, Vitali Brown, Juan Crenshaw, Frank Dreger, Julie Halverson, Ralph Kahle, Dan Oltrogge, Rob Wolff, Patrick Zimmerman
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Note: Meeting was **not** recorded and posted on CWE for those unable to attend, as we have done a few times. The practice of recording the meetings will be discussed at the Fall Meetings.

Notes	
1. Recent News Updates & Developments	Action
<p>David reported several news updates and developments:</p> <ul style="list-style-type: none"> • "Final" minutes of the Spring 2025 meetings have been distributed and posted on the NavWG CWE. If you should find something wrong, please advise and a revision can be produced. • Patrick solved the mystery of the "relative language" question posed in the draft minutes of Spring Meetings... it related to the presence of explicit references to a version of the CDM that appeared in the SANA Registry "Orbit-Relative Reference Frames"; these references have been removed from the SANA page. Thanks Patrick! • The effort to remove the NHM (Navigation Hardware Message) from the "ICPS wish list", a list of standards desired by the IOAG, is finally complete. The functionality is now in ACM. David had tried for 3+ years to get the NHM off the IOAG list. • The SANA "Orbital Elements" entry "KEPLERIANMEANS GP-4" requested by Cheryl has been added. • A solution to the "broken URLs" problem with CCSDS Blue Books has been discussed with CCSDS Tech Support, and a solution proposed by them is under consideration. • David, Dan, and Frank met with members of the IEEE Standards Association P1964 Working Group to discuss their plans for a "Standard for Collaborative Orbital Data Sharing", https://standards.ieee.org/ieee/1964/11979/ . We made the case that based on the proposed name, such a standard already exists and gave a very thorough one-hour introduction to CCSDS, the Nav WG, the SANA Registry, etc. • David has requested an address for the Spring Meetings location, since one has not been provided previously, making travel and hotel plans difficult. This is the address that has been provided to date: Hamburg University of Technology Am Schwarzenberg-Campus 1 21073 Hamburg • The CCSDS Editors are getting into the swing of things, but so far there are no new publications, no new Agency Reviews in progress, but there are a few new CESG/CMC polls in progress. Per CCSDS Tech Support, "the Editors' queue is full", so we can expect slow progress on new Nav WG publications. 	Proceed
2. Document Status	
<ul style="list-style-type: none"> • Query Lead Editors for status of document progress. Documents are sorted below in alphabetical order. 	To David: Report "simple" doc status to MOIMS AD.
<ul style="list-style-type: none"> • ADM: No discussion in this meeting. 	None

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<ul style="list-style-type: none"> • CDM: Brian was on vacation for this telecon date but reported by email that he had received no responses from his most recent email. He requested that Dan and David remind WG members of their testing assignments and posed the question for all: "When can you complete your testing?". • Also, it was reported that the plan for a second relative metadata/data section has been dropped. Brian distributed an updated CDM P-1.4 to all that reflects that change and a few other small edits. • David noted that the CDM Test Plan document refers to CDM P-1.2 in a couple of places... a small oversight. Please refer to CDM P-1.4 instead for the test planning. 	<p>To All: Respond to Brian's query. Everyone should have an email from Brian dated 01-Jul-2025 with the most recent materials.</p> <p>To David: Complete XML schemas corresponding to the latest Pink Book. Post latest Pink Book to CWE.</p> <p>To David: Check with Rob and Alinda regarding CDM Test #3.</p>
<ul style="list-style-type: none"> • FDM: No discussion in this meeting. 	To Vitali: Continue FDM development
<ul style="list-style-type: none"> • LDM: No discussion in this meeting. 	To Dan: Continue LDM development
<ul style="list-style-type: none"> • Navigation Data - Definitions and Conventions (NDDC): No discussion in this meeting. 	To Julie: Continue migration from Green Book to SANA Registry.
<ul style="list-style-type: none"> • Navigation Data Messages Overview (NDMO): No discussion in this meeting. 	None
<ul style="list-style-type: none"> • NCM (Navigation Composite Message): No discussion in this meeting. 	To Dan/Vitali/David: Continue NCM WB 1.0 development
<ul style="list-style-type: none"> • NDM/XML 4.0 Specification: No discussion in this meeting. 	To David: Complete test plan/report updates.
<ul style="list-style-type: none"> • NEM: No discussion in this meeting. 	To Alain/Frank: Continue NEM development.
<ul style="list-style-type: none"> • ODM: Dan noted that with respect to Action Item #39 from the Spring Meetings, TraCSS will suggest an OCM solution to the GNSS issue. 	To Dan, Rob: Proceed with GNSS data via OCM
<ul style="list-style-type: none"> • PRM: No discussion in this meeting 	None
<ul style="list-style-type: none"> • RDM: No discussion in this meeting. 	None
<ul style="list-style-type: none"> • SANA: There was brief discussion regarding the "KEPLERIANMEANS GP-4" entry in the SANA Orbital Elements registry... 	<p>To Dan: Email Cheryl regarding the new entry and the use of either AGOM or BSTAR.</p> <p>To David: Request that SANA remove the dash between "SGP" and "4". Request that status be set to "Assigned".</p>
<ul style="list-style-type: none"> • TDM: Most TDM discussion related to updates of Action Item dates and the prospect that P-2.0.3 might be the final draft of the TDM, and that a "proofreading" review (as opposed to a "technical" review) would be the applicable review for the TDM P-2.0.3 	To Juan: Complete TDM update P-2.0.3

Notes	
<ul style="list-style-type: none"> • TraCSS: Discussed with respect to the requirements of the CDM Test Plan... Test #3 involves TraCSS producing CDM V.2 messages that will be consumed by NASA/CARA. 	To Rob/Dianne: Prepare CDM 2.0 Test #3 messages to send to NASA/CARA.
3. Action Items Update	Action
<ul style="list-style-type: none"> • We reviewed the most recent Action Items (from Spring 2025 Meetings). David had distributed an updated list of Action Items prior to the meeting. The many items completed since the Spring Meetings concluded were highlighted. 	To All: Work on action items as time permits.
4. Fall Meeting Info	Action
<ul style="list-style-type: none"> • Discuss Fall Meeting Agenda: A "Draft 0" agenda was discussed, given that the next telecon will be the last prior to the Fall Meetings. Dan mentioned that he and Jose Miguel will be at the AMOS Conference in Hawaii (12 hour time difference from Hamburg), so please reschedule discussion items accordingly. Since the telecon, there has been another little "wrinkle", specifically, the CESG has decided that they would like to plan for a "CCSDS Standards for Interoperability Workshop" that will take place on the first day of the technical meetings in Hamburg. I have no details on this Workshop, but at least it was announced early enough that there is time to plan for it. Mehran Sarkarati, the MOIMS AD, determined that the Nav WG should participate in this Workshop. Accordingly, this will necessitate a somewhat large modification to the Nav WG agenda... "Draft 1" will be distributed with this minutes. 	<ul style="list-style-type: none"> • To David: Prepare Draft 1 Fall Meeting agenda for telecon, with accommodations for (1) Workshop, (2) Hawaii/Hamburg time difference (12 hours).
5. Any Other Business	Action
<ul style="list-style-type: none"> • None 	As applicable
6. Next Telecons/Meetings	Action
<ul style="list-style-type: none"> • Upcoming Meetings: • 27-Aug-2025 1300-1400 UTC • 15-Sep-2025 thru 19-Sep-2025 Fall Meetings sponsored by ESA at Hamburg, Germany (<u>Technische Universität Hamburg</u>) 	To David: Send invites as applicable