
NAV WG Report to MOIMS

Washington, DC, USA
Spring 2024

David Berry (NAV WG Chair)
Frank Dreger (NAV WG Deputy Chair)

MOIMS/Nav Meeting Demographics



Agency	NAV WG	
CNES	1	Alain Lamy
DLR	1	Ralph Kahle
ESA	3	Frank Dreger (virtual), Vitali Braun (virtual), Jose Miguel Lozano
JAXA	1	Hideaki Hinagawa (virtual)
NASA	7	David Berry, Juan Crenshaw, Cheryl Gramling, Julie Halverson, Dan Oltrogge, Patrick Zimmerman (virtual), Dianne Poster
UKSA	0	
Total	13	
Meeting Duration	5 days	
Agency Diversity	5	
Others (Non-Nav WG personnel)	12	Daniel Fischer, Klaus Juergen Schulz, Javier Vicente, Christine Joseph, Jim Lux, Chris Volk, Mehran Sarkarati, Costin Radulescu, and several members of the SM&C WG (counted as 1) , Julien Bernard (SANA), Michel Bernier (SANA), Sergey Polyakov (NIST)

NAV WG Executive Summary



Achievements for this meeting cycle:

- Completed a CESG requested presentation on potential NavWG contributions to LunaNet. Nav WG members Cheryl Gramling and Juan Crenshaw were the presenters.
- Completed discussion of Conjunction Data Message V.2 (Review draft Pink Book 1.1) with members of the TraCSS system being developed by NOAA/NIST for civil space conjunction assessment
- Continued Reconfirmation of Pointing Request Message (poll ends 10-May-2024); 3 "adopt" votes received as of 03-May-2024
- Continued discussion of plans for content updates in Tracking Data Message V.3 draft (P-2.0.2)
- Completed discussion of 3 White Books 1.0: Launch Data Message, Fragmentation Data Message, and Navigation Events Message
- Continued discussion of NDM/XML V.4 Pink Book draft 3.0.1 and issues with the document schedule
- Completed discussion of the Concept Paper for a potential new project ("Navigation Composite Message"), will request CMC Poll.

Working Group Status: **Good progress, "High Momentum" with very good attendance.**

Interaction with other WGs:

- Completed a CESG requested LunaNet discussion with representation from CESG Chair, MOIMS AD, NavWG, and SM&C WG.
- Met with the Delta-DOR WG to discuss requested additions to the Tracking Data Message
- Some members of NavWG also attended discussions with Time Management and a joint meeting of several Space Link Services WGs
- Met with representatives of SANA Operator Team to discuss various topics related to NavWG use of SANA

Problems & Issues:

- The Department of Commerce (DOC) meeting room required an application (ClickShare) to be installed on presenter laptops, which some Agency technical support groups do not permit. Secretariat should provide advance notice of special presentation software requirements.
- Security escort arrangements in the DOC building helped attendees avoid getting lost in the building maze and personnel contributed some relevant technical commentary, and may have been warranted for security reasons, but presented some challenges to inter-Working Group activities.

NAV WG Executive Summary



Resolutions agreed upon this meeting:

- NAV-01: The Navigation WG thanks The US Department of Commerce for arranging the high caliber of opening Plenary speakers, including the Deputy Secretary of Commerce, NOAA leadership, and the leadership of the White House National Space Council.
- Nav-02: The Navigation WG expresses thanks for the great meeting facilities!
- NAV-03: To create a CMC Poll for a new project, the "Navigation Composite Message"

Further Resolutions anticipated in the next 6 months:

- None anticipated

NAV WG Executive Summary



Planning (only approved Projects):

Area & WG name	CCSDS Ref Nr	Document Title	Status / Comments	Start and / or Target Publication Date
MOIMS NAV	503.0	Tracking Data Message (TDM) Version 3 Revision	Good progress. Spent considerable time discussing tracking data message changes in the recently distributed Pink Book 2.0.2 draft. Had joint meeting with Delta-DOR working group regarding requested changes.	Start date: 06-May-2019 End date: 30-Aug-2026
MOIMS NAV	505.0	Navigation Data Messages XML Specification Version 4 Revision	Good progress. Discussed impending Agency Review and issues with the schedule due to the gap between publishing the ADM and this companion document.	Start date: 06-Jan-2023 End date: 15-Jan-2025
MOIMS NAV	507.0	Navigation Events Message (NEM)	Good progress. We reviewed a draft of White Book Version 1.	Start date: 07-Nov-2017 End date: 28-Feb-2026
MOIMS NAV	507.1	Launch Data Message	Good progress. We reviewed a draft of White Book Version 1.	Start date: 02-Jun-2023 End date: 01-Dec-2025
MOIMS NAV	508.0	Conjunction Data Message 5 Year Revision	Discussion of future use of the standard in the US DOC Traffic Coordination System for Space (TraCSS). Document is in Agency Review for another month.	Start date: 14-Jan-2019 End date: 30-Sep-2024
MOIMS NAV	508.2	Fragmentation Data Message	Good progress. We reviewed a draft of White Book Version 1.	Start date: 02-Jan-2024 End date: 15-Sep-2026
MOIMS NAV	509.0	Pointing Request Message	No discussion. The document is in CMC Reconfirmation Polling until 10-May-2024.	Start date: 26-Apr-2024 End date: 10-May-2024

NAV WG Upcoming New Work Items



Area and WG name	CCSDS Ref Number	Document Title	Target Start / Publication Date	Resources Needed (total, Editor, Proto 1, Proto 2)				Comments Rationale What if not started?	
				TOTAL	EDITOR	PROTO1	PROTO2		
MOIMS NAV	<<To be chosen by Secretariat>>	Navigation Composite Message	01-Jul-2024 31-Dec-2026	2024	6	6	0	0	Rationale: Extends capabilities of existing standard. Could reduce "time to market" for new standards. If Not Started?: Current types of document inconsistencies that have their origin in imperfect and/or "out of phase" duplication of common material will persist. Agency resources will be consumed in efforts to achieve consistency. See Concept Paper.
				2025	20	12	4	4	
				2026	18	2	8	8	

NAV WG Issues for CESG/CMC



Increasingly Major Issue Related to CCSDS Standards Co-Published with ISO

- The ISO "Revisable Figure Rule" can require extensive (and expensive) effort to provide revisable figures for older documents. The benefit of co-publication with ISO TC20/SC14 may be worth reconsidering.

Minor Issue Related to CCSDS Draft Projects and Concept Papers

- Note that the CCSDS A02.1-Y-4 "Organization and Processes for the Consultative Committee for Space Data Systems" states in 6.1.1 "Every CCSDS document (or family of related documents) starts out as a CCSDS concept paper".
- A02.1-Y-4 contains extensive discussion about the purpose, content, etc. of concept papers, but there is no current way to associate a concept paper with a Draft Project on the CWE when a CMC Poll is requested (<https://cwe.ccsds.org/fm/Lists/Projects/AllOpenChartersWithDraftProjects.aspx>).
- It seems logical that a Concept Paper could be attached to the Draft Project form.