

CCSDS Navigation WG Telecon	11-May-2016
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Attendees: David Berry, Dale Force, Cheryl Gramling, Alain Lamy, Alexandru Mancas, Fran Martinez, Dan Oltrogge, Julie Thienel, Dave Vallado, Patrick Zimmerman

Notes	Action
1. Finalize Spring Meeting Minutes	
<ul style="list-style-type: none"> David indicated that he would finalize the Spring Meeting minutes on 12-May-2016. A few comments have been received and incorporated. Last chance to comment is Wednesday 11-May-2016. 	<ul style="list-style-type: none"> To All: Comment no later than 11-May-2016 if so desired. To David: Finalize on Thursday 12-May-2016
2. Document/Action Item Review & Status	
Most of the Action Items involve documents, so there is intertwined status of documents and their respective action items below. Documents that have a current draft out for review are sorted in priority order based on when the drafts were published; documents for which there is no current draft out for review are sorted below in alphabetical order.	None
a) NHM: David welcomed Julie Thienel to the group and indicated that the NHM is in a bit of limbo status. We decided that it would be desirable to schedule a telecon to discuss the current NHM status and issues (also include Cheryl Gramling). [NOTE: Given the lack of Prototype 2 commitment, a new Lead Editor, and the CESG's concern with ICD issues, I have cancelled the review of NHM WB15. Once we set the direction for this document (either resumption of prior direction, or new direction), an appropriate action item can be assigned.]	a) To David: Schedule telecon to discuss NHM issues. Cancel Action Item to review NHM WB 15.
b) TDM: P1.0.3 was distributed for review prior to the Spring Meetings... some comments and questions have been received. There are a few issues with the TDM (see below regarding projects with long delays and a Blue Book approach plan for the TDM).	b) To David: Proceed with plan to publish TDM P1.0.4
c) Navigation Data - Definitions and Conventions V.4: Dale produced an updated draft that was distributed to the WG. Reviewers should check that all the desired reference frames and time scales in the document.	c) To All: Review "changes tracked" version of the draft
d) ADM: Alain reported that he is not quite ready yet to put out the ADM Pink Book draft, but he should send it close to the action item deadline.	d) To Alain: Proceed with plan to publish ADM P1.3
e) CDM: No new status.	e) None
f) EVM: No new status.	f) None
g) Navigation Data Messages Overview Green: No new status.	g) None

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h) NDM/XML: David stated that he had discussed the prototype 2 commitment with Frank Dreger, which is necessary before a new project can be added to the CWE.	h) To David: Confirm with Frank that it is OK for Fran to prototype. Put a project in the CWE system.
i) ODM: Dan stated that he had made some ODM changes and edits at Cleveland and afterward. He also expressed interest in discussing ephemeris compression techniques (Chebyshev or other polynomial) with the JPL planetary ephemeris personnel. If this can be done in timely fashion, Dan can incorporate the topic into ODM P2.33.	i) To David: Send Dan material on planetary ephemeris. Set up telecon with JPL SSD if necessary.
j) PRM: Fran and David reported that a draft SANA registry has been created for the PRM templates. Fran has been processing RID dispositions into the document, and has been thinking about the prototype testing. He thinks the most complicated section would be to prototype Section 5; some thought will be required here. For other sections, Fran is thinking that no software would necessarily be involved in the prototyping. David needs to correspond with Frank regarding the ROSETTA sample to convert to PRM, and other topics. Other issues: we need a draft test plan, and we need a second party to volunteer to prototype.	j) To Fran: provide rough draft test plan. To David: email Frank regarding ROSETTA sample.
k) SMM: It was agreed that we need to have a discussion on how the SMM and OCM will play together. Cheryl stated that she had gone through the SMM Concept document, and the Fall 2015 version of SMM. We need to decide if the OCM will extract subsets of an SMM superset or if there should be some other approach. We need to have a discussion about the direction for this document. Many good questions were raised. In Dan's view, both the SMM and OCM are viable. The OCM is focusing on translational maneuvers, whereas the SMM includes attitude maneuvers also. The concept of moving towards a "navigation super message" of optional building block components (idea raised at Cleveland) may be the best future approach (but that's not feasible in the near term).	k) To David: Setup telecon 01-Jun-2016 1300 UTC
3. Prototype 2 Volunteers (Most Critically PRM)	
<ul style="list-style-type: none"> David noted that we have made some progress on meeting the requirement for prototype volunteers, but there are still several outstanding prototype 2 commitments. ESA has agreed to Prototype ADM revisions and the NDM/XML revisions. We don't yet have a prototype 2 commitment for the PRM; David suggests that Fran provide a draft Test Plan. Once we have a Test Plan for how the PRM can be tested, it may be easier to get a commitment to perform the work. We 	<ul style="list-style-type: none"> To David: Seek and confirm Prototype 2 volunteers. To All: Consider option to have students prototype To All: Consider Orange Book option.

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<p>also are lacking prototype 2 commitments for the NHM and SMM... given that these are already documents with some issues, we may be forced to cancel them if there is no prototype 2 volunteer. [NOTE: This was not discussed during the meeting, but there are a couple of other options here... (a) Mario has suggested that prototypes might be suitable projects for graduate students, and (b) we can also convert these to an "Orange" Book, which only requires one Agency to sponsor the work... but then it is not a standard. See http://public.ccsds.org/publications/OrangeBooks.aspx]</p>	
<p>4. PRM RID Dispositions</p>	
<ul style="list-style-type: none"> David displayed the PRM RID dispositions report, which shows the number of RIDs received from each Agency, any official responses received, and all the RIDs with dispositions. Fran indicated that he had not yet received a response from Frank regarding the rejected RID; David will follow up. Fran indicated that he would review the report in detail to correlate against the PRM R1.1 he is producing (this is the review copy with the dispositions included). In response to David's question, there was no objection raised to sending the report to all those who filed RIDs. 	<ul style="list-style-type: none"> To Fran: Review detailed report. To David: Distribute RID disposition report after incorporating modifications raised by Fran's review.
<p>5. "Projects with Large Delays" (ADM, TDM, SMM)</p>	
<ul style="list-style-type: none"> The CESG and CMC have expressed concerns about several projects across the CCSDS that they characterize as having "Long Delays". Among the list are 3 Nav WG standards (the ADM revision, TDM revision, and the SMM). 	<ul style="list-style-type: none"> To David: Express sentiment that these projects should NOT be cancelled. To Alain/David: Complete ADM/TDM as soon as possible. To Cheryl: None yet. We need to set the direction for the SMM, which might include cancellation of the project.
<p>6. TDM Blue Book Approach Plan</p>	
<ul style="list-style-type: none"> David stated his opinion that comments received from newer WG members on the TDM P1.0.3 would result in a delay of at least a couple of years in the production of an updated TDM. It should be noted that the TDM is already under watch by the CESG/CMC for delays to date (see item 5 above). It is proposed to proceed to publication of the TDM with the set of current revisions, satisfying the current update project. We can then consider with less pressure the issues raised in comments to the P1.0.3 and by the CSTS WG in 	<ul style="list-style-type: none"> To David: Do a more complete write up of the proposal.

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<p>their "Validated Radiometric Service" topic. MANY of these issues require revisiting discussions/decisions that occurred in the original TDM development. David explained that if we put out a TDM "as is", we do not have to wait 5 years to perform another review/revision, and cited the history of the ODM (first Blue Book published September 2004, by January 2005 the WG was already considering new requirements raised via the ISO TC20/SC14).</p>	
7. Lunar / Mars Exploration standards	
<ul style="list-style-type: none"> Attendees agreed that there were no glaring deficiencies in the Navigation WG portfolio that suggest a need for special standards. 	<ul style="list-style-type: none"> To David: Inform Mario and Nestor.
8. Five Year Plan Review	
<ul style="list-style-type: none"> There was insufficient time to go over the draft Five Year Plan in detail, but David explained how the plan was created (extract critical items from the CWE project plan, allocate to Fall or Spring Meetings, try to balance the work across the years). It was noted that 2017 and 2018 are very full and it is likely that some of this work will necessarily be rescheduled later. 	<ul style="list-style-type: none"> To All: Comment on draft plan, if desired, before next telecon, after which it will be "finalized". To David: Post draft to CWE.
9. Other Discussion	
<ul style="list-style-type: none"> Alexandru Mancas noted with respect to the Action Item to prioritize between the RDM and FDM, that the preference was to do the RDM first. The justification is that there are already different projects in Europe that consider a draft of the RDM in their design. Further, it is expected that there will be more users (such as in particular civil protection agencies) expressing needs on the content of an RDM. Finally, DLR expressed also already interest in the RDM work. NOTE: we will need a volunteer to produce Prototype 2 or the project cannot be proposed ... can it be provided by DLR? 	<ul style="list-style-type: none"> To David: Proceed with new project proposal.
10. Next Telecon Scheduling	
<ul style="list-style-type: none"> Proposed next telecon: 15-Jun-2016 1300 UTC 	<ul style="list-style-type: none"> To David: Set up webex meetings and send calendar invitations.