**CMC Draft Minutes**

**Mid-Term Telecon**

**07 February 2018**

1. **Call to Order – Welcome/Opening Remarks**

James Afarin, CMC Chair, called the meeting to order at 0805h and welcomed everyone to the CMC mid-term telecon. J. Afarin noted that there was much to discuss and initiated the roll call of delegates after the brief introduction.

1. **Roll Call of Delegates**

Introductions followed. CMC Attendees were:

1. ESA – Nestor Peccia, Margherita di Giulio, Mike McKay

2. DLR – Not present

3. JAXA – Tsutomu Shigeta

4. NASA - Wallace Tai, Dr. James Afarin

5. INPE - Eduardo Bergamini

6. UKSA – Christopher Perry

7. CNES – Jean-Marc Soula

8. CSA – Siamak Tafazoli

9. ASI – Not Present

10. CNSA – Yonghui Huang

11. ROSCOSMOS – Not present

12. Secretariat - David Ross, Michael Blackwood, Thomas Gannett, Brian Oliver

1. **Agenda Review and Approval** ([February\_2018\_Draft\_CMC Agenda mid-term telecon](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/February_2018_Draft_CMC%20Agenda%20mid-term%20telecon.doc))

The CMC agenda was reviewed and approved without comment.

1. **CESG Chair Report** ([CCSDS Report to CMC mid term telecom 7th Feb 2018\_V2](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/CCSDS%20Report%20to%20CMC%20mid%20term%20telecon%207th%20Feb%202018_V2.pptx))

Margherita di Giulio presented the CESG Chair Report.

* 1. **Progress since the last meeting (reviews, polls, etc.) (slides 2-6)**

M. di Giulio provided an overview of the polls and reviews that occurred since the meeting of the CMC in November 2017 in Darmstadt, Germany. M. di Giulio Began with CMC polls. Two (2) CCSDs books had transitioned to Historical status, four (4) books were sent to agency review, two (2) updates to working group charters were approved, Colin Haddow (ESA was appointed Deputy Director of the CSS Area, and James Afarin was appointed CCSDS Liaison to the IOAG. M. di Giulio continued with updates to CCSDS projects. Nine (9) projects had been approved while one (1) project, *Forward Frame CSTS – Blue Book*, had concluded polling with conditions from CNES. M. di Giulio noted that this project would be discussed later (4.4 Other CESG Status). Two (2) projects had been had been demoted; *Navigation Hardware Message* from approved to draft and *Adaptive Code and Modulation (ACM) Systems for CCSDS* had been cancelled. The ACM project was cancelled because it was deemed a form of VCM by the responsible Working Group and will be included in the upcoming VCM specification.

M. di Giulio continued to CESG polls that had not yet completed CMC polling. Four (4) books had completed CESG polling with no conditions and three (3) books had been approved with conditions. These books were *Delta-Differential One Way Ranging (Delta-DOR) Operations*, *Data Entity Dictionary Specification Language (DEDSL)—XML/XSD Syntax*, and *Requirements for Streaming Services over Bundle Protocol*. Transitioning *Mars Mission Protocol Profiles—Purpose and Rationale to Historical* status was also approved by the CESG. The liaison coordination agreement between ISO/TC 20/ SC 13 and 14 developed by the SEA System Architecture Working Group had also been approved by the CESG J. Afarin inquired as to the status of the ISO/Tc 20/SC 14 Liaison. M. di Giulio replied the SC 14 Liaison will be responsible for the SEA Reference Architecture and that Peter Shames would provide additional details at a later date.

M. di Giulio then presented the CCSDS books with outstanding Poll conditions. *Mission Data Product Distribution Services* concluded CESG polling with several conditions and would require considerable editing prior to release. *Variable Code Modulation Protocol* was transitioning from the Magenta Book track to the Blue Book track and a concept paper for the Blue Book was being prepared to highlight the necessary changes. *Data Entity Dictionary Specification Language (DEDSL)—XML/XSD Syntax*, *Streaming Services on Bundle Protocol*, and *CCSDS Streamlined Bundle Security Protocol Specification* all concluded CESG polling with conditions.

M. di Giulio presented reviews that had closed some time ago, but still had outstanding RID dispositions. The reviews of *SOIS—Specification for Dictionary of Terms for Electronic Data Sheets* and *SOIS—XML Specification for Electronic Data Sheets* closed in 2016. The outstanding RIDs for both books are currently being incorporated and should be completed prior to the CCSDS Technical Meetings in April 2018. There was consensus across the SOIS Area that the books had received updates sufficient to merit a second review. The review of MO MAL C++ API concluded in May 2017 and there were two (2) outstanding RIDs that had yet to be addressed.

* 1. **Project Status (behind schedule, etc.) (slide 7)**

M. di Giulio then discussed the status of approved projects. There were eighty-eight (88) approved projects reported on the CWE with an additional four (4) projects that were recently approved, but were not yet listed on the CWE Approved Projects page. All projects that were approved at the Fall 2017 CCSDS Meetings had been posted to the CWE. One (1) project remained with unfulfilled conditions. When this project is approved, it will join the other approved projects.

* 1. **Status of ICPA (not addressed)**
  2. **Other CESG Status (slides 8-9)**

M. di Giulio presented topics that will be addressed by the CESG at their next meeting. The first topic was the approval of the *Forward Frame – CSTS* project. The CMC poll concluded with the following condition form CNES, “as IOAG epoll should be completed now, CCSDS should make sure a statement from IOAG is obtained in order to consolidate the decision of starting this new work in a WG.” This comment was to be addressed with the CCSDS Liaison to IOAG. J. Afarin, General Secretary and Liaison to IOAG, stated that he believed the condition to be invalid as CCSDS projects do not require approval form IOAG and that resources for the project had already been identified. J.M. Soula stated that following the joint meeting with CCSDS in November 2017, IOAG had asked its Member Agencies about the future use of the CSTS FF service. As their epoll should be completed now, CCSDS should make sure a statement from IOAG is obtained in order to consolidate the decision of starting this new work in a WG that always claims for additional resources. J.M. Soula continued that this should not prevent CCSDS from continuing work on the project at this time. J. Afarin responded that work on this project could not continue because conditions must be fulfilled or lifted for a project to continue development. J.M. Soula agreed to remove the CNES condition as resources and priority had already been identified by CCSDS. M. di Giulio stated that the CSS Area will address the condition and that Forward Frame will be included in SC#2, but not as a priority, and agreed that as resources have been identified and an agency supports the project, the project should move forward. J. Afarin continued stating that CCSDS procedures do not allow an IOAG condition be placed upon the approval of a project and that setting such a precedent would be ill advised. J.M. Soula restated that he will remove the CNES conditions upon this project.

M. di Giulio then addressed the Excel RID Template stating that one room for improvement had been identified during the course of CESG review. The suggested template was well received but that when a RID addresses a figure or diagram, there is no way to attach a new file. Perhaps linking to a dedicated folder on the CWE would solve this issue. J. Afarin stated that the Secretariat would address this concern. M. Di Giulio then addressed the interface for subscription to the CCSDs Mailing Lists. M. Di Giulio suggested that before a user can be subscribed to a mailing list, they must indicate that they have a CWE account and state in which Working Groups they participate. This would give mailing list moderators more complete information when deciding whether to accept the request or not. J. Afarin stated that the Secretariat should address this as well.

**AI-CMC-A-2018-02-01: The CMC directs the Secretariat to address how RID’s submitted in the new excel format should handle attached files such as figures and diagrams.**

**Due by 9 April 2018.**

**AI-CMC-A-2018-02-02: The CMC directs the Secretariat to address how additional information can be requested when users request to be added to mailing lists**

**Due by 9 April 2018.**

M. di Giulio also discussed other proposed improvements to the CWE. The text of resolutions generated by CMC and CESG polls can be difficult to determine. It would be beneficial if a flag or a field to summarize the result were added to polls. The addition of this flag would also enable follow up actions such as moving draft projects to the approved projects list. The implementation of these suggestions can be discussed at the Spring 2018 Meetings.

**AI-CMC-A-2018-02-03: The CMC directs the Secretariat to add a flag to CESG Polls indicating that conditions were placed upon the poll and whether these conditions have yet been met.**

**Due by 15 October 2018.**

**AI-CMC-A-2018-02-04: The CMC directs the Secretariat to add a flag for moving projects from Draft to Approved Status on the CWE so that when a project is approved it may be easily moved to Approved Status.**

**Due by 15 October 2018.**

M. di Giulio reviewed the status of CMC Action Items. The three (3) action items were to update the strategic plans for the SOIS, SIS, and SEA Areas. All were currently in progress and due by the Spring 2018 Meetings. Finally, M. di Giulio reported a proposal for the CSS Functional Resource Model to be made a normative book. At the moment, the model is not formalized in any normative book. There is a document in a draft technical memorandum, but as this is a technical service needed for Monitored Data to function as intended, the model should be normalized.

1. **IOAG Liaison Report (**[**IOAG Liaison Report 2-7-18**](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/IOAG%20Liaison%20Report%202-7-18.pptx)**)**

J. Afarin presented the IOAG Liaison Report. The IOAG held a telecom on 26 January 2018 and J. Afarin summarized the proceedings for the CMC. SC#1 version 2.1 was approved and issued on 28 February 2017. The updated SC#2 version 1.2 was approved but has not been issued. An outstanding issue is whether DTN First-Hop/Last-Hop should be treated as a core issue. The Lunar Core Architecture Working Group (LCAWG) prepared recommendations on frequency bands, modulation, coding, ranging, and data link protocols for the Deep Space Gateway (DSG) project. A version of this recommendation was submitted to DSG on 10 January 2018. Due to the rapid progress, the LCAWG may complete this task as early as April 2018. The Spacecraft Operations Procedure (SOP) outline was drafted and was currently under review by the Spacecraft Emergency Cross Support Working Group (SECSWG) participants. The SECSWG also drafted descriptions for SECS services types including engineering services and standard TT&C services. The 26GHz Working Group was collecting lessons learned and recommendations from missions using Ka-band, including the JPSS, NOAA-20, TESS, and JWST. An updated report was expected before the end of 2018. In June 2018, a face-to-face meeting to prepare topics for discussion in the IOP will be held.

1. **CCSDS Working Files on the CWE**

D. Ross introduced the subject of CCSDS Working Files on the CWE reminding attendees of the CMC Action Item, [CMC-A-2017-11-04](https://cwe.ccsds.org/cmc/Lists/AI/DispForm.aspx?ID=77&ContentTypeId=0x0108000C175D359F92024695A561338A2BA43E), opened at the November 2017 meeting of the CMC. J. Afarin stated that he had discussed the proposal, that all Working Group files should be hosted on the CWE rather than being distributed by email, with several Working Group Chairs and Area Directors who reported that this was the approach they currently follow. As all Working Groups and Areas have dedicated areas of the CWE, requiring that this approach be followed would not incur hardship. J. Afarin asked for the Opinion of the CESG Chair. M. di Giulio responded that this would be a welcome improvement and would assist in the effort to insure that all CCSDS members have CWE accounts and are subscribed to the appropriate mailing lists. J. Afarin asked for the opinion of the other CMC members and all agreed that this approach should be adopted.

**Resolution 2018-02-01**

**The CMC resolves that all Working Groups and Areas shall use the CWE for file sharing.**

1. **New Projects from the IOAG**

New projects from the IOAG were discussed in the IOAG Liaison Report (Section 5).

1. **Secretariat Report**

D. Ross presented the Secretariat report.

* 1. **Action Item Status (only open items)**

D. Ross stated that there were three (3) Action Items to discuss. [CMC-A-2017-11-04](https://cwe.ccsds.org/cmc/Lists/AI/DispForm.aspx?ID=77&ContentTypeId=0x0108000C175D359F92024695A561338A2BA43E) was addressed previously, CCSDS Working Files on the CWE (Section 6), and closed. Peter Shames had been asked to draft a formal memorandum from CCSDS to ISO/TC 20/SC14 (Space Systems and Operations) to describe the coordination needed on RASDS ([CMC-A-2014-11-01](https://cwe.ccsds.org/cmc/Lists/AI/DispForm.aspx?ID=5&ContentTypeId=0x0108000C175D359F92024695A561338A2BA43E)). The memo was approved by the CESG with conditions. P. Shames was currently working to resolve the conditions. [CMC-A-2017-06-07](https://cwe.ccsds.org/cmc/Lists/AI/DispForm.aspx?ID=64&ContentTypeId=0x0108000C175D359F92024695A561338A2BA43E), the Secretariat to provide updated Yellow Book text, which is approaching completion. The updated text was delivered to T. Gannett. T. Gannett stated that before he updated the Yellow Book, he wanted to ensure that all of the discussed updates were included in the text. D. Ross stated that a file with all of the inputs had been posted to the CWE and that he would send the file to T. Gannett. The possibility of adding a WebEx only option to meeting registration on the CWE, [CMC-A-2016-10-11](https://cwe.ccsds.org/cmc/Lists/AI/DispForm.aspx?ID=46&ContentTypeId=0x0108000C175D359F92024695A561338A2BA43E), was discussed next. While other IT development projects have a higher priority, the low amount of development required for this task, means it may be completed in time for the Spring 2018 Technical Meetings.

* 1. **Status of IT projects (**[**ITUpdate**](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/ITUpdate.pptx)**)**

Brian Oliver presented the Status of IT projects. CCSDS Tech Support was supporting the Spring 2018 Meeting Registration cycle. The meeting information page on the public website was posted on 7 February 2018 and the registration system would be deployed no later than 16 February 2018. The integration of [Mission Data](https://public.ccsds.org/implementations/missions.aspx) on the public website with SANA had been completed. SANA now houses all CCSDS Mission Data. All Mission Data is now retrieved from SANA when the CCSDS Missions page is loaded. The page now includes a search function as well. Additional updates to clean back end data and remove any duplicate entries will occur in the near future. Tech Support was also working with SANA to integrate the CCSDS Membership Databases. SANA had the ability to query the CCSDS Databases and the importing OIDs and other processes would be addressed next.

* 1. **Status of documents (**[**CCSDS Document Status**](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/CCSDS%20Document%20Status.pdf)**)**

T. Gannett presented the Status of Document report. T. Gannett stated that six (6) books were currently in final polling and would be published shortly. T. Gannett had updated the ISO column of the report to link to the ISO document page rather than a status. T. Gannett noted that the ISO had started to display CCSDS document numbers on the ISO document pages. T. Gannett also noted that Michael Blackwood had updated the CCSDS public website publications page to list ISO equivalent standards and link to the ISO document pages.

1. **Meeting Planning**
   1. **Spring 2018 Tech Plenary (NASA, Gaithersburg, MD, USA)**

J. Afarin reported that on 6 February 2018, Michael Blackwood and Dan Smith had visited the National Institute of Standards and Technology (NIST) to finalize some meeting details. NIST provides a shuttle from the Shady Grove Metro Station to the NIST campus for attendees who wish to stay in Washington D.C. Non-US citizens will need to complete a registration form that is available on the [CCSDS public website meeting information page](https://public.ccsds.org/meetings/2018Spring/default.aspx) and fax the form, to NIST. On campus at NIST, there is a cafeteria for those attendees who wish to eat on site. This cafeteria is located in Building 101 where all Working Group meetings will take place. J. Afarin noted that the Opening Plenary of the Technical Meetings is the responsibility of the CESG Chair, but suggested that as there are three (3) guest speakers scheduled, the Plenary may need to be longer than the one hour usually provided. The speakers will be Dr. Walter Copen (Under Secretary of Commerce for Standards and Technology and NIST Director), Mr. Badri Younes (Deputy Associate Administrator for NASA Space Communications and Navigation), and Dr. Vint Cerf (Vice President and Chief Internet Evangelist for Google). J. Afarin suggested scheduling the Plenary for 0830-1030h. M. di Giulio agreed to the proposed revision to the schedule.

**NOTE:** After the Mid-term CMC Meeting, NIST informed the CCSDS Secretariat that Dr. Copen would no longer be able to give opening remarks at the Plenary. Dr. Kent Rochford (Associate Director for Laboratory Programs, NIST) will provide opening remarks in Dr. Copen’s place.

* 1. **Spring 2018 CMC (CNSA, Beijing, China) (**[**CMC Meeting Spring 2018-20180205**](https://cwe.ccsds.org/cmc/Private/Mid-Term%20CMC%20Telecons/2018-02%20Feb%20Telecon/CMC%20Meeting%20Spring%202018-20180205.ppt)**)**

Yonghui Huang presented the details of the Spring 2018 CMC Meeting. The meeting will occur 14-17 May 2018 in Beijing, China. The National Space Science Center (NSSC) will host the meeting. As most hotels in the area do not provide an internet connection, Y. Huang recommends attendees stay at the Park Plaza hotel. The CMC will meet in the Uranus Room on the fourth floor of the NSSC building. Adjacent to the meeting room is a break room where refreshments will be provided. In the meeting room and break room, Wi-Fi is available and a WebEx session will be established for remote participants. Y. Huang stated that he will distribute additional materials soon and suggested attendees print the materials to help in communicating in Beijing. Included in the presentation was a map showing the relative locations of the airport, hotel, and meeting location. Y. Huang suggested that taking a taxi form the airport to the hotel would be the most convenient option. The Beijing subway reaches nearly the entire city and is another option for transportation. Y. Huang stated that he was the primary contact for the meeting and his colleague, Ms. Weiwei Tang was preparing Letters of Invitation for attendees. At the time, only five (5) CMC agencies had provided details for their attendees. Tsutomu Shigeta stated that Japanese attendees would not require letters of invitation, as they would not need Visas. Wallace Tai inquired as to when the letters would be distributed. Y. Huang stated that the letters would be mailed after the Chinese New Year, 16 February 2018.

Y. Huang stated that a Technical Tour had been provisionally scheduled for Tuesday, 15 May 2018. The tour would be of the National Astronomical Observatories of CAS. A group dinner for the evening of the same day was also scheduled. Y. Huang stated that he was trying to arrange for lunches to be provided gratis at the canteen at NSSC and that there were also many restaurants near the meeting location and suggested hotel. Y. Huang stated that he would reserve a block of rooms at the Park Plaza Hotel and could book rooms directly for attendees. Chinese electrical outlets are the same style as United States outlets but provide 220V instead of 120V. The Chinese currency is the RenMinBi, or Yuan, and the current exchange rate is approximately 6.4 Yuan per US Dollar. Credit cards are not universally accepted in China though Alipay and WeChat Pay are. Y. Huang advised that it would be best to carry some cash at all times. Attendees may exchange currencies at the airport upon arrival. Y. Huang also pointed out that attractions such as the Great Wall, Old Summer Palace, Summer Palace, Forbidden City, Temple of Heaven, and Tiananmen Square are located in or near Beijing and suggested attendees may want to take the opportunity to visit these locations.

* 1. **Fall 2018 Tech Plenary & CMC (DLR, Berlin, Germany)**

O. Peinado was unable to attend the CMC meeting to provide an update on the Fall 2018 Technical Meetings in Berlin Germany, but noted via email that there have been no changes to the logistics since the last meeting. Everything is prepared for the Fall meetings.

* 1. **Spring 2019 Tech Plenary (NASA, USA)**

J. Afarin stated that the location for the Spring 2019 Technical Plenary was still being considered.

* 1. **Spring 2019 CMC (CSA, Montreal, Quebec, Canada)**

Siamak Tafazoli reported that there was no new information to Report about the Spring 2019 CMC Meeting since the November 2017 Meeting of the CMC. The meeting is scheduled for 11-13 June 2019 and will be held at CSA Headquarters to the south of Montreal, Canada. CSA Headquarters is thirty (30) to fifty (50) minutes’ drive from downtown Montreal depending on traffic. There is a cafeteria on site that will be available for lunches and evening outings will also be arranged. S. Tafazoli stated that he would provide additional information at the May 2018 meeting of the CMC.

* 1. **Fall 2019 Tech Plenary & CMC (ESA)**

Mike McKay noted that the Fall 2019 Technical Plenary and CMC meetings were still quite far in the future. M. di Giulio noted that preparations were underway and proposed 21-24 October 2019 as the dates of the Technical Plenary. M. di Giulio stated that she would check for conflicts with other conferences and formally proposed dates shortly. M. di Giulio also noted the meeting would be held in Darmstadt, Germany in the same facility as the Fall 2017 Technical Plenary, the darmstadtium wissenschaft | kongresse.

1. **Action Item & Resolution Review**

D. Ross provided an overview of the Action Items and Resolutions from the Mid-Term CMC Telcon.

1. **Any other business**

No other business was announced.

1. **Adjourn**

The meeting was adjourned at 0937h Eastern Time.