**CMC Draft Minutes**

**Spring 2022 Meetings**

**Remote Meeting**

**14-16 June 2022**

Day 1, 14 June 2022

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

S. Asmar called the meeting to order and welcomed all to the spring 2022 CMC meeting. He expressed regret that the CMC was not able to meet in person but that he hoped the fall meeting would be able to proceed in person as expected.

1. **Introduction of Delegates**

CMC Attendees were:

1. ASI – not present
2. CNES –Sylvain Teodomante
3. CNSA – Yonghui Huang
4. CSA – not present
5. DLR – Dorothea Richter
6. ESA – Nicholas Bobrinsky, Mariella Spada
7. INPE – Eduardo Bergamini, Mauricio Ferreira
8. JAXA – Tsutomu Shigeta
9. ROSCOSMOS –Dmitry Barranikov
10. NASA – Sami Asmar
11. UKSA – not present
12. CESG – Klaus-Juergen Schulz, Tim Pham, Jonathan Wilmot, Erik Barkley, Ignacio Aguilar, Gilles Moury, Peter Shames, Mario Merri, Rodney Grubbs, Marc Duhaze
13. Secretariat – Michael Blackwood, Tom Gannett, Brian Oliver

N. Bobrinsky noted that he would be retiring in a few weeks and introduced his successor as ESA Agency Representative, Mariella Spada. M. Spada expressed her gratitude to N. Bobrinsky and that she was looking forward to this new role

S. Asmar added that this would be the last meeting for representing the Secretariat. M. Blackwood would be beginning a new job.

M. Blackwood thanked the entire CMC for their comradeship through the years.

All present wished N. Bobrinsky and M. Blackwood well.

1. **Agenda Review and Approval** ([June\_2022\_CMC\_Agenda\_Final\_20220616.docx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b75DA1690-14BC-41D9-922A-7CBB239B1889%7d&file=June_2022_CMC_Agenda_Final_20220616.docx&action=default))

S. Asmar introduced the agenda, and it was unanimously approved.

1. **CESG and Area Reports** ([CESG Report to CMC\_Spring 2022 d2 MB.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bC9B30E7E-589B-4802-9683-B9FB696BB7D4%7d&file=CESG%20Report%20to%20CMC_Spring%202022%20d2%20MB.pptx&action=default))

K.J. Schulz presented the CESG report to the CMC.

M. Blackwood noted that he had not yet completed the section reporting on CMC polls since the last meeting. It would be presented the following day.

* 1. CESG Chair Introduction (slides 2-14)

K.J. Schulz presented the CESG Chair’s report. He noted that Colin Haddow (ESA) had retired and that the CESG had reviewed and approved Holger Dreihahn’s (ESA) candidacy for the CSS Deputy Area Director position. K.J. Schulz continued that the CMC would vote on this appointment at the following day’s meeting.

K.J. Schulz reported that slide 7 had not been updated and that the Secretariat had been moving away from using the number of documents published and missions using CCSDS standards as metrics for adoption. The CESG had discussed this and suggested collecting “CCSDS Success Stories” testimonials recommending the adoption of CCSDS standards with specifics of actual use cases.

* 1. MOIMS Area ([03 S22-MOIMS-Report-to-CMC v1.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bFCB8A254-8A26-4030-8D37-FD332978ED38%7d&file=03%20S22-MOIMS-Report-to-CMC%20v1.pptx&action=default))

M. Merri presented the report for the MOIMS Area. Additional slides were included in his presentation as reference material and not presented.

M. Merri reported that funding for John Hughes’s (NASA-JPL) support of the DAI WG would stop by the end of Fiscal Year 2022. This would likely cause significant disruption to the Architecture Description book and the OAIS Interoperability Framework work.

P. Shames, representing NASA-JPL’s data standards program in this case, replied that he was aware of the issue and was working to see what could be done to resolve the issue. Clarifying the source of funding with the center would determine the path forward. P. Shames concluded that he would provide an update to M. Merri when he had additional information to share.

M. Merri also reported that the DAI WG requested that the existing efforts to reestablish the relationship between CCSDS and the ISO be urgently treated. The DAI WG also requested to be allowed to participate fully in conversations with the ISO.

S. Asmar noted that a letter had been sent from CCSDS to Ms. Sauw Kook Choy, Chairperson of the ISO’s Technical Management Board, appealing the decision to classify CCSDS as a Category C liaison. Beyond confirmation that the letter had been received, there had been no communication from the ISO.

M. Merri asked if there was an expected timeframe for a response.

S. Asmar replied that there was none. He had inferred that the TMB was discussing the letter but needed more time to formulate a response/

M. Merri asked that the MOIMS Area and DAI WG be informed of any progress, and S. Asmar agreed.

* 1. SLS Area ([SLS-Area-Report-to-CMC-Spring2022-Rev\_2 – PowerPoint.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b05631659-622E-499B-9FC3-8D044872A5C1%7d&file=SLS-Area-Report-to-CMC-Spring2022-Rev_2%20-%20PowerPoint.pptx&action=default))

I. Aguilar presented the SLS Area report.

* 1. SIS Area ([d01-Area-Report-to-CESG Spring-SIS - Read-Only.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b21B83D44-E3C5-4A33-9B99-139CA3DA4E39%7d&file=d01-Area-Report-to-CESG%20Spring-SIS%20%20-%20%20Read-Only.pptx&action=default))

R. Grubbs noted that the SIS Area Director, Tomaso de Cola (DLR), was unable to attend the day’s meeting and sent his apologies. R. Grubbs, as SIS Deputy Area Director, would be presenting.

R. Grubbs noted that he would likely retire during the first quarter of 2023. As the MIA WG Chair, this created a need for succession planning, and the working group had discussed this during their meeting. The WG agreed to proceed with a new project (Video Quality Assessment); and discussed potential Working Group Chairs from among existing working group members.

Agreement to proceed with a new project (Video Quality Assessment), and discussed potential Working Group Chairs from among existing working group members. There was no significant result of this discussion to report at the time.

* 1. SOIS Area ([4.0x-SOIS-Report-to-CMC-Spring 2022.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bA99EA972-740A-41E9-AA49-A8B0222E3363%7d&file=4.0x-SOIS-Report-to-CMC-Spring%202022.pptx&action=default))

J. Wilmot presented the SOIS Area report.

* 1. CSS Area ([220609-CSS-Area-ReportToCESG-CMC.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b849B5F56-540D-4A84-99BC-099B41439E70%7d&file=220609-CSS-Area-ReportToCESG-CMC.pptx&action=default))

E. Barkley prested the CSS Area report.

* 1. SEA Area ([d01-SEA-Area-Report-to-Virtual-CMC Spring 2022 v1.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bB320E298-DBF0-4F90-8D64-749BAAE93D4C%7d&file=d01-SEA-Area-Report-to-Virtual-CMC%20Spring%202022%20v1.pptx&action=default))

P. Shames presented the SEA Area report. He emphasized there were no unallocated Version 2 (AOS) Q-SCIDs and only a few available in S-Band and X-Band. The shift by users to USLP was considered of utmost importance.

* 1. Summary

K.J. Schulz noted that he did not have anything additional to note, and the meeting adjourned at 1636 UTC.

# Day 2, 15 June 2022

1. **Introduction of Delegates**

CMC Attendees were:

1. ASI – not present
2. CNES –Sylvain Teodomante
3. CNSA – Yonghui Huang
4. CSA – Siamak Tafazoli
5. DLR – Dorothea Richter
6. ESA – Nicholas Bobrinsky, Mariella Spada
7. INPE – Eduardo Bergamini, Mauricio Ferreira
8. JAXA – Tsutomu Shigeta
9. ROSCOSMOS – Dmitry Barannikov
10. NASA – Sami Asmar
11. UKSA – Chris Perry
12. CESG – Klaus-Juergen Schulz, Tim Pham, Jonathan Wilmot, Peter Shames, Rodney Grubbs, Marc Duhaze
13. Secretariat – Michael Blackwood, Tom Gannett, Brian Oliver
14. **Opening remarks**

S. Asmar welcomed the attendees and noted that the first day of the CMC meetings had been very productive. He was sure this would be true for the second as well.

1. **Agenda Review and Approval** ([June\_2022\_CMC\_Agenda\_Final\_20220616.docx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b75DA1690-14BC-41D9-922A-7CBB239B1889%7d&file=June_2022_CMC_Agenda_Final_20220616.docx&action=default))

The CMC reviewed the agenda, and it was unanimously approved.

1. **CESG Report on Other Topics** (

K.J. Schulz stated that as CESG Chair, he had no additional topics to report.

* 1. Poll statistics since last CMC Meeting and status of activities ([CESG Report to CMC\_Polls.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bA4337A25-255D-4D43-95CA-0B382A46D0B1%7d&file=CESG%20Report%20to%20CMC_Polls.pptx&action=default))

M. Blackwood presented the CMC polls since the last meeting in December 2021.

* 1. Discussion of CESG Topics of interest to CMC Members ([CESG Topics Issues and Concerns.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b598FE782-5FA2-4C59-90E4-72A0942473DD%7d&file=CESG%20Topics%20Issues%20and%20Concerns.pptx&action=default))

This agenda item was intended to allow CMC members to address any topics they would like to discuss further with the CESG.

T. Shigeta requested further discussion of the recommended shift by agencies to USLP. He acknowledged the shortage of Q-SCIDs was troubling. T. Shigeta also noted that the transition to USLP would not be easy and introduced a financial challenge.

P. Shames agreed with T. Shigeta’s concerns and continued that CCSDS had been hurt by its success in this instance. CCSDS created several link-layer protocols more than twenty years ago, including the AOS protocol for high data rate missions. The AOS protocol had been created with a smaller SCID space than the preceding TM and TC protocols. Over two thousand missions used SCIDs, including in the X and S-bands. SCID allocation policies had been updated to issue SCIDs for specific bands multiplying the number of available SCIDs by the number of bands. Moving users into the Ka-band would introduce difficulty and expense. The same was true of adopting USLP, although USLP expands the SCID space from eight to sixteen bits. SANA has regularly requested that agencies and missions return SCIDs that are no longer in use.

J. Wilmot added that some mission has to be the first to certify flight and ground implementations of USLP. No one mission wants to bear the associated costs. This allows an agency to take the lead in these activities. NASA-MSFC has prepared an implementation for testing within NASA.

T. Shigeta noted that JAXA regularly checks for unnnessecary allocated SCIDs, and when any are identified, they are returned to SANA. With the understanding of the inevitable implantation of USLP, he stated this solution would take some time, and the short-term solution is for agencies and missions to check for and return any unused SCIDs.

P. Shames used this opportunity to return to another issue from the previous day, the need for a complete security architecture (identity, access control, authentication, secure network management) for multi-mission / agency “interoperable network” deployment. As agencies move to adopt DTN network protocols there is an increasing need for security architecture that goes beyond the mechanisms built into DTN. A framework for managing information in multi-agency, multi-mission deployments is required. P. Shames believed that CCSDS and the agencies flying these kinds of missions should be taking the lead in creating an interoperable solution. While some security processes weres in place, they are not yet interoperable and cross-supportable. Agency or consortium-specific solutions were likely to be developed in a vacuum.

K.J. Schulz, S. Asmar, P. Shames, and Daniel Fischer (ESA) had developed and assembled some material to present at the last IOAG meeting. ([CCSDS Collaborative Security WG 8June22 – addenda.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b7306400C-5EDE-42EC-A138-69F598D28785%7d&file=CCSDS%20Collaborative%20Security%20WG%208June22%20-%20adenda.pptx&action=default)) P. Shames recommended a more in-depth review with CCSDS security, DTN, and network management experts and requested the opportunity to present the findings of such a meeting to the CMC at a later date.

K.J. Schulz added that the presentation to the IOAG had been well received and that the IOAG would like individual agencies’ security offices to be involved in the process.No action had been agreed to by the IOAG. K.J. Schulz stated that he believed CCSDS must work to prepare technical grounds while the IOAG deliberates.

P. Shames agreed that getting agency security offices and mission personnel to discuss was the best option. Such discussion was required to reach any solution. To complete the technical work, the resources of CCSDS would need to be brought to bear. In P. Shames’s opinion, the IOAG appeared not ready to commit the necessary resources at that time. Waiting much longer could put the effort significantly behind schedule compared to a projected need date. In that time-independent, non-interoperable deployments would be developed.

K.J. Schulz suggested that the next IOAG meeting would include further discussion. In his opinion, CCSDS couldn’t act independently and needed the IOAG to facilitate these activities. K.J. Schulz asked that Daniel Fischer be invited to future discussions on this subject.

P. Shames presented the slides created for the IOAG meeting and gave a high-level overview of their contents. NASA and ESA had begun their work separately some six months earlier, addressing the fundamentals of the issue. A few weeks before the IOAG meeting, NASA and ESA began to work collaboratively to propose the IOAG address DTN security.

P. Shames asked the CMC members if their agencies were considering this issue and if his statements were true for other agencies. He also asked if agencies were planning missions to use DTN and share resources with other agencies. The IOAG had recognized the need for work on the subject.

P. Shames asked if CMC members had any concerns and if they thought CCSDS should begin addressing the shortfall immediately. J. Wilmot added that link-layer security was also an issue and that it was not just DTN that needed additional work.

S. Asmar agreed that the CMC would continue to consider this and that he would participate in NASA and ESA’s collaborative work on the matter. He would further coordinate with K.J. Schulz and reemphasize the work's urgency to the IOAG.

N. Boborinsky confirmed that ESA did not yet have a form or official position on the subject. There was reluctance to move too quickly. ESA would like to be involved in the continued development of a proposed solution.

T. Shigeta noted that he had consulted JAXA’s DTN and security experts and the ARTEMIS team. They recognize the necessity of this approach to DTN security, and their expertise is quite broad. The question for JAXA was whether the appropriate experts could be identified to participate and how much effort they would be able to commit to the work. To summarize, JAXA had begun discussing the topic but had not yet identified subject matter experts to participate.

K.J. Schulz suggested that he and S. Asmar try to convince the IOAG of the urgency of this topic and that S. Asmar, as CCSDS liaison to the IOAG, might take the lead in this effort. S. Asmar agreed to do so.

1. **Confirmation of candidate for CSS Deputy Area Director** ([CV-hdreihahn april 2022.docx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b6942FCD3-8CA9-4BD0-B941-4EB8F7E12024%7d&file=CV-hdreihahn%20april%202022.docx&action=default))

M. Blackwood reminded the CMC that K.J. Schulz had briefly introduced this subject the previous day.

As ESA agency representative. N. Bobrinsky reported that he was happy to present H. Dreihahn to the CMC. As an active member of the CSTS WG for more than 10 years and as the Chair of the same WG since 2019, H. Dreihahn had an excellent understating of the CSS Area’s work, and ESA fully supported his candidacy.

K.J. Schulz concurred with N. Bobrinsky.

The CMC voted and unanimously approved the appointment of Mr. Holger Dreihahn as CSS Deputy Area Director.

**CMC-R- 2022-06-01**

**The CCSDS Management Council,**

**CONSIDERING that the CMC is responsible for appointing CCSDS Deputy Area Directors; and**

**RECOGNIZING that Mr. Holger Dreihahn (ESA) has been proposed as Deputy Area Director for Cross Support Services (CSS) to replace Mr. Colin Haddow; and**

**RECOGNIZING that Mr. Holger Dreihahn (ESA) has received the unanimous support of the CMC;**

**Approves the appointment of Mr. Holger Dreihahn (ESA) as Deputy Area Director of CSS.**

1. **IOAG Liaison Report**

S. Asmar, as CCSDS’s liaison to the IOAG, presented his report. He attended the IOAG’s meeting on 23-25 May 2022 and presented on two subjects. The complete security architecture was covered earlier in the day’s meeting, and the potential use of clouds for data delivery was a topic the CSS Area considered.

1. **Update on CCSDS and ISO Effort to Develop a New Liaison Agreement** ([CCSDS letter to ISO.pdf](https://cwe.ccsds.org/cmc/Private/CMC%20Meeting%20Minutes%20and%20Presentations/2022%20Spring%20-%20Remote%20Meeting/CCSDS%20letter%20to%20ISO.pdf))

S. Asmar read the letter sent to the ISO TMB into the record. This topic was also discussed on the first day of the CMC’s meeting. Beyond confirmation that the letter had been received, there had been no communication from the ISO. S. Asmar again agreed to inform the CMC once a response was received and will involve the MOIMS Area and DAI WG.

Before the meeting was adjourned, S. Asmar noted that he and T. Pham were in South Korea for meetings with KARI related to their roles with NASA’s DSN. They had toured KARI’s new 35m antenna and were impressed with the facility. S. Asmar had spoken with colleagues at KARI about their participation in CCSDS. KARI was then an Observer member. As KARI expanded the scope of its work and international cooperation and more significant role in CCSDS could follow, S. Asmar recommended that KARI consider becoming a Participating Member of CCSDS.

The meeting adjourned at 14:33.

# Day 3, 16 June 2022

1. **Introduction of Delegates**

CMC Attendees were:

1. ASI – not present
2. CNES –Sylvain Teodomante
3. CNSA – Yonghui Huang
4. CSA – not present
5. DLR – not present
6. ESA – Nicholas Bobrinsky, Mariella Spada
7. INPE – Eduardo Bergamini, Mauricio Ferreira
8. JAXA – Tsutomu Shigeta
9. ROSCOSMOS –Dmitry Baranikov
10. NASA – Sami Asmar
11. UKSA – Chris Perry
12. CESG – Tim Pham, Peter Shames, Jonathan Wilmot
13. Secretariat – Michael Blackwood, Tom Gannett. Brian Oliver
14. **Call to Order – Welcome/Opening Remarks**

S. Asmar welcomed the attendees to the final day of the CMC’s spring meeting.

1. **Agenda Review and Approval** ([June\_2022\_CMC\_Agenda\_Final\_20220616.docx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b75DA1690-14BC-41D9-922A-7CBB239B1889%7d&file=June_2022_CMC_Agenda_Final_20220616.docx&action=default))

The agenda was reviewed and approved with one addition.

T. Shigeta requested that the Service Sites and Apertures (SS&A) registry in SANA be demonstrated. JAXA had been having some difficulties in editing the parameters for their entries.

T. Pham agreed to provide a demonstration and asked for roughly 15 minutes to prepare.

1. **Meeting Planning**
	1. Fall 2022 Tech, CESG, CMC (CNES) ([20220613Fall 2022 CMC by CNES report June 2022.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bCA16CF5B-8697-419A-8863-3EB0E552C9D4%7d&file=20220613Fall%202022%20CMC%20by%20CNES%20report%20June%202022.pptx&action=default))

S. Teodomante presented on CNES’s preparations for the fall 2022 CCSDS meetings. After several years of preparation and cancellations, he hoped to see the attendees on-person this year. He looked forward to welcoming everyone to Toulouse. Having been preparing for these meetings for quite some time, the presentation was undoubtedly familiar to most meeting attendees.

**CMC-A-2022-06-01**

**The CMC directs the Secretariat to be in the conversation in deciding on hosting the fall 2022 meetings in-person or remotely.**

**CNES requires a final answer no later than 15 July 2022**

**Due Date: 30 June 2022**

* 1. Spring 2023 Tech, CESG (NASA-MSFC) ([CCSDS Spring 2023 Meeting Huntsville.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bCDFE35B0-8A7D-4DDC-9542-3711E7B92E68%7d&file=CCSDS%20Spring%202023%20Meeting%20Huntsville.pptx&action=default))

M. Blackwood presented on NASA’s preparations for the spring 2023 Technical and CESG meetings. He noted that the meeting dates in the presentation were not yet finalized, but they would be provided to the CCSDS community once the contract was signed.

* 1. Spring 2023 CMC (JAXA) (

T. Shigeta presented on JAXA’s preparations for the CMC’s spring 2023 meeting.

* 1. Fall 2023 Tech, CESG, CMC (ESA-ESTEC)

N. Bobrinsky noted that due to the extended time frame, there was not much to report about the fall 2023 meetings. ESTEC would be hosting the meetings in the Netherlands. By the CMC’s Fall 2022 meeting, more information will be shared.

* 1. Spring 2024 Tech, CESG (NASA)

M. Blackwood mentioned that NASA was looking to host the spring 2024 technical and CESG meetings near a NASA center, specifically mentioning JSC in Houston Texas, and KSC in Florida. Once NASA had selected a location, the CMC would be consulted to choose the meeting dates.

* 1. Spring 2024 CMC (INPE)

M. Ferreira said it would be a pleasure to welcome the CMC to Brazil and INPE for the spring 2024 meeting. Further internal discussions were needed, and INPE, would provide additional information once it was finalized. M. Ferreira thanked E. Bergamini for his assistance in these preparations.

1. **Demonstration of Service Sites and Apertures Registry features currently in Beta**

As agreed, T. Pham demonstrated the SS&A registry (<https://sanaregistry.org/r/service_sites_apertures/>) in SANA. He demonstrated the beta version of the website to show additional features that would be deployed to the regular SANA website shortly. The beta site was created to test additional features without disrupting regular users’ activities. T. Pham demonstrated editing a service site, updating form fields, menu selections for some fields, and searching by text in fields. He noted that previously there was an error in linking between a site operator and point of contact, but the point of contact had been resolved on the beta site.

T. Shigeta noted that under SLE services, JAXA does not provide the EF-CLTU function, but JAXA had been unable to select more than one service per site. T. Pham replied that this was a known error and had been corrected on the beta site. The regular SANA site will soon be updated to introduce this feature.

1. **Secretariat Report**
	1. Action Item Status (only open items) ([Open\_CMC\_Action\_Items\_20220616.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bA7171F33-D4BE-4BFD-B20D-F806889E9428%7d&file=Open_CMC_Action_Items_20220616.pptx&action=default))
* CMC-A-2020-06-07 - The CMC asks that the CESG Chair and Secretariat investigate options for updating the CCSDS Strategic Plan Format created and formerly maintained by Juan Miro. Options to automate the process for generating the report and new formats for the report should be considered, and results reported to the CMC.
	+ M. Blackwood reported that he had met with K.J. Schulz and T. Pham twice in 2022 and discussed the topic of the strategic plan. They agreed that the required information was already contained in the CWE, it was simply a matter of determining an export format. With the CWE being upgraded to SharePoint 2019 later in 2022, it made sense to delay this action until that work was completed. The CMC agreed to extend the due date to the fall 2022 CMC Meeting.
* CMC-A-2020-12-06 - The CMC directs the CESG Chair and Secretariat to review the Strategic Plan on the CWE and Projects databases and determine what information should be included in an Excel export.
	+ M. Blackwood reported that, again, he had met with K.J. Schulz and T. Pham twice in 2022 and discussed the topic and that as the two action items are linked, it was decided to be best to delay this action item. The CMC agreed to extend the due date to the fall 2022 CMC Meeting.
* CMC-A-2020-12-07 - The CMC directs the Secretariat to produce the Excel export decided upon from CMC-A-2020-12-06 and provide this file to the CMC for review. The CMC should respond with any additional information they believe should be included in the report.
	+ As this action item is a successor to CMC-A-2020-12-06, it has not yet been completed.
* CMC-A-2021-06-07 - The CMC directs the Secretariat to produce an example of the CCSDS organizational chart, including Deputy Area Directors and Deputy Working Group Chairs. Once the CMC and CESG have reviewed it, they will choose a layout for the chart.
	+ M. Blackwood reported that B. Oliver had produced a draft of the CWE organization chart with the requested information but that he and M. Blackwood were unhappy with the result. They had reviewed open source solutions for org charts and found a couple that could be smoothly integrated with the CWE. SharePoint 2019 also provided some new features that would be useful in this endeavor. The CMC agreed to extend the due date to the fall 2022 CMC Meeting.
* CMC-A-2021-12-01 - The CMC directs the SANA Steering Group (SSG) to hold a meeting about the updates to the Service Sites and Apertures (SSA) registry inviting SSG Members, the SANA Operator, and Agency Representatives.
	+ As the necessary changes to the SSA registry had not yet been deployed, this action was not yet complete. T. Pham demonstrated these updates on the SANA beta site earlier in the meeting. P. Shames suggested that this meeting should occur after the updates were deployed to the production website. An email would be sent to the CMC informing them when this occurred and inviting them to review the SSA. Any questions or findings of the CMC members could then be discussed at a meeting. The CMC agreed to extend the due date to 30 September 2022.
* CMC-A-2021-12-02 - The CMC directs the secretariat to include an agenda item for the CMC midterm meeting to discuss the agenda for the entire meeting in Tokyo, Japan, and choose a three or four-day meeting.
	+ As the CMC did not meet in person in spring 2022, this action item was closed.
* CMC-A-2021-12-03 - The CMC directs the Secretariat to confirm the fall 2022 meeting dates selected by CNES with the CMC and CESG by email and report the results to CNES.
	+ M. Blackwood reported that the Secretariat had provided these dates to the CMC and CESG and that no conflicts were reported. The CMC closed this action item.
* CMC-A-2021-12-04 - The CMC directs the Secretariat to initiate a poll for selecting the CMC midterm meeting date in February 2022.
	+ M. Blackwood offered his apologies. HE overlooked this action, and no midterm meeting was held. The CMC closed this action item.
	1. Document Status Report ([CCSDS Document Status.pdf](https://cwe.ccsds.org/cmc/Private/CMC%20Meeting%20Minutes%20and%20Presentations/2022%20Spring%20-%20Remote%20Meeting/CCSDS%20Document%20Status.pdf))

T. Gannett presented the Document Status Report.

* 1. IT Project Status ([CCSDSITUpdate.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7b3685BB2A-9C86-4B1F-A593-02C239664B38%7d&file=CCSDSITUpdate.pptx&action=default))

B. Oliver presented the IT Project Status Report.

S. Asmar mentioned that at the IOAG meeting, he had heard that there could be an effort to harmonize the appearance of the IOAG’s website and the CCSDS CWE. B. Oliver replied that that was true. The IOAG website was managed by another part of the contract, ASRC Supports. After the CWE is updated to SharePoint 2019, there would be an effort made to modernize the appearance of the CWE which would consequently introduce similarities to the IOAG website.

1. **Schedule for Next CMC Mid-term Telecon**

M. Blackwood noted that the CMC, had late selected midterm telecon dates with an informal poll. The CMC agreed to do so again, intending to hold the meeting in late August or early September. C. Perry requested that the week of 5-9 September be avoided if possible.

**CMC-A-2022-06-02**

**The CMC directs the Secretariat to initiate a poll for selecting the CMC midterm meeting date in August/September 2022.**

**The Secretariat should avoid the week of 5 September if at all possible.**

**Due Date: 30 June 2022**

1. **CMC Review of Resolutions and Action Items** ([Draft\_CMC\_Action\_Items\_Spring2022\_20220616.pptx](https://cwe.ccsds.org/cmc/_layouts/15/WopiFrame.aspx?sourcedoc=%7bA32D1525-4D55-4288-9B1B-5FAE1EAA8EA4%7d&file=Draft_CMC_Action_Items_Spring2022_20220616.pptx&action=default))

S. Asmar noted that there was no formal action, but requested that K.J. Schulz, P. Shames, and Daniel Fischer continue their work on DTN security with the IOAG.

**CMC-A-2022-06-01**

The CMC directs the Secretariat to be in the conversation in deciding on hosting the fall 2022 meetings in-person or remotely

CNES requires a final answer no later than 15 July 2022

Due Date: 30 June 2022

**CMC-A-2022-06-02**

The CMC directs the Secretariat to initiate a poll for selecting the CMC midterm telecon date in August/September 2022.

The Secretariat should avoid the week of 5 September if at all possible.

Due Date: 30 June 2022

**CMC-R-2022-06-01**

The CCSDS Management Council,

CONSIDERING that the CMC is responsible for appointing CCSDS Deputy Area Directors; and

RECOGNIZING that Mr. Holger Dreihahn (ESA) has been proposed as Deputy Area Director for Cross Support Services (CSS) to replace Mr. Colin Haddow; and

RECOGNIZING that Mr. Holger Dreihahn (ESA) has received the unanimous support of the CMC;

Approves the appointment of Mr. Holger Dreihahn (ESA) as Deputy Area Director of CSS.

**CMC-R-2022-06-02**

The CCSDS thanks Michael Blackwood for his years of exemplary service in support of the CCSDS Secretariat and wishes him well in his future endeavors. The Secretariat is instructed to present him with a certificate acknowledging appreciation for his contributions to CCSDS.

**CMC-R-2022-06-03**

The CCSDS thanks Nicolas Bobrinsky for his service as ESA agency representative to CCSDS and wishes him a happy retirement.

1. **Adjournment**

S. Asmar thanked all attendees for their participation, noting the accomplishments of the meetings. He continued that coordination would continue by email and then at the midterm meetings. He hoped the CMC could meet in person this coming fall after three years of remote meetings.

S. Asmar thanked M. Blackwood again and wished him good luck in his future endeavors. He added that he was forward to continuing to work with Brian Oliver and Laura Stafford in the Secretariat.