

# CMC Final Minutes Mid-Term Telecom 28 June 2016

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

James Afarin, CMC Chair, called the meeting to order at 0802h and welcomed everyone to the CMC mid-term telecom. J. Afarin initiated the roll call of delegates after the brief introduction.

## 2. Roll Call of Delegates

Introductions followed. CMC Attendees were:

1. ESA – Juan Miro, Nestor Peccia
2. DLR – Martin Pilgram
3. JAXA – Tsutomu Shigeta
4. NASA - Wallace Tai, Dr. James Afarin
5. INPE - Eduardo Bergamini
6. UKSA – Christopher Perry
7. CNES - Gilles Moury (via WebEx), Jean-Marc Soula
8. CSA – Not Present
9. ASI – Not Present
10. CNSA –Yonghui Huang
11. ROSCOSMOS – Not Present
12. Secretariat - David Ross, Thomas Gannett, Brian Oliver

## 3. Agenda Review and Approval ([28 June 2016 CMC Agenda mid-term telecom v2](#))

The CMC agenda was reviewed and approved with one minor change to the order of presentations.

## 4. Discuss SOIS Area Director and Deputy Area Director proposed Delegates

The CMC discussed the SOIS Area Director (AD) and Deputy Area Director (DAD) proposed candidates. J. Afarin indicated that there was agreement that Rick Barton was going to stay on as the SOIS AD for another 6 months (until after the Rome meeting). J. Afarin indicated NASA may have a representative to put forward and inquired as to other agency interests in putting forth a different candidate. No other agencies responded affirmatively. The CMC discussed the continued viability of the SOIS area based on the perceived interest in AD and DAD. A new agenda item will be added to the fall 2016 CMC meeting to discuss the continued viability of the Area and, if needed, to select a new Area Director.

## 5. CESG Chair Report ([CCSDS Report to CMC mid term telecom 28<sup>th</sup> June 2016](#))

### 5.1 Progress since the last meeting (reviews, polls, etc...) (slides 2 – 3)

Nestor Peccia provided an overview of the polls and reviews that have occurred since the April CMC meeting in Sao Jose dos Campos, Brazil. N. Peccia indicated, and Tom Gannett confirmed, that the three space assigned numbers authority (SANA) yellow books have been published. N. Peccia noted that the Radio Frequency and Modulation (RF&M) bandwidth efficient modulation book has now been approved as a new project. N. Peccia indicated the Proximity-1 coding and synchronization sublayer modification to support the universal space link protocol (USLP) shall remain in draft as DLR is unable to provide prototype 2 resources in support of this book. N. Peccia further noted the approval for CCSDS Agency Heads of Delegation (HoD) and Spectrum Managers to provide actual spectrum allocations for active spacecraft for the spacecraft ID (SCID) registry.

## 5.2 Project Status (behind schedule, missing resources, etc...) (slide 6)

N. Peccia indicated that there are currently 85 projects and 24 of those projects are currently identified as behind schedule. He indicated that the CESG has asked the WG chairs to update their schedules. N. Peccia also indicated that there are currently 63 draft projects with one project under approval by the CMC at the time of the mid-term teleconference. N. Peccia reviewed and the CMC agreed to close AI-CMC-A-2016-05-08 – for the CESG to provide to the CMC their review of all projects identified with large delays.

N. Peccia also reviewed action item CMC-A-2016-05-10, an action for the CESG to report to the CMC the best dates for the fall 2017 Technical Plenary Meetings to be held at ESA, the CMC agreed to close the action. N. Peccia indicated the most likely location would be the Netherlands and that the best dates would be 6-9 November 2017 (Technical Meetings) and 10 November 2017 CESG Meeting with the CMC occurring on 13-15 November 2017.

**AI – CMC-A-2016-06-03: The CMC requests that the CCSDS Secretariat deliver to all CMC members the CESG comments (attached spreadsheet) on all projects with large delays. The CMC further requests that all comments are reviewed by all CMC members and comments are provided back to the Secretariat for aggregation. The CMC has requested that this activity conclude by the end of July 2016.**

## 5.3 Status of ICPA (slide 7)

N. Peccia noted that the ICPA was not updated by CCSDS because CCSDS is awaiting IOAG approval of service catalogue 1 (SC1) (an e-poll for the approval of the updated SC1 was planned by end June 2016). As such, more information will be forthcoming at the next CMC meeting.

## 5.4 IOAG Liaison report (Slide 7)

N. Peccia discussed IOAG coordination efforts and the IOAG response. N. Peccia noted that the IOAG Chairman reminded everyone that updating the service catalogue 2 (SC2) will ideally start after the approval of SC1 and may be completed by the end of 2016.

## 5.5 Other CESG status (slides 4-5)

N. Peccia provided an overview of other CESG activities and issues. He identified a new template for reporting to the CMC that was being reviewed by the CESG, noted that the CESG was working to accommodate the utilization of twelve meeting rooms for five days for the fall technical plenary meetings at ASI in Rome, Italy. Additional activities identified by N. Peccia included reviews of the Secretariat provided review item disposition (RID) and polling system requirements.

N. Peccia indicated that inputs for the CMC action on priorities for draft projects was still required from ESA and NASA. The CMC agreed to extend the deadline for the related CMC action item, CMC-A-2016-02-01, two weeks until 12 July 2016. Action updated and assigned to J. Afarin and N. Peccia.

## 6. Update on SANA Intellectual Property (IP) Question

J. Afarin provided an update on the Space Assigned Numbers Authority (SANA) and the ability to transfer the code associated with the SANA website. J. Afarin indicated that the current data is available publicly and that this can be provided by NASA to any new company. N. Peccia asked a question regarding the software, and if the software could also be transferred in addition to the data that currently populates the database. J. Afarin indicated that if any other nation is interested in picking up all of the code and the data they should make this request known to NASA and NASA will review the steps required to transfer the code and the data together. The CMC extended the action item due date for action item CMC-A-2016-05-02 to be completed by 5 July 2016, the action remains with J. Afarin to determine SANA's ability to transfer their code, and additionally adds the CMC members to respond if they are interested in taking over the SANA work.

## 7. [Update on coordination of future lunar missions \(IOAG Lunar-Mars coordination team - work statements\) \(Copy of IOAG LunarMars mission coordination data sheet 6-20-2016\)](#)

Wallace Tai provided an update on the coordination of future lunar/Mars mission's coordination from the IOAG. W. Tai discussed the IOAG work statements for the IOAG working group for coordinating future lunar/Mars missions and indicated that the purpose of the team is to identify any problems that must be solved regarding lunar/Mars coordination. Per W. Tai, the solution space will then be left up to the IOAG to decide and if there are standards

gaps to be resolved then those can be identified and assigned to the CCSDS from the IOAG via the CESG Chair. Operational issues were deemed to be above and beyond the current IOAG working group, and W. Tai indicated that they may be taken up by a future IOAG working group, but will not be addressed by the current IOAG WG.

J. Afarin asked what was required to complete the current coordination activity and W. Tai responded that another IOAG WG teleconference will be held at the end of the summer for the mission coordination team to come to its conclusions based upon the mission information that was collected. W. Tai noted that the cube-sats will raise interesting concerns and that a low cost way to deal with these missions, such that both the ground and space segments remain low cost, is yet to be fully understood.

W. Tai provided an overview of the lunar and Mars missions expected from each agency. J. Miro asked if there was any feedback to the CCSDS areas regarding standards that they should begin working on or looking into at this time. W. Tai indicated that the CCSDS already has most of the standards in place, and that the main item will be the high rate uplink coding that has not been standardized by CCSDS at this time. Additionally, W. Tai noted the need for DTN in terms of network layer internetworking at Mars. N. Peccia, in response to this comment, noted that DTN Network Management is a draft project in the CCSDS at this time, and W. Tai agreed, noting also that the book is not yet complete. The CMC members agreed that the IOAG, once it has identified the required standards, will respond to the CCSDS via the liaison. J. Miro asked if the IOAG working group looked at missions further out (beyond the 2020's) and W. Tai responded that they had not since the CMC request to the IOAG, per CMC-A-2016-11-13, was: "The CMC instructed the CCSDS liaison to the IOAG to propose a small working group within the IOAG to discuss and coordinate lunar and Mars missions in the early 2020s". A follow-up question from J. Miro was whether or not the IOAG working group would produce a report, and W. Tai responded that the IOAG chair will provide what is understood to be the problem as a presentation in September at the IOAG face to face meeting in Montreal, Canada.

## 8. Secretariat Report

### 8.1 Action Item Status (open items only)

D. Ross reviewed the currently open action items and provided status updates of currently open action items. The following action items were revised or closed:

- CMC-A-2016-02-02: Regarding priority inputs for draft CCSDS projects, the due date was revised to 12 July 2016 and assigned to N. Peccia and J. Afarin (see also note above in section 5.5).
- CMC-A-2016-04-01: Regarding the font size of the strategic plan upon printing. It was agreed that this action item would be closed per confirmation of the font size change completed by B. Oliver.
- CMC-A-2015-11-05: Regarding updating the code calculating ahead of schedule/behind schedule on the CCSDS CWE projects section. By request of the Secretariat and approved by the CMC, the deadline was extended until the fall 2016 CMC meeting.
- CMC-A-2016-05-08: Requesting the CESG to review current projects with significant delays, was closed by the CMC and a new action was opened for CMC members to review the comments provided by the CESG and to provide feedback to the Secretariat no later than the end of July.
- CMC-A-2016-05-10: Requesting the CESG to provide the best dates for the fall 2017 technical plenary meetings was closed by the CMC.

### 8.2 Status of IT projects

D. Ross provided an overview of the ongoing work being executed by the CCSDS web development staff to transition the public website from its currently expired software to an updated and more secure system.

### 8.3 Status of Documents

T. Gannett provided a current status of the documents in the editor's queue and fielded questions regarding specific document statuses. In particular, J.M. Soula requested more information DVB-S2 book and the PAIS books, and T. Gannett responded that he can prioritize books as required by the CMC members, and also indicated that the DVB-S2 green book is currently the highest priority green book in the editor's queue. T. Gannett indicated he will attempt to complete editing of the DVB-S2 and PAIS green books by the end of July. A question regarding the simple schedule format book was asked by N. Peccia and T. Gannett responded that this book is awaiting SANA URLs at this time.

## 9. Meeting Planning

**9.1 Fall 2016 Technical Plenary & CMC (ASI/Rome):**

No discussion was held, ASI was not present.

**9.2 Spring 2017 Tech Plenary (SwRI/USA – San Antonio, Texas, USA)**

J. Afarin indicated that the CCSDS is prepared for the technical plenary meetings to be held on 8 May 2017 through 12 May 2017 with the CMC to follow at a date to be determined in the future in Moscow, Russia.

**9.3 Spring 2017 CMC (Roscosmos/Moscow, Russia)**

A brief discussion of the CMC meeting in Russia was held amongst the CMC members with J. Afarin indicating that Roscosmos provided CCSDS an invitation to meet in Moscow, Russia at a date to be determined in the spring 2017.

**AI-CMC-A-2016-02 the CMC requests that the CCSDS Secretariat provide an updated excel list of all forthcoming meetings and include a column with the updated/detailed dates of the meetings on this spreadsheet. To be completed by 12 July 2016 (action now completed).**

**9.4 Fall 2017 Tech Plenary & CMC (ESA/Noordwijk)**

Discussed in section 5.2 above.

**9.5 Spring 2018 Tech Plenary & CMC (USA)**

J. Afarin provided information that NASA is currently looking into options for hosting the spring 2018 meeting in the United States.

The CMC held a brief discussion of the location for the spring 2018 CMC meeting, to be hosted by CNSA. One possible location for the spring 2018 CMC meeting in China that was briefed was Lianhu, China. CNSA also expressed interest in hosting the 2018 spring technical meetings. Further discussions will take place in Rome, Italy during the fall CMC meeting.

**9.6 Fall 2018 Tech Plenary & CMC (DLR)**

M. Pilgram provided information to the CMC regarding the fall 2018 technical plenary meeting and CMC, to be hosted by DLR. M. Pilgram indicated that the planned week of the technical plenary meetings will be on the 15 October 2018 and will constitute a similar schedule the arrangements of the Fall 2016 meetings in Rome, Italy (12 meeting rooms over 5 days plus 3 or 4 days for CMC and CESG meetings). The fall 2018 CCSDS technical plenary meeting is expected to begin on 15 October 2018 and to close on approximately 19 October 2018. The CESG and CMC meetings will follow on Monday 29 October 2018. The meeting location will be Berlin, Germany.

**AI-CMC-A-2016-01 the CMC requests that the CESG Chair, Nestor Peccia, review the expected dates for the fall 2018 CCSDS technical plenary and report to the CMC any expected conflicts that may occur by the provided dates. Estimated action completion date – 24 October 2016 (Fall CMC Meeting)**

**10. ISO TC 20 SC 13 Working Groups**

The CMC members held a brief discussion regarding the use of mirrored working groups in the International Standards Organization technical committee 20 sub-committee 13 that match the structure of the CCSDS Areas. E. Bergamini, chair of ISO TC 20 SC 13, pointed out that the working groups are not used and it was agreed by the CMC members that the ISO TC 20 SC 13 chair shall draft a letter, to be signed by the Subcommittee Secretary and Chair, to be addressed to the ISO general secretariat requesting that these working groups be removed at this time.

**11. Any other business**

The CMC briefly reviewed the forthcoming fall 2016 CMC meeting agenda and made some minor adjustments to that agenda.

**12. Adjourned**

The meeting was adjourned at 1020 Eastern Standard Time.