**CCSDS Engineering Steering Group (CESG)**

**Fall 2019 Meeting: Friday 25th October 2019, ESA/ESOC**

**Attendees: MdG, WT, MM, BB, PS, HT, SB, JW, XH, GPC, JM, EB, CH, TG, MG**

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| This Minute of Meeting contains information that was addressed/discussed in addition to the Presentations of the individual Areas.  Those presentations are available at :  **CESG--> CWE Private--> Meetings--> 2019 Fall Meeting Darmstadt.**  **CESG Discussion on SLS Area Issues** **from the past week**  SLS-OPT WG proposed a new project about adding the Generic Framing Procedure (GFP) to the Optical Communications Coding and Synchronization Layer for HPE scenario (published August 2019).  However, the Generic Framing Procedure entails matters affecting architecture stack, code & synch, protocols. The SLS Area agreed that OPT WG shall first coordinate with other WGs (SLS-C&S, SLS-SLP at least) in joint meetings.  GFP key features: variable length frames, frame from external sources.  Selections of codes for AOS/USLP fixed length frames uplink : no progress.  **CESG Discussion on SOIS Area Issues from the past week**  Agreement SOIS/MOIMS/SEA about finalization of Yellow Book 870.10y.  The (final) update will be done within few days by SOIS. This will then be reviewed by MOIMS. The book shall be completed by end-of-year.  The cases agreed to in this YB will serve as input to SEA’s ASL.  Issue: CCSDS host for a github.  SEDS infusion (Artemis/Gateway level 2): conceiving SEDS for existing standards interfaces.  Remark: ensure that proper “infusion points” are conceived for the next phase of Artemis/Gateway.  Joint meeting SM&C WG and SOIS 🡪 under "Status of actions since Spring Meeting”  **CESG Discussion on SIS Area Issues from the past week**  CFDP RIDs disposition completed. Interoperability test plan established . The Book will be published after completion of tests.  SANA registry item “CFDP Checksum Identifiers” remark (by MdG) : during the RIDs disposition discussion by the WG, the registration rule for new values of this registry item has been established: the SIS area is in charge of reviewing and approving such values. This implies prior verification/validation via (interoperability) testing on a representative set of files.  Resources for adoption of IETF BP V.7 – will be checked by AD, but presumably are available.    **CESG Discussion on CSS Area Issues from the past week**  Issue: Resources issue for the update of SLE Books: SLE-RCF and SLE-ROCF require update in order to support also USLP frames.  Issue: Definition of identifiers, aliases, etc, for “Sites” . These shall be available in SANA Registry, on the SS&A table (EB and CH please check this. PS agreed to support this).  TGFT submitted to Agency Review . To be addressed at Spring Meeting 2020: usage of TGTF by other services required by IOAG via ICPA (e.g. Off-line Radiometric Data) . It is assumed, that guidelines or tutorials may be required for the implementer(s) of those Recommendation(s). There shall be a joint session between the (candidate) WG and CSS.  The TN about Functional Resources model will be turned into a Magenta Book.  FR database creation and maintenance: resources issue. Proposal (MdG): can this activity be approximated to a Green Book project (which does not require Agency Review nor prototyping).  CESG Chair will (again) discuss with CMC.  Remark by MdG: (also outlined during other Areas’ reports): when a Recommendation goes to Agency Review, shall the complementary part of it in the SANA Registry also be reviewed? Obviously, the scope is not to review all elements/values of the SANA registries, but it is to assess the suitability of the approach/concept.  Actually, this is already the case: via the “SANA Consideration” chapter contained in each Recommendation, the required information is available to the reviewers. However, this requirement about the scope of the Agency Review shall be stressed in the Org&Proc book, in order to make it clear to the Reviewers.  To be addressed (e.g. at mid-term Telecon).  **CESG Discussion on MOIMS Area Issues from the past week**  The DAI WG proposed to reconfirm the following 3 documents  CCSDS 630.0-B-1 - Standard Formatted Data Units — Control Authority Procedures  CCSDS 631.0-G-2 - Standard Formatted Data Units — Control Authority Procedures Tutorial  CCSDS 632.0-B-1 - Standard Formatted Data Units — Control Authority Data Structure  However, CESG does not think it is good practice to keep alive outdated and innacurate documents (2 BBs and 1 GB). The following 2 options shall be considered by DAI: 1) Update the documents and convert the 2 BBs to MBs (streamlined approach, no prototyping needed); 2) Silverise the 3 books.  It is noted that silver books are still accessible via the CCSDS website. This implies that legacy users of CAO will still be able to access the silver documents. The stated SEA concern is that these documents do not align with the RMP, which has been published since 2016. Since the RMP adopted much of the registry structure that 632.0-B-1 defined, bringing them into alignment should not be a huge effort.  Action MM: The resolution shall be put on hold. DAI WG to consider the options, take a decision, and inform CESG.  SM&C WG and SOIS: reviewed the interaction boundaries between SOIS and MO services on-board. (more under "Status of actions since Spring Meeting”).  Agreed on prototyping use-cases. Two cases of mapping were defined. It was noted that this prototyping effort requires significant resources and that it is not required in support of a standard, just of this Yellow Book. Not a normal practice of CCSDS.  **CESG Discussion on SEA Area Issues from the past week**  Only AR (Agency Representatives) can request modifications to the content of the SS&A. Presently, this will get done by having the AR send the relevant info, in spreadsheet form, to the SANA operator.  Later, the Agency Representative(s) in charge of maintaining the entries in the SS&A will be given write-access to their information in the SS&A registry via a web interface.  Action PS: provide list of CWE users allowed to access the SSA. This needs to be submitted to CMC for approval.  There was a discussion of the current issues with document processing and notifications when documents contained registries. We have a situation where some registries are not created prior to request for document publication, and where others are created, but left incomplete or in some “limbo” where they are forever in “provisional” status. There are workflow issues between the WG, the SANA, the CESG review, and Secretariat processing and notifications.  Agreed that the Org & Proc book (CCSDS A02.1-Y-4), the SANA Org & Proc book (CCSDS 313.0-Y-1), and the WG Procedures for SANA Registry Specification (CCSDS 313.2-Y-1) are all to be updated to clarify the WG, SANA, and Secretariat procedures for SANA registry creation, description, and management. Further, the Org & Proc book will be updated to clarify the process for verification of the subset of new registries that require interoperability testing.  There was also a discussion of adding a notification process to certain SANA registries so that an extensible list of people could get notified when certain registries, such as the SS&A registry, get updated.  Discussion about Glossary issues and also the interest expressed by TC20/SC14 and ECSS in collaborating on / building on the CCSDS Glossary. A Liaison Agreement in in draft for SC14, no such draft exists for ECSS.  Delta-DOR: the WG does not have a Deputy Chair to-date. ESA proposes a candidate, who is already member of the WG.  SEA AD (PS) shall issue a request (via Secretariat) to the Agencies to submit candidates . | **AI/F19-1 MM**  **AI/F19-2 PS**  **AI/F19-3 PS/CESG All**  **AI/F19-4 PS** |
| **Status of actions since Spring Meeting**:   * **AI/S19-1 JW :** JW to produce a short presentation to introduce the notion of MIB, data formats (template) , commonality and possible relationship to other Areas. * **Status:** Not much progress since the CESG Telecon. Some discussion took place during the Technical Meeting. This action is closed, but a new AI is issued: * New **AI** J.Wilmot: to call a Telecon involving SOIS, SIS, CSS to assess data representation aspects (e.g. MIB) in different CCSDS domains and brainstorm about commonalities. Outcome to be presented at CESG Mid-term Telecon. * **AI/S19-6 PS** : PS to assess the comments to the SOIS & MOIMS Yellow Book, CCSDS 870.10y1, provided by the MOIMS Area, and to update the Yellow Book in the light of the 3 Cases and the current understanding about SOIS and S/C real-time environments.   **Status:** progress as per SOIS Area Report. Action is **closed**   * **AI/S19-7 PS/MM/JW** : Organize/schedule a telecom focused on sorting out outstanding issues (if any) and come up with an agreed concept that will be documented in the final 870.10y1 Yellow Book.   **Status:** progress as per SOIS Area Report. Action is **closed**   * **AI/S19-8 MM/JW**: Develop one example of mapping/interfacing of one MO service to one on-board service. JW to propose one on-board SOIS service ( e.g one instrument on a subnet, described by EDS’s) , MOIMS and SOIS to develop the relevant mapping example**.**   **Status:** during joint MOIMS/SOIS session examples to demonstrate mappings/interfacing were agreed (JW, DS) . Also, the mapping/interfacing of MO service(s) to the on-board RT service(s), according to the three architectural scenarios identified at Spring Meeting, were outlined via diagrams.  The mapping exercise and the prototyping will continue on that basis. Resources are an issue for this unusual, out of the norm, request to build a prototype for something that is not a Blue Book standard.  Action is **on-going**.   * **AI/S19-2 MM (DAI): DAI WG** to find out and list the Control Authority offices that are still active and functioning.   **Status:** progress as per MOIMs Area Report. Action is **closed** | **AI/F19-5 JW**  **AI/S19-8 MM/JW** |
| **Presentation about GitHub approach within CSS**  GitHub: Platform for collaboration and version control.  A CCDSS Github repository would be a valuable working platform. The following issues need to be addressed: where to make it visible /accessible, would it be used only to host a CCSDS-owned repository, or for other related purposes, e.g. Functional Resources , xml schemas, software. .  CSS developed a GitHub repository with an individual account type.  Other Areas have also established their own repository, via Agency-owned accounts:  MOIMS 🡪 owned by ESA  SOIS🡪 owned by NASA  SIS uses a different repository than GITHUB  Private vs public approach – and costs implications.  There was some discussion regarding, e.g. should we adopt and pay for a CCSDS github instances? Do we require it? Do we allow/support use of other CM services? How do we point to GITHUB (assuming we adopt it) and how do we point to other CM repositories?  Are some Guidelines required on the use of Github?  This topic will be further discussed at CMC Meeting. |  |
| **RID Template – presentation by C.Haddow**  The MS/Access-based tool developed by C.Haddow has been presented, and then followed by extensive discussion. This has an issue in that it is PC-only, not available on Mac and Linux systems.  The motivation: to make review of all RIDs easier there should be a unified exchange format in order to provide the Review coordinator with a uniform RIDs format.  Presently, each Agency produces the RIDs in its own format. This is ok as long as this can be turned into a unified exchange format. E.g. both some TBS xml format and an Excel format were proposed.  AI : CH to distribute the link to the RID tool package.  However, for the SLS Area, also this approach, like previous ones, does not seem suitable, due to the nature of their RIDs . In fact, the RID to their documents may contain graphs, or diagrams, or the like . These kinds of artifacts could be handled by appending a separate file to some standard template that works for all other inputs.  The discussion did not bring to any conclusion yet.  All Areas Directors: assess the suitability of the tool. By Mid-term Telecon. | **AI/F19- 6 CH**  **AI/F19-7 CESG All** |