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| **CSSM S24 Mtg Summary** | **April 29 – May 03, 2024, Washington, DC, USA** |
|  | **1. CDE Publication Check** |  | Conclusion: minor updates needed and will be ready to issue TC. |
|  |  | Items to address |  |
|  |  |  | a. Need to trim note on planningInfoType (Table 3-7). Just state only the extensibility, but do not name. Rationale: allow flexibility in Green Book/Concept to identify future types without introducing inconsistencies in CDE. |
|  |  |  | b. Update ModResParm in line with FRIN "resolution" (see item 9c) |
|  |  |  | c. Table 3-12, description fields all read "Line 0" (vs. Line 1 and Line 2) |
|  |  |  | d. VLBI as service type -- table 3-25 -- not sure if we will ever have VLBI service requests (and of course this applies to SSF too);needs further checking; agreed to leave as is for now |
|  |  |  | e. Double check navigation schema references (B2.1) |
|  |  |  | f. Need to get GitHub reference included |
|  | **2. SMURF Prototype Review** |  | Conclusion: Very minor updates to apply; test report in good shape. |
|  |  | Findings |  |  |
|  |  |  | a. Unused time for arbitrary aperture location is not supported (add a note to indicate this) (aka antenna free time) |
|  |  |  | b. Handover to single aperture -- is not quite supported -- but there can be a use case for long RTLT cases likes voyager (SMU-P3-6) |
|  |  |  | c. Conclusion: test report is sufficiently complete to support publication polling |
|  | 3**. SPDF Prototyping** |  |  | Conclusion: Change to Orange book and publish |
|  |  | a. Not complete |  |
|  |  | b. Unlikely to be completed in timely manner; no ESA funds available to complete |
|  |  | c. Readout on testing progress: -- progress appears to have stopped as March 18; about 50% complete |
|  |  |  | i. Need to check with \_C. Haddow to get best readout |
|  |  | d. Sufficient prototyping done by DLR to put SPDF on orange book track |
|  |  | e. Agreed to ask for CESG vote at CESG meeting for orange book track |
|  | **4. SACP -- Configuration profile**  |  |
|  |  | Current agency examples | Conclusion: Can make more user friendly; more parameters likely. |
|  |  |  | [AI]: W. Eddy to provide summary from big documentation already submitted |
|  |  |  | Walk through of DSN (XML) configuration profile example: |
|  |  |  |  | i. Applicability time to be handled via mission phases in service agreement |
|  |  |  |  | ii. Discussion on identifying antennas onboard of the spacecraft -- we should try to accommodate this (it helps user understand definition of configuration profile from their (spacecraft’s) perspective |
|  |  |  |  | iii. Discussed various minimum-time needed parameters and hand over allowed type parameters -- to some extent covered by the SMURF |
|  |  |  |  |  | 1)Will need to keep this in mind developing SACP |
|  |  |  |  | Agreed that there are likely lots more parameters to capture (loop bandwidth? We also need to review the FRM carefully  |
|  | **5. SACP -- Svc Agreement Parameters** | Conclusion: No significant change from March 2024 version |
|  |  | Walked through the presentation from March (no changes/updates). Noted that Storage service agreement parameters there could be some considerations if utilizing cloud computing |
|  |  | Noted that for Service latency there could be some considerations of utilizing cloud computing |
|  | **6. Developer's Forum Teleconference** |  |
|  |  | Many goals not fully met |  |
|  |  | Presentation from P. Crump/GES  |
|  |  |  | a. Desire for zero-latency in response to requests noted (cf. latency re file exchange) |
|  |  |  | b. Plans to have SPDF implemented within the next 12 months |
|  |  |  | c. JSON is more palatable to customers  |
|  |  |  |  | i. Goonhilly to put in a XSLT (XML --> JSON) in GitHub |
|  |  | M. Unal inputs: |
|  |  |  | a) Distinction between timeliness needed for near-earth and cislunar vs deep space |
|  |  |  | b) With ReST API how are unilateral changes communicated (provider --> client) |
|  |  |  | c) Cybersecurity vs ReST –concerned that different agency-specific approach are being pursued |
|  |  |  |  | a) Approach is to engage the SE Security WG to help with recommended common approach |
|  |  |  |  |
|  | **7. SMASH** |  |  | Conclusions: Address ReST and FTP; put on orange book track |
|  |  | a. FTP vs ReST API |  |  |
|  |  |  | i. See revised outline and considerations in Figure 1 below |
|  |  |  | ii. Leverage TGFT for file transfer interface |
|  |  |  | iii. Include state machine in the SMASH |
|  |  | b. As orange book – justification: allow for more co-implementation and co-development |
|  |  |  | i. Maybe make use of industry standards for API definition such that a commercial partner could help iterate in a GitHub repository |
|  |  | [AI]: H. Kelliher -- produce draft outline for SMASH book; due at the time of the London meetings |
|  | **8. SSF 5-year refresh** |  | Conclusion: Agreed that translation approach developed by C. Haddow is good; follow up as implementing in CDE pending |
|  |  | a. Made some minor comments to SSF disposition spreadsheet (see 240501-SSF-5Y-Refresh-Items.xlsx) |
|  |  | b. We agree that Colin's name translation approach is okay |
|  |  |  | Given that this could also be in service agreement, should we consider this going into the CDE? -- need to talk with \_C. Haddow about this |
|  | **9. SACP UML/XML Schema review** | Conclusion: Generation of schema from UML seems to be working well |
|  |  | a. UML model currently in a branch in gitHub |
|  |  | b. Appears that ability to convert from UML --> XML Schema has been more or less achieved |
|  |  | c. Need to square a definition of FRIN re FRM vs CSSM -- mini-oid vs simple integer [done] |
|  |  | d. Auto-generated schemas are showing up in a separate repository |
|  |  |  | i. There is a configuration profile for setting up the auto generation |
|  |  |  | ii. Overall effort does not yet include generation of the UML from the FRM |
|  |  | Bottom line here -- C. Haddow has done some very good work |
|  | **10. SACP book review** |  | Conclusion:  |
|  |  | Reviewed draft book developed to date |
|  |  | Discussion -- FRM gating definition of parameters for SACP will need a good, coherent area-wide control of the FRM |
|  |  | [AI]: M. Gnat, C. Haddow: As soon as FRIN clarified and UML diagrams clarified, provide SACP schemas to the WG |
|  | **11. Joint Session with SIS-DTN WG** |  |
|  |  | Presented CSS Area Standards likely to be of most interest/use in support DTN  |
|  |  | Requested that SIS DTN take a look the standards presented |
|  |  |  | Noted that SSF already has ability add additional metadata -- maybe no need to add anything for DTN support, but could be added if DTN WG has a strong “need” |
|  |  |  | Also requested if operational scenarios could be identified |
|  |  |  | Noted that FF-CSTS can be useful for multiplexing DTN and non-DTN traffic slong with closing re-transmission protocols (eg., CFDP Class 2, LTP) directly  |
|  |  |  | Some discussion on use of YANG models and their production from the FRM – SIS-DTN WG would like to investigate (will have to be AD discussion to see what happens further) |
|  | **12. Plenary Session** |  |  |  |
|  |  | a. Created CCSDS-FRM organization GitHub account (please see [CCSDS-FRM · GitHub](https://github.com/ccsds-frm))  |
|  |  | b. FRINs |  |  |  |
|  |  |  | i. Agreed that for service management, we "globally" assign FRINs -- not "sub-FRINs" ? (ie. “1”, “2”, etc., not “1.1”, “2.3.1”, etc.) |
|  |  |  | ii. configuration of MD-CSTS service instance itself also needs to be in the FRM (presumably a mission could configure the monitor data that they want to see – in practice, it might get fixed at the level of a service catalog) |
|  |  |  | iii. Similar considerations applies to SC-CSTS |
|  |  | c. Configuration level |  |
|  |  |  | i. Tooling is now available in a public repository |
|  |  |  | https://github.com/esa/ccsds-css-frm-editor |
|  |  |  | ii. [AI]: E. Barkley, M. Gnat by the time of London meetings -- can we get configuration levels defined for the FRM parameters that need to be surfaced in a managed service context and suppress those that do not make sense in a managed service context |
|  |  |  | iii. [AI]: Send H. Dreihahn a copy of the referential framework diagram |
|  | 13**. DDOR WG/CSSM WG joint session** | Conclusion: Good discussion – further exchange at London meetings |
|  |  | a. C. Volk walks through the DDOR service request (from DDOR WG) |
|  |  | b. DDOR WG agrees to send XML samples and descriptions to CSSM WG |
|  |  | c. CSSM WG will look at inputs from DDOR WG and check for fitting into CSSM standards and also look at update the FRM with DDOR information/resources (by London meeting) [AI] |
|  | **14. Concept Book Overhaul** |  | Conclusion – agreed on revised outline and subsequent actions |
|  |  | a. Agreed to have a simplified referential framework diagram -- in management service section |
|  |  | b. Action: E. Barkley -- generate simplified referential framework diagram |
|  |  | c. Created Green-2 folder on CWE (has revised outline) |
|  |  | d. Action: M. Gnat -- perform initial edit on green book to bring into conformance with new outline and eliminate "superfluous" sections and handover to \_H. Kelliher by time CSSM 2 telecon, (July 2) |
|  |  | e. Action: H. Keliher --- generate draft next version of the concept book by London Meetings |
|  |  |  | i. Note -- SMASH takes priority (in case of resource conflict) |
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Figure 1 SMASH Outline and Considerations