| **Page** | **Section** | **Line** | **Type** | **Comment/ Rationale** | **Source of Comment (Name/Agency)** | **Suggested Disposition** | **Disposition****(Completed by Principal Editor)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1-3 | 1.4 |  | ed | Since many of the definitions are adopted from references, it seems to me it would be better for the reference section to appear before the definitions. | David S. Berry / NASA | Consider | Rejected. We will use the standard CCSDS ordering. |
| 1-6 | 1.4.6 |  | te | "registration procedures": This term is defined, but never used in the document. There are 3 instances of "registration process" in the document but it is not defined in 1.4. There are 16 instances of "registration rule". | David S. Berry / NASA | Consider changing "registration process" in the document to "registration procedure", or change the term defined to "registration process". Alternatively, it is unclear how "registration process" and "registration procedure" differ from "registration rules". Might consider changing "process" to "rules" and eliminating the definition of "registration procedure". | Accept with mods: Change references to “registration process” to refer to “registration procedure”. Change “registration policy” to refer to “registration rules”.  |
| 1-7 | 1.4.8 |  | te | "Owned by CESG": Seems like the CESG could delegate things to any applicable CCSDS sub-entity: area, WG, or Expert Group. Why restrict the power to delegate only to an Expert Group? | David S. Berry / NASA | Consider changing "... update responsibility to a CCSDS Expert Group" to "...update responsibility to any applicable CCSDS organizational entity that reports to the CESG" | Accept, with mods. Change “Expert Group” to “Expert Group or other applicable organizational entity” |
| 2-1 | 2.1 | para 1, line 4 | te | Many of the things registered in SANA are names and data, not merely protocol numbers. In fact, most of the registries discussed in this document (enterprise and global) are names and data. | David S. Berry / NASA | From: "... key protocol numbering assignments"To: "... key data, naming, and numbering assignments" | Reject. This is correct as stated. The following clauses in the document describe these others kinds of registries. |
| 2-1 | 2.1 | para 2, line 3 |  | Mentions the ability to access the registries via programmatic interfaces, but provides no reference that explains how to do this. | David S. Berry / NASA | Add a reference that describes the programmatic interfaces. | Accepted. Add Reference [20] RFC 7230 (Hypertext Transfer Protocol (HTTP/1.1): Message Syntax and Routing) to references . Change in 3.4.2.1.14 “HTTP/REST query interface” to “HTTP/REST style query interface using the GET method” . |
| 2-2 | 2.3 | para 3, line 6 | te | The registries on the SANA don't appear to have uniform metadata. In particular, some have "Registration Policy" and "Review Authority", but not all have this info. The cited line refers to "registration rule" (which seems to be synonymous with "registration policy" and "Registration Authority" which seems to be synonymous with "review authority". | David S. Berry / NASA | Given the attention paid to definitions in Section 1.4, the document should be consistent with what is shown in the registry metadata. And it would seem that the SANA Operator should ensure that the registries have consistent metadata. | Accepted, no new change. See disposition for item on pg 1-6 re rule vs policy. Registration authority (SANA) and review authority (for a registry) are two different roles. |
| 2-9 | 2.8 | para 3, line 1 | te | States that registries are grouped by category, but they are not presently so organized. | David S. Berry / NASA | Perhaps this will be done once the document is approved for publication? | Accept. The SANA website should be altered to show these groupings. |
| 3-3 | 3.3.1.1.8 | 1 | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. Related to disposition for KS-3. it is included here as part of the overall RMP policy and procedure because leaving it out would miss an essential step in this document. Several of the requirements in this section are succinctly re-stated requirements that are presented in the CCSDS Org & Proc in a prose form. |
| 3-3 | 3.3.1.1.12 | 1 | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-3 | 3.3.1.1.13 | 1 | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-3 | 3.3.1.1.14 | 1 | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-4 | 3.3.1.2.4 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-4 | 3.3.1.2.5 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-4 | 3.3.1.2.6 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-4 | 3.3.1.2.12 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-5, 3-6 | 3.3.1.3.11 | (n), (s) | te | Given (n), the list entry (s) seems superfluous. | David S. Berry / NASA | Consider shortening the list. | Reject. The PoC for some purposes may be other than the WG chair, deputy, or co-chair. |
| 3-6 | 3.3.1.3.12 | (c), (d) | te | There is not a 1-1 mapping between service providers and service users, but there should be. | David S. Berry / NASA | Add "flight dynamics, and D-DOR data" to the list of service users. | Accepted. |
| 3-6 | 3.3.1.3.12 | (c) | ed | There is an extra comma at the end of the list. | David S. Berry / NASA | From: "D-DOR data," To: "D-DOR data" (remove comma from end) | See previous. |
| 3-7 | 3.3.1.4.9,3.3.1.4.12 |  | te | The requirement 3.3.1.4.9 seems to seriously limit the nature of the roles that can be assigned to an AR. | David S. Berry / NASA | Consider whether the 3.3.1.4.9 requirement is too restrictive. | Rejected. The HoD is the only one allowed to change the Org info or to assign ARs. The ARs may be delegated many other Roles. See 3.3.1.4.12. |
| 3-7 | 3.3.1.5.4 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-7 | 3.3.1.5.5 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-7 | 3.3.1.5.5 | 1 | te | If this requirement remains in the document, then I believe there is an ambiguity in the requirement. There can only be one Member Agency per country, but I don't think there's any such restriction on Observer Agencies... we already have a few instances of multiple Observer Agencies from a single country. | David S. Berry / NASA | From: "... sponsored by the CCSDS Agency..."To: "... sponsored by a CCSDS Agency..." | Accepted. Change “the” to “a” |
| 3-7 | 3.3.1.5.6 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-7 | 3.3.1.5.7 |  | te | This "requirement" seems out of place in this document. It would seem to be more appropriate for Reference [4].  | David S. Berry / NASA | I think this requirement should be deleted, and if it's not already stated in Reference [4], added there. | Rejected. See disposition for 3.3.1.1.8. |
| 3-8 | 3.3.1.6.9,3.3.1.6.12 |  | te | The requirement 3.3.1.6.9 seems to seriously limit the nature of the roles that can be assigned to an AR. | David S. Berry / NASA | Consider whether the 3.3.1.6.9 requirement is too restrictive. | Rejected. See disposition for 3.3.1.4.9. |
| 3-9 | 3.3.1.7.6 | 1 | ed | Typo. The document refers to a "Roles Registry", but this requirement refers to a "Role Registry". | David S. Berry / NASA | From: "Role Registry"To: "Roles Registry" | Accepted. |
| 3-10 | 3.3.2.1.9 |  | ed/te | Refers to types of SCIDs, but those types are not discussed anywhere, nor is a reference provided. The "Spacecraft Identifiers" registry doesn't contain a column called "Type". | David S. Berry / NASA | Provide a reference to where the types of SCIDs are identified. | Accepted. Add a reference to CCSDS 320x0m [7]. Change “type” to “version” |
| 3-10 | 3.3.2.2.8 |  | te | It seems like the reference [C1] should be a normative reference since it's a Blue Book | David S. Berry / NASA | Move to normative references section 1.5 | Accepted. Make reference C1 one of the normative references. |
| 3-11 | 3.3.2.2.13 |  | ed | Refers to "The AR", but there could be more than one per 3.3.1.4.10 and 3.3.1.6.10 | David S. Berry / NASA | From: "The AR ..."To: "An AR ..." | Accepted. Change “The” to “An” |
| 3-12 | 3.3.2.4.6 |  | ed | Refers to a "Service Provider site" (1 usage in document), but the general usage in the document is "service site" (45 usages). | David S. Berry / NASA | From: "Service Provider site"To: "service site" | Accepted. Related change to 3.3.2.3.7 & 8. See also 3.3.2.4.22. Use “service site” consistently. |
| Many | Many |  | ed | The capitalization of "service site" is inconsistent in the document. Mostly "Service Site", sometimes "service site", once "Service site". | David S. Berry / NASA | Consider case consistent usage. | Accepted. Except for when it is used in the title “Service Site & Aperture database” change all other references to lower case. |
| 3-13 | 3.3.2.4.13 |  | te | Refers to a "location for a service site may be fixed", but even on Earth the sites are not truly fixed (see Section III of http://ipnpr.jpl.nasa.gov/progress\_report/42-128/128F.pdf). Regardless of whether the service site is fixed, mobile, or in motion, its position can be defined by coordinates, so adding that doesn't really add anything. For generating tracking data for the purpose of navigation, it's essential to have the coordinates of the tracking station position. | David S. Berry / NASA | From: "...fixed, e.g., on Earth or some other planetary body defined by coordinates, mobile, or..."To: "...fixed on a planetary body, mobile, or ..." | Accepted with mods. Change “fixed, e.g., on Earth or some other planetary body defined by coordinates” to “fixed, e.g., defined by coordinates on Earth or some other planetary body”  |
| 3-17 | 3.4.4.7,3.4.4.8 |  | te | These 2 requirements provide the potential for conflict... "sufficiently broad" in 3.4.4.7 might create ambiguity that doesn't meet the intent of 3.4.4.8. | David S. Berry / NASA | Consider if there is a conflict. How will conflicts be resolved? | Rejected. Clause 3.4.4.13 deals with conflict resolution. |
| 3-17 | 3.4.4.12 |  | ed/te | Uses "i.e." before a list of authoritative technical and standards development organizations that is probably not intended to be exhaustive. | David S. Berry / NASA | From: "i.e."To: "e.g." | Accepted. |
| 3-19 | 3.4.6.10 |  | te | States that "All XML schema shall utilize terms that are defined in the CCSDS Terminology Registry", but the term "term" is itself ambiguous... is an XML tag in a schema a "term"? If so, does this mean that every tag in every CCSDS XML schema must be defined in the Terminology Registry? This sounds like a nearly impossible task.  | David S. Berry / NASA | Consider the ramifications of this requirement as written. | Accepted with mods. In 3.4.6.11 change “new” to “significant, new”. Move 3.4.6.11 before 3.4.6.10, as amended. See also disposition of MM-2. |
| 3-19 | 3.4.6.11 |  | te | See above comment... applies for 3.4.6.11 too. | David S. Berry / NASA | Consider the ramifications of this requirement as written. | See mods to 3.4.6.11 described in disposition of 3.4.6.10. |
| 3-20 | 3.4.7.11 |  | ed/te | This requirement implies the need for a "SANA Registry Boot Camp" in addition to the current Editor's Boot Camp. In order to realize this requirement, I think a lot of training will be required. I think the SSG will be very busy during CCSDS meeting weeks meeting with Working Groups. What about existing standards... will they all have to be retrofitted? | David S. Berry / NASA | Consider the ramifications of this requirement as written. | Accepted, with mods. Add new clauses after 3.4.7.11. Insert 3.4.7.12 All existing CCSDS Standards, when they are revised, requiring a new OID (sub-)type in the OID Registry shall document it in a and review it with the SSG. 3.4.7.13 All existing CCSDS Standards requiring references to existing OIDs shall be updated when they are reviewed,  |
| 4-1 | 4.1 | para2, line 2 | te | It seems like the Expert Group organizational construct should be defined in Reference [4], not [5]. | David S. Berry / NASA | Define Expert Groups in Reference [4] | Rejected. Related to disposition for KS-3. it is included in [5] as part of the overall SANA policy and procedure because [4] tends to use prose language rather than “shall” / “should” requirements language. |
| 4-1, 4-2 | 4.2.2 |  | te | Membership of SSG seems unnecessarily restricted, given all the requirements in this document. | David S. Berry / NASA | Expand the membership of the SSG to include a representative from EACH CCSDS Area, not just 3 of them. | Accepted. This was historical. |
| 4-2 | 4.2.3 |  | te | It seems like the Expert Group organizational construct should be defined in Reference [4], not [6]. | David S. Berry / NASA | Define Expert Groups in Reference [4] | Rejected. Related to disposition for KS-3. it is included in [6] as part of the overall XML policy and procedure because [4] tends to use a prose approach rather than “shall” / “should” requirements language. |
| A-1 |  | para 4, line 3 | ed/te | Refers to plans for an ITU doc in 2014, which is now over a year in the past. | David S. Berry / NASA | Update the text to reflect current plans, or the publication of the document after 2014. | Accepted. Change “is planned for 2014” to “was published in 2011” |
| B-2 | Table B-1 |  | ed | Organization Point of Contact: Rules for "Valid Person name" should be provided; there currently are none. The current "Contacts" registry will sort all the "Dr."s together, then all the "Mr."s, etc. The names are in the format title/first/last, but really should be organized by last name, with title included in a different column if necessary. | David S. Berry / NASA | Publish rules defining a "Valid Person name", and update the current registry to reflect them. May need to put titles in a different column. | Accepted, with mods.Change Note in Person Name field of Table B2 (Contacts) to say “Field should be composed of sub-fields for last name, first name, middle name, and title.” |
| B-3 | Table B-1 |  | te | "URL Character (64)": I don't think this length is sufficient. Just for example, the CCSDS CWE URL for the MOIMS-Nav folder takes 142 characters. | David S. Berry / NASA | Extend URL length, perhaps to 256 characters. | Accepted. |
| B-3 | Table B-1 |  | te | "Note Char (64)" may not be enough for useful notes. Also inconsistent usage "Char" and "Character". There are 8 instances of "Character" in this table, but only one of "Char". | David S. Berry / NASA | Consider extending length of the field. Be consistent with "Char" and "Character".  | Accepted. Change Char (64) TO Character (256). |
| B-5 | Table B-2 |  | ed | Person Name: Rules for "Valid Person name" should be provided; there currently are none. The current "Contacts" registry will sort all the "Dr."s together, then all the "Mr."s, etc. The names are in the format title/first/last, but really should be organized by last name, with title included in a different column if necessary. | David S. Berry / NASA | Publish rules defining a "Valid Person name", and update the current registry to reflect them. May need to put titles in a different column. | Accepted. See related issue for Table B-1 |
| B-5 | Table B-2 |  | te | "Note Char (64)" may not be enough for useful notes. Also inconsistent usage "Char" and "Character". There are 9 instances of "Character" in this table, but only one of "Char". | David S. Berry / NASA | Consider extending length of the field. Be consistent with "Char" and "Character" | Accepted. Change Char (64) TO Character (256). |
| B-8 | Table B-3 |  | te | GSCID = VN + SCID: What is "VN"?... Vehicle Number? Version No.? | David S. Berry / NASA | If "VN" = "Version No.", add "(VN)" on the "Version No." line. | Accepted. Change “Version No.” to Version No. (VN)” |
| B-8 | Table B-3 |  | te | Transmitting Frequency: KHz, MHz, GHz are not the "Data Range".  | David S. Berry / NASA | Move the current "Data Range" entry to "Notes". If the actual frequency is required, then KHz, MHz, GHz is not necessary. If the exact frequency is not required, then the units (KHz, MHz, GHz) should be provided. | Accepted. Change “KHz, MHz, or GHz” to “Actual frequency in KHz, MHz, or GHz” |
| B-8 | Table B-3 |  | te | "Note Char (64)" may not be enough for useful notes. Also inconsistent usage "Char" and "Character". There are 7 instances of "Character" in this table, but only one of "Char". | David S. Berry / NASA | Consider extending length of the field. Be consistent with "Char" and "Character" | Accepted. Change Char (64) TO Character (256). |
| B-9 | B4 | para 3 | te | There are a number of references to "fixed facilities" in this section; the intent should probably be defined somewhere since they are not actually fixed on any planet that experiences tectonic forces. | David S. Berry / NASA | Add definition of what is meant by "fixed facility". | Accepted. Insert this text: In the following clauses the term “fixed facility” refers to a site attached to the Earth or some other planetary body whose position is defined by coordinates. Driven by tectonic or other forces these positions may actually change over time, and this requires calibration. |
| C-1 | Annex C |  | te | There are several references in normative statements in the document to the documents listed in this annex.  | David S. Berry / NASA | Move all but [C2] into section 1.5 | Accepted. CCSDS Tech Writer is to resolve this dis-connect. |
| General | General |  |  | There are many, many acronyms in this document, but no Annex that lists them. | David S. Berry / NASA | Add an acronyms/abbreviations annex. | Accepted. |