Please provide the WG position on the following CESG action   
  
DAI : the three books that were requested by CESG to be updated, in order to include the SANA-related aspects of Control Authority registries, are now proposed by the WG to be reconfirmed as–is, due to the lack of resources

Action: DAI WG to find out and list the Control Authority offices that are active and functioning. DAI WG to consider the fact that these CA registries were used as the source format for the RMP ( due date: by Fall Meeting).

Response:

1. Only the NSSDC Control Authority Offices (CAOs) (IMACAO D: NSSD) is active and assigning new ADIDs
   1. However, there are significant amounts of archived legacy data that contain ADIDs (particularly SFDU data, but also could be some XFDU data)
   2. The top-level CCSDS CAO (MACAO ID: CCSD) is also technically active, but ADIDs for which it is responsible are assigned via definition of those ADIDs in CCSDS Publications.
   3. The top-level CNES CAO (MACAO ID: FCST) is also technically active, but ADIDs for which it is responsible are assigned via definition of those ADIDs in CCSDS 646.0-G-1 – The Data Description Language EAST – List of Conventions.
   4. There is also an option to (temporarily) locally assign CAOs (MACAO ID: starts with Z) and associated ADIDs without reporting into the hierarchical CAO System.
2. Although SANA may desire to set up an Organization registry and a Contracts registry for other purposes, DAI’s CAO System should not be used to justify them.
   1. We believe intention of those SANA registries is to maintain current information.
   2. Information captured in CAO system registrations of ADID (IDs for registered data format descriptions) is, in OAIS terms, Provenance Information. In this case the Provenance is historical event metadata recording who registered the data format description and their associated contact information at that time.
      1. SANA registries are not intended to maintain this historical information.
      2. Even if SANA did provide historical information, there is no linking mechanism for outside access to that information and ability to link to it.
      3. Even if those SANA functions are added, it does not operationally make sense that these independent locally administered CAOs would need to make multiple accesses into the SANA system (which may or may not be automated) before they can store a record in their own system.
3. DAI WG suggests that the CAO Publications simply be reconfirmed.
   1. Technically the only required update in DAI WG’s opinion would be an update to point to SANA rather than WDC A-R&S as the CA Agent. (i.e. top CAO in the CAO hierarchy)

From: The World Data Center A for Rockets and Satellites (WDC-A-R&S) is serving as the CA Agent.

To: The CCSDS Space Assigned Numbers Authority (SANA) serves as the CA Agent.

* 1. If needed, CCSDS should allow just an AMD to be filed against the CAO policy document.
  2. No volunteers or funding is available to create even a single prototype required by CCSDS procedures for updated Blue Books.

1. In DAI WG’s opinion, there seems to be a push to turn their CAOs into something they are not currently and were not intended to be.
   1. CAOs are set up specifically to track format descriptions
   2. CAO is not trying to maintain current lists of contacts or orgs.
   3. CAO is simply adding event metadata (the person and their then current organization and current contact information) to a format description document registration.
   4. It is problematic to require each outside organizations and each contact to take time to register with SANA (an organization they have no other relationship to, remember they may not even have a relationship to CCSDS or any Space Agency)
   5. In addition, when we’ve discussed issues of potentially having thousands of organization or contacts from outside the Space Agencies make use of SANA and we have been led to understand that SANA does not have and will not be provided funding to support such use.
   6. We fully understand and support creation of the SANA Organization registry and the SANA contacts registries, but they are not appropriate for the CAO function.
   7. SANA registries are not intended to be long-term preservation registries.
      1. If we are incorrect on this point, perhaps CCSDS would be interested in seeking third -party ISO certification of their repositories as Trustworthy Digital Repositories according to the DAI WG standards. We can put you in touch with organizations accredited by ISO to perform such certifications.

Control Authority Hierarchy and Status of individual Control Authority Offices (CAOs)

DAI personnel have attempted to recollect the important aspects of the Member Agency Control Authority Office (MACAO or CAO) hierarchy. We could attempt to dig out more details from personal records if needed.

This information was turned over to SANA, but we did not find an easily accessed list there.

Control Authority hierarchy

CCSD CCSDS Secrectariat

DAI WG assigns ADIDs to data formats that are defined within

CCSDS Standards created by the DAI WG

EESA ESA Primary CAO

ESA’s multi-mission archive made use of CAOs to assign ADIDs

We understand that the ESA CAOs are no longer active

(Additional information may be available from Mario or Nestor)

EXMM ESA XMM Project

ECLU ESA Cluster Project

E??? ESA (additional) Projects (about a half dozen CAOs)

FCST CNES Primary CAO

CNES had a CAOs to assign ADIDs for use with EAST

Used to register ADIDs used with EAST (BEST) software

EAST associated ADIDs are defined in CCSDS 646.0-G-1

We understand that the CNES BEST software is still in use

NASA NASA Primary CAO

NASA had CAOs to assign ADIDs for missions or archives or sites

NJPL NASA JPL

(other than PDS Archive?)

Dozens of ADIDs assigned for various projects

No longer active

(Peter was one of contacts and may have more information)

NSSD NASA NSSDC Archive

Hundreds of ADIDs assigned to manage any data in NSSDC

Active - a new ADIDs assigned when new data received

Large amount of legacy SFDU containing ADIDs

(Note will continue current use,

but will not change operational system to require SANA registrations to assign local defined and used ADIDs)

Does not have funding to prototype updated CCSDS BB

NPDS NASA PDS Archive

Hundreds of ADIDs assigned for use in SFDU datasets

No longer creating SFDU datasets so no new assignments

Majority of PDS archive is legacy SFDU containing ADIDs

NURS NASA UARS Project

Dozens of ADID assigned for use in UARS data

Project no longer active

INPE INPE Primary CAO (never officially registered)

INPE never officially registered any of its CAOs

INPE maintained an extensive hierarchy of CAO’s (~25+)

Unsure how of if ADIDs from this hierarchy were used

Background/Context

The Control Authority Office system was set up to support a methodology to provide for format registries, i.e. a location where someone could find a definitive definition of the syntax and/or semantics of formats. The plan was to have definitions of both general-purpose formats, e.g. PDF, as well as very specific formats, e.g. the data file from a specific instrument on a specific spacecraft.

These format repositories would be most useful if people could easily find and reuse these format definitions. To enable this a universal persistent ID was assigned to each format definition in our system.

An ADID (Authority and Description ID) was a reference ID that was assigned to each format definition. It was composed of two parts – A four character identifier (Control Authority ID or CAID) and a 4 character Description ID, The CAID identified a particular facility that was responsible for assigning IDs to locally created format descriptions and maintaining a register those definitions and their IDs. Each Control Authority Office was responsible for assigning and maintaining the Descriptor IDs locally.

An ADID was the 8 character concatenation of the CAID and the Descriptor ID.

Also Control Authority Offices were set up in a hierarchical fashion in a similar fashion to that used by the Domain Name System (DNS). In DAI’s Control Authority System , it was envisioned that a CCSDS Space Agency would maintain an agency top level Control Authority Office that in turn was responsible for a number of other Control Authority Offices at facilities in their agency. In turn each of the agency level Control Authority Offices would report to a single top level CCSDS run Control Authority Office.