                    CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-001
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
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DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 1-1   PARAGRAPH NUMBER: Sec 1.1
PID SHORT TITLE: Strange use of "organization" and "system" to describe an "archive"

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
An OAIS is an Archive, consisting of an organization, which may be part of a larger
organization, of people and systems, that has accepted the responsibility to preserve
information and make it available for a Designated Community.

To:
An OAIS is an Archive System, owned and operated by some organization, composed of
systems elements (hardware, software, people, and procedures), that has accepted the
responsibility to preserve information and make it available for a Designated
Community.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

A widely accepted definition of "system" is that it is composed of hardware, software,
people, and procedures. To say that "an archive (system) consists of an organization"
is a very peculiar use of common terminology.

DISPOSITION:

ALTERNATIVE CHANGES MADE

The book uses the term "Archive", rather than "Archive System" because the latter has
the implication to many that it is a specific implementation.

The view in OAIS is clearly that the implementation may change, indeed will change,
over relatively short time intervals and the book clearly states that the reference
model "does not specify a design or an implementation".

Because of this the suggested text would actually be confusing to the current readership, while on the other hand we do not believe that the existing text would confuse systems engineers.

The suggested phrase "owned and operated by some organization" seems to exclude the possibility that the archive is stand-alone. However we do want to include such stand-alone archives, for example those that are independent and obtain funding from many sources.

However to clarify the way "organization" is used we suggest making the following change:

FROM:
An OAIS is an Archive, consisting of an organization, which may be part of a larger organization, of people and systems, that has accepted the responsibility to preserve information and make it available for a Designated Community.
TO:
An OAIS is an Archive consisting of an organization of people and systems, which has accepted the responsibility to preserve information and make it available for a Designated Community. The organization may be part of a larger organization.

Also change the Glossary.   **Please see note in PDF file.**

===

              CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-002
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
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DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 1-2   PARAGRAPH NUMBER: 1.2
PID SHORT TITLE: OAIS is a recommended practice

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
It is specifically applicable to organizations, which may themselves be part of larger organizations, with the responsibility of making information available for the Long Term.

To:
As a recommended practice it is specifically applicable to organizations with the responsibility for making information available for the Long Term.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

```
-------------------------------------------------------------------
SUPPORTING ANALYSIS:

This is a recommended practice and is largely about concepts and procedures.  As such
it is much more about systems than it is organizations.  Also, I find the repetition
of "organizations, which may themselves be part of larger organizations" to provide no
added value, largely because a) it is repeated here and above, and b) because it is
almost tautological.



-------------------------------------------------------------------
DISPOSITION:                  This "change" appears to have been made to the previous section 1.1, pg 1-1, and
                              not here.  I still assert that the OAIS is applicable to systems.  It really does not
NO CHANGE MADE                describe how organizations should be structured and this statement about "orgs
                              may be part of orgs" is already made in sec 1.1.  It need not be repeated here.

See previous RID SEA-650x0-001 (DAI reference http://review.oais.info
/show_bug.cgi?id=281)

For the 2012 version of OAIS we had RIDS asking us to clarify that an organization
could be part of a larger organization.

To clarify the way "organization" is used we suggest making the following change:

FROM:
An OAIS is an Archive, consisting of an organization, which may be part of a larger
organization, of people and systems, that has accepted the responsibility to preserve
information and make it available for a Designated Community.
TO:
An OAIS is an Archive consisting of an organization of people and systems, which has
accepted the responsibility to preserve information and make it available for a
Designated Community. The organization may be part of a larger organization.


===========================================================================


          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-003
SUBMITTING AREA: SEA
-------------------------------------------------------------------
REVIEWER'S NAME:    Peter Shames
E-MAIL ADDRESS:     peter.m.shames@jpl.nasa.gov
-------------------------------------------------------------------
DOCUMENT NUMBER:    CCSDS 650.0-P-2.0
DOCUMENT NAME:      OAIS Reference Model
DATE ISSUED:        December 2019
PAGE NUMBER:   1-4                PARAGRAPH NUMBER:  1.5.2
PID SHORT TITLE:   Model views are abstractions
-------------------------------------------------------------------
DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)

From:
Section 4 provides model views needed for a detailed understanding of an OAIS Archive.
It breaks down the OAIS into a number of functional entities and it identifies some
high-level services at the interfaces. It also provides information models using
Unified Modeling Language (UML) diagrams.

To:
Section 4 provides model views needed for a detailed understanding of an OAIS Archive.
It breaks down the OAIS into a number of abstract functional entities and it describes
some abstract high-level services provided at the interfaces of these entities. It
```

also provides abstract information models using Unified Modeling Language (UML) diagrams.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

I think it is useful to be clear that these are abstractions and there is no expectation that they can be directly implemented. This is stated, in different terms, in Sec 1.4.

Even with the specific use of abstract, but formal, language for these systems elements there can be no assumption that this is a specification for how to build a system. At best it might become a specification for how to think about designing and building a system. Or evaluating existing systems.

DISPOSITION:
AGREED, CHANGE MADE except adding the word "abstract" to "information models" was thought unnecessary.
                                            OK

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-004
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 1-5   PARAGRAPH NUMBER: 1.5.3
PID SHORT TITLE: Strange diagram conventions

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
Except where indicated otherwise, diagrams show entities such as people or organizations as round cornered long rectangles, functions as rectangles with round corners and functional entities as rectangles with cut corners, with information between them as arrows, and special information objects as ellipses as illustrated in figure 1-1.

To:
Except where indicated otherwise, diagrams show entities such as people or organizations as round cornered long rectangles, functions as ovals (ellipses, functional entities as 3-D rectangles, with information flows between them shown as

arrows, and special information objects as cut corner rectangles as illustrated in ASL
figure 3-1. Organizational domains and data stores may also be represented.


```
------------------------------------------------------------------
CATEGORY OF REQUESTED CHANGE:
      Technical Fact ___     Recommended _X_     Editorial ___
NOTES:
TECHNICAL FACT:  Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected.  (Supporting analysis/rationale is essential.)
RECOMMENDED:  Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL:  Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)
------------------------------------------------------------------
SUPPORTING ANALYSIS:
```

The ASL is being contemporaneously processed and it covers the OAIS as well as the
rest of MOIMS and SOIS. Instead of using a separate, and non-standard, set of
representations, which are in some cases hard to understand, I recommend that OAIS
adopt the ASL/RASDS representations. It will make understanding all of this much
easier. See attached screenshot of ASL Fig 3-1.

I strongly believe that this is a poor choce, but I am guessing that you are stuck on this point and will not budge. So you are publishing an updated document where you could bring it into line with best current practice and are choosing not to, thereby persisting a disconnect. I went to those two websites. One has disappeared. The other has a confusing array of pictures. Which of the two I attached were being referenced?

```
------------------------------------------------------------------
DISPOSITION:
NO CHANGE MADE.
```
D AI agreed thatwe should NOT make this change because it will cause confusion for the
vast number of people and institutions who have been using the current OAIS diagrams
in their own work for the past 20+ years (see https://www.flickr.com/photos/wlef70
/8508056502 or https://www.agid.gov.it/sites/default/files/repository_files
/documentazione/m-manuale_della_conservazione_-_rev_2.0.2-firmatorg.pdf (page 5) or
search for "OAIS Functional Model" in Google).
This will particularly apply if we change the use of ovals (ellipses) which currently
designate information objects.


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        CESG POLL ITEM DISPOSITION (PID) INITIATION FORM


AREA PID NUMBER:SEA-650x0-005
SUBMITTING AREA: SEA
------------------------------------------------------------------
REVIEWER'S NAME:   Peter Shames
E-MAIL ADDRESS:    peter.m.shames@jpl.nasa.gov
------------------------------------------------------------------
DOCUMENT NUMBER:   CCSDS 650.0-P-2.0
DOCUMENT NAME:     OAIS Reference Model
DATE ISSUED:       December 2019
PAGE NUMBER:  1-15                PARAGRAPH NUMBER:  1.6.2
PID SHORT TITLE:   Weak definition of semantic information
------------------------------------------------------------------
DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)


From:
Semantic Information: The Representation Information that further describes the
meaning of the Data Object beyond that provided by the Structure Information.


Structure Information: The Representation Information that imparts meaning about how
the Data Object is organized


To:
```

Semantic Information: The Representation Information that describes Data Objects using relationships between signifiersâ€"like words, phrases, signs, and symbolsâ€"and what they stand for in reality.
NOTE: This is distinct from that provided by the Syntax, the Structure Information.

Structure information: The set of rules, principles, and processes that govern the syntax of Information.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

The definitions of semantics and syntax, as stated, are weakly specified and somewhat intertwined.

What you describe as "broad" I must describe as "intentionally weak". A simple search for definitions of syntax and semantics, in broad terms, including "semantics in language" or "semantics in computers" yields much more precise and useful definitions. Webster "Semantics: the historical and psychological study and the classification of changes in the signification of words or forms viewed as factors in linguistic development," or "the meaning of relationship of meanings of a sign or set of signs especially : connotative meaning". Please be clearer about what you really mean. Music actually has a "language", a "form", and a "meaning", as well as emotive force. From Wikipedia "Semantics (from Ancient Greek: σημαντικός sēmantikós, "significant")[a][1] is the linguistic and philosophical study of meaning in language, programming languages, formal logic, and semiotics. It is concerned with the relationship between signifiers— like words, phrases, signs, and symbols—and what they stand for in reality, their denotation. "

DISPOSITION:
NO CHANGE MADE
Rejected because we do not wish to force the definition of Semantic/Structure Information to be too formal. We want to allow Semantic/Structure Information to include a wide variety of possibilities, including a narrative description. Of course having a formal description is advantageous but may not be possible at the early stages of preservation.

So when the justification for the changes states that the definitions are "weakly specified" -it should be realized that that is what we need, for very practical reasons - it should be regarded as "broad" rather than weak.

The proposed text, puts quite specific constraints on the representation of Semantic Information and restricts its application to specific objects.
E.g. semantics could be as well described in an informal way and if we think about archiving music, we will not have any signifiersâ€"like words, phrases, signs, and symbols

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-006
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
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DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 1-12   PARAGRAPH NUMBER: 1.6.2
PID SHORT TITLE: Use of term "metadata"

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

```
From:
Metadata: Data about other data.

Representation Information: The information that maps a Data Object into more
meaningful concepts so that the Data Object may be understood in ways exemplified by
Preservation Objectives. It is a type of Information Object.

To:
Consistent use of "metadata", or "representation information", i.e. "The information
that maps a Data Object into more meaningful concepts", but not both.  The definition
for Representation information seems to convolve two separate thoughts, 1) "data about
data" or some variant of that, and 2) "some exemplification of Preservation
Objectives".

-------------------------------------------------------------------
CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___     Recommended _X_     Editorial ___
NOTES:
TECHNICAL FACT:  Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected.  (Supporting analysis/rationale is essential.)
RECOMMENDED:  Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL:  Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)
-------------------------------------------------------------------
SUPPORTING ANALYSIS:

The term "metadata" is widely used and understood, but it only appears in a couple of
places in this document(pg 4-15, 4-33).  The two separate thoughts embodied in the
current "Representation information" description should probably be sorted out and
clarified.  They are distinct.


-------------------------------------------------------------------
DISPOSITION:
NO CHANGE MADE
```

Please follow your own rules, as stated here. Remove all references to metadata, there are still a few, and augment the very vague definition of metadata with some sort of explanation like this, in a NOTE.

```
Rejected.

It illustrates the fundamental confusion which is the reason why we severely limit the
use of the word "metadata".

The point is that "metadata" covers far too many possibilities, not just
Representation Information but also Provenance, Fixity, and also MARC records, claims
of Authenticity etc etc etc.

Before we decided to limit the use of the word "metadata" the confusion wasted years
of pointless discussions e.g. Archivists meant things like integrity while Librarians
meant things like MARC records, yet they all simply used the word "metadata", and
thought they were talking about the same thing. Hence the confusion.

One of the aims of OAIS was to define, and use, terms with a much finer granularity
than "metadata".

===================================================================================


        CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-007
SUBMITTING AREA: SEA
-------------------------------------------------------------------
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REVIEWER'S NAME:    Peter Shames
E-MAIL ADDRESS:     peter.m.shames@jpl.nasa.gov
------------------------------------------------------------------
DOCUMENT NUMBER:    CCSDS 650.0-P-2.0
DOCUMENT NAME:      OAIS Reference Model
DATE ISSUED:        December 2019
PAGE NUMBER:    2-5                PARAGRAPH NUMBER:  2.3.1
PID SHORT TITLE:    Support for "digital preservation"
------------------------------------------------------------------
DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)
```

From:
As digital technology develops, multimedia technology and the dependency on complex interplay between the data and presentation technologies will lead some organizations to require that the look and feel of the original presentation of the information be preserved. This type of preservation requirement may necessitate that the software programs and interfaces used to access the data be preserved. This problem may be further complicated by the proprietary nature of some of the software. Various techniques for preserving the look and feel of information access are currently the subject of research and prototyping. These techniques, which include hardware level emulation, emulation of various common service APIs, and the development of virtual machines, are being investigated for the preservation of the original bit stream and software across technology.

To:
Some more focused discussion of the nature of digital preservation. This seems to wander off into some techno-weeds. Is it really that case that people want to preserve old IBM 1620 printer data and software? Do we need to create emulators for old Cobol programs and dot matrix printers in order to preserve "information", or will a nice clean, modern print-out do as well (or better)? I can understand the desire to want to preserve and represent all of the subtlety in a painting by one of the old masters (van Gogh, Rembrandt, Michelangelo), or even a new(er) master like Picasso or Pollack. There is subtlety of information in the colors, brush strokes, layers and thickness of paint that even an excellent flat photo cannot capture. But this discussion of hardware emulation seems way off base.

NOTE: I did just take my grandson to an excellent museum. These flights of fancy are are derived from that and my own computing experiences from 50+ years ago.

```
------------------------------------------------------------------
CATEGORY OF REQUESTED CHANGE:
    Technical Fact ___     Recommended _X_     Editorial ___
NOTES:
TECHNICAL FACT:  Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected.  (Supporting analysis/rationale is essential.)
RECOMMENDED:  Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL:  Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)
------------------------------------------------------------------
SUPPORTING ANALYSIS:
```

Re-think whether this paragraph really adds anything or if it misses the mark entirely. **I still assert that this paragraph is wandering off into the techno-weeds and spending time on a specific, very narrow, part of the preservation landscape, that of ancient computer technology. Why not equal amounts of air-time for preserving music, or preserving art, or preserving sculptures, or preserving ancient hand woven rush baskets? What makes old computer technology so worthy of air-time? It's your choice, and I'll let it pass, but it is a puzzlement. I stand aside on this one.**

```
-----------
DISPOSITION:
NO CHANGE MADERejected.
```

It comment seems to be wandering into the area of trying to say what should be preserved.

Instead OAIS aims to be useful no matter what is being preserved for whatever reason.

===

           CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-008
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
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DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 2-9   PARAGRAPH NUMBER: 2.4
PID SHORT TITLE: Is "re-perform" really an aspect of digital preservation?

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
â€"   The ability to re-perform an artistic performance. This could be compared with
a recording of a previous performance.

To:

[NULL]

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

Is the ability to "re-perform an artistic piece", presumably with different musicians,
actors, or dancers, really an instance of "digital preservation"? No argument with
the value of preserving images, movies, and/or recordings of such artistic endeavors,
but is "re-performance" really an aspect of preservation?

DISPOSITION:
NO CHANGE MADE   **See note on PID SEA-650x0-007. I think you guys are off the mark in this and being imprecise in what you mean. But it's your choice. I stand aside on this one.**

Rejected.

The supporting analysis asks:
  'is "re-performance" really an aspect of preservation?'

Enabling re-performance is a valid aim of preservation, in arts as well as science.

OAIS is not aimed at judging what should be preserved. The point here is that someone
want to preserve the information encoded in digital objects which should allow the

work to be performed.

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-009
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 2-11   PARAGRAPH NUMBER: 2.5.3
PID SHORT TITLE: Submission Information Schema?

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
The Submission Agreement will normally specify its data model by creating a submission
information schema. The submission information schema formally defines the digital
information objects to be transferred by an information Producer to an Archive and how
these objects are packed in the form of Submission Information Packages (SIPs).

To:

The Submission Agreement will normally specify its data model by creating a Submission
Information Schema. The Submission Information Schema (defined in sec ???) formally
defines the digital information objects to be transferred by an information Producer
to an Archive and how these objects are packed in the form of Submission Information
Packages (SIPs).

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

This section introduces the term Submission Information Schema, and states that it has
a formal definition and is "normally" used in the SA, but it neither defines this SIS
(even abstractly) nor makes further reference to it. if this is a formal definition
that is normally part of an SA it should be defined somewhere. The same situation
seems to obtain for "dissemination information schema" in the following sec 2.5.4.

                                                    This issue, which is now on pg 2-14,
-- in sec 2.6.4, was not addressed.
DISPOSITION:
ALTERNATIVE CHANGE MADE.
The change removes the word "schema":   OK

From:
The Submission Agreement will normally specify its data model by creating a submission
information schema. The submission information schema formally defines the digital

information objects to be transferred by an information Producer to an Archive and how
these objects are packed in the form of Submission Information Packages (SIPs).

To:
The Submission Agreement will normally include a detailed description of the
Submission Information Package(s) (SIP). The description formally defines the digital
information objects to be transferred by an information Producer to an Archive and how
these objects are packed in the form of Submission Information Packages.

==

             CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

        AREA PID NUMBER:SEA-650x0-010
        SUBMITTING AREA: SEA

        REVIEWER'S NAME: Peter Shames
        E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

        DOCUMENT NUMBER: CCSDS 650.0-P-2.0
        DOCUMENT NAME: OAIS Reference Model
        DATE ISSUED: December 2019
        PAGE NUMBER: 3-4   PARAGRAPH NUMBER: 3.3.4
        PID SHORT TITLE: Designated Community terminology

        DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

        From:
        For some scientific information, the Designated Community of Consumers might be
        described as those with a first-year graduate level education in a related scientific
        discipline. This is a more difficult case as it is less clear what degree of
        specialized scientific terminology might actually be acceptable. The Producers of such
        specialized information are often familiar with a narrowly recognized set of
        terminology, so it is especially critical to clearly define the Designated Community
        for that information and to make the effort to ensure that this community can
        understand the information.

        To:
        This section really seems to beg the question of just how the terminology in any given
        designated community is defined and managed. Isn't this terminology itself an
        archivable information object? Doesn't it need to be established, and curated? Isn't
        this every bit as important as the "specialized information" itself, since it is part
        of the semantics that support understanding.

        CATEGORY OF REQUESTED CHANGE:
             Technical Fact ___   Recommended _X_   Editorial ___
        NOTES:
        TECHNICAL FACT: Major technical change of sufficient magnitude as to
         render the Recommendation inaccurate and unacceptable if not
         corrected. (Supporting analysis/rationale is essential.)
        RECOMMENDED: Change of a nature that would, if incorporated, produce
         a marked improvement in document quality and acceptance.
        EDITORIAL: Typographical or other factual error needing correction.
         (This type of change will be made without feedback to submitter.)

        SUPPORTING ANALYSIS:

        Consider if something further needs to be stated about "designated community"
        terminology in the basic sense and if it (the definitions of the semantics) needs to

be archived along with the data itself. ==This comes up again on pg 3-5 in sec 3.3.5. But perhaps you think of this is another form of Representation Information? If so, that should be clarified.==

DISPOSITION: **OK. Well done.**
CHANGE MADE as follows: **Perhaps Sec 3.3.5 needs a reference back to this list?**

It would be better to add this group of bullets as a new section 2.5. We believe that all the concepts have been mentioned before this, as follows:

2.5 Supplementary Information Held by the Archive
The archive will need to preserve many pieces of information besides the AIPs. The following lists show items mentioned in this document, but the archive may preserve other items.

As long as the objects are being preserved by the archive the following should also be preserved:
â€¢   Definition of the Designated Communities
â€¢   Preservation Objectives
â€¢   Transformational Information Properties

For as long as any specific AIP structure is in use:
â€¢   Packaging Information for the AIPs.
â€¢   Relationship between Editions and Versions of AIPs

Other information may be useful while the various services are in use
â€¢   Finding, Ordering, and Retrieval Aids
â€¢   Packaging Information for SIPs, DIPs

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-011
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 4-1   PARAGRAPH NUMBER: 4.2.1, Figure 4-1
PID SHORT TITLE: Meanings of lines on Fig 4-1

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
Figure 4-1 shows a set of functional entities, information objects, and two organizational entities. It also has three separate kinds of "connecting lines", and it says "The lines connecting entities identify communication paths over which information flows. The lines to Administration and Preservation Planning are dashed only to reduce diagram clutter." But there is a third kind of line besides those with arrows and those dashed ones, and those are the thin lines from Producer and Consumer to Admin and Preservation Planning. Are these intended as flows of some sort or are they something else?

To:
Clean up this diagram, and others, as requested in SEA-650x0-004. Clarify if there are two, or three, kinds of flows and label them appropriately.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

The inclusion of extra, unlabelled, lines in this diagram that have no stated purpose
nor type is confusing.   **There is still text in sec 4.2.1 referencing dashed lines, which**
                           are no longer in the figure.
                           There is no added text, as suggested below, to the effect that
--**the flows are elaborated in more detailed figures.**
DISPOSITION:
CHANGE MADE:
Make the thin lines as double ended arrows. Add text saying these flows are shown in
more detail in figures in section 4.

==

        CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-012
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 4-3   PARAGRAPH NUMBER: 4.2.2.2
PID SHORT TITLE: Common "Services", or just functions, and what about more formal
OAIS services?

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
This entire section describes what are called "Common Services". The term is used
elsewhere in the document as well. In sec 1.6.2 you say "In other CCSDS documents the
terms such as â€˜serviceâ€™ and â€˜objectâ€™ have different definitions from those
used here.", but then you do not define "service" except in context, as in, on pg 1-8,
"Access Functional Entity: The OAIS functional entity that provides the services and
functions that support Consumers". So all of the OAIS functional entities provide
"services". This seems to align well enough with the definition of "service" from MOS
(A software application that uses a being supplied by a being supplied by a service
provider. An individual software application can act as the consumer of multiple
services.. An individual software application can act as the consumer of multiple
services.) or, more abstractly, from RASDS "A provision of an interface of an object
to support actions of another object.". SLE & CSTS use similar definitions.

To:
Calling all of these Operating System, Network, and Security functions "services"
seems to diminish the meaning of the word "service" as applied to the OAIS functional
entity services. I would think that you would want to emphasize the role that these
Functional Entity services play in the OAIS and to define clearly the nature of their

service interfaces, even if only abstractly. This is just a Reference Model, so you
are not going to define service interfaces formally, but even some abstract
specification, such as those in the RASIM, CCSDS 312.0-G-1, Sec 3 & 4, could be useful
in conveying what you have in mind for these OAIS service interfaces.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

Treating OS functions in the same way as OAIS services weakens their status. Failing
to provide even some abstract formalism for these important, exposed, OAIS service
interfaces does likewise. Note that this is not asking to define the internal service
interfaces in a formal way, just the external ones exposed to the "users".

You guys seem to love imprecise use of words, it makes me weary. Yes, the word "building" can be used for your garden shed and the Taj Mahal. In the same vein, the words "magnificent palace" can be used for the Taj Mahal, but (probably) not for you garden shed. You are trying to make these functional entities, and presumably their service interfaces and data objects, into something "magnificent". You would be well advised, therefore, to not lump them with garden variety items like OS APIs and HW clock operations. But it's your choice. I stand aside on this one.

DISPOSITION:
NO CHANGE MADE
The supporting analysis says 'seems to diminish the meaning of the word "service"'.

However that is like saying that using the word "building" for both the Taj Mahal as
well as for my garden shed diminishes the Taj Mahal.

What makes the difference is surely the additional description of the objects.

The DAI agreed to reject this change.

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-013
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 4-5   PARAGRAPH NUMBER: 4.2.2.3, fig 4-2
PID SHORT TITLE: Meaning of figures are not as clear as they could be
----
DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
Fig 1-1 defines diagram conventions. Figure 4-2 includes four primary kinds of
objects: "entities" (Producer), "Functional Entities" (Data Management), "Functions"
(Generate AIP, QA), and "special information", or data objects, (just named). I
believe it is the case that the Functions on this diagram are "inside" the Ingest
Functional Entity, and that the other Functional Entities, like Data Management" are

"outside" the Ingest Functional Entity, but this is not evident from the diagram and
it is easy to get confused.

To:
See earlier request, in SEA-650x0-004, to adopt a clearer diagramming convention. At
the minimum redraw this diagram, and all of the others in this section, to show these
"Functions" that are inside the Ingest Functional Entity, as actually being inside the
"Ingest" box (a "white box" diagram) and that the other Functional Entities, and
"entities" like "Producer", are actually outside this Entity. Consistent use of the
color codes that are introduced here, both dealing with "what's inside the box", and
throughout the document, would improve clarity.

CATEGORY OF REQUESTED CHANGE:
    Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
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 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

In this set of diagrams it is really easy to overlook the rather subtle distinctions
between the clipped corners and rounded corners of different boxes. The use of
different colors helps, but even there an opportunity for consistence was missed. For
instance, the "Function" color codes (orange, yellow, green, ...)introduced here in
these white box diagrams could also be applied to the Functional Entities themselves,
on "black box" diagrams like Fig 4-1 (and others). It's a little thing, but that way
the color codes would be consistent throughout and actually help to convey meaning.

DISPOSITION:
Agreed that we update figures to have consistent colours and add short explanation in
section 1.5.3, but the document does not rely on the colours.
Append to section 1.5.3:
Suggestions for text will be added as comments to get agreement.
To serve as visual clues, consistent colors have been adopted for each Functional
Entity and its component Functions, however the diagrams do not depend upon these
colors.   **Thanks. I agree that the diagrams do not depend on these colors. That said, I
               believe that your readers will find these colored versions easier to understand.**
==

        CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-014
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 6-9   PARAGRAPH NUMBER: 6.2.6
PID SHORT TITLE: No viable definition of Registry

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
In Sec 6.2.6, "Archives with Shared Resources, the term "registry" is used, as in:

"Additional potential shared services include registries of Representation Information
and name resolvers such as the DNS. In the former case a registry of Representation
Information should also be an OAIS and the Representation Information it holds should
be part of the Content Information it holds. The Representation Information it holds
might, for example, be part of the Representation Information Network for the Content
Information within an AIP in another OAIS. In such a case the OAIS holding that AIP
may cache copies of the Representation Information Network held in the registry.
Whether it does so or instead relies on the registry to maintain the Representation
Information Network, the ultimate responsibility for the understandability of the
Content Information remains with the OAIS which holds the AIP."

To:
Define the term "registry" in a formal way. Provide an abstract model of what a
"registry" object is and what sorts of abstract interfaces it provides. It is
recommended to use the definitions that appear in the Reference Architecture for Space
Information Management (RASIM), CCSDS 312.0-G-1. Furthermore, it is recommended that
the interfaces throughout Sec 6 (and Sec 4), where they reference the kinds of
functionality associated with a Registry adopt this terminology in a consistent way
for clarity.

CATEGORY OF REQUESTED CHANGE:
      Technical Fact _X_   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

In this section which addresses "Archive Interoperability" it would be ideal if a more
formal set of definitions for registry, repository, query, and producer objects were
used and if a set of clear, if abstract, interface definitions were provided. The
RASIM provides a clear set of abstract definitions for such functional objects as well
as recipes for combining them to build information management systems. These could be
put into an annex and referenced here.

The same situation occurs in re "repository" (see SEA-650x0-015). It is also the case
that none of the other documents in this series, OAIS (650.0), PAIS (651.0), nor TDR
(652.0)provide any sort of concrete definitions for these fundamental building blocks
for information management systems and their interfaces.

Note that use of such abstract service interfaces is not the same as providing
anything like a concrete interface spec or technology binding. The treatment would
still be abstract, and open to a separate transformation into interoperable designs,
but it would be a whole lot clearer.

Not acceptable. You apparently missed the highlighted part (above) where the request was to fix the
document, in sec 4 & sec 6, where registry and repository are used. And, if you think that "registry" is
such common English usage please look at Wikipedia, https://en.wikipedia.org/wiki/Registry, and tell
me which of these 26 "common English uses" you had in mind when writing this response. A clear
definition of these abstract terms should not diminish, in any way, the ability of OAIS-IF to specify them
in technical terms. In fact, it should help to keep the two docs aligned.

DISPOSITION:
NO CHANGE MADE
Our position is that a formal definition is not needed for a word that is used
minimally (only used 3 times in one paragraph) and in this case the common English
usage is preferred. We want to wait until OAIS-IF defines it because we want to ensure
that the definition we provide is correct for that future application.

==

        CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-015
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 6-11   PARAGRAPH NUMBER: 6.2.7
PID SHORT TITLE: No viable definition of Repository

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
In Sec 6.2.7, "Archives with Distributed Functionality" the term "repository" is used,
as in:

It is possible that development of these agreements and oversight of the results might
be accomplished more easily and more reliably with another OAIS. For example,
oversight and monitoring of the OAIS providing the service could be simplified by
requiring the OAIS be certified as a Trustworthy Digital Repository in accordance with
the metrics specified by CCSDS 652.0 (also known as ISO 16363) and the procedures
specified in CCSDS 652.1 (also known as ISO 16919).

To:
Define the term "repository" in a formal way. Provide an abstract model of what a
"repository" object is and what sorts of abstract interfaces it provides. It is
recommended to use the definitions that appear in the Reference Architecture for Space
Information Management (RASIM), CCSDS 312.0-G-1. Furthermore, it is recommended that
the interfaces throughout Sec 6 (and Sec 4), where they reference the kinds of
functionality associated with a Repository adopt this terminology in a consistent way
for clarity.

CATEGORY OF REQUESTED CHANGE:
    Technical Fact _X_   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

In this section which addresses "Distributed Functionality" it would be ideal if a
more formal set of definitions for registry, repository, query, and producer objects
were used and if a set of clear if abstract, interface definitions were provided. The
RASIM provides a clear set of abstract definitions for such functional objects as well
as recipes for combining them to build information management systems.

The same situation occurs in re "registry" (see SEA-650x0-014). It is also the case
that none of the other documents in this series, OAIS (650.0), PAIS (651.0), nor TDR

(652.0)provide any sort of concrete definitions for these fundamental, and essential, building blocks for information management systems and their interfaces.

DISPOSITION: **Not acceptable. See reply for PID-014. Which of the eleven (11) Wikipedia,**
NO CHANGE MADE   **common English, definitions of "repository" did you have in mind?**
Our position is that a formal definition is not needed for words that are used minimally and in these cases the common English usage is preferred. We want to wait until OAIS-IF defines them because we want to ensure that the definition we provide is correct for that future application.

==

            CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-016
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 4-1   PARAGRAPH NUMBER: 4.2.1, Fig 4-1
PID SHORT TITLE: All of these Functional Entities need better definitions and
interfaces

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
The definitions throughout this section 4, for "functional entities", make continual references to "query", "storage", "submission", "provide", "database", but no even semi-formal definitions of any of these terms are provided.

"The purpose of this section is to provide a more detailed model view of the functional entities of the OAIS and the information handled by the OAIS. This aids OAIS designers of future systems and provides a more precise set of terms and concepts for discussion of current systems."

Furthermore, a "detailed model view" of these functional entities would be vastly improved by the use of the "registry", "repository", "query", and "product" service building blocks defined within the Reference Architecture for Space Information Management (RASIM), CCSDS 312.0-G-1.

To:
Define these "OAIS Functional Entities" in a more formal way. It is recommended to use the definitions that appear in the Reference Architecture for Space Information Management (RASIM), CCSDS 312.0-G-1. All of the functions in this section can be composed of these building blocks, and the associated abstract interfaces would vastly improve comprehensibility of what is really the intended functionality of these entities.

Furthermore, it is recommended that the interfaces throughout Sec 4, where they reference the kinds of functionality associated with "registry", "repository", "query", and "product" service objects adopt this terminology in a consistent way for clarity.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact _X_   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
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RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

In this section which addresses OAIS Functional Entities would be vastly improved if a
more formal set of definitions for registry, repository, query, and product service
objects were used and if a set of clear if abstract, interface definitions were
provided. The RASIM provides a clear set of abstract definitions for such functional
objects as well as recipes for combining them to build information management systems.

Even though this is a Magenta Book, and as such describes entities in the abstract,
these can be described in much clearer and more explanatory ways by referencing the
RASIM abstract building block definitions and service interfaces.

See more extensive comments on PID-015 and PID-016. See also the references to "common English"
meanings. In this doc registry appears only 3 times on one page (it probably should be more widely used),
repository appears 5 times on 5 pages, query appears on 11 pages, product appears on 18 pages, and service
appears on 48 pages.   All of these terms have multiple meanings in "common English". Please fix this.

DISPOSITION:
NO CHANGE MADE
Our position is that a formal definition is not needed for words that are used
minimally and in these cases the common English usage is preferred. We want to wait
until OAIS-IF to define them because we want to ensure that the definition we provide
is correct for that future application.

==

          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-017
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 5-11   PARAGRAPH NUMBER: 5.3.1
PID SHORT TITLE: Representation Information Network or Semantic Information Network?

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
This section talks about "representation information network" and adding it to Content
Data Objects. It also references semantic as well as structure information. I went
looking for references for "representation information network" and came up pretty
empty handed, but find lost of references for "semantic information network". I am
wondering why this pretty well understood field of knowledge management was
overlooked.

To:
Suggest that the team look at their use of the term "representation information
network" and see if the body of work covered by "semantic information network"

shouldn't be addressed or leveraged in some way.

CATEGORY OF REQUESTED CHANGE:
    Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
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EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

It feels as though a rather well known set of terms in knowledge management has been
overlooked in favor of a locally defined term. It is not clear that this is the best
possible approach.

DISPOSITION: **If you wish to hold this position then I think you must ammend the definition of**
                    Representation Information Network on pg 1-15. It is vague and contains nothing
NO CHANGE MADE   **like even the level of specificity you included in this reply.**
A "representation information network" is much more than "semantic information
network". It can include, as part of the network, Semantic RepInfo, Structure RepInfo
and Other RepInfo. For example it includes software and the libraries and operating
system it depends on, also file formats etc, as well as semantic information such as
ontologies, data dictionaries and relationships.

===

            CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-018
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 4-37   PARAGRAPH NUMBER: 4.3.3.3
PID SHORT TITLE: Type of Information Packages

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
This section talks about "information Packages" and the different kinds that might
exist. These are all discussed very much in the abstract, using somewhat vague terms:

"There are several types of Information Packages that are used within the archival
process. These Information Packages may be used to structure and store the OAIS
holdings; to transport the required information from the Producer to the OAIS, or to
transport requested information between the OAIS and Consumers. There are differing
information requirements for each of these functions. It is necessary to distinguish
between an Information Package that is preserved by an OAIS (an Archival Information
Package) and the Information Packages that are used to transport requested information
from the Producer to an OAIS (a Submission Information Package), and those that are
used to transport requested information from an OAIS to the Consumers (a Dissemination
Information Package). Although these are all Information Packages, they differ in

mandatory content and the multiplicity of the associations among contained classes."

To:
Presumably any system that adopts this OAIS approach, and attempts to "conform" to it,
will need to define the kinds, syntax and semantics of the information packages that
it uses. Shouldn't there be reference made to the need to do this and to a registry
of such packages and a repository where they are stored? Isn't this essentially one
of the "meta" functions of an open archive system?

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
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 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

This is just one of the types of registries that seem to be appropriate as "meta"
functional objects in an Open Archive System. A registry of package formats, for SIP,
AIP, DIP, AIU, and PDI is another. A registry of Finding, Ordering, and Retrieval
Aids is another.

**Actually, SEA-650x0-010 does not address registries nor did the response define
these classes of meta objects. This is more related to SEA-650x0-014, -015 and -016.
Note that a "repository" could be a cardboard box, and a "registry" could be a piece
of paper describing the contents of said box. Seems like a pretty low barrier of entry
for any system that would make a pretense of complying with OAIS.**

DISPOSITION:
CHANGE MADE ALREADY
Resolved this in SC290 (SEA-650x0-010) so this item can be closed with no further
change needed.

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          CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-019
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
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DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 5-1   PARAGRAPH NUMBER: 5.1
PID SHORT TITLE: Systems & software evolution and "bit rot"

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
This section talks about the issues of "irreversible loss of data", i.e. "bit rot" and
it's relationship to storage media and software longevity.

"Today's digital data storage media can typically be kept at most a few decades
before the probability of irreversible loss of data becomes too high to ignore.
Further, the rapid pace of technology evolution makes many systems much less cost-
effective after only a few years. Even more daunting, as operating systems evolve, is

maintenance of operational software as a part of the Representation Information, which
is essential for the preservation of Content Information."

To:
It is axiomatic that operating systems and software have to evolve or "die", i.e. lose
their efficacy. And we all know that digital media and the devices that read them are
among the most fragile, and fungible parts of any system. But from reading this it
seems that the ability to provide formal descriptions of data formats that will allow
data to be recovered from still viable media, even if the original software has rotted
away, is missing or not emphasized at all. I suggest that this aspect of data
preservation be explored in more depth. Much in the same way that the Nav WG data
format standards allow different software, written in different languages, running on
different operating systems, to be exchanged. Data preservation should consider such
practices rather than archiving old software and hoping that this will continue to run
in the future.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
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 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
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EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

This is just one of the types of data preservation that seems to be overlooked in this
document. Or maybe it is in here, as some aspect of "migration" and I just do not
recognize it.   **To be completely frank, I am still concerned by the emphasis on "maintenance of operational software as
                  part of representation information" . I think that is an approach that is, in the long run, doomed to failure.
------------------ **That said, if that is what your community is really commited to go ahead and support it. Or, take the
DISPOSITION: superior apporoach of pointing them toward a better future. Your choice. I stand aside on this one too.**
ALTERNATIVE CHANGE MADE
From:
The fast-changing nature of the computer industry and the ephemeral nature of
electronic data storage media are at odds with the key purpose of an OAIS: to preserve
information over a long period of time. Today's digital data storage media can
typically be kept at most a few decades before the probability of irreversible loss of
data becomes too high to ignore. Further, the rapid pace of technology evolution makes
many systems much less cost-effective after only a few years. Even more daunting, as
operating systems evolve, is maintenance of operational software as a part of the
Representation Information, which is essential for the preservation of Content
Information. In addition to the technology changes there will be changes to the
Knowledge Base of the Designated Community which will affect the Representation
Information needed.

To:
Despite the efforts (e.g. making use of standardized data formats that are expected to
be used for a time) of an OAIS to make information it holds to be relevant for the
long-term, it is inevitable that at some point, OAIS holdings will need to be
addressed to ensure they are usable to future generations.
Even more so
the fast-changing nature of the computer industry and the ephemeral nature of
electronic data storage media are at odds with the key purpose of an OAIS: to preserve
information over a long period of time. Today's digital data storage media can
typically be kept at most a few decades before the probability of irreversible loss of
data becomes too high to ignore. Further, the rapid pace of technology evolution makes
many systems much less cost-effective after only a few years. Even more daunting, as
operating systems evolve, is maintenance of operational software as a part of the

Representation Information, which can be used by the Designated Community to use the Content Data Object. These additional preservation strategies are discussed below in section 5.3. In addition to the technology changes there will be changes to the Knowledge Base of the Designated Community which will affect the Representation Information needed.

In section 5.3.1 we should append:

"Structure Information, with the Semantic Information could allow one to create new software to access elements from a Digital Object, so that one does not have to rely on maintaining old software."

==

             CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-020
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: 6-2   PARAGRAPH NUMBER: 6.2
PID SHORT TITLE: OAIS Interaction Requirements

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
This section talks about the issues of "OAIS archive interoperability", i.e. how might one archive interoperate with another.

"Each time the OAIS exchanges data with another organization the agreements include:
â€"   the protocol(s) to be used in the transfer, for example, TCP/IP, HTTP, USB memory stick, etc.;
â€"   the interfaces to use;
â€"   the definition of the packages (SIP/DIP/AIP) transferred;
â€"   the processes which the sending and receiving organizations should follow.
These agreements may include standards (current or future standards that will be developed which will specify these agreements and processes). The type and extent of these agreements and the level of formality of the agreements can be the basis of categorizing these interactions.
"

To:
To a great extent this section seems to cast the discussion of archive interoperability in terms of "organizations" and "agreements". The list of technical concerns that would support interoperability, namely: protocols (mostly network & application layer are named), interfaces, definitions of packages, processes, but also processes is necessary, but not sufficient. And the "conformance" points that are used do not cover any topics related to interoperability. The document is truly silent on this subject and avoids even the abstract discussion of these key topics.

What is also missing is any attention paid to how these archives might provide any sort of common means for discovering which variations of these systems features that have been employed, how to document the protocols, interfaces, data packages, query (and product, report, etc) interfaces that are available. A common way for documenting these interfaces and discovering them could be provided. Even without providing a way

storage element to succeed, standards are needed at the internal Ingest-storage and Access-storage interfaces."

"Sec 6.2.7
Such a distribution of functional areas or functional entities of an OAIS, as well as their composition into distributed OAIS, can be, for example, of a physical, organizational, or administrative nature. The motivation could be to distribute resources to achieve the complete set of functional entities or functional areas to establish a distributed OAIS in a complementary and collaborative way. Other motivation factors can be to mitigate risks or outsource parts of the OAIS in a way that enables the OAIS to remain an OAIS.
"

To:
The discussion in these sections is philosophically accurate, but provides the reader with little in the way of leverage except conceptually. If, following some of the other recommendations in the set of RIDs, even a set of abstract services were identified, along with a clear discussion of the functions of query interfaces, and of a suitable set of registries and repositories, a much more compelling picture of how these shared and distributed resources could interoperate could be presented. This is viable even in the abstract as long as clear requirements are stated for compatible and interoperable service interfaces on these different types of Functional Entities.

CATEGORY OF REQUESTED CHANGE:
    Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

An approach like this, which is rather more challenging than what has been attempted so far, could start to provide a real interoperability framework for federated and distributed archives.

Please consider that these several pages that talk about "independent archives", "cooperating archives", "federated archives", "archives with shared resources", "archives with distributed functionality" and that show connected OAIS, and Inner and outer OAIS are, in fact, showing abstractions of archive designs and deployments. This document is supposed to be a Magenta Book, something that is intended to have normative content. Most of the "normative" part seems to be definitions and concepts. You have consistently reject any attempts to amend these materials in a way that would add value. What has been recommended is different from actual design, it is, instead, a somewhat more rigorous set of abstractions.

DISPOSITION:

NO CHANGE MADE

The current OAIS document is not intended to be a design document (even for an abstract design). The DAI WG has begun work on the suite of standards that will form the OAIS-Interoperability Framework and we will be addressing this issue in those standards.

Since the OAIS RM is not a design document and since the OAIS-IF is addressing these issues, we reject any update to the current document.

However, we do agree that these issues should be addressed and we intend to address them in the OAIS-IF efforts as quickly as possible given our current resources.

There is a Roadmap in ANNEX B which describes OAIS-IF.

==
Please make these points more clearly in the intro to sec 6. That will better set readers expectations about how to interpret these diagrams as just highly abstract sketches with no normative weight and no probative values re interoperability.

```
                 CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

     AREA PID NUMBER:SEA-650x0-022
     SUBMITTING AREA: SEA
     ------------------------------------------------------------------
     REVIEWER'S NAME:   Peter Shames
     E-MAIL ADDRESS:    peter.m.shames@jpl.nasa.gov
     ------------------------------------------------------------------
     DOCUMENT NUMBER:   CCSDS 650.0-P-2.0
     DOCUMENT NAME:     OAIS Reference Model
     DATE ISSUED:       December 2019
     PAGE NUMBER:   A-1              PARAGRAPH NUMBER:  Figure A-1
     PID SHORT TITLE:   Use, features, and position of Fig A-1
     ------------------------------------------------------------------
     DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)

     From:
     Figure A-1, which shows all of the major Functional Entities, their
     decomposition into Functions, and suitable color coding would be better placed much
     earlier in the document.  Similarly, the color coding used here, and in Sec 4, would
     be better if introduced earlier and used consistently.  Even a "lower resolution",
     "black box" version like this, with the same color coding and aggregated flows would
     be an improvement over what is there now.

     To:
     Move this figure into Sec 4, to replace / augment Fig 4-1 (maybe in a lower resolution
     form as a new 4-2).  This would help to tie the entire discussion in Sec 4 together
     and lend greater coherence.  Also, introduce the concept of these query, registry,
     repository, product interfaces early on in Sec 4 and show where there is commonality
     in interfaces and functions on this diagram.


     ------------------------------------------------------------------
     CATEGORY OF REQUESTED CHANGE:
         Technical Fact ___     Recommended _X_     Editorial ___
     NOTES:
     TECHNICAL FACT:  Major technical change of sufficient magnitude as to
      render the Recommendation inaccurate and unacceptable if not
      corrected.  (Supporting analysis/rationale is essential.)
     RECOMMENDED:  Change of a nature that would, if incorporated, produce
      a marked improvement in document quality and acceptance.
     EDITORIAL:  Typographical or other factual error needing correction.
      (This type of change will be made without feedback to submitter.)
     ------------------------------------------------------------------
     SUPPORTING ANALYSIS:

     These recommended changes will require some amount of work, but they will also make
     the document much more informative and useful.  As it is now it is more descriptive,
     using lots of words, than it is prescriptive.  The document could be moved in a more
     prescriptive direction while still dealing in abstractions and not directly
     implementable formalisms.
```

If the WG wishes to persist on the current path, and not do anything to improve or elaborate on the content in what is supposed to be a Normative Magenta Book, then I am left wondering if this should even be categorized as an MB. If there is no attempt to clarify the use of abstract terms, as recommended in PID-014, -015, -016 and if these diagrams really are only of descriptive value "The reader is cautioned not to assume that this is a recommended design or implementation" then maybe the document really should be published as a Green Book and not Magenta. Just what part of this whole document is normative in any way, where is a stated compliance? I am reviewing the definition of Magenta Book in sec 6.1.4.3 of the CCSDS Org & Proc. The closest phrase I can find would appear to be:

```
     ----------
     DISPOSITION:
     NO CHANGE MADE

     The supporting text says "The document could be moved in a more prescriptive
     direction
```

c) reference architectures and other formal but not directly implementable specifications;

```
     We do not believe that it would be sensible to do this.
```

But the following paragraph says "Recommended Practices (Magenta Books) differ from "informational" documents in that they do provide normative, controlling guidance rather than purely descriptive material." I question if this document, in its current form, meets that test.

```
     We did not mention colors in the Functional Model diagram because of comments during
```

the development of the 2012 version of OAIS.

We do not think that A-1 diagram should be moved to section 4. That would make it look
as if OAIS is a prescriptive design for an archive instantiation, which we state
elsewhere in the document that it is NOT, and it would make the document more
difficult to read.

==

            CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-023
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: C-1   PARAGRAPH NUMBER: Figure C-1
PID SHORT TITLE: UML Diagram description

DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
"A key to object relationships in the UML diagrams of 4.3 in this document is shown in
figure C 1."

and ...

"A Class is indicated by a rectangle containing the Class name. The UML representation
of a class is a three-compartment rectangle with name in the top compartment
attributes in the second compartment and methods in the lowest compartment. In this
document the attributes and operations compartments are always empty and UML states
empty compartments can be suppressed."

To:
Other WGs use similar subsets of UML for various diagrams. The SM WG uses UML Class
diagrams, but includes the attributes and operations compartments. Given some of the
other discussions in this set of RIDs some more extensive use of such practices might
be adopted to good purpose.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

I like the use of UML and the inclusion of this brief introduction in the document.
But I think that the addition of more specificity in these diagrams, such as adding at
least operations, if not attributes, would make the descriptions even clearer.

This is, in my opinion, unresponsive. How can it be the case that these diagrams are, at one and the same time, "clear", "obvious", and "not yet analyzed"? These materials, in various forms, have been around for years. The key reference I provided for the relevant set of abstract architectural concepts, the RASIM Green Book, has also been around for years, it was published in 2013. Even as a Green Book it offers more accurate and descriptive information than this Magenta Book does.

```
----------------------------------------------------------------
DISPOSITION:
NO CHANGE MADE
We do not think that the suggested change would be helpful.

OAIS is not a detailed design document.

The supporting analysis says "adding at least operations" would be helpful.
We believe that
(1) it would over complicate the diagrams
(2) adding the various get/set/put/ etc for the objects that are shown in the UML
diagrams are pretty obvious and do not need to be made explicit
(3) we have not analyzed all the operations

The forthcoming documents on OAIS Interoperability Framework is the appropriate
document to include that level of detail.


================================================================================



            CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-024
SUBMITTING AREA: SEA
----------------------------------------------------------------
REVIEWER'S NAME:    Peter Shames
E-MAIL ADDRESS:     peter.m.shames@jpl.nasa.gov
----------------------------------------------------------------
DOCUMENT NUMBER:    CCSDS 650.0-P-2.0
DOCUMENT NAME:      OAIS Reference Model
DATE ISSUED:        December 2019
PAGE NUMBER:   1-3              PARAGRAPH NUMBER:  Sec 1.4
PID SHORT TITLE:    Notions of "Conformance" are weak
----------------------------------------------------------------
DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)

From:
"A conforming OAIS Archive implementation shall support the model of information
described in 2.3. The OAIS Reference Model does not define or require any particular
method of implementation of these concepts.

A conforming OAIS Archive shall fulfill the responsibilities listed in 3.2. Subsection
3.3 provides examples of the mechanisms that may be used to discharge the
responsibilities identified in 3.2. These mechanisms are not required for conformance.

A conformant OAIS Archive may provide additional services that are beyond those
required of an OAIS."


To:
In this reference model the only aspects that are identified as being important for
"conformance" are the sec 2.3 information model, which is so simple in its form (fig
2-2) that almost anything that talks about "information" would be compliant.

The other conformance point is sec 3.2 which addresses organizational responsibilities
having to do with accepting, controlling, preserving, and providing access to data.

These both use "shall" language, so it is fair to say that they are requirements, but
they appear to be of limited utility in terms of understanding anything about what an
Open Archive Information System is, with emphasis on the "system" part, how one ought
to operate, what one ought to do, or how one might be designed.  There are very few
```

other uses of "shall" in the document and none that directly relate to any of the
elements in sec 4, which forms the Functional Model and Information Model heart of the
document, 56 out of a total of 150 pages, many of which are "boiler plate".

Recommend adding conformance with the key section (sec 4) of the document and also the
other, related, edits identified elsewhere in this set of RIDs.

CATEGORY OF REQUESTED CHANGE:
     Technical Fact ___   Recommended _X_   Editorial ___
NOTES:
TECHNICAL FACT: Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected. (Supporting analysis/rationale is essential.)
RECOMMENDED: Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL: Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)

SUPPORTING ANALYSIS:

The idea of "conformance with requirements" given the extremely vague language in sec
2.3 and 3.2 seems disjoint with the usual CCSDS notions of conformance, even with
regard to reference models. There are materials in this document which could supply a
much stronger framework for conformance, especially if the changes requested elsewhere
in this set of RIDs are adopted. Even in their absence, requiring conformance also
with Sec 4 would provide a much stronger "compliance" test than just sec 2.3 and 3.2.

The weak nature of "conformance", as specified, is further called into suspicion when
there is language like this in Sec 6.2.7, pg 6-12:

"It should be noted that in the example and elsewhere whenever something is named as
an OAIS, it is expected that anything that is spoken about as an OAIS conforms to the
full suite of OAIS criteria specified in the conformance subsection (1.4)."

That phrase "conforms to the full suite of OAIS criteria" sounds really strong, but in
reality it is not.

Guys, after reading back through all of this, reminding myself of what the intro says the document will provide (sec 1.1, last paragraph), and looking at this highly abbreviated "conformance" statement, I am more convinced that ever that this is really a Green Book and not a Magenta Book. Furthermore, it seems that is how you want to keep this book since you have rejected all attempts to make it less "squishy", to use a technical term. If the ONLY conformance point is this fig 2.3 info model, and that is, in itself, abstract, then there is really no conformance point.

DISPOSITION:
ALTERNATIVE CHANGE MADE
Reject the recommendation of adding conformance with the key section (sec 4) of the
document and also the other, related, edits identified elsewhere in this set of RIDs.

The Functional Model has always been excluded from the conformance statement because
OAIS is not a design document.

We think the use of the conformance section has been very useful in the reference
model as it stands.

The "To:" text in this RID is obviously not seriously being proposed.

However this comment suggests to me that it might be useful to change

From:
"A conforming OAIS Archive implementation shall support the model of information
described in 2.3. The OAIS Reference Model does not define or require any particular
method of implementation of these concepts."

To:
"A conforming OAIS Archive implementation shall support, and be able to map to the
components of, the model of information described in 2.3. The OAIS Reference Model

does not define or require any particular method of implementation of these concepts."
See above. If you want to leave the document as it is think you have to re-characterize this as a Green Book. The abstract info model in Sec 2.3 does not provide sufficient "conformance" to be testable except in the abstract.
==

```
AREA PID NUMBER:SEA-650x0-025
SUBMITTING AREA: SEA
------------------------------------------------------------------
REVIEWER'S NAME:   Peter Shames
E-MAIL ADDRESS:    peter.m.shames@jpl.nasa.gov
------------------------------------------------------------------
DOCUMENT NUMBER:   CCSDS 650.0-P-2.0
DOCUMENT NAME:     OAIS Reference Model
DATE ISSUED:       December 2019
PAGE NUMBER:    3-1              PARAGRAPH NUMBER:  Sec 3.2
PID SHORT TITLE:   Inadequate coverage of security topics
------------------------------------------------------------------
DESCRIPTION OF REQUESTED CHANGE:  (Use From: "..." To "..." format)


From:
This subsection establishes mandatory responsibilities that an organization must
discharge in order to operate an OAIS Archive.


To:
This subsection establishes mandatory responsibilities that an organization must
discharge in order to operate an OAIS Archive.
Augment this section to cover this topic:
The document has some cursory attribution to security requirements: access control,
authentication, confidentiality, integrity, and non-repudiation.  This was in section
4.2.2.2 – Common Services and appeared in the Network Services and the Security
Services sections. That being said, there was no in-depth discussion of any of the
security services or specification of their application in the model.


But the requirements are listed in Section 3.2 and there are no security requirements.



------------------------------------------------------------------
CATEGORY OF REQUESTED CHANGE:
    Technical Fact ___     Recommended _X_     Editorial ___
NOTES:
TECHNICAL FACT:  Major technical change of sufficient magnitude as to
 render the Recommendation inaccurate and unacceptable if not
 corrected.  (Supporting analysis/rationale is essential.)
RECOMMENDED:  Change of a nature that would, if incorporated, produce
 a marked improvement in document quality and acceptance.
EDITORIAL:  Typographical or other factual error needing correction.
 (This type of change will be made without feedback to submitter.)
------------------------------------------------------------------
SUPPORTING ANALYSIS:


Coverage of security topics, for all archives in general, and for federated archives
in particular, should be identified as required practices.  See also SEA-650x0-026.




------------------------------------------------------------------
DISPOSITION:


We recognize the importance of security in archival applications, but we do not wish
to put in a great deal about it in the body of the document beyond that which is
already there. We will cover this topic in more detail in the OAIS-IF documents
mentioned in the Roadmap in Annex B, which will take detailed advice from security
experts.
```

However we realize that it would be helpful to put a reference to the security Annex
in the relevant overview sections in order to remind readers of its importance.

Append to section 3.1:
"Annex F discusses security considerations which may apply to section 3.3."

Note that Annex F states: "Communications between the Archive and Producer may require
additional safeguards such as electronic signatures and/or digests.", which covers the
point made about transfers.

Note also that ANNEX F has a typo in the last bullet – it should be moved up a level
and then the sub-bullet should begin "Implementations of Dissemination Information
Packages"

Insert after para 3 in 6.2.1
"Annex F discusses security considerations which may apply to interacting OAISes,
which are described below."

Ok. But see PID-024

===

                    CESG POLL ITEM DISPOSITION (PID) INITIATION FORM

AREA PID NUMBER:SEA-650x0-026
SUBMITTING AREA: SEA

REVIEWER'S NAME: Peter Shames
E-MAIL ADDRESS: peter.m.shames@jpl.nasa.gov

DOCUMENT NUMBER: CCSDS 650.0-P-2.0
DOCUMENT NAME: OAIS Reference Model
DATE ISSUED: December 2019
PAGE NUMBER: F-1   PARAGRAPH NUMBER: Annex F
PID SHORT TITLE: Inadequate coverage of security topics, redux
----
DESCRIPTION OF REQUESTED CHANGE: (Use From: "..." To "..." format)

From:
To be conformant to this Reference Model an implementation should use the Information
Model and follow the mandatory requirements in 3.2; therefore, the following
annotations on those mandatory requirements provide some guidance on security
concerns.   On further review fo the doc, and your dispoistions of these PIDs, it appears that you are asserting that
the only "conformance" is to the abstract info model in Sec 2.3. If that is the case then this sec 3.2
         cannot be "mandatory", since no part of the doc other than 2.3 is deemed relevant for "conformance".
To: See also note on pg 3-1.

The security section was quite well done, but did not cover certain topics. Of
particular concern is the there is no mention of security concerns related to logical
access control at the interfaces, but physical access is addressed. And there is
little mention anywhere of providing adequate measures to ensure the integrity of the
data, either at ingest, at rest, or in transit to the users (or other archives).
There is also no mention of any specific security concerns needed for the kinds of
cooperating or federated archives conceived of in Sec 6.2.

Moreover, my suggestion is that they need to include the information contained in the
security section back in the "meat" of the document and not just leave it as an
"orphan" in the security section. The security section should be a synopsis of the
security services/mechanisms contained in the document and not be the first time they
are exposed. The security section does follow the requirements listed in Section 3.2,
but in 3.2 there is are no security requirements other than authenticity of the data
received for archiving.

```
     -----------------------------------------------------------------
     CATEGORY OF REQUESTED CHANGE:
          Technical Fact ___     Recommended _X_     Editorial ___
     NOTES:
     TECHNICAL FACT:  Major technical change of sufficient magnitude as to
      render the Recommendation inaccurate and unacceptable if not
      corrected.  (Supporting analysis/rationale is essential.)
     RECOMMENDED:  Change of a nature that would, if incorporated, produce
      a marked improvement in document quality and acceptance.
     EDITORIAL:  Typographical or other factual error needing correction.
      (This type of change will be made without feedback to submitter.)
     -----------------------------------------------------------------
     SUPPORTING ANALYSIS:

     Coverage of security topics, for all archives in general, and for cooperating and
     federated archives in particular, should be identified as required practices.  See
     also SEA-650x0-025.



     -----------------------------------------------------------------
     DISPOSITION:
     CHANGE MADE in SEA-650x0-025        Ok.  See PID-024 and -025.



     =========================================================================
```