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Minutes

MEETING NAME 09-WG33: WG-33 Data Archive and Management

MEETING PLACE/DIAL IN

DATE & TIME Wednesday, February 2, 2022 | 11:00 am – 12:30 pm US ET

PRESIDING OFFICERS Matthew Bishop, UnityPoint Health
Keith Eklund, Healthcare Tech Solutions

VOTING MEMBERS PRESENT

Ambra Health/Intelerad	Ostrow, Daniel
Argentix Informatics, Inc.	Silver, Elliot
DesAcc EMEA	Lyshkow, Hugh
GE Healthcare	Nichols, Steven
GE Healthcare	Numan, Jouke
Healthcare Tech Solutions	Eklund, Keith
Laitek, Inc.	Solomon, Harry
Society for Imaging Informatics In Medicine	Bishop, Matthew
Society for Imaging Informatics In Medicine	Carey, Cheryl
Varian, a Siemens Healthineers Company	Anghelescu, Alex

OTHERS

Laitek, Inc.	Behlen, Fred
London Health Science Center	Aizawa, Luiz
Mega Informatica Ltd	Fauquex, Jacques

VOTING MEMBERS ABSENT

AAPM	Bevins, Nicholas
ACR	Maldonado, Josh
Canon Medical Research USA	O'Donnell, Kevin
Change Healthcare	Ho, Kinson

European Society of Radiology	Mildenberger, Peter
Grafimedia	Georgiadis, Pantelis
Mayo Clinic Rochester	Persons, Kenneth
PixelMed Publishing	Clunie, David
Society for Imaging Informatics In Medicine	Henson, Kyle

DICOM SECRETARIAT Anna Zawacki, SIIM

1 CALL TO ORDER AND REVIEW OF ANTI-TRUST RULES AND DICOM PATENT POLICY (Co-Chairs, Secretariat)

The meeting was called to order. Guidelines for Conducting NEMA Meetings were read and attendance was recorded.

2 REVIEW AND APPROVE AGENDA (Co-Chairs)

The agenda was reviewed and approved.

3 REVIEW MINUTES (Co-Chairs)

The minutes of the previous meeting were reviewed and approved.

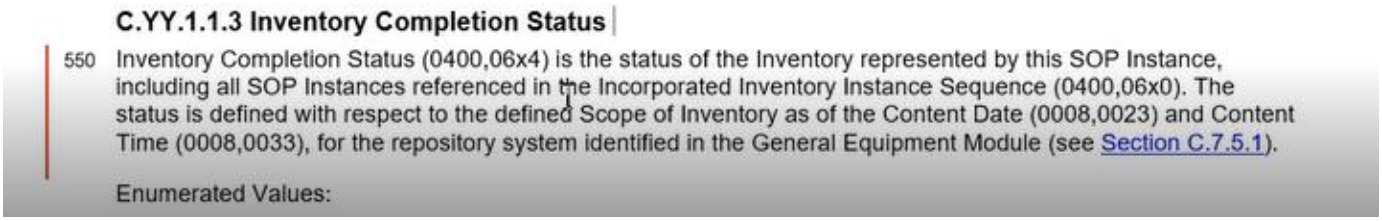
4 TOPIC ITEMS TO BE DISCUSSED (All)

Sup223 did not progress to Letter Ballot. WG-6 reviewed the changes from Public Comment round 2, which were accepted with some editorial clarifications. However, in the "page-by-page" review, two issues were raised (so far) regarding the references to stored objects:

- At the Study and Series levels, is providing for only a single URI for non-DICOM file access sufficient? What if the repository provides different ports (base URIs) for different users? In answering this issue, WG-33 should consider also the implications of multiple base URIs on the relative URIs that might be used for SOP Instance access.

- The attribute name "Stored Instance File URI" was seen as (potentially) confusing, as it is not necessarily the URI of a Stored Instance (i.e., Part 10) File, but could be the URI for a container file that contains (multiple) Part 10 files. Consider possible other names (perhaps "File Access URI"?) Also consider whether Container Type should always be required, with an additional defined term for (uncontainerized) Part 10 native files.

Before the meeting, Jouke and Harry did some language review and changes. Then went to WG-06 meeting. WG-06 did a page-by-page review.
There were questions about Inventory Completion Status paragraph:



C.YY.1.1.3 Inventory Completion Status

550 Inventory Completion Status (0400,06x4) is the status of the Inventory represented by this SOP Instance, including all SOP Instances referenced in the Incorporated Inventory Instance Sequence (0400,06x0). The status is defined with respect to the defined Scope of Inventory as of the Content Date (0008,0023) and Content Time (0008,0033), for the repository system identified in the General Equipment Module (see Section C.7.5.1).

Enumerated Values:

Did a re-write of this paragraph in WG-06. Basically, broke up a long sentence into 2 shorter ones.

We had in each inventory object the total number of study record in this object and in its incorporated objects but not a total number in the instance itself, WG-06 asked to add that in. Type 1 – required.
Does it have to be known up front before you create an IOD – no, it does not, because these attributes are at the end of the object.
Added in definitions of YES and NO.
Then we were getting into the names of the attributes, so this attribute now called FILE ACCESS URI was formerly called STORED INSTANCE FILE URI –WG-06 preferred a more generic name.

Next big change is in part 4 and the definition of Metadata Sequence and Updated Metadata Sequence. WG-06 asked for a re-write of this section.

C.6.x4.1.4 Metadata Sequence and Updated Metadata SequenceAttributes

An SCP may manage a set of metadata Attributes of the SOP Instances in the repository for response to Query requests. Metadata Sequence (00gg,0Fz3) in a Response Identifier returns all SOP Instance Attributes at the Query level that are managed by the SCP. Excluded are bulk data elements such as pixel, waveform, and surface mesh data, and non-SOP Instance Attributes specified in Section C.3.4 or in Table C.6.x4.1-1.

Note

The set of Attributes returned is implementation dependent. The intention is that the SCP returns Attributes that it manages in a database, rather than reading a SOP Instance from secondary media and parsing out Attributes to be returned. In some implementations the managed set of Attributes might include only those few required to be supported for Query Key matching, while in other implementations the set might include every non-bulk data Attribute.

An SCP may manage a set of metadata Attributes whose values differ from those in Although a stored SOP Instance referenced by accessible through the Stored Instance File URIFile Access URI (00gg,0FxB). Although a stored SOP Instance must be conformant to its IOD (per the requirements of the DICOM File Format), some Attributes in the file might not have current values (e.g., Patient Name may have been corrected or changed after the Instance was stored). Updated Metadata Sequence (00gg,0Fz4) in a Response Identifier returns contains all Attributes at the Query level and at higher Query levels whose values are different from the values contained in the stored SOP Instance file. It may also contain Attributes that do not have differing values. It shall not include Attributes specified in Section C.3.4 or in Table C.6.x4.1-1.

An SCP that supports references to stored SOP Instances shall support either the Metadata Sequence (00gg,0Fz3) or the Updated Metadata (00gg,0Fz4), or both, to provide current metadata values for SOP Instances accessed through the File Access URI (00gg,0FxB).

Note

If The SCP does may not track whether Attribute values have changed, or which specific Attributes have changed values, and would therefore not support Updated Metadata Sequence (00gg,0Fz4). it In this case, the SCU may request the Metadata Sequence (00gg,0Fz3) simply for return of all current Attribute values that it knowsmanaged by the SCP. Determination of differences, if any, between those returned Attribute values and values in the stored SOP Instance would be the responsibility of the SCU.

As Updated Metadata Sequence (00gg,0Fz4) provides current metadata for SOP Instances accessed via the Stored Instance File URI (00gg,0FxB), the SCP shall support this attribute if it also supports File Access Sequence (00gg,0FyF).

At any Query level, Metadata Sequence (00gg,0Fz3) or Updated Metadata Sequence (00gg,0Fz4) may include the Original Attributes Sequence (0400,0561) describing the provenance of changes to Attributes at that level or at higher Query levels.

If present in a Request Identifier, the absence of Metadata Sequence (00gg,0Fz3) or Updated Metadata Sequence (00gg,0Fz4) in the Response Identifier indicates the SCP does not support the Attribute (see Section C.2.2.1.3).

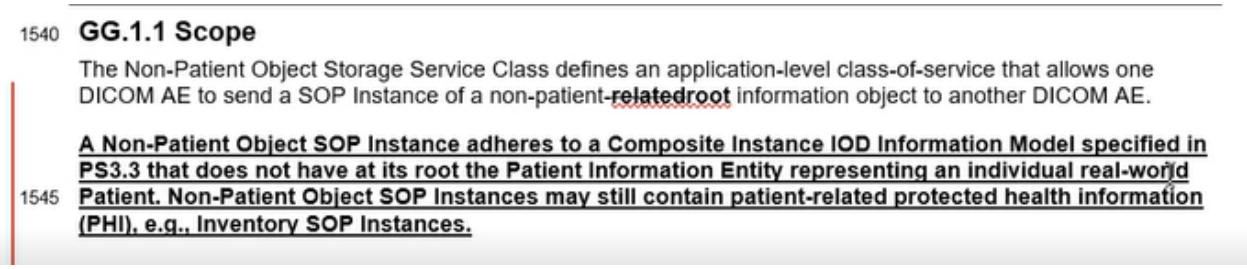
A zero-length value or a single empty Item for Updated Metadata Sequence (00gg,0Fz4) in a Response Identifier indicates the SCP supports the Attribute, but there are no differing Attribute values.

WG-33 read through the revised text. Suggested a change in line 1403 from “The intention is that the SCP returns (…)” to “For many systems, the SCP returns (…).”

Add in the 1400 paragraph - is there value in pointing out that the values in the stored instance are updated on a query on retrieve? Harry to add that in part 17 and add a reference here.

Under line 1410, added a *Note: If the Stored SOP Instance is up to date, the Updated Metadata Sequence returns empty.*

Next significant change – what we actually call those non-patient objects:

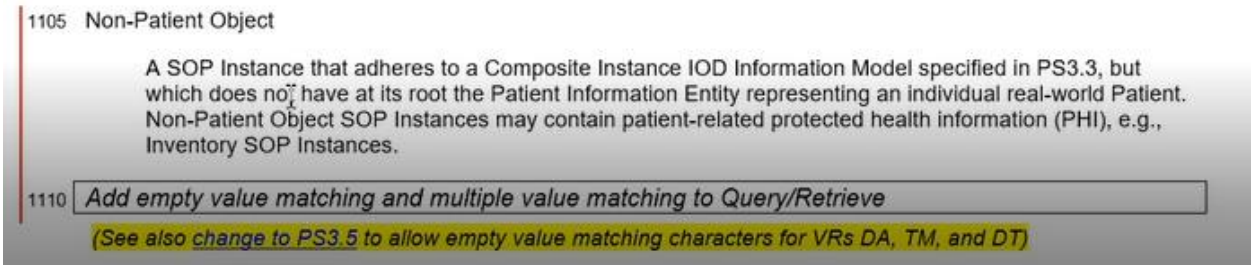


1540 **GG.1.1 Scope**

The Non-Patient Object Storage Service Class defines an application-level class-of-service that allows one DICOM AE to send a SOP Instance of a non-patient-**relatedroot** information object to another DICOM AE.

A Non-Patient Object SOP Instance adheres to a Composite Instance IOD Information Model specified in PS3.3 that does not have at its root the Patient Information Entity representing an individual real-world
1545 **Patient. Non-Patient Object SOP Instances may still contain patient-related protected health information (PHI), e.g., Inventory SOP Instances.**

We actually put the definitions in part 4. We put in a definition for a non-patient object:



1105 Non-Patient Object

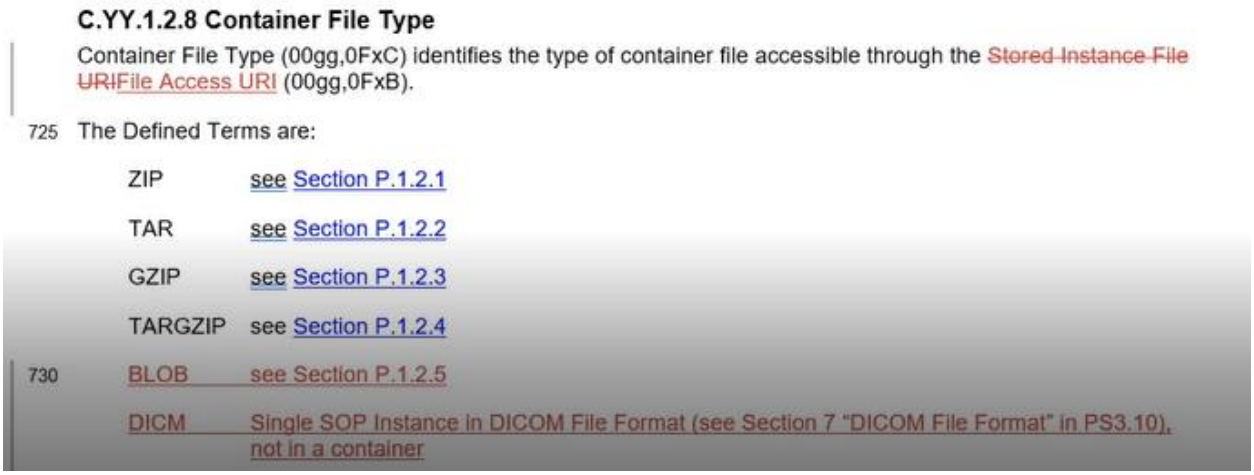
A SOP Instance that adheres to a Composite Instance IOD Information Model specified in PS3.3, but which does not have at its root the Patient Information Entity representing an individual real-world Patient. Non-Patient Object SOP Instances may contain patient-related protected health information (PHI), e.g., Inventory SOP Instances.

1110 *Add empty value matching and multiple value matching to Query/Retrieve*

(See also change to PS3.5 to allow empty value matching characters for VRs DA, TM, and DT)

The goal now is to continue our page-by-page review in WG-06, address any further comments that they have and get it out for Letter Ballot after the March meeting, the week of March 22.
The person doing the closest reading of this is Kevin O'Donnell, Harry has scheduled time on his calendar.

Another thing WG-06 was thinking – when you point to a file, you may be pointing to either a container file or to a native part 10 compliant file. So, there was some thought that maybe we just always specify what the file type was and if it was a part 10 file, we would always call it a DICM.



C.YY.1.2.8 Container File Type

Container File Type (00gg,0FxC) identifies the type of container file accessible through the ~~Stored Instance File URI~~File Access URI (00gg,0FxB).

725 The Defined Terms are:

ZIP	see Section P.1.2.1
TAR	see Section P.1.2.2
GZIP	see Section P.1.2.3
TARGZIP	see Section P.1.2.4
730 BLOB	see Section P.1.2.5
DICM	Single SOP Instance in DICOM File Format (see Section 7 "DICOM File Format" in PS3.10), not in a container

This actually seems to simplify our conditions.

Table C.YY.2-2 Stored File Access Macro Attributes

Name	Tag	Type	Description
~~Stored Instance File URI~~File Access URI	(00gg,0FxB)	1C	Access URI for file containing the SOP Instance. See Section C.YY.2.2.1.1 Required if referenced SOP Instance is in the DICOM File Format, and is accessible through a non-DICOM protocol (see Annex P).
Container File Type	(00gg,0FxC)	1C	Type of container file. See Section C.YY.1.2.8 for Defined Terms. Required if ~~Stored Instance File URI~~File Access URI (00gg,0FxB) ~~references a container file~~is present.

Action: Harry Solomon will accept most of these changes and put out a DLB2 version of the file for the WG-33 to read and provide comments.

5 OLD BUSINESS

6 NEW BUSINESS

7 DATE AND TIME OF NEXT MEETINGS (Secretariat)

- Continue T-con meetings bi-weekly
- Next call is February 16, 2022 between 11:00 am and 12:30 pm ET

NEMALINK CODE	09-WG33
SUBMITTED BY	Hull, Carolyn
SUBMITTED ON	3/4/22
LEGAL APPROVAL	3/14/22
UPLOAD LOCATION	Enter upload location.