

# MINUTES

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

**MEETING PLACE/DIAL IN**

**DATE & TIME** Wednesday, October 28, 2020 | 11:00 am – 12:30 pm US ET

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

**VOTING MEMBERS PRESENT**

|   |                      |
|---|----------------------|
| Ambra Health                                | Ostrow, Daniel       |
| American College of Radiology               | Maldonado, Josh      |
| Argentix Informatix                         | Silver, Elliot       |
| GE Healthcare                               | Nichols, Steven      |
| Grafimedia                                  | Georgiadis, Pantelis |
| Healthcare Tech Solutions                   | Eklund, Keith        |
| Laitek, Inc.                                | Solomon, Harry       |
| Society for Imaging Informatics In Medicine | Carey, Cheryl        |

**OTHERS**

|                                   |                   |
|-----------------------------------|-------------------|
| Citius Tech Healthcare Technology | Mahalle, Prashant |
| DeJarnette Research Systems       | Wineke, Steve     |
| Hyland Software                   | Ullrich, Mike     |
| Laitek, Inc.                      | Behlen, Fred      |

**VOTING MEMBERS ABSENT**

|                            |                  |
|----------------------------|------------------|
| AAPM                       | Bevins, Nicholas |
| AAPM                       | Knazik, Shayna   |
| Canon Medical Research USA | O'Donnell, Kevin |
| Canon/Vital Images         | Dawson, Tim      |

|   |                        |
|---|------------------------|
| Canon/Vital Images                          | Whitby, Jonathan       |
| Change Healthcare                           | Ho, Kinson             |
| DesAcc EMEA                                 | King, Graham           |
| European Society of Radiology               | Mildenberger, Peter    |
| GE Healthcare                               | Numan, Jouke           |
| Laitek, Inc.                                | Costea-Barluti, Razvan |
| Mayo Clinic Rochester                       | Persons, Kenneth       |
| Mach7 Technologies                          | Ulanov, Alexey         |
| PixelMed Publishing                         | Clunie, David          |
| Society for Imaging Informatics In Medicine | Bishop, Matthew        |
| Society for Imaging Informatics In Medicine | Henson, Kyle           |
| Varian Medical Systems, Inc.                | Schwere, Thomas        |

**DICOM** Anna Zawacki, SIIM  
**SECRETARIAT**

## **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.

## **3 REVIEW MINUTES (Co-Chairs)**

The minutes of the previous meeting were reviewed.

## **4 TOPIC ITEMS TO BE DISCUSSED (All)**

- Final Review of the Draft Supplement for presentation to WG-06

Look for v06 in this folder: <ftp://d9-workgrps@medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/WG33/2020/2020-10-28>

Went through the comments submitted by WG-33 members.

Instance Coercion Date/Time – having the same tag at multiple levels makes it hard for DTKs that provide info on level a tag is expected to be on.

Revised and created a new attribute – Study Update Date/Time – that can have precisely the semantics that we want.

Issue with the original attributes sequence – tags can also be added – this is a gap in the original attributes sequence – Jouke to submit a change proposal on that.

Inventory Module – huge IOD which is not an exact copy of the main DB. Attributes that are not readily available in the PACS DB can be left empty.

Inventory Module Attributes - Deleted studies/series/instances known by the PACS DB can have a record in the inventory with Not for Clinical Use Flag = ABSENT

Zip files don't have an offset, you need filename in the zip – can extend URI pointing to the zip file with a name of the file in it? treating a zip file itself as it was file system folder directory. Harry to experiment.

FilePath Expiration DateTime - Expected duration of retention until which time SOP Instance may be accessed - Needs some thought how to formulate this. Systems don't want to lock down their individual files too long. Also probably don't want to guarantee a retention period nor keep track of this on individual instance. This is optional per text in C.Y.Y 1.4.2. More informational for us as migrators. Helpful info, but can we get the vendors to do it. If optional, probably only applies to caches.

Not for Clinical Use Flag - What should the source system do when a Study or Series level request is made and \*some\* of the instances in the Study or Series are not for clinical use? If only some instances are marked NFCU, that means some are not, and hence the Study or Series should not be so marked.

How are studies without Study Date/Time handled? Need to define behavior how such studies are treated – added to Open Issues. Do we need to be able to request an inventory of studies that do not have a Study DateTime? This would be a useful query to add in – for QC purposes. Same goes for Patient ID.

How to distinguish between multiple https-based protocols? Basically it would need to be configured on a per-site basis, as would access control permissions, although the only feature we are really looking for is a read of an object, which is just an HTTP GET. Note has been added to the new text.

## Draft 6

In the Information Model we have this relationship 1:1 between Study and Imaging Service Request, and the following text has been added:

While there is a potentially complex relationship between the Study and Imaging Service Requests in the real world (e.g., see [\[IHE RAD TF-1\] Presentation of Grouped Procedures Integration Profile](#)), the Inventory information model supports only single Accession Number representing an Imaging Service Request.

**New Attribute – Study Update DateTime – DateTime of last update to study instances or metadata + additional explanation between line item 370 and 375. The vendors implement. Should be last accessed time.**

**Not for clinical use flag – added in 2 notes (line item 390)**

4. While defined in this specification at the Study, Series, and Instance levels, an Application Entity might not manage this attribute at some, or all, of those levels. E.g., an AE may only manage this attribute at the Instance level, and is not required to infer a value for the Series or Study level.
5. If the Application Entity retains a record of deleted Studies, Series, or Instances, even though the actual Instances are physically deleted, it may include them in the Inventory with a Not for Clinical Use Flag value of ABSENT.

**Line 440-445 – added in a Note for the Folder PathName**

In the terminology of [RFC3986], Folder Pathname and File Pathname are relative references to the name space of the Stored Instance Root URI.

**Added in an attribute for when you do point to a file – Stored Instance Container File – to explicitly say what type it is – line item 445-450**

### **C.YY.1.2.8 Stored Instance Container Type**

If the resource identified by File Pathname (0008,0FxC) is a container format file as specified in **Section P.1.2**, Stored Instance Container Type (0008,0Fy8) identifies the type of container file. The Defined Terms are:

|       |   |
|-------|---|
| ZIP   | ZIP container file in accordance with [ISO/IEC 21320-1]   |
| TAR   | ustar container file in accordance with [POSIX]   |
| TARGZ | ustar container file in accordance with [POSIX], compressed using GZIP in accordance with [RFC1952] |

On the container files – we are not tracking any kind of encryption.

Consider zip file passwords.

We don't have a note that is more explicit in terms of always requiring either AETitle or DICOMweb origin server. Implicit you should have one or the other. Agreed on what we have at this point is sufficient.

Inventory Initiation Model Attributes

|                    |             |   |
|--------------------|-------------|---|
| Transaction Status | (0008,0Fy0) | Processing status indication.<br>Defined Terms:<br>CONT - Processing continuing<br>NOMATCH - No studies match Scope of Inventory<br>FAIL - Processing failure<br>OUTRES - Out of resources<br>MAXTIM - Max time to complete exceeded<br>CANCEL - Processing canceled by requestor |
|--------------------|-------------|---|

Change CONT to PROCESS – similar to what we see with other systems that are processing data

Need to add COMPLETE – final transaction status

Add PAUSED – processing paused or suspended

Should we add % of completion – may be hard, you'd have to know how much you still have to go through

Settle on: Number of Studies found and processed into Inventory SOP Instances (as of time of message) that match Scope of Inventory.

Should we add Processing status? Prep before doing inventory generation.

General consensus – not add it, keep it simple.

Add in Status description – will be entirely optional with no restrictions on what goes in there

Under P.2 Access Protocols, the following has been added:

- Several protocols are layered on HTTPS. While the specific protocol should be specified in the Conformance Statement, the only feature required is the ability to read an object, which is generally implemented simply as an HTTP GET.

**Table P.2-1. Common Non-DICOM File Access Protocols (Informative)**

| Protocol          | IANA-registered Scheme | Further Specification   |
|-------------------|------------------------|---|
| NFS               | nfs                    | RFC7530   |
| SMB               | smb                    | <a href="https://docs.microsoft.com/en-us/openspecs/windows_protocols/ms-smb2">https://docs.microsoft.com/en-us/openspecs/windows_protocols/ms-smb2</a> |
| Amazon S3         | https                  |   |
| Apache CloudStack | https                  |   |
| Azure BLOB        | https                  |   |

How long will the protocol list be relevant? Let's switch to the following:

| IANA-registered Scheme | Protocol | Further Specification |
|------------------------|----------|-----------------------|
| nfs                    | NFS      | RFC7530               |

| IANA-registered Scheme | Protocol | Further Specification   |
|------------------------|----------|---|
| smb                    | SMB      | <a href="https://docs.microsoft.com/en-us/openspecs/windows_protocols/ms-smb2">https://docs.microsoft.com/en-us/openspecs/windows_protocols/ms-smb2</a> |
| https                  | HTTP GET | Includes various cloud storage implementations  |
| https                  |          |   |
| https                  |          |   |

WG-33 Members ran through the Open Issues at the end of the call  
Deleted issue K - Do we need a lifecycle of inventory objects –

## 5 OLD BUSINESS

## 6 NEW BUSINESS

## 7 Adjourned at 12:30PM ET

## 8 DATE AND TIME OF NEXT MEETINGS (Secretariat)

- Continue T-con meetings bi-weekly for the time being
- Next call is November 18, 2020 between 11:00 am and 12:30 pm ET

NEMALINK CODE 09-WG33

SUBMITTED BY Hull, Carolyn

SUBMITTED ON 11/16/20

LEGAL APPROVAL Peter Tolsdorf, 11/20/2020

UPLOAD LOCATION Enter upload location.