

MINUTES

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

MEETING PLACE/DIAL IN

DATE & TIME Wednesday, June 9, 2021 | 11:00 am – 12:00 pm US ET

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

VOTING MEMBERS PRESENT

Argentix Informatics, Inc.	Silver, Elliot
Canon Medical Research USA	O'Donnell, Kevin
Healthcare Tech Solutions	Eklund, Keith
Laitek, Inc.	Brown, Barry
Laitek, Inc.	Solomon, Harry
London Health Science Center	Aizawa, Luiz
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

VOTING MEMBERS ABSENT

AAPM	Bevins, Nicholas
ACR	Maldonado, Josh
Ambra Health	Ostrow, Daniel
Canon/Vital Images	Dawson, Tim
Canon/Vital Images	Whitby, Jonathan
Change Healthcare	Ho, Kinson
DesAcc EMEA	King, Graham
European Society of	Mildenberger, Peter

Radiology	Nichols, Steven
GE Healthcare	Numan, Jouke
GE Healthcare	Georgiadis, Pantelis
Grafimedia	Costea-Barluti, Razvan
Laitek, Inc.	Sluis, Douglas
Laitek, Inc.	Ulanov, Alexey
Mach7 Technologies	Persons, Kenneth
Mayo Clinic Rochester	Clunie, David
PixelMed Publishing	Henson, Kyle
Society for Imaging Informatics In Medicine	
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)

- Discuss Public Comments received for Sup223

ftp://d9-workgrps@medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/WG33/2021-06-09/Sup223_pc_cmts.docx

Went through comments received during Public Comment period.

E

GE comment

- IOD creation adds burden on the old/outgoing system, who is the least incentivized to support a potentially expensive operation, requiring:
 - several days to create 1 or more inventories, based on 300GB metadata per 1 billion instances,
 - allocation of storage (and backup) for the inventory,
 - CPU allocation (e.g. database) to create inventories without impacting clinical use, and
 - development of application logic to create / update inventories

GE Proposed Approach

- Extend query service (C-FIND) to specify an offset and count mechanism to window across database (e.g. Study table).
 - allows migration tools to read the live, up-to-date data immediately,
 - no overhead for initial/delta passes, and
 - requires only few metadata fields to be added (e.g. last updated timestamp, file location, pending updates).
- An existing study table Primary Key value can be used for windowing (“SELECT TOP \$COUNT ... WHERE idStudy > \$offset ORDER BY idStudy”).
 - Note: compound PK might be not possible, extra column & index could be needed in that case.

Our collective response to the comment:

Response to GE comment (1)

- DICOM is a voluntary standard, and each SOP Class is an independent conformance clause. Each system developer has choices for which features a product will implement based on their evaluation of the market. If there are insufficient market incentives, there is no compulsion to implement a feature.
- Sup 223 was developed through a consensus process and the technical approach was established through that process. WG-33 is cognizant of the relative burdens on producers and consumers of the inventory (see proposed PS3.17 Section XXXX.2.6) and has made such trade-offs during the development of Sup 223.
- The solution proposed in the comment was raised during the process and was not adopted by WG-33. Instead, WG-33 adopted the approach of an exchangeable Inventory SOP Instance, which could be produced by a variety of methods including, but not restricted to, a new Inventory Creation service, or a local administrative user interface.

Response to GE comment (2)

- The process by which the Inventory SOP Instances are produced is totally at the discretion of the producer. It is not constrained to a storage mechanism or a time response, and the producer can allocate its resources as necessary to minimize impacts to clinical operations.
- The Sup 223 approach of a tree of Inventory SOP Instances enables a multitude of production approaches (see proposed PS3.17 Section XXXX.2.3), allowing a breadth of innovative implementations that can optimize resource use.
- The GE proposal forces production to be synchronous to C-FIND transactions and to a particular model of database management. It adds a new concept (offset and count) to the DICOM query information model which is implementation-specific, and response would not be consistent across different implementations.

Add – the alternate ultimately does not reduce the CPU burden on the producer.

Jörg Riesmeier comment

- [Numerous editorial style / capitalization issues]
- I propose to name the three new Query/Retrieve SOP Classes after the long-standing model, i.e.
 - change "Inventory FIND" to "Inventory Query/Retrieve Information Model - FIND"
 - change "Inventory MOVE" to "Inventory Query/Retrieve Information Model - MOVE"
 - change "Inventory GET" to "Inventory Query/Retrieve Information Model - GET"

Originally in the draft we had the long names and found them confusing, so we changed to shorter.

Part of that is from Annex C where you have more information models.

We'll not change but mention to WG-6 to see if they want us to change to long names.

Open issues – need to write up the rationale:

- 1A Scope of Inventory – we couldn't think of use cases that go beyond the initial set, and nobody else could, without the use case you can't decide how something may or may not be use, we needed use cases to demonstrate the need for it and none manifested; client side filtering as a fallback.
- 1B Matching Mechanism Different – some of this to be pulled from the response to GE comment – no one proposed an alternative approach that hasn't already been considered; no direct negative comments on proposed approach.
- 1C Matching on SOP Classes in Study – select for modality CT and select client-side filtering, use CT as a rough cut, if you need a fine cut use client-side filter – no use cases left that could not do client-side filter.
- 2A Study/Series level folders or container files – no problematic use cases raised, individual SOP instances can be accessed.
- 2B Non-DICOM file access protocols – no problematic use cases raised, can add in the future if we need to (e.g. IHE profiling) – no light way of specifying them, either we deal with what we have or have to go much deeper, point in time.
- 3A De-identification – no needs were raised.

- 3B User Authorization – authorization is left to implementation to figure out – need to make sure we have that paragraph written in somewhere in the proposal, add subsection to security considerations.
- 3C Confidentiality/Privacy Attributes – didn't get any comments, checked with WG-14, they said it's fine, if you have any comments, make sure to get them during Letter Ballot.
- 4A Pause/Resume – no comments received.
- 4B Fresh Inventory – no comments received.
- 4C – Tree of References – no comments received.
- 4D Production Monitoring – no comments received, unnecessary complication.

5 OLD BUSINESS

6 NEW BUSINESS

Week of June 21 is WG-06 Meeting. WG-33 and Sup223 will be on the agenda per the below schedule:

- 6/21 1:45pm EDT 2 hrs
- 6/23 2:45pm EDT 1 hr (but might extend)
- 6/25 11:15am EDT 2 hrs

7 DATE AND TIME OF NEXT MEETINGS (Secretariat)

- Continue T-con meetings bi-weekly
- June 23 meeting is cancelled due to WG-06 meetings all week
- Next call is July 7, 2021 between 11:00 am and 12:30 pm ET

NEMALINK CODE 09-WG33

SUBMITTED BY Hull, Carolyn

SUBMITTED ON 7/1/21

LEGAL APPROVAL 7/6/21

UPLOAD LOCATION

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