

MINUTES

DICOM WG-06 Base Standard

May 27-31, 2024

Hybrid (Face-to-Face & Remote) Meeting

Location: NEMA, 1300 17th Street N, Arlington, Virginia, USA

Presiding Officers: Björn Nolte, Siemens Healthineers, Chair
David Clunie, PixelMed, DICOM Editor

DICOM Secretariat: Shayna Knazik, NEMA/MITA

Summary of decisions from this meeting

- CPack-126 was approved for Final Text as amended (28 CPs), with the inclusion of CP-2289 and CP-2311 and the exclusion of CP-2380.
- CPack-127 was approved for Letter Ballot (16 CPs).
- Supplement 228: DICOMweb API for Server Volumetric Rendering was approved for Letter Ballot as amended.
- Supplement 232: JPEG XL Transfer Syntax was approved for Letter Ballot as amended.
- Supplement 233: Patient Model Gender Enhancements was approved for Public Comment as amended.
- Supplement 236: Waveform Presentation State was approved for Public Comment as amended.
- Supplement 239: Waveform Annotation SR was approved for Final Text as amended.
- Supplement 242: Ultrasound Fetal Cardiac Structured Report Extensions was approved for Letter Ballot as amended.
- Supplement 243: Label Map Segmentation was approved for Letter Ballot as amended.

1. Administrative

- a. The WG-06 Hybrid Face-to-Face & Remote Meeting was called to order on Monday, May 27, 2024 at 8:30am US Eastern.

- b. Staff reminded members of the [DICOM Patent Disclosure Policy](#) and [guidelines for conducting NEMA meetings](#). The agenda was reviewed and approved.
- c. The minutes from the March 2024 WG-06 meeting were reviewed and approved without objection or abstention.

2. Report on Letter Ballots

DSC Ballot	Ballot Closed	Approve	Disapprove	Abstain	Comments
CPack-126	May 8, 2024	13	1	0	7

a. CPack-126

- The official ballot was distributed to voting members of the DICOM Standard Committee on April 3, 2024 and closed on May 8, 2024.
- CPack-126 included the following Change Proposals (27 CPs):

CP #	Title
CP-1978	Restore presentation state retrieval to PS3.18
CP-2289	Update to TID 10048 Radiation Output Description
CP-2307	Rationalize and extend codes and strings for filter material
CP-2311	Make Camellia support optional
CP-2344	Update RT Patient Setup Module
CP-2350	Remove duplicate CIDs expressing Time Relative to Procedure
CP-2352	Clarify floating point Not a Number values
CP-2355	Refactor lung anatomy context groups
CP-2356	Add Ethnic Group Code Sequence
CP-2357	In SR, Referenced Instance Sequence is not intended to duplicate references in other reference Sequences
CP-2358	Update DICOM to reflect changes in IHTSDO SNOMED CT-DICOM Subset for JUL 2023 INT Release
CP-2359	Add representative and boundary point concepts
CP-2360	Use SNOMED code for calcium score
CP-2361	Correct segmentation tissue codes
CP-2362	Clarify the content of Extended Offset Table present in Concatenation
CP-2363	Add missing fields to Context Group definition
CP-2365	Clarify use of Command Elements and Error Comment
CP-2366	Remove rendered bulk from conformance statement
CP-2367	Retire Sleep Stage Codes
CP-2369	Add Peak Blood Velocity to CID 12120 and CID 12222
CP-2371	Remove precision on ObservationDateTime for Procedure Log
CP-2372	Update Gantry Angle description in RT IMAGE to allow for an Imaging beam angle

CP-2374	Improve RT equipment mapping for imaging
CP-2375	Add Generic RT Patient Support Position Parameters
CP-2376	Add Table Top Calibration UID to Table Top positions
CP-2377	Add Radiotherapy Workitem Codes to DCMR Context Groups
CP-2378	Add RT Treatment Technique Code to Beam Sequence
CP-2379	Add new codes for referencing prior dose
CP-2380	Clarify single row or column or pixel data PixelSpacing value is zero

- CP-2289 and CP-2311 were not ready for Final Text back in March 2024 and were withheld from CPack-125. Both CPs were reviewed this week and included in CPack-126.
- CP-2380 requires input from WG-16 MR prior to Final Text, and will be withheld from the vote.
- *David Clunie made a motion to approve CPack-126 for Final Text as amended with the inclusion of CP-2289 and CP-2311 and exclusion of CP-2380. Kevin O'Donnell seconded the motion. The motion was approved without objection or abstention.*
- **DECISION:** CPack-126 was approved for Final Text as amended (28 CPs), with the inclusion of CP-2289 and CP-2311 and the exclusion of CP-2380.

b. CPack-127 Letter Ballot

CP #	Title
CP-2226	Add Breast Segmentation Types Context Group
CP-2295	KVP attribute in CT Image Module may also be filled in MultiEnergy case
CP-2315	Clarify Single Conformance Statement in PS3.2
CP-2337	Implementation Version Name will contain version information
CP-2338	Add Antral Follicle Counts to OB/GYN SR
CP-2343	Add Spacer and Device to RT ROI Interpreted Type
CP-2347	Clarify OPT Frame of Reference Coordinate System
CP-2349	Relax Multi-energy CT Rescale Type constraint
CP-2364	Update outdated Note on Type of VOI LUT Sequence and Window Center
CP-2373	Clarify Description related to Range Shifter Settings
CP-2381	Replace attributes by Referenced SOP Instance macro for Intravascular OCT Series Module
CP-2382	Add derived measures of similarity for ROIs
CP-2383	Value Set Constraint of row 8 to 10 within TID10001 has to be changed from CID 230 Yes-No to CID 231 Yes-No Only
CP-2384	Change name of Status Code 0107H to clarify it is a Warning
CP-2385	Fix inconsistent names of Transfer Syntaxes

CP-2387	New Context Group for Waveform Modalities
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- *David Clunie made a motion to approve CPack-127 for Letter Ballot. Kevin O'Donnell seconded the motion. The motion was approved without objection or abstention.*
- **DECISION:** CPack-127 was approved for Letter Ballot (16 CPs).

3. Report on Change Proposals (CPs)

a. New CPs

Submitted file	Title	New CP #
CP CID Entries	CID Entries which are inconsistent or incomplete	CP-2408
CP Multiple	Multiple Inconsistencies of DCM CodeMeanings in PS3.16 table D-1 versus CIDs	CP-2409
cp_dac646	Formally define Attribute Value	CP-2410
cp_dac647	Clarify Point Coordinates origin in Microscopy Bulk Simple Annotations	CP-2411
cp_dac648	Add flag to whole slide microscopy images indicating tiles are nonoverlapping	CP-2412
cp_dac649	Clarify Admitting Diagnosis meaning and add other types of diagnosis	CP-2413
cp_dac650	Clarify that ICC Profile should not be present in top-level dataset since in Optical Path Sequence Item of Whole Slide Microscopy Image	CP-2414
cp_dac651	Add PAXgene fixation system	CP-2415
cp_FLIO	FLIO Ophthalmic Photography	CP-2416
cp_JM_01	Note for ordering tags in XML representation	CP-2417
cp_jm18	Remove Partial Content status code from some Responses	CP-2418
cp_jm19	Clarify some aspects of UPS	CP-2419
cp_jr46	Add missing Status Codes to DIMSE Services and further improve consistency	CP-2420
cp_jr47b	Fix inconsistent spelling and use of terms in Part 4	CP-2421
cp_jr48	Fix inconsistencies in and add missing information to PS3.2 Annex N	CP-2422
cp_jr49b	Add missing abbreviation "MPPS" to various Parts	CP-2423
cp_KV	Correct the Relax NG Compact Schema for the Native DICOM Model	CP-2424
cp_nb28	Generalize CTDI phantom options	CP-2425
cp_rjh56	Fix inconsistent CFIND documentation	CP-2426
cp_RT247	Add RT specific plan approvals	CP-2427

cp_RT250	Add Algorithm Identification to RT Dose Module	CP-2428
cp_RT251	Update ROI DateTime and ROI Observation DateTime	CP-2429
cp_RT254	Add Examples of Ion Control Point Sequence for Arc Treatment Techniques	CP-2430
CP_WG-09	Remove LUT restrictions for Ophthalmic Tomography Images	CP-2431
cp_sjn	Clarify Support of Mandatory Query Parameters in DICOMweb	CP-2432

b. Assigned CPs

The following CPs were reviewed and decisions reached as shown. Note: Please upload the VP version (candidates for the CPack-128/August 2024 Voting Packet) to the [August 2024 meeting folder](#).

CP #	Title	Decision
CP-2319	Enable multiple dose reference points in TIDs 10004 and 10007 & clarify conditions in TID 10007	Moved to August 2024 Voting Packet
CP-2342	Add Clinical Fraction Number to 1st Generation RT Objects	Moved to August 2024 Voting Packet
CP-2346	Ocular Region Imaged Module in Ophthalmic Tomography	Moved to August 2024 Voting Packet Action: Shayna will forward this to WG-19 to see if Dermatology could reuse mechanisms.
CP-2370	Orientation guidance for vertical CT gantries	Moved to August 2024 Voting Packet
CP-2388	Extended Offset Table clarification	Moved to August 2024 Voting Packet
CP-2389	Define Fragment and Frame	Moved to August 2024 Voting Packet
CP-2393	Update CT Scanning Length Definition	Moved to August 2024 Voting Packet
CP-2396	Describe case where '¥' is a delimiter with a disclaimer	Moved to August 2024 Voting Packet
CP-2398	Correct inconsistent time point concepts	Moved to August 2024 Voting Packet
CP-2399	Correct Audit Message Schema Conflict	Moved to August 2024 Voting Packet
CP-2400	Add Mixed Ion Radiation Type and add Ion species information in control points	Moved to August 2024 Voting Packet

CP-2401	Ion Range Surface Compensator	Moved to August 2024 Voting Packet
CP-2402	Isodose levels for RT Dose visualization	Moved to August 2024 Voting Packet
CP-2403	Fix wrong use of Association-related terms in PS3.2 Annex N	Moved to August 2024 Voting Packet
CP-2404	Rephrase Reference Description	Moved to August 2024 Voting Packet
CP-2405	Add note clarifying DIMSE JWT and DICOMweb access token can be the same	Moved to August 2024 Voting Packet
CP-2406	<i>Clarify Series and Frame of Reference relationship for Whole Slide Microscopy Images</i>	<i>Remains assigned</i>

- c. **Proposed changes to the CP template:** Rob Horn presented proposed changes to the CP template. These were previously circulated to the DICOM Executive Committee, and the only comment received was from Björn Nolte who made some minor suggestions which Rob incorporated. **Action:** Rob will send the updated version to Shayna to upload to the website.

4. Report on Supplements

NOTE: All documents are uploaded to the meeting folder on the FTP server in the WG-06 directory. Please refer to those documents for more technical details. Contact the Secretariat for help accessing the FTP.

a. **New Supplement on DICOMweb Modality Services (WG-27)**

- Jeroen Medema and Diter Krotz led the group through a PowerPoint on the scope and use case for a new Supplement on DICOMweb Modality Services, pursuant to Work Item 2023-10-C. WG-06 will assign a number once the draft document is reviewed. This will return to WG-06 in August 2024.

b. **Supplement 245: RDSR Informative Annex (WG-28)**

- Francisco Sureda and Nick Bevins presented Supplement 245: RDSR Informative Annex in preparation for Public Comment. The group reviewed changes since their last visit in January 2024.
- Supplement 245 will return to WG-06 in August 2024.

c. **Supplement 228: DICOMweb API for Server Volumetric Rendering (WG-27)**

- Steve Nichols presented Supplement 228: DICOMweb API for Server Volumetric Rendering in preparation for Letter Ballot, along with its accompanying PowerPoint presentation.

- *Wim Corbijn moved to approve for Supplement 228 for Letter Ballot as amended. The motion was seconded by Kevin O'Donnell. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 228: DICOMweb API for Server Volumetric Rendering was approved for Letter Ballot as amended.

d. Supplement 232: JPEG XL Transfer Syntax (WG-04)

- David Clunie and Bill Wallace presented the draft document and PowerPoint presentation for Supplement 232: JPEG XL Transfer Syntax in preparation for Letter Ballot.
- *Kevin O'Donnell moved to approve Supplement 232 for Letter Ballot as amended. The motion was seconded by Wim Corbijn. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 232: JPEG XL Transfer Syntax was approved for Letter Ballot as amended.

e. Supplement 233: Patient Model Gender Enhancements (WG-06 Ad Hoc on Gender and Sex Encoding)

- Rob Horn presented Supplement 233: Patient Model Gender Enhancements in preparation for Public Comment. The group reviewed the checklist and agreed it is ready for an extended public comment period (because the August meeting was very full, summer is about to begin, and Sup233 is different than most supplements). It will be an open public comment period until early/mid October.
- The current draft is available here: <https://github.com/rjhorniii/dicom-sup233-wip>
- *Wim Corbijn moved to approve Supplement 233 for Public Comment as amended. The motion was seconded by Kevin O'Donnell. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 233: Patient Model Gender Enhancements was approved for Public Comment as amended.

f. Supplement 236: Waveform Presentation State (WG-32)

- Silvia Winkler presented Supplement 236: Waveform Presentation State and the accompanying PowerPoint presentation in preparation for Public Comment.

- *Wim Corbijn moved to approve Supplement 236 for Public Comment as amended. The motion was seconded by Steve Nichols. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 236: Waveform Presentation State was approved for Public Comment as amended.

g. Supplement 239: Waveform Annotation SR (WG-32)

- Silvia Winkler presented Supplement 239: Waveform Annotation SR in preparation for Final Text. All Letter Ballots comments, the Supplement PowerPoint, and the Supplement Checklist were reviewed.
- *Kevin O'Donnell moved to approve for Supplement 239 for Final Text as amended. The motion was seconded by Wim Corbijn. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 239: Waveform Annotation SR was approved for Final Text as amended.

h. Supplement 241: Structural Heart Procedural SR Template (WG-01/WG-12)

- Steve Nichols presented Supplement 241: Structural Heart SR Template for in preparation for Public Comment. It will return to WG-06 in August 2024.

i. Supplement 242: Ultrasound Fetal Cardiac Structured Report Extensions (WG-01/12)

- Kevin O'Donnell presented Supplement 242: Ultrasound Fetal Cardiac Structured Report Extensions in preparation for Letter Ballot. The draft document, its accompanying PowerPoint, and all Public Comments were reviewed, as well as the Supplement Checklist.
- *Wim Corbijn moved to approve Supplement 242 for Letter Ballot as amended and Steve Nichols seconded the motion.*
- **DECISION:** Supplement 242: Ultrasound Fetal Cardiac Structured Report Extensions was approved for Letter Ballot as amended.

j. Supplement 243: Label Map Segmentation (WG-06)

- David Clunie presented Supplement 243 on Label Map Segmentation in preparation for Letter Ballot. The PowerPoint, draft document, and all Public Comments were reviewed, as well as the Supplement Checklist.
- *David Clunie moved to approve the Supplement for Letter Ballot as amended and Wim Corbijn seconded the motion.*

- **DECISION:** Supplement 243: Label Map Segmentation was approved for Letter Ballot as amended.

5. WG-20/HL7 Report

- a. Brian Bialecki and Jonathan Whitby presented updates from the DICOM WG-20/HL7 II group. For details on this report, their PowerPoint can be accessed in this meeting's folder on the FTP.
- b. Meeting cadence: January (virtual only), May (in-person only) and September (in-person only). They also hold biweekly teleconferences. There is a tentative plan is not to have a separate imaging Connectathon track but instead to collaborate with FHIRcast for a joint track.
- c. The group revisited the HL7 IG Workflow and the WG-06 review timeline. WG-20 seeks WG-06 review of managed FHIR resources at the following stages:
 - Resource proposal: Depending on timing, may be before or after FHIR Management Group approval but prior to draft resource is added to the FHIR build
 - Resource Maturity 1: Prior to updating resource maturity in build
 - Equivalent to "Public Comment"
 - Resource Maturity 5: Prior to updating resource maturity in build
 - Equivalent to "Letter Ballot"
 - Transition from Maturity 5 to Normative to follow HL7 balloting process
 - WG-20 to notify DICOM membership of relevant ballots
- d. FHIR Release 6 aiming for mid-to-late 2024. The intent is for almost all resources to be normative in this release. WG-20/HL7 II is working to get the ImagingStudy (as Maturity 5) and ImagingSelection (as Maturity 3) IGs ready.
- e. The DICOM SR to FHIR Observation Mapping draft is nearly complete and the current plan is to ballot in September 2024. Success
- f. Imaging ServiceRequest Profile
 - The Project Scope Statement (<https://jira.hl7.org/browse/PSS-2135>) was reviewed by II and Orders and Observations WG, and is currently awaiting FMG approval.
- g. WG-06 began a review of the ImagingStudy IG in preparation for the August WG-06 meeting.

6. Deadlines for action items from this meeting

- a. For any supplements going out for comment/ballot that are also on the agenda for next meeting, the comment/ballot window of 5 weeks results in the following

deadlines. Note to authors: please submit earlier if you want any time to resolve comments prior to the next WG-06 meeting.

- Submit **Letter Ballot** drafts to Shayna by **June 17, 2024**.
- Submit **Public Comment** drafts to Shayna by **June 24, 2024**.

7. WG-06 Meeting Schedule

a. Next meeting:

- August 19-23, 2024

b. **2024 meetings:**

- January 8-12, 2024
- March 18-22, 2024
- May 27-31, 2024
- August 19-23, 2024
- November 4-8, 2024
 - **Action:** Björn will continue investigate possible locations.

c. **2025 meetings:**

- January 13-17, 2025
- March 24-28, 2025
- June 16-20, 2025
- September 1-5, 2025
- November 3-7, 2025

8. Old/New Business

- None at this time

9. Adjournment

a. The meeting was adjourned at 10:45am on Friday, May 31, 2024.

10. Meeting Participants

Voting Members Present							
Company/ Organization	Represented by		Mon	Tue	Wed	Thu	Fri
ACR	Brian Bialecki	Voting			X		

Agfa HealthCare	Laura Peters	Voting	X	X	X	X	X
Canon Medical Systems USA	Kevin O'Donnell	Voting	X	X	X	X	X
Carl Zeiss Meditec	Detlev Hohmeier	Voting		X	X		
Fairhaven Technologies	Rob Horn	Voting	X	X	X	X	X
GE Healthcare	Steve Nichols	Voting	X	X	X	X	X
JIRA	Akihiro Yomoda	Alt. Voting	X	X	X	X	X
NEMA/MITA	Shayna Knazik	Voting	X	X	X	X	X
Philips	Wim Corbijn	Voting	X	X	X	X	X
PixelMed Publishing	David Clunie	Voting		X	X	X	
Siemens Healthineers	Björn Nolte	Voting	X	X	X	X	X
Voting Members Absent							
Company/ Organization	Represented by		Mon	Tue	Wed	Thu	Fri
AAPM/University of Arkansas for Medical Sciences	Lawrence Tarbox	Voting	X	X	X	X	X
ACR	Brian Bialecki	Voting	X	X		X	X
Carl Zeiss Meditec	Detlev Hohmeier	Voting	X			X	X
PixelMed Publishing	David Clunie	Voting	X				X
Observers and Alternate Voting Members Present							
Company/ Organization	Represented by		Mon	Tue	Wed	Thu	Fri
AAPM	Nick Bevins	Obs.				X	

Brainlab	Christof Schadt	Obs.		X	X		
Canon Medical Systems USA	Jonathan Whitby	Obs.			X		
CSImed	Uwe Tronnier	Obs.	X	X	X		X
DICOM Usergroup Austria	Silvia Winkler	Obs.	X	X	X	X	
Elekta	Jim Percy	Obs.			X		
GE Healthcare	Francisco Sureda	Obs.				X	
Philips	Jeroen Medema	Obs.					X
Radical Imaging	Bill Wallace	Obs.				X	X
Self	Ulrich Busch	Obs.		X	X		
Siemens Healthineers	Dieter Krotz	Obs.					X
Tocpon Healthcare	Juho Uotila	Obs.			X	X	

Prepared and submitted by Shayna Knazik
Review by counsel Karin Moore