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MINUTES

DICOM WG-06 Base Standard

November 6-10, 2023

Hybrid (Face-to-Face & Remote) Meeting

Location: Institute of Electronics and Informatics Engineering of Aveiro (IEETA)

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

DICOM Secretariat: Shayna Knazik, MITA/NEMA

Summary of decisions from this meeting

- CPack-123 was approved for Final Text as amended (12 CPs), with the exception of CP-2163 and the inclusion of CP-2270 (from CPack-122).
- CPack-124 was approved for Letter Ballot with 13 Change Proposals (CPs).
- A new Supplement on Label Map Segmentation was presented for First Read and assigned the number 243.
- Supplement 226: Confocal Microscopy was approved for Final Text as amended.
- Supplement 234: DICOMweb Storage Commitment Service was approved for Letter Ballot as amended.
- Supplement 235: HTJ2K Transfer Syntax was approved for Final Text as amended.
- Supplement 239: Waveform Annotations SR was approved for Public Comment as amended.

1. Administrative

- a. The WG-06 Hybrid Face-to-Face & Remote Meeting was called to order on Monday, November 6, 2023 at 8:40am UTC.
- b. Antitrust and patent statement was reviewed: Per DICOM bylaws, all discussions in this meeting, including those in the chat window, must abide by DICOM's

antitrust and patent policies which are located on the DICOM website:

<https://www.dicomstandard.org/patent>

- c. The agenda was reviewed and approved.
- d. The minutes from the August 2023 WG-06 meeting were reviewed and approved without objection or abstention.

2. Report on Letter Ballots

DSC Ballot	Ballot closed on	Approve	Disapprove	Abstain	Comments
CPack-123	October 27, 2023	16	0	2	7

a. CPack-123

- The official ballot was distributed to voting members of the DICOM Standard Committee on September 22, 2023 and closed on October 27, 2023. CPack-123 included the following Change Proposals (13 CPs). Additionally, CP-2270 was held over from CPack-122 and is being considered for Final Text here as well.

CP #	Title
<i>CP-2163</i>	<i>Add term to represent the local client copy buffer to CID-405 for Data Export</i>
CP-2270	Support of Empty and Multiple Value Matching Query in DICOMWeb
CP-2280	Relax requirement to provide default Transfer Syntax if uncompressed encapsulated Transfer Syntax image is too large
CP-2281	Remove references to retired IODs and other retired concepts
CP-2282	Add Note on handling C-FIND-CANCEL request in Query/Retrieve Service Class
CP-2283	Clarify use of Concept Name Code Sequence in Encapsulated Documents
CP-2284	Remove remaining references to retired Curves and suffix retired sections
CP-2286	Post-Coordinated Echo Property Code Fix
CP-2290	PositionMeasuringDeviceUsed Enumeration
CP-2293	Resolve Duplicate names for TIDs and a CID
CP-2297	Strengthen Dose Semantics of Dose References
CP-2298	Synchronize 1st Generation BLD definitions
CP-2299	Beam Hold Transition Trigger Source
CP-2300	Extend 1st Gen to 2nd Gen Tolerance Value Mapping

- CP-2163 requires further discussion will return to WG-06 at the January 2024 meeting.
- *David Clunie made a motion to approve CPack-123 for Final Text as amended with the exception of CP-2163 as well as the inclusion of CP-*

2270. Björn Nolte seconded the motion. The motion was approved without objection or abstention.

- **DECISION:** CPack-123 was approved for Final Text as amended (12 CPs), with the exception of CP-2163 and the inclusion of CP-2270 (from CPack-122).

b. CPack-124 Letter Ballot

CP #	Title
CP-1636	Examples of Specific Character Set in Worklist
CP-2220	Differentiate acquisition techniques for RT 3D CBCT imaging
CP-2269	Clarify matching multiple values
CP-2285	Harmonize description of Directory Records and clarify their applicability
CP-2287	Update mammography dose reference point code meaning
CP-2288	Description of DateTime entries in TABLE content items for Enhanced RDSR
CP-2296	Extend RT Structure Set Definitions
CP-2301	Clarify applicability of RLE and JPEG 2000 Transfer Syntax to single bit images such as binary segmentations
CP-2302	Clarify absence of padding between frames applies to single BitsStored multi-frame images encoded in Native format
CP-2303	Clarify Frame Pixel Data Retrieve Response for single BitsStored multi-frame images encoded in Native format
CP-2304	Use the Group Number term correctly
CP-2309	Add channel obstruction to Treatment Termination reasons
CP-2310	Wording improvement for C.8.8.5.4 and use of Study in RTSS references

- *David Clunie made a motion to approve CPack-124 for Letter Ballot. Björn Nolte seconded the motion. The motion was approved without objection or abstention.*
- **DECISION:** CPack-124 was approved for Letter Ballot (13 CPs).

3. Report on Change Proposals

a. New CPs

Submitted file name	Title	New CP #
cp_dac631	Refactor lung anatomy context groups	CP-2355
cp_dac632	Add Ethnic Group Code Sequence	CP-2356
cp_dac633	Clarify that in SR, the Referenced Instance Sequence content shall not overlap with the	CP-2357

	Current Requested Procedure or Pertinent Other Evidence, Predecessor or Identical Documents Sequences	
cp_dac634	Update DICOM to reflect changes in IHTSDO SNOMED CT-DICOM Subset for JUL 2023 INT Release	CP-2358
cp_dac635	Add representative and boundary point concepts	CP-2359
cp_dac636	Use SNOMED code for calcium score	CP-2360
cp_dac637	Correct segmentation tissue codes	CP-2361
cp_dac638	Clarify the content of Extended Offset Table present in Concatenation	CP-2362
cp_jr40	Add missing fields to Context Group definition	CP-2363
cp_jr41	Update outdated Note on Type of VOI LUT Sequence and Window Center	CP-2364
cp_jr42	Clarify use of Command Elements and Error Comment	CP-2365
cp_sjn_remove	Remove rendered bulk from conformance statement	CP-2366
cp_sw	Retire Sleep Stage Codes	CP-2367
cp_wc33	Documenting of lossy compression behavior by Storage SCP in DCS	CP-2368
cp_kod_Add	Add Peak Blood Velocity to CID 12120 and CID 12222	CP-2369
cp_kod_Vertical	Orientation guidance for vertical CT gantries	CP-2370
cp_jwbb	Add context group for Storage SOP Classes	Rejected (see below)
cp_dac639	Remove precision on ObservationDateTime for Procedure Log	CP-2371
cp_RT229	Update Gantry Angle description in RT IMAGE to allow for an Imaging beam angle	CP-2372
cp_RT232	Clarify Description related to Range Shifter Settings	CP-2373
cp_RT236	Improve RT equipment mapping for imaging	CP-2374
cp_RT240	Add Generic RT Patient Support Position Parameters	CP-2375
cp_RT241	Add Table Top Calibration UID to Table Top positions	CP-2376
cp_RT243	Add Radiotherapy Workitem Codes to DCMR Context Groups	CP-2377
cp_RT244	Add RT Treatment Technique Code to Beam Sequence	CP-2378
cp_RT245	Add new codes for referencing prior dose	CP-2379
cp_dac640	Clarify single row or column or pixel data PixelSpacing value is zero	CP-2380

cp_wc34	Replace attributes by Referenced SOP Instance macro for Intravascular OCT Series Module	CP-2381
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b. WG-06 considered a Change Proposal from the WG-20 and FHIR II Co-Chairs named “cp_jwbb” with the title “Add context group for Storage SOP Classes” which proposed to add a context group for Storage SOP Classes. Several WG-06 members wanted to reject the CP noting that a table already exists which is maintained in the DICOM standard, so there is no DICOM use case for creating this context group which would just become additional maintenance and duplicative to the standard.

- *Brian Bialecki made a motion for a formal vote to reject or accept the CP. Steve Nichols seconded the motion. Two members voted to accept the CP and four members voted to reject the CP.*
- **DECISION:** The motion does not pass and cp_jwbb is rejected.
- Brian noted that table that already exists can be referenced in the creation of a FHIR Value Set. HL7/FHIR may extract this as a value set for its usage and DICOM will help if necessary to programmatically extract this if requested.
- After discussion with WG20/HL7 II on Tuesday, November 7th, this may be moot anyway since changing back to OID representation for SOP Class UID in FHIR ImagingStudy would mean that no value set is needed in the first place, which would be much better.

c. Assigned CPs

The following CPs were reviewed and decisions reached as shown.

Note: Please upload the VP version (candidates for the CPack-125/January 2024 Voting Packet) in the [January 2024 meeting folder](#).

CP #	Title	Decision
CP-1570	Add dental visible light acquisition context information	Remains assigned
CP-1978	Restore presentation state retrieval to PS3.18	Remains assigned
CP-2254	Clarify relative URI usage in DICOMweb	Remains assigned
CP-2275	JSON Value Representation for Infinity and NaN Floating Point Numbers	Remains assigned
CP-2289	Update to TID 10048 Description	Moved to January 2024 Voting Packet
CP-2295	KVP attribute in CT Image Module may also be filled in MultiEnergy case	Remains assigned

CP-2305	Clarify Matching of Key Attributes with a VR of IS or DS	Moved to January 2024 Voting Packet
CP-2306	Fix inconsistencies regarding "Status"-related terms	Moved to January 2024 Voting Packet
CP-2308	Clarify Creator Digital Signature Profile	Moved to January 2024 Voting Packet
CP-2311	Make Camellia support optional	Moved to January 2024 Voting Packet
CP-2312	Address change to BCP-195	Moved to January 2024 Voting Packet
CP-2313	Correct Reference in Row 34e of TID 10003	Moved to January 2024 Voting Packet
CP-2314	Clarify units of Vector Grid Data	Moved to January 2024 Voting Packet
CP-2315	<i>Clarify Single Conformance Statement in PS3.2</i>	<i>Remains assigned</i>
CP-2316	Include reference to DICOM Conformance Statement (DCS) into Annex N PS3.2	Moved to January 2024 Voting Packet
CP-2317	Duplicate RP definition in RDSR	Moved to January 2024 Voting Packet
CP-2318	Cassette-Based X-Ray Total DAP	Moved to January 2024 Voting Packet
CP-2319	<i>Enable multiple dose reference points in TIDs 10004 and 10007 & clarify conditions in TID 10007</i>	<i>Remains assigned</i>
CP-2320	Communication that data is synthetic	Moved to January 2024 Voting Packet
CP-2321	Add a code for Intraoperative Transducer to CID 12035	Moved to January 2024 Voting Packet
CP-2324	Add information about Vertex Distance to refraction correction parameters	Moved to January 2024 Voting Packet
CP-2325	Correct DICOMDIR sample in table A.1-1	Moved to January 2024 Voting Packet
CP-2326	Former existing coded-concept (F-10440,SRT,"Erect") in legacy data missing	Moved to January 2024 Voting Packet
CP-2327	Inconsistency (113930,DCM,Size Specific Dose Estimate)	Moved to January 2024 Voting Packet
CP-2328	Deidentification of Patient ID in Patient Group Macro	Moved to January 2024 Voting Packet
CP-2329	Extend histology and microscopy imaging procedure protocol codes	Moved to January 2024 Voting Packet
CP-2330	Add Spatial Information to Secondary Capture IOD	Moved to January 2024 Voting Packet

CP-2331	Clarify Segment scan order for TILED_FULL	Moved to January 2024 Voting Packet
CP-2334	Add [18F]DCFPyL (Piflufolastat) PSMA PET radiopharmaceutical	Moved to January 2024 Voting Packet
CP-2335	Clinical Trial Identifiers need Issuers and may be multiple	Moved to January 2024 Voting Packet
<i>CP-2337</i>	<i>Implementation Version Name shall contain version information</i>	<i>Remains assigned</i>
<i>CP-2338</i>	<i>Add Antral Follicle Counts to OB/GYN SR</i>	<i>Remains assigned</i>
<i>CP-2341</i>	<i>Add reference to Series in UPS Scheduled and Performed Procedure Information Modules</i>	<i>Remains assigned</i>
<i>CP-2342</i>	<i>Add Clinical Fraction Number to 1st Generation RT Objects</i>	<i>Remains assigned</i>
<i>CP-2343</i>	<i>Add Spacer and Device to RT ROI Interpreted Type</i>	<i>Remains assigned</i>
<i>CP-2344</i>	<i>Update RT Patient Setup Module</i>	<i>Remains assigned</i>
CP-2345	Add Requirement for Selected Frames in Sparse MF Module	Moved to January 2024 Voting Packet
<i>CP-2347</i>	<i>Clarify OPT Frame of Reference Coordinate System</i>	<i>Remains assigned until author can join to discuss</i>
CP-2348	Replace the terms Operations Statement and Notifications Statement	Moved to January 2024 Voting Packet
<i>CP-2350</i>	<i>Remove duplicate CIDs expressing Time Relative to Procedure</i>	<i>Remains assigned</i>
CP-2352	Clarify floating point Not a Number values	Moved to January 2024 Voting Packet
<i>CP-2353</i>	<i>Editorial move of Segment Number explanation</i>	<i>Cancelled (it is superseded and expanded by Sup243)</i>
CP-2354	Clarify lack of versioning of Character Sets including GB18030	Moved to January 2024 Voting Packet

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. Supplement NNN: Label Map Segmentation (WG-06)

- David Clunie led the group through a First Read of Supplement NNN on Label Map Segmentation and its accompanying PowerPoint, pursuant to Work Item 2023-10-B.

- *David Clunie moved to assign this Supplement a number and Kevin O'Donnell seconded the motion.*
- **DECISION:** A new Supplement on Label Map Segmentation was presented for First Read and assigned the number 243.
- Sup243 will return to WG-06 in January 2024 in preparation for Public Comment.

b. Supplement 224: Service Discovery and Control (WG-23)

- Brian Bialecki presented Supplement 224 in preparation for Public Comment. Some broader scope discussions took place with WG-06 to figure out a path forward with this Supplement. Brian will make some changes based on WG-06 feedback and hopes to present again at the March 2024 meeting.

c. Supplement 226: Confocal Microscopy (WG-19)

- Liam Caffery presented Supplement 226: Confocal Microscopy in preparation for Final Text. The draft Supplement, its accompanying PowerPoint, and all Letter Ballot comments were reviewed. All Supplement Checklist items were reviewed.
- *David Clunie moved to approve for Supplement 226 for Final Text as amended. The motion was seconded by Kevin O'Donnell. The motion was approved without objection or abstention.*
- **DECISION:** Supplement 226: Confocal Microscopy was approved for Final Text as amended.

d. 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 a PowerPoint presentation.
- Supplement 228 will return to WG-06 in January 2024.

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.
- Sup233 will return to WG-06 in January 2024.
- The current draft is available here: <https://github.com/rjhorniii/dicom-sup233-wip>

- f. **Supplement 234: DICOMweb Storage Commitment Service (WG-27)**
- Jeroen Medema and Dieter Krotz led the group through a review of Supplement 234 on DICOMweb Storage Commitment and its accompanying PowerPoint presentation, in preparation for Letter Ballot. All Public Comments were reviewed and incorporated, and all Supplement Checklist items were reviewed.
 - *Kevin O'Donnell moved to approve for Supplement 234 for Letter Ballot as amended. The motion was seconded by Wim Corbijn. The motion was approved without objection or abstention.*
 - **DECISION:** Supplement 234: DICOMweb Storage Commitment Service was approved for Letter Ballot as amended.
- g. **Supplement 235: HTJ2K Transfer Syntax (WG-04)**
- Bill Wallace led the group through review of Supplement 235: HTJ2K Transfer Syntax, along with its accompanying PowerPoint, in preparation for Final Text. The group reviewed all Letter Ballot comments received. All Supplement Checklist items were reviewed.
 - *David Clunie moved to approve for Supplement 235 for Final Text as amended. The motion was seconded by Wim Corbijn. The motion was approved without objection or abstention.*
 - **DECISION:** Supplement 235: HTJ2K Transfer Syntax was approved for Final Text as amended.
- h. **Supplement 236: Structured Display for DICOM Waveforms (WG-32)**
- Silvia Winkler briefly presented Supplement 236 on Structured Display for DICOM Waveforms and asked the group a few questions.
 - This Supplement will return to WG-06 in January 2024.
- i. **Supplement 239: Waveform Annotations SR (WG-32)**
- Silvia Wikler presented Supplement 239 on Waveform Annotations SR in preparation for Public Comment. The document and its accompanying PowerPoint were reviewed.
 - *David Clunie moved to approve for Supplement 239 for Public Comment as amended, and only after homework is done with WG-32 and then re-reviewed by WG-06 via email. The motion was seconded by Wim Corbijn. The motion was approved without objection or abstention.*

- **DECISION:** Supplement 239: Waveform Annotations SR was approved for Public Comment as amended.
- This will not be released for Public Comment until after January 1, 2024 due to the holiday season. The Supplement will return in March 2024.

j. **Supplement 240: Heightmap Segmentation and Revised Ophthalmic OCT En Face Image (WG-09)**

- Harry Solomon presented Supplement 240 on Heightmap Segmentation and Revised Ophthalmic OCT En Face Image in preparation for Public Comment.
- Sup240 will return at the January 2024 WG-06 meeting.

k. **Supplement 241: Structural Heart SR Template (WG-01/WG-12)**

- Steve Nichols presented Supplement 241 on Structural Heart SR Template for in preparation for Public Comment. It will return to WG-06 in January 2024 with a 2-hour slot.

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

- Kevin O'Donnell presented Supplement 242 on Ultrasound Fetal Cardiac Structured Report Extensions in preparation for Public Comment. It will return to WG-06 in January 2024 with a 2-hour slot.

5. WG-20/HL7 Report

- Jonathan Whitby and Brian Bialecki presented updates from the DICOM WG-20/HL7 II group. For details on this report, Jonathan's PowerPoint can be accessed in this meeting's folder on the FTP.
- FHIR Release 6 publication is aiming for mid-to-late 2024. WG-20/HL7 II is working to get ImagingStudy and ImagingSelection ready.
- The Radiation Dose Report Summary received some comments from AAPM which have been resolved.
- The DICOM SR to FHIR Observation Mapping draft is nearly complete and on track to be balloted in January 2024. Jonathan led the group through changes to the draft since it was presented last at the June 2023 WG-06 meeting. They will return to WG-06 in January 2024.

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 **Public Comment** drafts to Shayna by **November 27, 2023**.
 - Submit **Letter Ballot** drafts to Shayna by **November 20, 2023**.

7. WG-06 Meeting Schedule

- a. Next meeting:
 - January 8-12, 2024

- b. **2024 meetings:**
 - January 8-12, 2024
 - March 18-22, 2024
 - June 3-7, 2024
 - **August 19-23, 2024** -*This meeting was moved from August 26-30, 2024*
 - November 4-8, 2024

- c. 2025 meetings will be determined at the January 2024 WG-06 meeting.

8. Old/New Business

- None at this time

9. Adjournment

- a. The meeting was adjourned at 11:57am on Friday, November 10, 2023.

10. Meeting Participants

Voting Members Present							
Company/ Organization	Represented by		Mon	Tue	Wed	Thu	Fri
ACR	Brian Bialecki	Voting	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
MITA/NEMA	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	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
Agfa	Paul Seifert	Voting	X	X	X	X	
Carl Zeiss Meditec	Detlev Hohmeier	Voting	X	X			X
CIMICS	Bryan Fan	Voting	X	X	X	X	X
Observers and Alternate Voting Members Present							
Company/ Organization	Represented by		Mon	Tue	Wed	Thu	Fri
AAPM	Nick Bevins	Obs.			X		
American Academy of Ophthalmology	Harry Solomon	Obs.	X	X			
AWS	Chris Hafey	Obs.	X				

Brainlab	Christof Schadt	Obs.			X	X	
Canon Medical Systems USA	Jonathan Whitby	Obs.	X			X	
Carl Zeiss Meditec	Patrick Nast	Obs.			X	X	X
CSImed	Uwe Tronnier	Obs.	X	X	X	X	X
DICOM Usergroup Austria	Silvia Winkler	Obs.	X	X	X	X	
Elekta	Jim Percy	Obs.	X		X		
Philips	Jeroen Medema	Obs.	X				X
Radical Imaging	Bill Wallace	Obs.	X			X	
Seno Medical	Allison Bertrand	Obs.		X			
Siemens Healthineers	Dieter Krotz	Obs.	X				
Siemens Healthineers	Ingo Wilkening	Obs.	X	X			
University of Maryland	Andrew Casertano	Obs.			X		
University of Queensland	Liam Caffery	Obs.	X				

Prepared and submitted by Shayna Knazik
Reviewed by counsel: 01/05/2024 kfrm