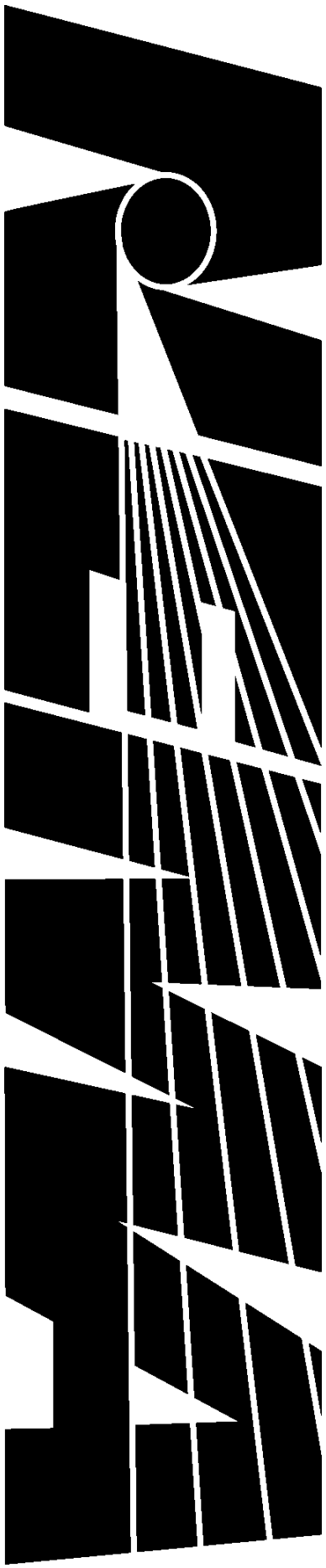
DICOM



Release Notes for DICOM 2004

DICOM®
Digital Imaging and Communications in Medicine

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Release Notes for DICOM PS 3 - 2004.

04 October 2004.

The following changes have been made relative to the published PS 3 2003 standard, by incorporating the changes specified in the supplements and correction items.

The Final Text of all applied Supplements and Correction Proposals is available at:

ftp://ftp.nema.org/medical/dicom/final/

Changes to Parts

Part 1
- Cover done 2004
- Header and footer done
- Sup 67 done (wording referenced in final text did not quite match what was in PS 3.1)
- Sup 85 done
- CP 459 done

Part 2
- Completely replace with Sup 64
-
- Sup 67 done
- Sup 85 done
- Sup 90 done
-
- CP 252 done
- CP 459 done

Part 3
- Cover done 2004
- Header and footer done
-
- Continue crusade to change “which” to “that”
- Fix various RT-related attribute tag typos
- Fix C.13.3 figures (several had extra row)
- Fix references to C.7.3.1.1.1 Modality values to always say “Defined Terms”, not sometimes “Enumerated Values”
- Restore lost Pixel Aspect Ratio figure
- Merge extra defined terms for Body Part Examined from General Series into CR Series Module

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-
- Moved all informative annexes to Part 17
- Sup 42 done
- Sup 47 done – incorporated Window Center and Width at top level rather than nested
- Sup 58 done – and fix CTIDVol tag number to match PS 3.6 (0018,9345); correctly nest Frame Type (and amend Sup 58 FT accordingly)
- Sup 66 done
- Sup 67 done
- Sup 73 done
- Sup 84 done
- Sup 85 done
- Sup 88 done
- Sup 90 done
- Sup 91 done – including ft2
- Sup 92 done
- Sup 93 done
-
- CP 159 done
- CP 252 done – but need references for CNS and GB standards filled in
- CP 294 done
- CP 306 done
- CP 307 done – also did Table C.8-46—RT BEAMS MODULE
- CP 308 done
- CP 309 done
- CP 315 done
- CP 326 done
- CP 328 done
- CP 329 done
- CP 330 done
- CP 332 done
- CP 333 done
- CP 335 done
- CP 337 done
- CP 340 done
- CP 343 done
- CP 346 done
- CP 347 done
- CP 350 done
- CP 351 done
- CP 353 done
- CP 354 done
- CP 356 done
- CP 357 done

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- CP 359 done
- CP 360 done
- CP 361 done
- CP 364 done
- CP 365 done
- CP 366 done
- CP 367 done
- CP 368 done
- CP 369 done
- CP 371 done
- CP 379 done
- CP 380 done
- CP 381 done
- CP 382 done
- CP 383 done
- CP 385 done
- CP 386 done
- CP 392 done
- CP 395 done
- CP 400 done
- CP 401 done
- CP 404 done
- CP 405 done
- CP 409 done
- CP 410 done
- CP 411 done
- CP 412 done
- CP 413 done
- CP 417 done
- CP 420 done
- CP 422 done
- CP 424 done
- CP 426 done
- CP 428 done
- CP 431 done
- CP 432 done
- CP 433 done – conflicted to some extent with Sup 84 – Clarification of Ultrasound Region Calibration; resolved by moving Sup 84 text rather than CP text to new location as appropriate
- CP 435 done
- CP 436 done
- CP 437 done
- CP 438 done
- CP 439 done

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- CP 440 done
- CP 441 done
- CP 442 done
- CP 443 done
- CP 444 done
- CP 445 done
- CP 446 done
- CP 447 done
- CP 454 done
- CP 459 done

Part 4

- Sup 26 done
- Sup 47 done
- Sup 58 done
- Sup 66 done
- Sup 67 done
- Sup 73 done
- Sup 75 done
- Sup 85 done
- Sup 88 done
- Sup 90 done
- Sup 91 done
- Sup 93 done
-
- CP 268 done
- CP 309 done
- CP 326 done
- CP 334 done
- CP 336 done
- CP 340 done
- CP 342 done
- CP 344 done
- CP 348 done
- CP 376 done
- CP 397 done
- CP 407 done
- CP 422 done
- CP 459 done

Part 5

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- Cover done 2004
- Header and footer done
-
- Tidy up quoting of transfer syntax UIDs
-
- Sup 42 done
- Sup 67 done
- Sup 85 done
-
- CP 252 done – but needs attention to Chinese font rendering
- CP 358 done
- CP 378 done
- CP 459 done

Part 6

- Cover done 2004
- Header and footer done
- Sup 42 done
- Sup 47 done
- Sup 58 done
- Sup 67 done
- Sup 73 done
- Sup 75 done
- Sup 85 done
- Sup 88 done
- Sup 90 done
- Sup 91 done
- Sup 92 done
- Sup 93 done
-
- CP 159 done
- CP 309 done
- CP 326 done
- CP 328 done
- CP 330 done
- CP 337 done
- CP 340 done
- CP 347 done
- CP 350 done
- CP 353 done
- CP 367 done
- CP 370 done
- CP 379 done
- CP 386 done

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- CP 392 done
- CP 397 done
- CP 400 done
- CP 409 done
- CP 420 done
- CP 432 done
- CP 433 done
- CP 435 done
- CP 438 done
- CP 441 done
- CP 442 done
- CP 459 done

Part 7
- Cover done 2004
- Header and footer done
-
- Sup 67 done
- Sup 85 done
- Sup 90 done
- CP 355 done
- CP 459 done

Part 8
- Cover done 2004
- Header and footer done
-
- Sup 67 done
- Sup 85 done
- Sup 90 done
- CP 459 done

Part 10
- Cover done 2004
- Header and footer done
-
- Sup 67 done
- Sup 85 done
- CP 269 done
- CP 459 done

Part 11
- Cover done 2004
- Header and footer done

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-
- Sup 42 done
- Sup 67 done
- Sup 80 done
- Sup 82 done
- Sup 85 done
- Sup 87 done
- Sup 88 done
- Sup 92 done
-
- CP 408 done
- CP 459 done

Part 12
- Cover done 2004
- Header and footer done
-
- Sup 42 done
- Sup 67 done
- Sup 80 done
- Sup 82 done
- Sup 85 done
- Sup 87 done
- CP 459 done

Part 14
- Cover done 2004
- Header and footer done
-
- Sup 67 done
-
- CP 399 done

Part 15
- Cover done 2004
- Header and footer done
-
- Sup 58 done
- Sup 67 done
- Sup 85 done
-
- CP 338 done
- CP 341 done
- CP 421 done

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- CP 459 done

Part 16

- Cover done 2004
- Header and footer done
- Include CP 310 Annex D definitions not included with rest of CP 310 in last edition
- Changed “CID” to “BCID” in rows 3 and 7 of TID 5204 Wall Motion Analysis per H.S.
-
- Sup 26 done – conflict with CIDs 1200xx, fixed by renaming new to 12018 and 12019
- Sup 42 done
- Sup 47 done
- Sup 58 done
- Sup 66 done – overrides version on CIDs 220 thru 242, 3627 from 20030130 to 20030327 though content is the same; overrides version on CID 3015 from 20030108 to 20030327 though content is the same; TID 3509 did not have extensibility specified (made Extensible)
- Sup 67 done
- Sup 71 done
- Sup 72 done
- Sup 73 done
- Sup 75 done
- Sup 76 done
- Sup 77 done - TID 3251 did not have extensibility specified (made Extensible)
- Sup 79 done
- Sup 85 done
- Sup 88 done
- Sup 91 done – including ft2
- Sup 93 done
-
- CP 275 done – was incompletely incorporated in 2003; fix now
- CP 309 done – assigned missing version to CID 7205
- CP 323 done
- CP 326 done
- CP 328 done
- CP 331 done
- CP 339 done
- CP 351 done
- CP 371 done
- CP 372 done
- CP 373 done
- CP 374 done

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- CP 376 done
- CP 377 done
- CP 386 done – made CIDs 4030 and 4031 into 4032 and 4033 instead, since conflicted with Sup 58 – updated CP FT accordingly
- CP 388 done
- CP 389 done
- CP 390 done
- CP 391 done
- CP 394 done
- CP 396 done
- CP 403 done
- CP 406 done
- CP 418 done
- CP 429 done
- CP 451 done
- CP 453 done
- CP 455 done
- CP 456 done
- CP 458 done
- CP 459 done
-

Part 17

- Created
- Moved PS 3.3 Annexes
- Sup 26 PS 3.3 additions put here instead
- Sup 45 PS 3.4 additions put here instead
- Sup 66 PS 3.3 additions put here instead
- Sup 67 done
- Sup 71 PS 3.3 additions put here instead
- Sup 72 PS 3.3 additions put here instead
- Sup 73 PS 3.3 additions put here instead
- Sup 76 done
- Sup 77 done
- Sup 79 PS 3.3 additions put here instead
- Sup 85 done
- Sup 91 done – including ft2
-
- CP 376 done
- CP 403 done
- CP 418 done
- CP 459 done

Part 18

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- Created
- Sup 85 done

Supplements Incorporated

Sup 26 – OB-GYN Ultrasound Procedure Reports
Sup 42 – MPEG2 Transfer Syntax
Sup 45 – Ultrasound Staged Protocol Data Management
Sup 47 – Visible Light Video
Sup 58 – Enhanced CT Image Storage SOP Class
Sup 64 – Revised Conformance Statements
Sup 66 – Catheterization Lab Structured Reports
Sup 67 – Configuration Management
Sup 71 – Vascular Ultrasound Procedure Reports
Sup 72 – Echocardiography Procedure Reports
Sup 73 – Spatial Registration SOP Classes
Sup 75 – Relevant Patient Information Query Service Class
Sup 76 – Quantitative Arteriography and Ventriculography Structured Reports
Sup 77 – Intravascular Ultrasound (IVUS) Structured Reporting
Sup 79 – Breast Imaging Report Templates
Sup 80 – DVD Media Application Profiles
Sup 82 – 2.3GB 90mm MOD Medium Format and use in US Profiles
Sup 84 – Clarification of Ultrasound Region Calibration
Sup 85 – Web Access to DICOM Persistent Objects (WADO)
Sup 87 – USB and Flash Memory Devices
Sup 88 – Media Creation Management Service Class
Sup 90 – SOP Class Relationship Negotiation
Sup 91 – Ophthalmic Photography Image SOP Classes
Sup 92 – Media Application Profile for Digital Radiographic Images in Dentistry
Sup 93 – Instance Availability Notification

Correction Items Incorporated

- CP 159 – Generalize Therapy Module to Intervention Module
- CP 252 – Define support for Chinese Character Sets
- CP 294 – Clarify SR Container Referenced Content Item
- CP 306 – Support for negative error dose values in Radiotherapy
- CP 307 – Clarification of RT Image Position
- CP 308 – Support for Verification Plans in Radiotherapy
- CP 309 – Query for SOP Instance UID of alternate lossy compressed image
- CP 315 – Add General Anatomy Macros
- CP 323 – Code Meaning for UCUM code value of 1
- CP 326 – Enhance Modality Worklist for NM/PET Workflow, JJ1017, and Coded Contrast

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- CP 328 – Add Related Series Sequence to General Series Module
- CP 329 – Clarification of Usage of Center of Rotation Offset in NM IODs
- CP 330 – Addition of Slice Order Indication for NM IODs
- CP 331 – Revision of View Codes for NM IODs
- CP 332 – Forbid overlays for Samples per Pixel > 1
- CP 333 – Clarify Image Type Value Optionality
- CP 334 – Clarify Need to Create MPPS Discontinuation Reason
- CP 335 – Reorganize Part 3 Section C.17.3
- CP 336 – Clarify Behavior with Duplicate SOP Instances in a Storage Commitment
- CP 337 – Allow Non-cine Multiframe XA and XRF Instances
- CP 338 – Add AES to DICOM TLS Negotiation
- CP 339 – Add Missing Code Definitions to PS 3.16, Annex D
- CP 340 – Add Modification Date and Time to GP-SPS
- CP 341 – Add Spectroscopy Data and Raw Data to signature profiles
- CP 342 – MWL Response Identifier should contain only what was requested
- CP 343 – Add Spectroscopy and Raw Data records to DICOMDIR
- CP 344 – Correct references to the retired Referenced Image Box SOP Class
- CP 346 – Rename Enumerated CIDs as Defined
- CP 347 – Support for characterization of fluence maps in radiotherapy
- CP 348 – Clarify Date/Time Matching with UTC Offsets
- CP 350 – Addition of phase description to NM IODs
- CP 351 – Addition of stress/rest terminology to NM IODs
- CP 353 – Extension of MR Echo Train Length attribute
- CP 354 – Fix PRINTER BUFFER FULL status value
- CP 355 – Clarify SCP/SCU Role Selection
- CP 356 – Correct Acquisition Context Module note in DX IOD
- CP 357 – Add attributes to CT IOD for helical pitch
- CP 358 – Clarify AE Value Representation
- CP 359 – Forbid HAS CONCEPT MOD By-Reference Relationship
- CP 360 – Add higher precision X-ray Dose attributes to XA IOD
- CP 361 – Add Synchronization and DX Detector Modules to XA and XRF IODs
- CP 364 – MR Spatial Saturation Sequence incorrect number of items
- CP 365 – Laterality in Enhanced MR
- CP 366 – Pixel Aspect Ratio inappropriate for enhanced MR images
- CP 367 – Palette Color LUT for enhanced MR images
- CP 368 – Redundant conditions in Acquisition Context
- CP 369 – Missing number of items in Contrast/Bolus Module, MR Diffusion and MR Anatomy Macros, Purpose of Reference Code Sequence
- CP 370 – Wrong VR for LUT Label in Enhanced MR
- CP 371 – Update language and country codes
- CP 372 – Provide coding scheme UIDs
- CP 373 – Correct CID 7455
- CP 374 – Correct View Codes

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- CP 376 – Fix Typos in related to OB-GYN templates
- CP 377 – Support for OB-GYN Vascular Measurements
- CP 378 – Add comparison with ISO-2022-JP-2 for Japanese character sets
- CP 379 – Various MR attribute changes
- CP 380 – Mixed image multi-frame functional group requirements in Enhanced MR
- CP 381 – Defined Terms for Image Type in Enhanced MR
- CP 382 – Clarify Concatenation requirements in Enhanced MR
- CP 383 – MR Spectroscopy Fixes
- CP 385 – Supplemental Palette Color Compression
- CP 386 – MR Chemical Shift in Metabolite Maps
- CP 388 – Update template definition for extensibility
- CP 389 – Add volume measurement to TID 40xx
- CP 390 – Add missing TID 14xx definitions
- CP 391 – Corrections to context groups 6018, 6019
- CP 392 – Add Frame Pointers Module to Multi-Frame US IOD
- CP 394 – Correct Typo in TID 1006
- CP 395 – Addition of slice order indication and View Code Sequence to PET IOD
- CP 396 – Correct TID 4017, 4018, 4020
- CP 397 – Query Key for SOP Classes in Study
- CP 399 – Calibration of Color Displays for Grayscale
- CP 400 – Lossy Compression Method and Original Images
- CP 401 – Patient Orientation
- CP 403 – Fixes to Vascular Templates
- CP 404 – Add defined terms, medium type for Mammography
- CP 405 – Remove the restriction of VOI LUT from the NM IOD
- CP 406 – Add Discontinued Reason Codes to PS3.16 Annex D
- CP 407 – Correct service status classes
- CP 408 – Add 12bit Lossy JPEG to STD-XA1K-DVD
- CP 409 – Add Reason for Requested Procedure Code Sequence
- CP 410 – Correct Observation Datetime condition
- CP 411 – Refine Mammography Positioning Attributes
- CP 412 – Clarify Type in SOP Common Module
- CP 413 – Change documentation of Icon Image Sequence
- CP 417 – Add US Region Bit Flags
- CP 418 – Sup72 Corrections
- CP 420 – Add R-Wave Time Vector
- CP 421 – Add AES to DICOM Secure Media and Attribute Encryption
- CP 422 – Add Issuer of Patient ID to Patient Module
- CP 424 – Clarify specializations of Referenced Image Sequence
- CP 426 – Correct SNOMED codes in CID 4031 and CID 4016
- CP 429 – Use pre-coordinated terms in TID 3507
- CP 431 – Add MR Series Module

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- CP 432 – UTC Synchronization Frame of Reference
- CP 433 – Retire Ultrasound Frame of Reference

- CP 268 – Clarify definition of SOP Instance
- CP 269 – Define Media Storage Services
- CP 428 – Add Summary Assessments to TID 3570 and 3812
- CP 435 – Dose Reference UID in RT Plan
- CP 436 – Additional Dose Volume Histogram Type
- CP 437 – RT Control Point Example D
- CP 438 – Fraction Group Description
- CP 439 – Clarification of Structures with Excluded Volumes in RT
- CP 440 – New Defined Terms for Fixation Device Type in RT Setup Module
- CP 441 – RT Alternate Accessory Codes
- CP 442 – RT Tissue Heterogeneity Correction
- CP 443 – RT Wedge Position Clarification
- CP 444 – Clarify the use of Reference Series in Presentation State
- CP 445 – Allows X-Ray Table Module included when only angulation done
- CP 446 – Distance Source to Detector and SID errors
- CP 447 – MR Enhanced Contrast/Bolus Module
- CP 451 – Add Key Object Selection Document Title for Report Attachment
- CP 453 – Define Graphic Type Value Set Constraint
- CP 454 – Correct description of SCOORD Image Reference
- CP 455 – Correct multiplicity in TID 1002
- CP 456 – Correct default value in TID 1006
- CP 458 – Correct condition in TID 1404
- CP 459 – Create PS 3.17 for Explanatory Information

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