

DICOM Correction Item

Correction Number	CP-607
Log Summary: Add VR;VM information of retired ACR/NEMA command and data elements	
Type of Modification	Name of Standard
Addition	PS 3.6, PS 3.7
Rationale for Correction	
<p>DICOM Implementation have still to be able to handle retired ACR/NEMA attributes in Data and – less frequently – in Command Sets. Providing convenient access methods for attribute values requires assuming a proper VR also for retired ACR/NEMA attributes.</p> <p>Extracting VR and VM information for retired ACR/NEMA command and data elements from ACR/NEMA Standard Publication No. 300, available at ftp://medical.nema.org/medical/dicom/1988/ACR-NEMA_300-1988.pdf, is quite cumbersome.</p> <p>Value Representations (VR) and Value Types (VT) in ACR/NEMA differs from Value Representations defined by DICOM3, and several ways to map ACR/NEMA VR&VT to DICOM3 VR are possible. Specifying a DICOM3 VR for retired ACR/NEMA attributes in the standard text prevents confusions caused by different ACR/NEMA VR&VT to DICOM3 VR mappings used by different DICOM implementations.</p>	
Sections of documents affected	
PS 3.6 Section 6	
PS 3.7 Annex E.2	
Correction Wording:	

Add a note under the tables in both PS3.6 Section 6 and PS3.7 Section E.2.

“For attributes that have been introduced in earlier versions of this standard and have been retired, provided specifications of Value Representation and Value Multiplicity are recommendations for the purpose of interpreting their values in objects created in accordance with earlier versions of this standard. These recommendations are suggested as most appropriate for a particular attribute, however, there is no guarantee that historical objects will not violate some requirements or specified VR and/or VM”.

In PS3.6, Section 6, add missing VR and VM information

Tag	Name	VR	VM	
(0008,0001)	<i>Length to End</i>	UL	1	RET
(0008,0010)	<i>Recognition Code</i>	CS	1	RET
(0008,0040)	<i>Data Set Type</i>	US	1	RET
(0008,0041)	<i>Data Set Subtype</i>	LO	1	RET
(0008,1000)	<i>Network ID</i>	AE	1	RET
(0008,4000)	<i>Comments</i>	LT	1	RET
(0010,1050)	<i>Insurance Plan Identification</i>	LO	1-n	RET
(0018,1240)	<i>Upper/Lower Pixel Values</i>	IS	1-n	RET

(0018,4000)	Comments	LT	1	RET
(0018,5030)	Dynamic Range	DS	1	RET
(0018,5040)	Total Gain	DS	1	RET
(0020,0030)	Image Position	DS	3	RET
(0020,0035)	Image Orientation	DS	6	RET
(0020,0050)	Location	DS	1	RET
(0020,0070)	Image Geometry Type	LO	1	RET
(0020,0080)	Masking Image	CS	1-n	RET
(0020,1001)	Acquisitions in Series	IS	1	RET
(0020,1020)	Reference	CS	1-n	RET
(0020,3100 to 31FF)	Source Image Ids	CS	1-n	RET
(0020,3401)	Modifying Device ID	CS	1	RET
(0020,3402)	Modified Image ID	CS	1	RET
(0020,3403)	Modified Image Date	DA	1	RET
(0020,3404)	Modifying Device Manufacturer	LO	1	RET
(0020,3405)	Modified Image Time	TM	1	RET
(0020,3406)	Modified Image Description	LO	1	RET
(0020,5000)	Original Image Identification	AT	1-n	RET
(0020,5002)	Original Image Identification Nomenclature	CS	1-n	RET
(0028,0005)	Image Dimensions	US	1	RET
(0028,0040)	Image Format	CS	1	RET
(0028,0050)	Manipulated Image	LO	1-n	RET
(0028,0060)	Compression Code	CS	1	RET
(0028,0104)	Smallest Valid Pixel Value	US or SS	1	RET
(0028,0105)	Largest Valid Pixel Value	US or SS	1	RET
(0028,0200)	Image Location	US	1	RET
(0028,1080)	Gray Scale	CS	1	RET
(0028,1100)	Gray Lookup Table Descriptor	US or SS	3	RET
(0028,1200)	Gray Lookup Table Data	US or SS or OW	1-n 1	RET
(0028,4000)	Comments	LT	1	RET
(4000,0010)	Arbitrary	LT	1	RET
(4000,4000)	Comments	LT	1	RET
(60xx,0060)	Compression Code	CS	1	RET
(60xx,0110)	Overlay Format	CS	1	RET
(60xx,0200)	Overlay Location	US	1	RET
(60xx,4000)	Comments	LT	1	RET

Add the following note behind the tables of PS3.5 Section 6

Note: For attributes that have been introduced in earlier versions of this standard and have been retired, provided specifications of Value Representation and Value Multiplicity are recommendations for the purpose of interpreting their values in objects created in accordance with earlier versions of this standard. These recommendations are suggested as most appropriate for a particular attribute, however, there is no guarantee that historical objects will not violate some requirements or specified VR and/or VM.

In PS3.7, Annex E.2, add missing VR and VM information

**Table E.2-1
RETIRED COMMAND FIELDS**

Message Field	Tag	VR	VM	
Length to End	(0000,0001)	UL	1	RET
Recognition Code	(0000,0010)	CS	1	RET
Initiator	(0000,0200)	AE	1	RET
Receiver	(0000,0300)	AE	1	RET
Find Location	(0000,0400)	AE	1	RET
Number of Matches	(0000,0850)	US	1	RET
Response Sequence Number	(0000,0860)	US	1	RET
DIALOG Receiver	(0000,4000)	AT	1	RET
Terminal Type	(0000,4010)	AT	1	RET
Message Set ID	(0000,5010)	SH	1	RET
End Message ID	(0000,5020)	SH	1	RET
Display Format	(0000,5110)	AT	1	RET
Page Position ID	(0000,5120)	AT	1	RET
Text Format ID	(0000,5130)	CS	1	RET
Nor/Rev	(0000,5140)	CS	1	RET
Add Gray Scale	(0000,5150)	CS	1	RET
Borders	(0000,5160)	CS	1	RET
Copies	(0000,5170)	IS	1	RET
Magnification Type	(0000,5180)	CS	1	RET
Erase	(0000,5190)	CS	1	RET
Print	(0000,51A0)	CS	1	RET
Overlays	(0000,51B0)	US	1-n	RET

Add the following note behind Table E.2-1 of PS3.7

Note: For attributes that have been introduced in earlier versions of this standard and have been retired, provided specifications of Value Representation and Value Multiplicity are recommendations for the purpose of interpreting their values in objects created in accordance with earlier versions of this standard. These recommendations are suggested as most appropriate for a particular attribute, however, there is no guarantee that historical objects will not violate some requirements or specified VR and/or VM.