

DICOM Correction Item

Correction Number	CP-582
Log Summary: Constrain Presentation LUT Shape for Enhanced CT and MR	
Type of Modification	Name of Standard
Clarification	PS 3.3 2004
<p>Rationale for Correction</p> <p>The enhanced CT and MR image objects include the Softcopy Presentation LUT Module, yet there is no practical application for there being an actual LUT encoded in the image objects interposed between the window (VOI LUT stage) operation and the P-values interpreted by the display. Further, were display applications not to support such a LUT (likely), its presence in an image object would lead to inconsistent appearance.</p> <p>Accordingly, it is proposed to remove the Softcopy Presentation LUT Module and add the Presentation LUT Shape attribute as Type 1 with a fixed value of IDENTITY, as has been done with other recent image IODs.</p>	
<p>Sections of documents affected</p> <p>PS 3.3 A.1</p> <p>PS 3.3 A.36.1</p> <p>PS 3.3 A.38.1</p> <p>PS 3.3 C.8.13.1</p> <p>PS 3.3 C.8.15.2</p>	
Correction Wording:	

Item #1: Remove the Softcopy Presentation LUT Module from the Enhanced CT and MR Image IODs and update Table A.1-1 accordingly:

**Table A.36-1
 ENHANCED MR IMAGE IOD MODULES**

IE	Module	Reference	Usage

	Softcopy Presentation LUT	C.11.6	M
	SOP Common	C.12.1	M

**Table A.38-1
 ENHANCED CT IMAGE IOD MODULES**

IE	Module	Reference	Usage

	Softcopy Presentation LUT	C.11.6	M
	SOP Common	C.12.1	M

Item #2: Add a fixed value of Presentation LUT Shape to the Enhanced MR and CT Image Modules:

C.8.13.1 Enhanced MR Image Module

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**Table C.8-79
 ENHANCED MR IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
<u>Presentation LUT Shape</u>	<u>(2050,0020)</u>	<u>1</u>	<u>Specifies an identity transformation for the Presentation LUT, such that the output of all grayscale transformations defined in the IOD containing this Module are defined to be P-Values.</u> <u>Enumerated Values:</u> <u>IDENTITY - output is in P-Values.</u>
Icon Image Sequence	(0088,0200)	3	This icon image is representative of the Image.
> Include 'Image Pixel Macro' Table C.7-11b			See Section F.7.

C.8.15.2 Enhanced CT Image Module

...

**Table C.8-114
 ENHANCED CT IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
<u>Presentation LUT Shape</u>	<u>(2050,0020)</u>	<u>1</u>	<u>Specifies an identity transformation for the Presentation LUT, such that the output of all grayscale transformations defined in the IOD containing this Module are defined to be P-Values.</u> <u>Enumerated Values:</u> <u>IDENTITY - output is in P-Values.</u>
Icon Image Sequence	(0088,0200)	3	This icon image is representative of the Image.
> Include 'Image Pixel Macro' Table C.7-11b			See Section F.7.