STATUS	May 2024 Voting Packet
Date of Last Update	2024-03-21
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Submission Date	2023-10-13

Correction Number	CP-2364
Log Summary: Update outdated Note on Type of VOI LUT Sequence and Window Center	
Name of Standard PS3.3	
Rationale for Correction: A "Note" in the section about "General Requirements for Window Center and Window Width" still refers to the outdated information that the VOI LUT Sequence (0028,3010) and Window Center (0028,1050) Attributes are optional (Type 3). This information should either be updated or removed. The latter is proposed. It is also proposed to remove further inconsistencies in this section, which presumably originate from incomplete revisions in the past.	
Correction Wording:	

For reference PS3.3 Section C.11.2

C.11.2 VOI LUT Module

Table C.11-2 specifies the Attributes of the VOI LUT Module, which describe the VOI LUT.

Table C.11-2. VOI LUT Module Attributes

Attribute Name	Tag	Type	Attribute Description
Include Table C.11-2b "VOI LUT Macro Attributes"			

Table C.11-2b. VOI LUT Macro Attributes

Attribute Name	Tag	Type	Attribute Description
VOI LUT Sequence	(0028,3010)	1C	Defines a Sequence of VOI LUTs. One or more Items shall be included in this Sequence. Required if Window Center (0028,1050) is not present. May be present otherwise.
>LUT Descriptor	(0028,3002)	1	Specifies the format of the LUT Data in this Sequence. See Section C.11.2.1.1 for further explanation.
>LUT Explanation	(0028,3003)	3	Free form text explanation of the meaning of the LUT.

Attribute Name	Tag	Type	Attribute Description
>LUT Data	(0028,3006)	1	LUT Data in this Sequence.
Window Center	(0028,1050)	1C	Window Center for display. See Section C.11.2.1.2 for further explanation. Required if VOI LUT Sequence (0028,3010) is not present. May be present otherwise.
Window Width	(0028,1051)	1C	Window Width for display. See Section C.11.2.1.2 for further explanation. Required if Window Center (0028,1050) is present.
Window Center & Width Explanation	(0028,1055)	3	Free form explanation of the meaning of the Window Center and Width. Multiple values correspond to multiple Window Center and Width values.
VOI LUT Function	(0028,1056)	3	Describes a VOI LUT function to apply to the values of Window Center (0028,1050) and Window Width (0028,1051). See Section C.11.2.1.3 for further explanation. Defined Terms: **LINEAR** **LINEAR_EXACT** **SIGMOID** When this Attribute is not present, the interpretation of the values of Window Center (0028,1050) and Window Width (0028,1051) is linear as in Section C.11.2.1.2.

Change PS3.3 Section C.11.2.1.2.2

C.11.2.1.2.2 General Requirements for Window Center and Window Width

The Window Center (0028,1050), Window Width (0028,1051) and VOI LUT Function (0028,1056) Attributes shall be used only for Images with Photometric Interpretation (0028,0004) values of MONOCHROME1 and MONOCHROME2. They have no meaning for other Images.

If multiple values are present **in the Window Center (0028,1050) and Window Width (0028,1051) Attributes**, both ~~Attributes~~ shall have the same number of values and shall be considered as pairs. Multiple values indicate that multiple alternative views may be presented.

If any VOI LUT ~~Table~~**, specified by the VOI LUT Sequence (0028,3010) Attribute,** is included by an Image, a **pair of** Window ~~Width~~**Center (0028,1050)** and Window ~~Center~~**Width (0028,1051) values,** or the VOI LUT ~~Table~~, but not both, may be applied to the Image for display. Inclusion of both indicates that multiple alternative views may be presented.

If multiple Items are present in VOI LUT Sequence (0028,3010), only one may be applied to the Image for display. Multiple Items indicate that multiple alternative views may be presented.

If the VOI LUT Module is defined in an IOD and if neither ~~a~~ VOI LUT Sequence **(0028,3010)** nor ~~a~~ Window ~~Width~~**Center (0028,1050)** and Window ~~Center~~**Width (0028,1051)** are present, then the VOI LUT stage of the grayscale pipeline **(described in PS3.4 Section N.2)** is defined to be an identity transformation.

> Note
>
> 1. This requirement is specified so that IODs that define a particular output space for the grayscale pipeline, such as P-Values, are not in an undefined state when no VOI LUT Sequence or Window Width and Window Center are present.

2. ~~Despite the Type 3 requirement for~~ **Though the VOI LUT Module,** VOI LUT Sequence **(0028,3010),** ~~and~~ Window Center **(0028,1050) and Window Width (0028,1051) Attributes may be optional in a particular IOD**, implementations that render images are expected to implement and apply these transformations when they are present in the image, unless overridden by the user, a presentation state, or a hanging protocol, and to allow the user to select which transformation to apply when multiple transformations are present.