DICOM Correction Proposal

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Correction Number: CP-2169

Log Summary: Move SCP rendering requirements from Part 3 to Part 4

Name of Standard
PS3.3, PS3.4

Rationale for Correction:
In PS3.3 Section C.8.30.2.1.2 “Corneal Topography Map Real World Value and Image Transformations”, a rendering requirement is made for an SCP of the Corneal Topography Map Storage SOP Class. Requirements for an SCP shall be specified in PS3.4 instead of PS3.3, so it is proposed to move the corresponding paragraph to PS3.4.

*Editorial change #1:* PS3.4 sometimes uses the wording “a SCU” and “a SCP” and sometimes “an SCU” and “an SCP”. This should be changed consistently to “an SCU” and “an SCP”.

*Editorial change #2:* PS3.4 sometimes refers to “the Class”. It is proposed to use “the SOP Class” or “this SOP Class” instead (whichever is more appropriate).

Correction Wording:

*Change PS3.3 Section 2.1 (remove reference to “ISO 19980”)*

2.1 International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC)

[...]


[...]

*Change PS3.3 Section C.8.30.2.1.2*

C.8.30.2.1.2 Corneal Topography Map Real World Value and Image Transformations

The Corneal Topography Map SOP Class supports a sequence of transformations that completely define the conversion of a stored image into a displayed image.

The sequence of transformations from corneal measurements to a displayable image is explicitly defined in Figure C.8.30.2.1-1. Figure C.8.30.2.1-1 also conveys the transformation to display the scaling of the color map using its Real World Value Macro (see Table C.7.6.16-12 for more details on the Real World Value Macro).
Figure C.8.30.2.1-1. Corneal Topography Map Real World Value and Image Transformation Pipeline

An SCP of the Corneal Topography Map Storage SOP Class, when rendering SOP Instances of this SOP Class, shall apply the image transformations (i.e., Palette Color LUT) and the Real World Value LUT to display the annotated color scale. The annotated color scale shall conform to the "ISO Standard 19980 - Ophthalmic instruments - Corneal topographers, second edition, section B.4 Standardized colour Scale."

Note
Requirements for an SCP of the Corneal Topography Map Storage SOP Class when rendering SOP Instances of this SOP Class are defined in Section B.5.1.17 in PS3.4. Formerly, these requirements could be found in this Section of PS3.3.

2 Normative References

[...]


[...]

B.5.1.17 Corneal Topography Map Storage SOP Class

The Corneal Topography Map SOP Class encodes a topographic representation of the curvature and/or elevation measurements of corneal anterior and posterior surfaces (e.g., maps that display corneal curvatures, corneal elevations, and corneal power, etc.).

An SCP of the Corneal Topography Map Storage SOP Class, when rendering SOP Instances of this SOP Class shall apply the image transformations (i.e., Palette Color LUT) and the Real World Value LUT to display the annotated color scale. The annotated color scale shall conform to the "ISO Standard 19980 - Ophthalmic instruments - Corneal topographers, second edition, section B.4 Standardized colour Scale."

For a device that is both an SCU and an SCP of the Corneal Topography Map Storage SOP Class, in addition to the behavior for the Storage Service Class specified in Section B.2.2, the following additional requirements are specified for Corneal Topography Map Storage SOP Classes:

• An SCP of this SOP Class shall support Level 2 Conformance as defined in Section B.4.1.
Note

This requirement means that all Type 1, Type 2, and Type 3 Attributes defined in the Information Object Definition and Private Attributes associated with the SOP Class will be stored and may be accessed.