

DICOM Correction Item

Correction Number		CP-181
Log Summary: Behavior clarification for Presentation LUT and Basic Print Image Overlay Box SOP Class		
Type of Modification	Name of Standard	
Clarification	PS 3.4-1999	
Rationale for Correction		
<p>The current description of the behavior of the N_CREATE and N_DELETE for Presentation LUT and Basic Print Image Overlay Box SOP Class requires users to make assumptions about their behavior. This CP recommends clarifications as follows:</p> <ol style="list-style-type: none">1. The description for Presentation LUT explicitly states that an instance must be created before referenced, if the requirements are the same for Basic Print Image Overlay Box then the standard should explicitly state it.2. The standard should specify that references by the SCU to deleted instances of Presentation LUTs and Image Overlay Boxes are not allowed.		
Sections of documents affected		
PS 3.4: Sections H.4.12.2.1.3, H.4.9.2.2.2, H.4.12.2.3.2		
Correction Wording:		
Modify behavior descriptions as follows		

Update H.4.12.2.1.3 to explicitly state an instance of the Basic Print Image Overlay Box must be created before referenced.

H.4.12.2.1.3 Behavior

The SCU uses the N-CREATE to request the SCP to create a Basic Print Image Overlay Box SOP Instance. **The SCU shall create an instance of a Basic Print Image Overlay Box prior to referencing it.** The SCU shall initialize Attributes of the SOP Class as specified in Section H.2.4

The SCP shall create the SOP Instance and shall initialize Attributes of the SOP Class as specified in Section H.2.4.

The SCP shall return the status code of the requested SOP Instance creation. The meaning of success, warning, and failure status codes is defined in Section H.2.5.

The SCP shall create the Combined Print Image by magnifying the overlay or image (per Overlay or Image Magnification (2040,0072)) to yield the number of columns in the overlay or image specified by Magnify to Number of Columns (2040,0074) prior to superimposing the image and overlay. The same magnification factor shall be applied to rows and columns of the overlay or image.

The overlay and image shall be superimposed before the image is further processed (e.g. magnification and applying gray scale transformations) for printing. Thus if Overlay Foreground Density (2040,0080) is specified as WHITE and Polarity is REVERSE, the printed overlay pixels will be black. Any Presentation LUT then applied will produce the same transformation of overlay pixels as it does image pixels.

If the SCP supports cropping of image rows and columns, and cropping of the Combined Print Image would be required for it to fit the Image Box, then failure code C616 shall be returned.

Modify H.4.9.2.2.2 to indicate SCUs cannot reference deleted instances of Presentation LUTs.

H.4.9.2.2.2 Behavior

The SCU uses the N-DELETE Service Element to request the SCP to delete the Presentation LUT SOP Instance. The SCU shall specify the Presentation LUT SOP Instance UID.

The SCP shall not delete a Presentation LUT SOP Instance as long as there are outstanding references to it. Otherwise, it shall delete the specified Presentation LUT SOP Instance. **The N DELETE of a Presentation LUT will prevent the SCU from further referencing it. The SCU shall not reference a previously deleted Presentation LUT.** The SCP shall return the status code of the requested Presentation LUT SOP Instance deletion. The meaning of success, warning, and failure status codes is defined in Section H.2.5.

Modify H.4.12.2.3.2 to indicate SCUs cannot reference deleted instances of Image Overlay boxes.

H.4.12.2.3.2 Behavior

The SCU uses the N-DELETE to request the SCP to delete the Basic Print Image Overlay Box SOP Instance. The SCU shall specify the Basic Print Image Overlay Box SOP Instance UID.

If there are no outstanding references to the specified Basic Print Image Overlay Box SOP Instance, the SCP shall delete it. **The SCU shall not reference a**

previously deleted Basic Print Image Overlay Box SOP Instance. The SCP shall not delete the SOP Instance if there are outstanding references to it. The SCP shall return the status code of the requested Basic Print Image Overlay Box SOP Instance deletion. The meaning of success, warning, and failure status codes is defined in Section H.2.5.

Note: If references to the SOP instance exist, the SCP will fail the N-DELETE. The SCU could remove the references using N-SETs of the Image Box and then repeat the N-DELETE of the Basic Print Image Overlay Box SOP Instance.