

DICOM Correction Item

Correction Number	CP-924
Log Summary:	Segmentation Objects in Blending Presentation State
Type of Modification	Name of Standard
Clarification	PS 3.3-2008
Rationale for Correction: Segmentation objects, as a type of Image object, should be usable in conjunction with Presentaion State objects. In fact, a principal use of segmentations, to define color overlays for an anatomic image, is a classic case for use of the Blending Presentation State. The Blending Presentation State should therefore be able to control display of Segmentations and their underlying Images, or applying Segmentations to other (non-source) images, including opacity, color, annotations, etc. This use requires only clarifying text.	
Sections of documents affected PS 3.3 Annex C	
Correction Wording:	

C.11.14.1 Presentation State Blending Module Attributes

C.11.14.1.1 Blending Sequence

The Blending Sequence (0070,0402) Attribute is used to identify two sets of images, one to be superimposed upon the other.

The sets of images and any subset of the frames therein in the case of multi-frame images are identified by Study, Series, SOP Instance and Frame Number. **In the case of a Segmentation image, the subset of segments is identified by the attribute Referenced Segment Number (0062,000B) in the Referenced Image Sequence (0008,1140) invoked in the Presentation State Relationship Macro.**

This module specifies no explicit relationship (such as pairing or ordering) between the sets of images and frames defined in the first item for the underlying images, and the second item for the superimposed images. This module does not define how the images are spatially related, and what re-sampling, if any, needs to be performed before the images are blended for rendering.

Notes: **1.** The images in the two sets may share the same Frame of Reference, in which case the rendering application can spatially relate the two sets of images based on their Image Position (Patient) (0020,0032) and Image Orientation (Patient) (0020,0037) Attributes.

Alternatively, a Spatial Registration SOP Instance may exist that relates either two different Frames of Reference, or two sets of images identified by UID and frame.

Whilst the two sets of images may already be spatially co-registered and oriented in the same plane, or even be sampled at the same in-plane and between-plane resolution, this will frequently not be the case.

See PS 3.4 for behavioral requirements that apply to Storage SOP Classes using this Module.

2. The underlying image for a superimposed Segmentation image need not be the source image for the segmentation.