

DICOM Correction Proposal Form

Correction Number CP-332	
Log Summary: Forbid overlays for Samples per Pixel > 1	
Type of Modification	Name of Standard
Clarification	PS 3.3
Rationale for Correction Currently it is not defined how to interpret the presence of an overlay when Samples per Pixel is > 1. In the absence of any specific mechanism to interpret such a case, or a plausible use-case, it is proposed to forbid it. Also, it is proposed to emphasize that there is no mechanism in an image object for specifying with what color an overlay is to be rendered.	
Sections of documents affected PS 3.3 C.9.2	
Correction Wording:	

C.9.2 Overlay plane module

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Each Overlay Plane is one bit deep. Sixteen separate Overlay Planes may be associated with an Image or exist as Standalone Overlays in a Series.

Overlay pixel data are stored either in Overlay Data (60xx,3000) or embedded in the image pixel data in Image Pixel Data (7FE0,0010). See PS 3.5 for a description of overlay pixel data imbedded with image pixel data. See the Section Repeating Groups in PS 3.5 for a description of permitted values of 60xx. **Overlay Planes embedded in Image Pixel data (7FE0,0010) are only permitted when Samples per Pixel (0028,0002) has a value of 1.**

Attributes describing display of grayscale and color overlays were defined in a previous version of the DICOM Standard. These have now been retired. **How an Overlay Plane is rendered is undefined; specifically there is no mechanism to specify with what color or intensity an Overlay Plane is to be displayed, except when rendered under the control of a Grayscale Softcopy Presentation State SOP Instance.**