

DICOM Correction Item

Correction Number	CP-536
Log Summary: Correct VL Image Photometric Interpretation for MPEG	
Type of Modification	Name of Standard
Correction	PS 3.3 2004
Rationale for Correction	
The Photometric Interpretation added to the VL Image Module by Sup 47 to support the VL Video IODs was incorrectly specified as YBR_FULL_420, which is inconsistent with the Sup 42 addition to Part 5 of YBR_PARTIAL_420 as mandatory for MPEG2 Transfer Syntaxes.	
Sections of documents affected	
PS 3.3 C.8.12.1.1	
Correction Wording:	

Amend PS 3.3 C.8.12.1.1:

C.8.12.1.1 VL Image Module Attribute Descriptions

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C.8.12.1.1.1 Photometric Interpretation

The Enumerated Values of Photometric Interpretation (0028,0004) shall be:

MONOCHROME2

RGB

YBR_FULL_422

YBR_~~FULL~~**PARTIAL**_420

YBR_RCT

YBR_ICT

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C.8.12.1.1.4 Samples per Pixel

The Enumerated Values of Samples per Pixel (0028,0002) shall be as follows: If the value of Photometric Interpretation (0028,0004) is MONOCHROME2, then the Enumerated Value of Samples per Pixel (0028,0002) shall be one (1). If the value of Photometric Interpretation (0028,0004) is RGB or YBR_FULL_422 or YBR_~~FULL~~**PARTIAL**_420 or YBR_RCT or YBR_ICT, then the Enumerated Value of Samples per Pixel (0028,0002) shall be three (3).

From PS 3.5, for reference:

8.2.5 MPEG2 MP@ML IMAGE COMPRESSION

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The MPEG2 MP@ML bit stream specifies whether or not a reversible or irreversible multi-component (color) transformation, if any, has been applied. If no multi-component transformation has been applied, then the components shall correspond to those specified by the DICOM

Attribute Photometric Interpretation (0028,0004). MPEG2 MP@ML applies an irreversible multi-component transformation, so DICOM Attribute Photometric Interpretation (0028,0004) shall be YBR_PARTIAL_420 in the case of multi-component data, and MONOCHROME2 in the case of single component data (even though the MPEG2 bit stream itself is always encoded as three components, one luminance and two chrominance).