

# DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2014/09/04
Person Assigned	Bas Revet ( <a href="mailto:bas.revet@philips.com">bas.revet@philips.com</a> )
Submitter Name	Bas Revet ( <a href="mailto:bas.revet@philips.com">bas.revet@philips.com</a> )
Submission Date	2013/06/27

Correction Number	CP-1354
Log Summary:	Move requirement use isocenter 3D-Xray
Name of Standard	PS 3.3 - 2013
Rationale for Correction:	<p>For 3D-Xray the requirement to use the isocenter requirement is inside an informative note in section C.7.6.21.2.</p> <p>Proposed is to move this requirement as normative constraint below the 3D X-Ray IOD table. (This change is similar to the addition for Breast Tomosynthesis IOD in supplement 165).</p>
Correction Wording:	<include proposed change below, following guidelines for formatting of changes in supplements>

*Add new section in A.53.3*

## **A.53.3 X-Ray 3D Angiographic Image IOD Image Module Table**

...

### **A.53.3.1 X-Ray 3D Angiographic Image IOD Content Constraints**

#### **A.53.3.1.1 Modality Type Attribute**

The Modality Type attribute (0008,0060) shall have the value XA.

#### **A.53.3.1.2 Restrictions for Standard Extended SOP Classes**

The Overlay Plane Module, VOI LUT Module and Softcopy Presentation LUT Module shall not be used in a Standard Extended SOP Class of the X-Ray 3D Angiographic Image.

- Notes:
1. The VOI LUT function is provided by a Frame VOI LUT Functional Group.
  2. The Curve Module was previously included in the Image IE for this IOD but has been retired. See PS 3.3 2004.

### **A.55.3.1.X Image – Equipment Coordinate Relationship Module**

**For X-Ray 3D Angiographic Images created from SOP Instances of the Enhanced XA SOP Class (1.2.840.10008.5.1.4.1.1.12.1.1) the isocenter coordinate system is used to describe the positioning of the table and positioner (see C.8.19.6.13), and shall use only the Defined Term ISOCENTER for Equipment Coordinate System Identification (0028,9537).**

*Remove note in section C.7.21.1.2*

### C.7.6.21 Image - Equipment Coordinate Relationship Module

This section describes the Image - Equipment Coordinate Relationship module. Table C.7.6.21-1 contains the attributes that specify how the equipment (e.g. gantry) and patient oriented coordinate system (in conjunction with the Image Position (Patient) (0020,0032) and Image Orientation (Patient) (0020,0037) attributes) are related.

**Table C.7.6.21-1  
IMAGE - EQUIPMENT COORDINATE RELATIONSHIP MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Image to Equipment Mapping Matrix	(0028,9520)	1	A 4x4 homogeneous transformation matrix that maps patient coordinate space of the reconstructed image to the equipment defined original coordinate space. Matrix elements shall be listed in row-major order. See C.7.6.21.1.
Equipment Coordinate System Identification	(0028,9537)	1	Identification of the type of equipment coordinate system in which the projection images were acquired. See C.7.6.21.2. Defined Terms: ISOCENTER

#### C.7.6.21.1 Image to Equipment Mapping Matrix

...

#### C.7.6.21.2 Equipment Coordinate System Identification

The Equipment Coordinate System Identification (0028,9537) identifies the Reference Coordinate System to which the Image to Equipment Mapping Matrix (0028,9520) is related.

The Defined Term ISOCENTER refers to a coordinate reference system where the origin corresponds with the center of rotation of the projections.

**Note:** ~~For X-Ray 3D Angiographic Images created from SOP Instances of the Enhanced XA SOP Class (1.2.840.10008.5.1.4.1.1.12.1.1) the isocenter coordinate system is used to describe the positioning of the table and positioner (see C.8.19.6.13), and will use only the Defined Term ISOCENTER.~~