

DICOM Correction Item

Correction Number CP-237	
Log Summary: Clarify Definition of Collimator Attributes	
Type of Modification Clarification	Name of Standard PS 3.3-2000
<p>Rationale for Correction</p> <p>The X-Ray Collimator Module is unclear in its definition of the “edge” of the collimator.</p> <p>Both the X-Ray Collimator Module and the Shutter Module are unclear in their definition of a polygon.</p>	
<p>Sections of documents affected</p> <p>Modify PS 3.3, Section C.7.6.1, Table C.7-17; Section C.8.7.3, Table C.8-28; and add new subsection C.8.7.3.1.</p>	
Correction Wording:	

**Table C.7-17
DISPLAY SHUTTER MODULE**

Attribute Name	Tag	Type	Attribute Description
...			
Vertices of the Polygonal Shutter	(0018,1620)	1C	<p>Required if Shutter Shape (0018,1600) is POLYGONAL.</p> <p>Multiple Values where the first set of two values are:</p> <p style="padding-left: 40px;">row of the origin vertex column of the origin vertex</p> <p>Two or more pairs of values follow and are the row and column coordinates of the other vertices of the polygon shutter. Polygon shutters are implicitly closed from the last vertex to the origin vertex and all edges shall be non-intersecting except at the vertices polygons.</p>

**Table C.8-28
X-RAY COLLIMATOR MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...			
Collimator Left Vertical Edge	(0018,1702)	1C	<p>Required if Collimator Shape (0018,1700) is RECTANGULAR. Location of the left edge of the rectangular collimator with respect to pixels in the image given as column. See C.8.7.3.1.1.</p>

Collimator Right Vertical Edge	(0018,1704)	1C	Required if Collimator Shape (0018,1700) is RECTANGULAR. Location of the right edge of the rectangular collimator with respect to pixels in the image given as column. See C.8.7.3.1.1.
Collimator Upper Horizontal Edge	(0018,1706)	1C	Required if Collimator Shape (0018,1700) is RECTANGULAR. Location of the upper edge of the rectangular collimator with respect to pixels in the image given as row. See C.8.7.3.1.1.
Collimator Lower Horizontal Edge	(0018,1708)	1C	Required if Collimator Shape (0018,1700) is RECTANGULAR. Location of the lower edge of the rectangular collimator with respect to pixels in the image given as row. See C.8.7.3.1.1.
...			
Vertices of the Polygonal Collimator	(0018,1720)	1C	Required if Collimator Shape (0018,1700) is POLYGONAL. Multiple Values where the first set of two values are: row of the origin vertex; column of the origin vertex. Two or more pairs of values follow and are the row and column coordinates of the other vertices of the polygon collimator. Polygon collimators are implicitly closed from the last vertex to the origin vertex are and all edges shall be non-intersecting except at the vertices polygons.

C.8.7.3.1 X-Ray Collimator Attribute Descriptions

C.8.7.3.1.1 Collimator Vertical and Horizontal Edges

These attributes specify the pixel row or column where the X-ray beam is fully obscured by a rectangular collimator:

- **if the left edge of the collimator is not visible, Collimator Left Vertical Edge (0018,1702) shall have a value of 0;**
- **if the right edge of the collimator is not visible, Collimator Right Vertical Edge (0018,1704) value shall be 1 greater than the value of the Columns (0028,0011) attribute;**
- **if the top edge of the collimator is not visible, Collimator Upper Horizontal Edge (0018,1706) shall have a value of 0;**
- **if the bottom edge of the collimator is not visible, Collimator Lower Horizontal Edge (0018,1708) value shall be 1 greater than the value of the Rows (0028,0010) attribute.**