

DICOM Correction Item

Correction Number		CP-649
Log Summary: Mammography CR identification of devices for quality issues		
Type of Modification	Name of Standard	
Addition	PS 3.3, 3.6 2006	
Rationale for Correction		
<p>The DX family of image IODs, including the Mammography IOD, address the need to identify different components of the imaging chain for the purpose of quality control and assurance; specifically, when an image quality problem arises it is necessary to review the performance of each component used.</p> <p>With a fixed detector and gantry, the Detector ID defined in the Digital X-Ray Detector Module may be sufficient, but in the case of CR plates used for mammography, it is necessary to separately identify the</p> <ul style="list-style-type: none">• generator• gantry• plate inside the cassette• cassette• grid• reader <p>It is proposed to add appropriate additional attributes and to clarify the role of the existing Device Serial Number and Detector ID in the context of CR and DX.</p>		
Sections of documents affected		
PS 3.3		
PS 3.6		
Correction Wording:		

Add new elements to PS 3.3 modules:

C.7.5.1 General Equipment Module

Table C.7-8 specifies the Attributes that identify and describe the piece of equipment that produced a Series of Composite Instances.

**Table C.7-8
GENERAL EQUIPMENT MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Device Serial Number	(0018,1000)	3	Manufacturer's serial number of the equipment that produced the composite instances. Note: <u>This identifier corresponds to the device that actually created the images, such as a CR plate reader or a CT console, and may not be sufficient to identify all of the equipment in the imaging chain, such as the generator or gantry or plate.</u>
Software Versions	(0018,1020)	3	Manufacturer's designation of software version of the equipment that produced the composite instances.
...
Gantry ID	(0018,1008)	3	Identifier of the gantry or positioner.

C.8.7.9 X-Ray Generation Module

This Module describes the attributes related to generation of X-rays during the acquisition of an X-Ray image.

**Table C.8-34
X-RAY GENERATION MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Rectification Type	(0018,1156)	3	Type of rectification used in the X-Ray generator. Defined Terms: SINGLE PHASE THREE PHASE CONST POTENTIAL
Generator ID	(0018,1005)	3	Identifier of the generator

C.8.7.11 X-Ray Grid Module

This Module describes the attributes related to the use of a grid to reduce scatter of X-rays during the acquisition of an X-Ray image.

**Table C.8-36
X-RAY GRID MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Grid Focal Distance	(0018,704C)	3	Focal distance in mm of a FOCUSED grid.
Grid ID	(0018,1006)	3	Identifier of the grid

C.8.1.2 CR Image Module

Table C.8-2 contains IOD Attributes that describe computed radiography images.

**Table C.8-2
CR IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Plate ID	(0018,1004)	3	The ID or serial number of the sensing plate upon which the image was acquired
...

C.8.11.4 DX Detector Module

Table C.8-71 contains IOD Attributes that describe a DX detector.

**Table C.8-71
DX DETECTOR MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
<i>Include 'Digital X-Ray Detector Macro' Table C.8-71b</i>			
...
Cassette ID	(0018,1007)	3	Identifier of the cassette that contains the photostimulable phosphor plate, for CR acquisitions.
Plate ID	(0018,1004)	3	Identifier of the photostimulable phosphor plate, for CR acquisitions.

Table C.8-71b contains common attributes that describe digital X-ray detector.

**Table C.8-71b
DIGITAL X-RAY DETECTOR MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Detector ID	(0018,700A)	3	The ID or serial number of the detector used to acquire this image.
...

Add new elements to PS 3.6:

(0018,1004)	Plate ID	LO	1
(0018,1005)	Generator ID	LO	1
(0018,1006)	Grid ID	LO	1

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Final Text

<u>(0018,1007)</u>	<u>Cassette ID</u>	<u>LO</u>	<u>1</u>
<u>(0018,1008)</u>	<u>Gantry ID</u>	<u>LO</u>	<u>1</u>