DICOM Correction Proposal

STATUS	Assigned
Date of Last Update	2016/08/30
Person Assigned	Ulrich Busch (ulrich.busch@varian.com)
Submitter Name	Christof Schadt (christof.schadt@brainlab.com)
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Correction Number CP-1656
Log Summary: Add Content Date and Time to RT Dose Module
Name of Standard PS 3 2016c
Rationale for Correction: Currently the content creation date and time of an RT Dose instance only can be defined by the Content Date (0008,0023) and Content Time (0008,0033) attributes. These attributes are part of the General Image module, which is only “required if dose data contains grid-based doses”. In case an RT Dose instance only contains DVH data and therefore does not contain a grid-based doses, then it is not possible to define a content date and time. It is therefore proposed to add the Content Date (0008,0023) and Content Time (0008,0033) attributes to the RT Dose Module, providing this identification in general as this module is mandatory.
Correction Wording: <include proposed change below, following guidelines for formatting of changes in supplements>

Add in PS 3, C.8.8.3 RT Dose Module

C.8.8.3 RT Dose Module

The RT Dose Module is used to convey 2D or 3D radiation dose data generated from treatment planning systems or similar devices. The attributes defined within the module support dose for a single radiation beam (potentially comprised of multiple segments, as delivered in a dynamic treatment) or a group of beams comprising either a fraction group (see Section C.8.8.13) or a complete treatment plan (potentially the sum of multiple fraction groups).

The RT Dose Module provides the mechanism to transmit a 3D array of dose data as a set of 2D dose planes that may or may not be related to CT or MR image planes. This mechanism works via the DICOM Multi-frame module that is required if multi-frame pixel data are sent.

Table C.8-39. RT Dose Module Attributes

Attribute Name	Tag	Type	Attribute Description
Samples per Pixel	(0028,0002)	1C	Number of samples (planes) in this image. See Section C.8.8.3.4.1 for specialization. Required if Pixel Data (7FE0,0010) is present.
Photometric Interpretation	(0028,0004)	1C	Specifies the intended interpretation of the pixel data. See Section C.8.8.3.4.2 for specialization. Required if Pixel Data (7FE0,0010) is present.
Bits Allocated	(0028,0100)	1C	Number of bits allocated for each pixel sample. Each sample shall have the same number of bits

Attribute Name	Tag	Type	Attribute Description
			allocated. See Section C.8.8.3.4.3 for specialization. Required Pixel Data (7FE0,0010) is present.
Bits Stored	(0028,0101)	1C	Number of bits stored for each pixel sample. Each sample shall have the same number of bits stored. See Section C.8.8.3.4.4 for specialization. Required if Pixel Data (7FE0,0010) is present.
High Bit	(0028,0102)	1C	Most significant bit for each pixel sample. Each sample shall have the same high bit. See Section C.8.8.3.4.5 for specialization. Required if Pixel Data (7FE0,0010) is present.
Pixel Representation	(0028,0103)	1C	Data representation of the pixel samples. Each sample shall have the same pixel representation. See Section C.8.8.3.4.6 for specialization. Required Pixel Data (7FE0,0010) is present.
Content Date	**(0008,0023)**	**3**	**The date the content of this module was created.**
Content Time	**(0008,0033)**	**3**	**The time the content of this module was created.**
Dose Units	(3004,0002)	1	Units used to describe dose. Enumerated Values: **GY** Gray **RELATIVE** dose relative to implicit reference value
Dose Type	(3004,0004)	1	Type of dose. Defined Terms: **PHYSICAL** physical dose **EFFECTIVE** physical dose after correction for biological effect using user-defined modeling technique **ERROR** difference between desired and planned dose
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