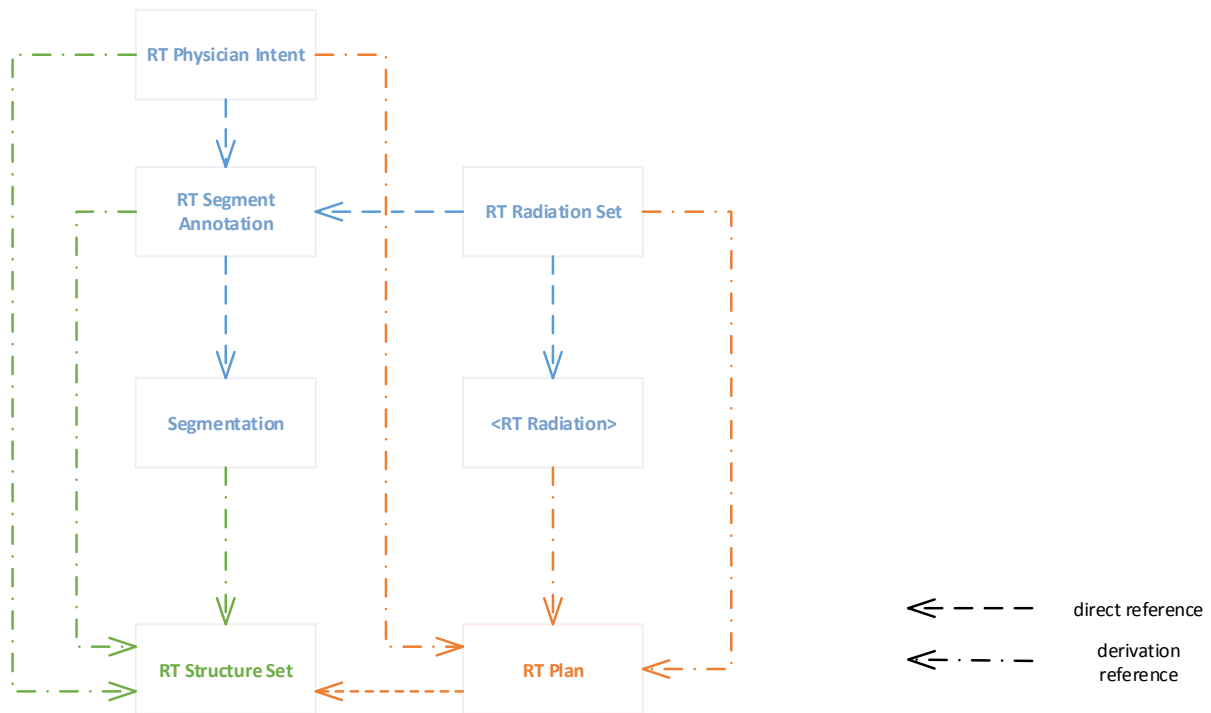


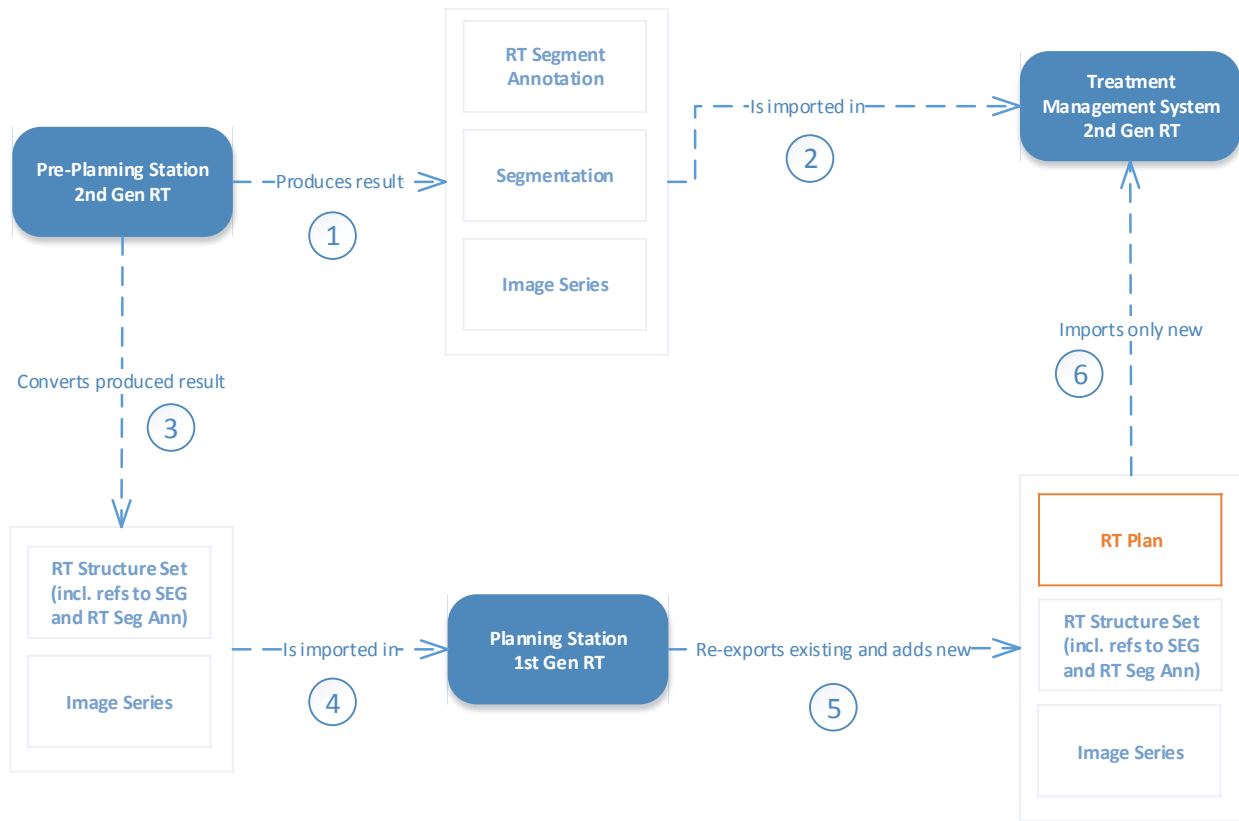
DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2018/01/23
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Submission Date	2016/03/18

Correction Number	CP-1617
Log Summary:	Constituent Mapping Macro
Name of Standard	PS 3.3, PS3.6 2017e
Rationale for Correction:	<p>It is proposed to add a facility that allows referencing source information even below instance level to reference constituents of an instance. A use case for this additional feature would be to annotate which ROI in an RT Structure Set was derived from which Segment in a Segmentation instance.</p> <p>The current CP extends existing IODs where encoding of the same information in different SOP Instances is possible. It is foreseen that this will be continued, once the 2nd Generation DICOM RT SOP Classes are available within the Standard.</p> <p>Examples are illustrated in the following drawings:</p>



Conversion of 2nd Generation DICOM RT to 1st Generation DICOM RT Instances



Conversion workflow in mixed 1st/2nd Generation DICOM RT environment

Correction Wording:

Add to Part 3 Annex C – Section C.8.8.5 Structure Set Module:

C.8.8.5 Structure Set Module

A structure set defines a set of areas of significance. Each area can be associated with a Frame of Reference and zero or more images. Information that can be transferred with each region of interest (ROI) includes geometrical and display parameters, and generation technique.

Table C.8-41. Structure Set Module Attributes

Attribute Name	Tag	Type	Attribute Description
Structure Set Label	(3006,0002)	1	User-defined label for Structure Set.
...			
Structure Set ROI Sequence	(3006,0020)	1	ROIs for current Structure Set. One or more Items shall be included in this Sequence.
>ROI Number	(3006,0022)	1	Identification number of the ROI. The value of

Attribute Name	Tag	Type	Attribute Description
			ROI Number (3006,0022) shall be unique within the Structure Set in which it is created.
<u>>Definition Source Sequence</u>	<u>(0008,1156)</u>	<u>3</u>	<u>Instances containing the source of the ROI Contour information.</u> <u>Only a single Item shall be included in this Sequence.</u>
>> Include Table 10-11 "SOP Instance Reference Macro Attributes"			
<u>>>Referenced Segment Number</u>	<u>(0062,000B)</u>	<u>1C</u>	<u>The value of Segment Number (0062,0004) in the referenced SOP Instance that identifies the segment that is the source of the ROI Contour information.</u> <u>Required if Referenced SOP Class UID (0008,1150) is Segmentation Storage ("1.2.840.10008.5.1.4.1.1.66.4").</u>
<u>>>Referenced Fiducial UID</u>	<u>(0070,031B)</u>	<u>1C</u>	<u>The value of Fiducials UID (0070,031A) in the referenced SOP Instance that identifies the fiducial that is the source of the ROI Contour information.</u> <u>Required if Referenced SOP Class UID (0008,1150) is Spatial Fiducials Storage ("1.2.840.10008.5.1.4.1.1.66.2").</u>
...			

Add to Part 3 Annex C – Section C.8.20.4.1 Segment Description Macro:

C.8.20.4.1 Segment Description Macro

Table C.8.20-4 specifies the attributes of the Segment Description Macro.

Table C.8.20-4. Segment Description Macro Attributes

Attribute Name	Tag	Type	Attribute Description
Segment Number	(0062,0004)	1	Identification number of the segment. The value of Segment Number (0062,0004) shall be unique within the Segmentation instance in which it is created. See Section C.8.20.2.4.
<u>Definition Source Sequence</u>	<u>(0008,1156)</u>	<u>3</u>	<u>Instances containing the source of the Segment information.</u> <u>Only a single Item shall be included in this Sequence.</u>
>Include Table 10-11 "SOP Instance Reference Macro Attributes"			
<u>>Referenced ROI Number</u>	<u>(3006,0084)</u>	<u>1C</u>	<u>The value of ROI Number (3006,0022) in the referenced SOP Instance that identifies the ROI that is the origin of the Segment information.</u>

Attribute Name	Tag	Type	Attribute Description
			Required if Referenced SOP Class UID (0008,1150) is RT Structure Set Storage ("1.2.840.10008.5.1.4.1.1.481.3").
Segment Label	(0062,0005)	1	User-defined label identifying this segment. This may be the same as Code Meaning (0008,0104) of Segmented Property Type Code Sequence (0062,000F).
Segment Description	(0062,0006)	3	User-defined description for this segment.
...			

Add to Part 3 Annex C – Section C.21.2 Spatial Fiducials Module:

C.21.2 Spatial Fiducials Module

Table C.21.2-1 defines the general Attributes of the Registration.

Table C.21.2-1. Spatial Fiducials Module Attributes

Attribute Name	Tag	Type	Attribute Description
Content Date	(0008,0023)	1	The date the content creation started.
...			
Fiducial Set Sequence	(0070,031C)	1	A sequence of items, each of which is a fiducial set. One or more Items shall be included in this Sequence.
...			
>Fiducial Sequence	(0070,031E)	1	A sequence that specifies fiducials, one item per fiducial. One or more Items shall be included in this Sequence.
...			
>>Fiducial UID	(0070,031A)	3	Globally unique identifier for the fiducial instance of this fiducial assignment.
>>Definition Source Sequence	(0008,1156)	3	Instances containing the source of the ROI contour information. Only a single Item shall be included in this Sequence.
>>>Include Table 10-11 "SOP Instance Reference Macro Attributes"			
>>>Referenced ROI Number	(3006,0084)	1C	The value of ROI Number (3006,0022) in the

Attribute Name	Tag	Type	Attribute Description
			<p>referenced SOP Instance that identifies the ROI that is the origin of the Spatial Fiducial information.</p> <p>Required if Referenced SOP Class UID (0008,1150) is RT Structure Set Storage ("1.2.840.10008.5.1.4.1.1.481.3").</p>
...			

Add to PS 6, chapter 6 Registry of Data Elements

(0070,031B)	Referenced Fiducial UID	ReferencedFiducialUID	UI	<u>1</u>
(0008,1156)	Definition Source Sequence	DefinitionSourceSequence	SQ	<u>1</u>