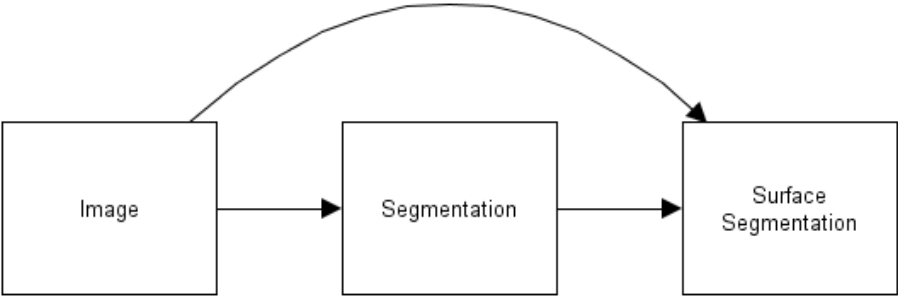


DICOM Correction Item

Correction Number		CP-970	
Log Summary: Improving Compatibility Between Segmentation And Surface Segmentation			
Type of Modification		Name of Standard	
Addition		PS 3.3 2009	
<p>Rationale for Correction</p> <p>The complete creation of Surface Segmentation Instances derived from the Segmentation Instances should be possible.</p>  <pre> graph LR Image[Image] --> Segmentation[Segmentation] Segmentation --> Surface[Surface Segmentation] Image --> Surface </pre> <p>Figure 1. Creation of Surface Segmentation</p> <p>As shown in Figure 1 the Surface Segmentation can be created directly from the images or can be created from a Segmentation.</p> <p>Surface Segmentation IOD Instances require information about the algorithms, which were used for the segmentation. Therefore, this information should be added to the Segmentation IOD. Including these attributes in the Segmentation Image Module has the added benefit of making the Segmentation and Surface Segmentation information more consistent.</p> <p>By adding the Algorithm Identification Macro encapsulated in a Type 3 Sequence to Table C.8.20-2, the Segmentation Image Module is extended by the required information.</p> <p>The Algorithm Identification Macro was not inserted in PS 3.3 – 2009 as instructed in Supplement 132. This CP includes a copy of that part of the supplement.</p>			
Sections of documents affected			
PS 3.3			
Correction Wording:			

Item: Add the following Section to PS 3.3 from (Supplement 132).

10.X ALGORITHM IDENTIFICATION MACRO

Table 10-X describes the Attributes for encoding the algorithm used to create or derive a SOP Instance. An algorithm is described by the Algorithm Family, a specific Algorithm Name, and an

Algorithm Version. A character string containing parameters that were used in the algorithm can be included.

Table 10-X
ALGORITHM IDENTIFICATION MACRO ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Algorithm Family Code Sequence	(0066,002F)	1	The family of algorithm(s) that best describes the software algorithm used. Only one item shall be permitted in the sequence.
<i>>Include 'Code Sequence Macro Table 8.8-1'</i>			<i>Context ID may be defined in the macro invocation.</i>
Algorithm Name Code Sequence	(0066,0030)	3	The code assigned by a manufacturer to a specific software algorithm. Only one item shall be permitted in the sequence.
<i>>Include 'Code Sequence Macro Table 8.8-1'</i>			<i>No Baseline Context ID is defined.</i>
Algorithm Name	(0066,0036)	1	The name assigned by a manufacturer to a specific software algorithm.
Algorithm Version	(0066,0031)	1	The software version identifier assigned by a manufacturer to a specific software algorithm.
Algorithm Parameters	(0066,0032)	3	The input parameters used by a manufacturer to configure the behavior of a specific software algorithm.

<i>Add to PS 3.3 new attribute to Module for segmentation image:</i>
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C.8.20.2 Segmentation Image Module

Table C.8.20-2 defines the general Attributes of the Segmentation Image Module.

**Table C.8.20-2
SEGMENTATION IMAGE MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Segment Sequence	(0062,0002)	1	Describes the segments that are contained within the data. One or more items shall be present.
>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 C.8.20.2.4.
>Segment Label	(0062,0005)	1	User-defined label identifying this segment. This may be the same as the Code Meaning (0008,0104) of the Segmented Property Type Code Sequence (0062,000F).
>Segment Description	(0062,0006)	3	User-defined description for this segment.
>Segment Algorithm Type	(0062,0008)	1	Type of algorithm used to generate the segment. Enumerated Values are: AUTOMATIC: calculated segment SEMIAUTOMATIC: calculated segment with user assistance MANUAL: user-entered segment
>Segment Algorithm Name	(0062,0009)	1C	Name of algorithm used to generate the segment. Required if Segment Algorithm Type (0062,0008) is not MANUAL.
>Segment Surface Generation Algorithm Identification Sequence	(0066,002D)	3	<u>A description of how this segment was derived.</u> <u>Only a single item shall be permitted in this sequence.</u>
>>Include 'Algorithm Identification Macro' Table 10-X			<u>Baseline Context ID is 7162 Surface Processing Algorithm Families.</u>
...