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Correction Number CP-1541

Log Summary: Template Content Sequence not required when template created through refactoring

Name of Standard

PS3.3

Rationale for Correction:

It is desirable to identify in encoded SR instances what subordinate (non-root) templates were used in the creation of content. CP 452 clarified the requirements for the identification to be encoded "if a template was used to define the content of this Item" and "the template consists of a single CONTAINER with nested content", etc.

However, if the standard is refactored to extract content of an existing template into new subordinate templates (perhaps to reuse in new templates for other applications), then arguably an existing object (or a new object created by an existing implementation) would fail to satisfy the requirement since the "new" template ID (not known at the time of encoding or implementation) would now be expected to be identified.

It is not the intent of the template identification requirement to discourage refactoring and reuse.

Accordingly, emphasize that "template was used" is intended to be interpreted literally, i.e., "a template defined and known to the implementation at the time of encoding was used".

This is an unusual case in which refactoring does change the content of encoded information, in that the template identification may be present or absent.

Correction Wording:

Amend DICOM PS3.3 as follows:

C.18.8 Container Macro

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Table C.18.8-1. Container Macro Attributes

Attribute Name	Tag	Type	Attribute Description
	•••		
Content Template Sequence	(0040,A504)	1C	Template that describes the content of this Content Item and its subsidiary Content Items. Only a single Item shall be included in this Sequence.
			Required if a template <u>defined and known to the implementation at</u> the time of encoding was used to define the content of this Item, and the template consists of a single CONTAINER with nested content, and it is the outermost invocation of a set of nested templates that start with the same CONTAINER (see Section C.18.8.1.2).
>Mapping Resource	(0008,0105)	1	Mapping Resource that defines the template. See Section 8.4. Defined Terms:
			DCMR DICOM Content Mapping Resource
>Mapping Resource UID	(0008,0118)	3	Uniquely identifies the Mapping Resource that defines the template. Note
			The unique identifier for the DICOM Content Mapping Resource "DCMR" is defined in PS3.6.
>Template Identifier	(0040,DB00)	1	Template identifier.

C.18.8.1 Container Macro Attribute Descriptions

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C.18.8.1.2 Content Template Sequence

A Template for SR Documents defines a set of constraints on the relationships and content (Value Types, Codes, etc.) of Content Items. Specific Templates for SR Documents are defined either by the DICOM Standard (see PS3.16) or by users of the Standard for particular purposes. Usage of Templates for SR Documents may improve comparability of essential data, facilitate data-entry and revisions, enable automatic processing and simplify presentation of information to the user.

Note

New subordinate templates may be factored out of existing Templates during revisions to the Standard or revisions to private Template definitions. It is permissible for instances created by implementations made prior to such refactoring to omit identification of a Template of which they had no future knowledge. Receivers should be wary of depending on the presence of identification information for subordinate templates.

An SR Document consists of a Root CONTAINER Content Item with nested content, and as such may be defined by a Template specifying a single CONTAINER with nested content. Sub-trees of an SR Document may similarly be defined by a Template specifying a single CONTAINER with nested content. If created using such a Template, the Root and/or sub-tree shall identify the Template in the CONTAINER Content Item. When a Template invokes (includes) another Template, the outermost invoking Template is the one identified as the defining Template for the CONTAINER in the Content Template Sequence (0040,A504).

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The Content Template Sequence (0040,A504) identifies the Template that was used in the creation of the associated Content Item and its subsidiary Content Items. A Template is identified by a Mapping Resource (0008,0105) (the entity that manages or registers the Template), and an identifier of the Template. DICOM Standard Templates are identified in Template Identifier (0040,DB00) using the CS value representation.

The DICOM Template Identifier (0040,DB00) is a string of digits, without leading zeroes, and does not include the string "TID".