

1	Status	Final Text
2	Date of Last Update	2017/04/18
3	Person Assigned	David Clunie
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5	Submitter Name	David Clunie
6		mailto:dclunie@dclunie.com
7	Submission Date	2016/09/01

8	Correction Number CP-1666	
9	Log Summary: Add Observation DateTime to Acquisition Context	
10	Name of Standard	
11	PS3.3, PS3.16	
12	Rationale for Correction:	
13	Observation DateTime is available in all SR Content Items to record the date and time the observation is made without having to	
14	create unnecessary child content items. The same mechanism would be useful in Acquisition Content and Content Item Macro uses	
15	(e.g., in worklist parameters). As a case in point, the NM/PET Acquisition Context template already alludes to this usage!	
16	Correction Wording:	

Amend DICOM PS3.16 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

10.2 Content Item Macro

...

Table 10-2. Content Item Macro Attributes Description

Attribute Name	Tag	Type	Attribute Description
Value Type	(0040,A040)	1	The type of the value encoded in this name-value Item. Enumerated Values: DATE TIME DATETIME PNAME UIDREF TEXT CODE NUMERIC COMPOSITE IMAGE
<u>Observation DateTime</u>	<u>(0040,A032)</u>	<u>3</u>	<u>The date and time on which this Item was completed. For the purpose of recording measurements or logging events, completion time is defined as the ending time of data acquisition of the measurement, or the ending time of occurrence of the event.</u>
Concept Name Code Sequence	(0040,A043)	1	Coded concept name of this name-value Item. Only a single Item shall be included in this Sequence.
>Include Table_8.8-1 "Code Sequence Macro Attributes"			No Baseline CID is defined.
DateTime	(0040,A120)	1C	DateTime value for this name-value Item. Required if Value Type (0040,A040) is DATETIME.
...

C.7.6.14 Acquisition Context Module

...

Table C.7.6.14-1. Acquisition Context Module Attributes

Attribute Name	Tag	Type	Attribute Description
Acquisition Context Sequence	(0040,0555)	2	A sequence of Items that describes the conditions present during the acquisition of the data of the SOP Instance. Zero or more Items shall be included in this Sequence.

Attribute Name	Tag	Type	Attribute Description
>Value Type	(0040,A040)	3	The type of the value encoded in this Item. Defined Terms: TEXT NUMERIC CODE DATE TIME PNAME See Section 10.2.
<u>>Observation DateTime</u>	<u>(0040,A032)</u>	<u>3</u>	<u>The date and time on which this Item was completed. For the purpose of recording measurements or logging events, completion time is defined as the ending time of data acquisition of the measurement, or the ending time of occurrence of the event.</u>
>Concept Name Code Sequence	(0040,A043)	1	A concept that constrains the meaning of (i.e., defines the role of) the Observation Value. The "Name" component of a Name/Value pair. Only a single Item shall be included in this Sequence.
>>Include Table_8.8-1 "Code Sequence Macro Attributes"			No Baseline Context is defined.
>Referenced Frame Numbers	(0040,A136)	1C	References one or more frames in a Multi-frame SOP Instance. The first frame shall be denoted as frame number one. Required if this SOP Instance is a Multi-frame SOP Instance and the values in this Sequence item do not apply to all frames.
>Numeric Value	(0040,A30A)	1C	This is the Value component of a Name/Value pair when the Concept implied by Concept Name Code Sequence (0040,A043) is a set of one or more numeric values. Required if the value that Concept Name Code Sequence (0040,A043) requires (implies) is a set of one or more integers or real numbers. Shall not be present otherwise.
...
Acquisition Context Description	(0040,0556)	3	Free-text description of the image-acquisition context.

C.17.3 SR Document Content Module

This section specifies the Attributes contained in the SR Document Content Module. The Attributes in this Module convey the content of an SR Document.

Table C.17-4. SR Document Content Module Attributes

Attribute Name	Tag	Type	Attribute Description
Include Table C.17-5 "Document Content Macro Attributes"			With a Value Type (0040,A040) of CONTAINER
Include Table C.17-6 "Document Relationship Macro Attributes"			

Table C.17-5. Document Content Macro Attributes

Attribute Name	Tag	Type	Attribute Description
Value Type	(0040,A040)	1	<p>The type of the value encoded in this Content Item.</p> <p>Enumerated Values:</p> <p>TEXT NUM CODE DATE TIME DATETIME UIDREF PNAME COMPOSITE IMAGE WAVEFORM SCOOD SCOOD3D TCOORD CONTAINER</p> <p>See Section C.17.3.2.1 "Content Item Value Type" for further explanation.</p>
Concept Name Code Sequence	(0040,A043)	1C	<p>Code describing the concept represented by this Content Item. Also conveys the value of Document Title and section headings in documents.</p> <p>Only a single Item shall be included in this Sequence.</p> <p>Required if Value Type (0040,A040) is TEXT, NUM, CODE, DATETIME, DATE, TIME, UIDREF or PNAME.</p> <p>Required if Value Type (0040,A040) is CONTAINER and a heading is present, or this is the Root Content Item.</p> <p>Note</p> <p>That is, containers without headings do not require Concept Name Code Sequence</p> <p>Required if Value Type (0040,A040) is COMPOSITE, IMAGE, WAVEFORM, SCOOD, SCOOD3D or TCOORD, and the Purpose of Reference is conveyed in the Concept Name.</p> <p>See Section C.17.3.2.2 "Concept Name Code Sequence" for further explanation.</p>
>Include Table_8.8-1 "Code Sequence Macro Attributes"			No Baseline CID is defined.

Attribute Name	Tag	Type	Attribute Description
Text Value	(0040,A160)	1C	<p>This is the value of the Content Item.</p> <p>Required if Value Type (0040,A040) is TEXT.</p> <p>Text data that is unformatted and whose manner of display is implementation dependent.</p> <p>The text value may contain spaces, as well as multiple lines separated by CR LF, but otherwise no format control characters (such as horizontal or vertical tab and form feed) shall be present, even if permitted by the Value Representation of UT.</p> <p>The text shall be interpreted as specified by Specific Character Set (0008,0005) if present in the Section C.12.1 "SOP Common Module".</p> <p>Note</p> <p>The text may contain single or multi-byte characters and use code extension techniques as described in PS3.5 if permitted by the values of Specific Character Set (0008,0005).</p>
...

Table C.17-6. Document Relationship Macro Attributes

Attribute Name	Tag	Type	Attribute Description
Observation DateTime	(0040,A032)	1C	<p>The date and time on which this Content Item was completed. For the purpose of recording measurements or logging events, completion time is defined as the ending time of data acquisition of the measurement, or the ending time of occurrence of the event.</p> <p>Required if the date and time are different from Content Date (0008,0023) and Content Time (0008,0033) or Observation DateTime (0040,A032) defined in higher items. May be present otherwise.</p> <p>Note</p> <p>When Content Items are copied into successor reports, Content Date (0008,0023) and Content Time (0008,0033) of the new report are likely to be different than the date and time of the original observation. Therefore this attribute may need to be included in any copied Content Items to satisfy the condition.</p>
Observation UID	(0040,A171)	3	<p>Unique identifier for the observation Content Item (and its subsidiary Content Items, if any). The UID represents the semantic content of the observation; an encoding of the same observation with the same context into another representation (e.g., a CDA Entry) may use the same UID.</p>

Attribute Name	Tag	Type	Attribute Description
Content Sequence	(0040,A730)	1C	<p>A potentially recursively nested Sequence of Items that conveys content that is the Target of Relationships with the enclosing Source Content Item.</p> <p>One or more Items shall be included in this Sequence.</p> <p>Required if the enclosing Content Item has relationships.</p> <p>Note</p> <ol style="list-style-type: none"> 1. If this Attribute is not present then the enclosing Item is a leaf. 2. The order of Items within this Sequence is semantically significant for presentation. <p>See Section C.17.3.2.4 "Content Sequence and Relationship Type" for further explanation.</p>
>Relationship Type	(0040,A010)	1	<p>The type of relationship between the (enclosing) Source Content Item and the Target Content Item.</p> <p>IODs specify additional constraints on Relationships (including lists of Enumerated Values).</p> <p>Enumerated Values:</p> <p>CONTAINS HAS PROPERTIES HAS OBS CONTEXT HAS ACQ CONTEXT INFERRED FROM SELECTED FROM HAS CONCEPT MOD</p> <p>See Section C.17.3.2.4 "Content Sequence and Relationship Type" for further explanation.</p>
<p>>Include Table C.17-6 "Document Relationship Macro Attributes" if the Target Content Item is included by-value in the Source Content Item. The Macro shall not be present if the relationship is by-reference.</p>			
<p>>Include Table C.17-5 "Document Content Macro Attributes" if the Target Content Item is included by-value in the Source Content Item. The Macro shall not be present if the relationship is by-reference.</p>			

Attribute Name	Tag	Type	Attribute Description
>Referenced Content Item Identifier	(0040,DB73)	1C	<p>An ordered set of one or more integers that uniquely identifies the Target Content Item of the relationship.</p> <p>The root Content Item is referenced by a single value of 1.</p> <p>Each subsequent integer represents an ordinal position of a Content Item in the Content Sequence (0040,A730) in which it belongs. The Referenced Content Item Identifier is the set of these ordinal positions along the by-value relationship path. The number of values in this Multi-Value Attribute is exactly the number of relationships traversed in the SR content tree plus one.</p> <p>Note</p> <ol style="list-style-type: none"> See Section C.17.3.2.5 "Referenced Content Item Identifier". Content Items are ordered in a Content Sequence starting from 1 as defined in VR of SQ (see PS3.5). <p>Required if the Target Content Item is denoted by-reference, i.e., the Document Relationship Macro and Document Content Macro are not included.</p>

For reference unchanged DICOM PS3.16:

TID 3471 PET Covariates Acquisition Context

Type: Extensible
Order: Non-Significant
Root: No

Table TID 3471. PET Covariates Acquisition Context

	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1	NUMERIC	(14749-6, LN, "Glucose")	1	U		UNITS = EV (mmol/l, UCUM, "mmol/l")
2	DATE	(127857, DCM, "Glucose Measurement Date")	1	MC	IFF Row 1 is present and does not contain Observation DateTime (0040,A032)	
3	TIME	(127858, DCM, "Glucose Measurement Time")	1	MC	IFF Row 1 is present and does not contain Observation DateTime (0040,A032)	

Content Item Descriptions

Row 2	Glucose Measurement Date	In an earlier edition of the standard, an incorrect DCM code was used for this concept, which was already assigned as (109081, DCM, "Prospective gating").
Row 3	Glucose Measurement Time	In an earlier edition of the standard, an incorrect DCM code was used for this concept, which was already assigned as (109082, DCM, "Retrospective gating").