Status	Letter Ballot
Date of Last Update	2019/02/23
Person Assigned	David Clunie mailto:dclunie@dclunie.com
Submitter Name	Kevin ODonnell
Submission Date	2018/11/09

Correction Number CP-1875
Log Summary: Two Dimensional Measurement Graph in SR has no concept for data values
Name of Standard PS3.16
Rationale for Correction: TID 3990 Two Dimensional Measurement Graph row 4 CONTAINER says "no concept name". One alternative would be to use $MeasurementGraph like the other rows. The other alternative, proposed here, since we don't usually say "no concept name", is to just leave it empty and add an explanation in the content item descriptions. It is permitted to have empty Concept Names for container content items that are not root content items.
Correction Wording:

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

TID 3990 Two Dimensional Measurement Graph

Generic Template representing arbitrary two-dimensional graphs.

Table TID 3990. Parameters

Parameter Name	Parameter Usage
$MeasurementGraph	Describes what the graph is about
$X-Concept	Concept of the X-Axis of the graph
$Y-Concept	Concept of the Y-Axis of the graph
$X-AxisUnit	Unit of the x-axis data elements
$Y-AxisUnit	Unit of the y-axis data elements

Type: **Extensible**
Order: **Significant**
Root: **No**

Table TID 3990. Two Dimensional Measurement Graph

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	$MeasurementGraph	1	M		
2	>	CONTAINS	CODE	EV (122698, DCM, "X-Concept")	1	M		$X-Concept
3	>	CONTAINS	CODE	EV (122699, DCM, "Y-Concept")	1	M		$Y-Concept
4	>	CONTAINS	CONTAINER	**~~no concept name~~**	1-n	MC	IF Row 7, 8, or 9 not present	
5	>>	CONTAINS	NUM	$X-Concept	1	M		UNITS = $X-AxisUnit
6	>>	CONTAINS	NUM	$Y-Concept	1	M		UNITS = $Y-AxisUnit
7	>	CONTAINS	IMAGE	$MeasurementGraph	1	U		
8	>	CONTAINS	WAVEFORM	$MeasurementGraph	1	U		
9	>	CONTAINS	COMPOSITE	$MeasurementGraph	1	U		

Content Item Descriptions

Row 4	**No Concept Name is used for this container.**
Rows 5-6	The X-Concept values shall be monotonically increasing.
Row 7	Secondary Capture Image containing a bitmap representation of the graph
Row 8	Waveform containing a representation of the graph
Row 9	Composite Object containing a rendered representation of the graph

For reference, unchanged DICOM PS3.16:

TID 3910 Flow Quantification

Contains the flow quantification measurement results

Type: **Extensible**
Order: **Significant**
Root: **No**

Table TID 3910. Flow Quantification

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (111004, DCM, "Analysis Performed")	1	M		EV (122604, DCM, "Flow Quantification")
3	>	HAS OBS CONTEXT	INCLUDE	D???	1	U		
4	>	HAS OBS CONTEXT	DATETIME	EV (G-D321, SRT, "Start DateTime")	1	M		
5	>	HAS OBS CONTEXT	DATETIME	EV (G-D320, SRT, "Stop DateTime")	1	M		
6	>	CONTAINS	INCLUDE	DTID 3990 “Two Dimensional Measurement Graph”	1	U		$MeasurementGraph = EV (122667, DCM, "Blood velocity vs. time of cardiac cycle") $X-Concept = EV (122666, DCM, "Time relative to R-wave peak") $Y-Concept = EV (F-0319E, SRT, "Arterial Velocity") $X-AxisUnits = DT (ms, UCUM, "ms") $Y-AxisUnits = DT (cm/s, UCUM, "cm/s")
7	>	CONTAINS	NUM	EV (122642, DCM, "Velocity Encoding Minimum Value")	1	U		UNITS = DT (cm/s, UCUM, "cm/s")
...	>	CONTAINS	NUM	EV (122643, DCM, "Velocity Encoding Maximum Value")	1	U		UNITS = DT (cm/s, UCUM, "cm/s")