

1	Status	March 2019 Voting Packet
2	Date of Last Update	2019/01/17
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5	Submitter Name	Kevin ODonnell
6	Submission Date	2018/11/09

7	Correction Number CP-1875	
8	Log Summary: Two Dimensional Measurement Graph in SR has no concept for data values	
9	Name of Standard	
10	PS3.16	
11	Rationale for Correction:	
12	TID 3990 Two Dimensional Measurement Graph row 4 CONTAINER says "no concept name".	
13	One alternative would be to use \$MeasurementGraph like the other rows.	
14	The other alternative, proposed here, since we never say "no concept name", is to just leave it empty and add an explanation in the	
15	content item descriptions. It is permitted to have empty Concept Names for container content items that are not root content items.	
16	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	<del>no concept name</del>	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

<b>Row 4</b>	<b><u>No Concept Name is used for this container.</u></b>
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")