DICOM Change Proposal

STATUS	Letter Ballot
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Change Number	CP-2465
Log Summary: Unclear constraints on measurement units for Real World Value Mapping	
Name of Standard PS3.3	
Rationale for Change: DICOM PS3.3 Table C.25.2-1 includes Table C.7.6.16-12 "Real World Value Mapping Macro Attributes" with DCID 83 for the Measurement Units Code Sequence. This Macro itself includes Table C.7.6.16-12b "Real World Value Mapping Item Macro Attributes" with DCID 82 "or as specified in the Macro invocation". And, finally, this Macro includes Table 8.8-1 "Code Sequence Macro Attributes" for the Measurement Units Code Sequence with DCID 7181 "or as specified in the Macro invocation". It is unclear how the "or" is to be interpreted in the above cited "Attribute Descriptions". For example, if the Real World Value Mapping Module is used in an IOD, would the Measurement Units Code Sequence be restricted to CID 83 (which is extensible and would, therefore, allow one to add further codes) or would it also be allowed to use codes from CID 82 and/or CID 7181? In all three cases, a reference to the respective Context Group is made by "DCID", i.e., a Defined Context Group Identifier that specifies the Context Group for a Code Sequence Attribute that *shall* be used. Replace text to indicate that the invocation overrides the macro attribute description.	
Change Wording:	

Amend PS3.3 Section C.7.6.16.2.11 as shown:

5   **C.7.6.16.2.11 Real World Value Mapping Macro**

Table C.7.6.16-12 specifies the Attributes of the Real World Value Mapping Macro, which is used as a Functional Group Macro.

Table C.7.6.16-12. Real World Value Mapping Macro Attributes

Attribute Name	Tag	Type	Attribute Description
Real World Value Mapping Sequence	(0040,9096)	1	The mapping of stored values to associated Real World values. One or more Items shall be included in this Sequence.
>Include Table C.7.6.16-12b "Real World Value Mapping Item Macro Attributes"			Measurement Units Code Sequence DCID 82 "Measurement Unit", ~~or as specified~~ **unless otherwise defined** in the Macro invocation.

Table C.7.6.16-12b. Real World Value Mapping Item Macro Attributes

Attribute Name	Tag	Type	Attribute Description
…			
Measurement Units Code Sequence	(0040,08EA)	1	Units of measurement. Only a single Item shall be included in this Sequence. See Section C.7.6.16.2.11.1 for further explanation.
>Include Table 8.8-1 "Code Sequence Macro Attributes"			DCID 7181 "Abstract Multi-dimensional Image Model Component Unit", ~~or as specified~~ **unless otherwise defined** in the Macro invocation.
Quantity Definition Sequence	(0040,9220)	3	A list of name-value pairs that describe the characteristics of the quantity represented by the Real World Value. One or more Items are permitted in this Sequence.
>Include Table 10.2.1-1 "Content Item with Modifiers Macro Attributes"			BTID 15400 "Real-World Quantity Definition". Other TIDs may be defined by the IOD or application that uses this Macro.

For reference PS3.3 Section C.25.2 (unchanged)

C.25.2 Real World Value Mapping Module

15   Table C.25.2-1 specifies the Attributes of the Real World Value Mapping Module.

Table C.25.2-1. Real World Value Mapping Module Attributes

Attribute Name	Tag	Type	Attribute Description
Content Date	(0008,0023)	1	The date the content creation started.
Content Time	(0008,0033)	1	The time the content creation started.
Include Table 10-12 "Content Identification Macro Attributes"			
Referenced Image Real World Value Mapping Sequence	(0040,9094)	1	A Sequence of Real World Value mapping Items. Each Item defines a single mapping and a list of images to which the mapping applies. One or more Items shall be included in this Sequence.
>Include Table C.7.6.16-12 "Real World Value Mapping Macro Attributes"			Measurement Units Code Sequence DCID 83 "Real World Value Mapping Unit".
>Referenced Image Sequence	(0008,1140)	1	A Sequence listing the images to which the mapping applies. One or more Items shall be included in this Sequence.
>>Include Table 10-3 "Image SOP Instance Reference Macro Attributes"			