

DICOM Correction Item

Correction Number	CP-630
Log Summary: Type 1 meaning for multi-valued string attributes	
Type of Modification	Name of Standard
Clarification	PS 3.5 2006
Rationale for Correction The meaning of Type 1 data elements used as attributes in PS 3.3 and 3.4 is defined in PS 3.5 to mean that the element shall be included, shall not have a VL of zero, and that the absence of a valid value is an error. For multi-valued string elements, it is not clear whether or not every potential value shall be present, or whether only one of multiple values needs to be present unless otherwise specified. Consider, for example, Specific Character Set in this regard. Since there are example in the standard of the first of multiple values of Specific Character Set being zero length, it is presumed that the intent is that only one of several values is required for Type 1 attributes. Further, it is not explicitly stated but the presence of only one or more delimiter characters but no values does not mean that a valid value is present, and hence is an error.	
Sections of documents affected PS 3.5 7.4.1	
Correction Wording:	

7.4.1 TYPE 1 REQUIRED DATA ELEMENTS

IODs and SOP Classes define Type 1 Data Elements that shall be included and are mandatory elements. The Value Field shall contain valid data as defined by the elements VR and VM as specified in PS 3.6. The Length of the Value Field shall not be zero. Absence of a valid Value in a Type 1 Data Element is a protocol violation.

Notes: 1. For data elements with a string (CS, SH, LO) rather than binary, text or sequence Value Representation, and for which multiple Values are allowed, the presence of a single Value is sufficient to satisfy the Type 1 requirement, unless specified otherwise in the Attribute description, and other Values may be empty, unless otherwise specified by the IOD. The presence of one or more delimiter (BACKSLASH) characters alone, without any Values, is not sufficient to satisfy the Type 1 requirement, since even though the Value Length is greater than zero, there is no valid Value present.