

DICOM Correction Item

Correction Number	CP-1043										
Log Summary: Clarification on the multiplicity of Items - 2											
Type of Modification	Name of Standard										
Addition	PS 3.3 – 2009										
<p>Rationale for Correction</p> <p>CP-44 specified the sentences that should be included in the attribute description with a VR of SQ. The following list is stated in CP – 44:</p> <table border="0"> <tr> <td style="padding-right: 20px;">Number of Items:</td> <td>Suggested sentence:</td> </tr> <tr> <td>1</td> <td>Only a single Item shall be permitted in this sequence.</td> </tr> <tr> <td>0-1</td> <td>Zero or one Item may be included in this sequence.</td> </tr> <tr> <td>0-n</td> <td>Zero or more Items may be included in this sequence.</td> </tr> <tr> <td>1-n</td> <td>One or more Items may be included in this sequence.</td> </tr> </table> <p>This guideline is not included in the DICOM standard and there is no difference between a Type 1 attribute (that shall have 1 or 1-n items), a Type 2 (that shall have 0-1 or 0-n items) or a Type 3 attribute (that shall have 1 or 1-n items).</p> <p>This CP proposes to add documentation rule in Section 5.2 of PS 3.3 to document the sentences to be included for each attribute description of a Type 1, 2 or 3 of a sequence.</p>		Number of Items:	Suggested sentence:	1	Only a single Item shall be permitted in this sequence.	0-1	Zero or one Item may be included in this sequence.	0-n	Zero or more Items may be included in this sequence.	1-n	One or more Items may be included in this sequence.
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Sections of documents affected											
PS 3.3 5.2											
Correction Wording:											

5.2 SEQUENCES

Certain Tables in this Standard describe Sequences of Items by using the symbol: '>'. The symbol '>' precedes the Attribute (or Module) Name of the members of an Item. All marked Attributes (or Modules) belong to the generic description of an Item which may be repeated to form a Sequence of Items. This Sequence of Items is nested in the Attribute (or Module) which precedes in the table the first member marked with a '>'.

Note: The following table describes the "Referenced Series Sequences" Attribute as a Sequence of one or more Items where each Item contains the three Attributes marked by a '>'. The Sequence of Items is nested inside the value of the Referenced Series Sequence Attribute. The following Attribute (not marked) is not part of the Items of the Sequence.

.....
Referenced Series Sequence
> Series Date
> Series Time
> Series Instance UID
Modality

This notation may be used to create nested hierarchical structures by using '>>' at the second level of nesting and so on.

The Type of the Sequence attribute defines whether the Sequence attribute itself must be present, and the Attribute Description of the Sequence attribute may define whether and how many Items shall be present in the Sequence. The Types of the attributes of the Data Set included in the Sequence, including any conditionality, are specified within the scope of each Data Set, i.e., for each Item present in the Sequence. See PS 3.5.

For describing the number of items in the attribute description the following sentences are preferred:

<u>Sequence Attribute Type</u>	<u>Number of Items</u>	<u>Sentence</u>
<u>1, or 1C</u>	<u>1</u>	<u>Only a single Item shall be included in this sequence.</u>
<u>1 or 1C</u>	<u>1-n</u>	<u>One or more Items shall be included in this sequence.</u>
<u>2 or 2C</u>	<u>0-1</u>	<u>Zero or one Item shall be included in this sequence.</u>
<u>2 or 2C</u>	<u>0-n</u>	<u>Zero or more Items shall be included in this sequence.</u>
<u>3</u>	<u>1</u>	<u>Only a single Item is permitted in this sequence.</u>
<u>3</u>	<u>1-n</u>	<u>One or more Items are permitted in this sequence.</u>

Note: The encoding of empty sequence attributes is described in PS 3.5.

In a number of cases for Normalized IODs, the Data Element Type and Conditions are defined in the appropriate Service definition in PS 3.4, in other cases in the attribute description in PS 3.3.

It is not necessary to specify for any Attribute within a Sequence the condition that it is “required if a Sequence Item is present”, since this is always implicit, whether or not there are additional requirements.