

DICOM Correction Item

Correction Number		CP-130
Log Summary: Specify DT VR matching for Query/Retrieve		
Type of Modification	Name of Standard	
Clarification by addition of items	PS 3.4 - 1999	
Rationale for Correction		
<p>PS 3.4 does not specify a mechanism for matching the Date Time (DT) VR.</p> <p>This has not been a problem because few attributes use the DT VR, but proposed IODs may, since DT has several potential advantages, including the optional inclusion of timezone information, and the unambiguous ability to match a datetime range.</p> <p>Also, whether or not single value date and time matching is by string or by meaning is unclear. This is therefore clarified by a note to indicate that matching is by meaning.</p>		
Sections of documents affected		
See below ...		
Correction Wording:		

C.2.2.2.1 Single Value Matching

If the value specified for a Key Attribute in a request is non-zero length and if it is:

- a) not a date or time or datetime, contains no wild card characters
- b) a date or time or datetime, contains a single date or time or datetime with no "-"

then single value matching shall be performed. Only entities with values which match exactly the value specified in the request shall match. This matching is case-sensitive.

Notes: 1. This definition implies that dates or times or datetimes are matched by their meaning, not as literal strings. For example:

- the DT "19980128103000.0000" matches "19980128103000"
- the DT "19980128103000GMT" matches "19980128073000GMT-3"
- the TM "2230" matches "223000"
- the TM "223000" matches the deprecated ACR/NEMA 2.0 form "22:30:00"
- the DA "19980128" matches the deprecated ACR/NEMA 2.0 form "1998.01.28"

2. If an application is concerned about how single value matching of dates and times is performed by another application, it may consider using range matching instead, which is always performed by meaning, with both values in the range the same.

C.2.2.2.5 Range Matching

If the Attribute is a date, then:

- a) A string of the form "<date1> - <date2>" shall match all occurrences of dates which fall between <date1> and <date2> inclusive
- b) A string of the form "- <date1>" shall match all occurrences of dates prior to and including <date1>
- c) A string of the form "<date1> -" shall match all occurrences of <date1> and subsequent dates

If the Attribute is a time, then:

- a) A string of the form "<time1> - <time2>" shall match all occurrences of times which fall between <time1> and <time2> inclusive
- b) A string of the form "- <time1>" shall match all occurrences of times prior to and including <time1>
- c) A string of the form "<time1> -" shall match all occurrences of <time1> and subsequent times

If the Attribute is a datetime, then:

- a) A string of the form "<datetime1> - <datetime2>" shall match all moments in time which fall between <datetime1> and <datetime2> inclusive
- b) A string of the form "- <datetime1>" shall match all moments in time prior to and including <datetime1>
- c) A string of the form "<datetime1> -" shall match all moments in time subsequent to and including <datetime1>
- d) The timezone, if present in the Value of the Attribute, shall be taken into account for the purposes of the match.

Range matching is not defined for types of Attributes other than dates and times.