DICOM Correction Proposal

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<td>Date of Last Update</td>
<td>2013/10/17</td>
</tr>
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<td>Person Assigned</td>
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Correction Number: CP-1311

Log Summary: Prohibit * and ? in Patient ID and Name

Name of Standard

PS 3.3 2011
PS 3.5 2011

Rationale for Correction

Use of the characters * and ? in attributes used for matching (especially Patient ID and Patient Name) conflicts with its use in query matching strings. In a query string there is no way to distinguish between use of these characters as literals for single value matching and use as wildcards for wildcard matching. For example, if Patient ID would be allowed to have * or ? characters, an MWL or UPS SCP application may reject a single value match string because it looks like an illegal wildcard match string, or a Patient Root C-FIND SCP may reject a STUDY, SERIES, or IMAGE level operation because the Patient ID Unique Key looks like a wildcard match string.

Similarly, the attempt to perform single-value match for an Accession Number with one of these characters will be interpreted by an SCP as a wildcard match. The problem is most pronounced for the Attributes with VRs of AE, PN, SH and LO that are defined as Unique or Required Matching keys for Query/Retrieve, MWL and UPS services.

To address the issue, explanatory notes are added to Section C.2.2.4 Wildcard Matching.

Correction Wording:

Amend PS 3.4 with the notes about use of wildcard matching in attributes with certain VRs

C.2.2.2.4 Wild Card Matching

If the Attribute is not a date, time, signed long, signed short, unsigned short, unsigned long, floating point single, floating point double, other byte string, other word string, unknown, attribute tag, decimal string, integer string, age string or UID and the value specified in the request contains any occurrence of an "*" or a "?", then "*" shall match any sequence of characters (including a zero length value) and "?" shall match any single character. This matching is case sensitive, except for Attributes with an PN Value Representation (e.g., Patient Name (0010,0010)).

For attributes with a PN value representation, including the case of extended negotiation of fuzzy semantic matching, wild card matching is implementation dependent and shall be specified in the conformance statement.

Notes:
1. Wild card matching on a value of "*" is equivalent to universal matching.
2. The wild card matching method specified by DICOM might not be supported by some non-DICOM multi-byte character text processors.
3. For multi-component group names, the component group delimiter "=" (3DH) may be present in the Key Attribute value, but may give unexpected results if the SCP does not support matching on separate components but interprets the entire value literally. E.g., "*=*" or "*=*=" may or may not return all strings, and hence is not equivalent to "*", nor to universal matching.
4. Using attributes with VR of AE, LO, PN and SH as matching keys will not allow single value matching on values that contain characters “*” and “?”. Such queries will always be treated as queries with wildcard matching.

5. Attributes with VR of ST, LT and UT are intended for conveying narrative text and may contain wildcard characters “*” and “?”. Attempt to match on the string explicitly containing “*” or “?” will be treated as wildcard matching and thus may return multiple results rather than single one.