DICOM Correction Proposal

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Correction Number 1778
Log Summary: Improve PN Delimiter Specification
Name of Standard PS 3.5 2018c
Rationale for Correction: The current specification could lead to the interpretation, that these delimiters could also be present after the last element of the list of elements: E.g. implementers could write the following values - Alphabetical component of PN: family name^given name^middle name^name prefix^name suffix^^^ - components of PN: (alphabethic)=(ideographic)=(phonetic)===== In both cases, delimiters have been added erroneously to the last element. Explicit clarifications are added.
Correction Wording:

In PS 3.5, Section 6.2, change the text as follows:

6.2 VALUE REPRESENTATION (VR)

…

Table 6.2-1. DICOM Value Representations

VR Name	Definition	Character Repertoire	Length of Value
…			
PN Person Name	A character string encoded using a 5 component convention. The character code 5CH (the BACKSLASH "\" in ISO-IR 6) shall not be present, as it is used as the delimiter between values in multiple valued data elements. The string may be padded with trailing spaces. For human use, the five components in their order of occurrence are: family name complex, given	Default Character Repertoire and/or as defined by (0008,0005) excluding character code 5CH (the BACKSLASH "\" in ISO-IR 6) and all Control Characters except ESC when used for ISO 2022 escape sequences.	64 chars maximum per component group (see Note in Section 6.2)

VR Name	Definition	Character Repertoire	Length of Value
	name complex, middle name, name prefix, name suffix. Note HL7 prohibits leading spaces within a component; DICOM allows leading and trailing spaces and considers them insignificant. Any of the five components may be an empty string. The component delimiter shall be the caret "^" character (5EH). **There shall be no more than four component delimiters, i.e., none after the last component if all components are present.** Delimiters are required for interior null components. Trailing null components and their delimiters may be omitted. Multiple entries are permitted in each component and are encoded as natural text strings, in the format preferred by the named person. For veterinary use, the first two of the five components in their order of occurrence are: responsible party family name or responsible organization name, patient name. The remaining components are not used and shall not be present. This group of five components is referred to as a Person Name component group. For the purpose of writing names in ideographic characters and in phonetic characters, up to 3 groups of components (see Annexes H, I and J) may be used. The delimiter for component groups shall be the equals character "=" (3DH). **There shall be no more than two component group delimiters, i.e., none after the last component group if all component groups are present.** The three component groups of components in their order of occurrence are: an alphabetic representation, an ideographic representation, and a phonetic representation. Any component group may be absent, including the first component group. In this case, the person name may start with one or more "=" delimiters. Delimiters are required for interior null component groups. Trailing null component groups and their delimiters may be omitted. Precise semantics are defined for each component group. See Section 6.2.1.2. For examples and notes, see Section 6.2.1.1.		
…			

6.2.1.1 Examples of PN VR and Notes

Examples:

- Rev. John Robert Quincy Adams, B.A. M.Div.

  "Adams^John Robert Quincy^^Rev.^B.A. M.Div."

  [One family name; three given names; no middle name; one prefix; two suffixes.]

- Susan Morrison-Jones, Ph.D., Chief Executive Officer

"Morrison-Jones^Susan^^^Ph.D., Chief Executive Officer"

[Two family names; one given name; no middle name; no prefix; two suffixes.]

- John Doe

  "Doe^John"

  [One family name; one given name; no middle name, prefix, or suffix. Delimiters have been omitted for the three trailing null components.]

- (for examples of the encoding of Person Names using multi-byte character sets see Annex H)

- "Smith^Fluffy"

  [A cat, rather than a human, whose responsible party family name is Smith, and whose own name is Fluffy]

- "ABC Farms^Running on Water"

  [A horse whose responsible organization is named ABC Farms, and whose name is "Running On Water"]

  Note

  1. A similar multiple component convention is also used by the HL7 v2 XPN data type. However, the XPN data type places the suffix component before the prefix, and has a sixth component "degree" that DICOM subsumes in the name suffix. There are also differences in the manner in which name representation is identified.

  2. In typical American and European usage the first occurrence of "given name" would represent the "first name". The second and subsequent occurrences of the "given name" would typically be treated as a middle name(s). The "middle name" component is retained for the purpose of backward compatibility with existing standards.

  3. The implementer should remain mindful of earlier usage forms that represented "given names" as "first" and "middle" and that translations to and from this previous typical usage may be required.

  4. For reasons of backward compatibility with versions of this standard prior to V3.0, person names might be considered a single family name complex (single component without "^" delimiters).