# DICOM Correction Proposal

| STATUS | Letter Ballot |
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| Date of Last Update | 2024/11/11 |
| Person Assigned | Wim Corbijn |
| Submitter Name | Jeroen Medema, jeroen.medema@philips.com |
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| Correction Number | CP-2417 |
|---|---|
| Log Summary:   Note for ordering tags in XML representation | |
| Name of Standard<br>PS3.18, PS3.19 | |
| Rationale for Correction:<br><br>During the FT review of Supplement 234 in WG06 (January 2024) there was a comment from Janet Keyes regarding the ordering of the XML tags: "Is it a convention that DICOM Web messages are not expected to put DICOM Attributes in tag number order?" to which the reply was: "It is not clearly defined. For JSON the attribute objects within a DICOM JSON Model object must be ordered by their property name in ascending order. In XML it is not explicitly defined. In many cases the ordering is followed, but in some it is not." It was decided to write a CP to add a note to the applicable XML-section to make clear that although it is mandatory for JSON to sort tags (see PS3.18, section F.2.2), it is not for XML. | |
| Correction Wording: | |

> *Change PS3.19 section A.1.1 as given below.*

## A Data Exchange Models

## A.1 Native DICOM Model

## A.1.1 Usage

The Native DICOM Model defines a representation of binary-encoded DICOM SOP Instances as XML Infosets that allows a recipient of data to navigate through a binary DICOM data set using XML-based tools instead of relying on tool kits that understand the binary encoding of DICOM.

**Note**

> It is not the intention that this form be utilized as the basis for other uses. This form does not take advantage of the self-validation features that could be possible with a pure XML representation of the data.

As per the XML standard, XML tags are case sensitive. The case convention for elements is an upper case initial letter, camel case. The case convention for attributes is a lower initial letter, camel case. Keywords referenced in the XML schema are the DICOM title case from the definitions in PS3.6.

With the exception of padding to an even byte length, a data source that is creating a new instance of a Native DICOM Model (e.g., the result from some analysis application) shall follow the DICOM encoding rules (e.g., the handling of character sets) in creating Values for the DicomAttributes within the instance of the Native DICOM Model. Attribute Values encoded in a Native DICOM Model are not required to be padded to an even byte length.

**<u>Note</u>**

**Attribute objects within a DICOM JSON Model object are ordered by their property name in ascending order (see PS3.18, section F.2.2). Elements within an XML Infoset following the Native DICOM Model definition are not required to be ordered.**

Group Length (gggg,0000) attributes shall not be included in a Native DICOM Model instance.

A data recipient that converts data from an instance of the Native DICOM Model back into a binary encoded DICOM object shall adjust the padding to an even byte length as necessary to meet the encoding rules specified in DICOM PS3.5.

*Change PS3.18 Section F.2.2 as given below.*

Attribute objects within a DICOM JSON Model object ~~must~~ **shall** be ordered by their property name in ascending **lexicographic (alphabetic)** order.