

DICOM Correction Item

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| Correction Number | CP-974 |
| Log Summary: UIDs as codes and standard codes for organizations | |
| Type of Modification | Name of Standard |
| Correction | PS 3.3, 3.6, 3.16 - 2008 |
| Rationale for Correction Standard codes for organizations are required, e.g., to use to record DICOM or HL7 as the creator of well known SOP Instances (e.g., color palettes) in Institution Code Sequence (0008,0082) within Content Creator's Identification Sequence (0070,0086). The UID roots of organizations can serve as such identifiers, which leads to the more generally useful concept of also providing a coding scheme designator that allows for any ISO object identifier based concept value. | |
| Sections of documents affected PS 3.3 PS 3.6 PS 3.16 | |
| Correction Wording: | |

Amend PS 3.3 Section 10.1 to include baseline context ID for organizations:

10.1 PERSON IDENTIFICATION MACRO

This Macro may be invoked to specify a coded representation of a person such as a healthcare worker, and the organization to which they are responsible.

- Notes:
1. This macro is typically invoked within a Sequence Item used to identify an individual such as a physician or a device operator.
 2. The free-text name of the individual is not included in this Macro since there are already widely used specific Attributes to hold such values.
 3. No Baseline, Defined or Enumerated Context Groups are defined nor is any particular coding scheme specified. In practice, workers are usually identified by using a locally or nationally specific coding scheme. For example, a local Coding Scheme Designator might be used and the individual's internal hospital ID number user in Code Value.
 4. The organization is specified by either a coded sequence or a free text name but not both. **A Baseline Context Group of standard organizations is provided for the purpose of identifying standard organizations responsible for creation of well known instances.**

**Table 10-1
 Person Identification Macro Attributes Description**

| Attribute Name | Tag | Type | Attribute Description |
|--|-------------|--|---|
| Person Identification Code Sequence | (0040,1101) | 1 | A coded entry which identifies a person. The Code Meaning attribute, though it will be encoded with a VR of LO, may be encoded according to the rules of the PN VR (e.g. caret '^' delimiters shall separate name components), except that a single component (i.e. the whole name unseparated by caret delimiters) is not permitted. Name component groups for use with multi-byte character sets are permitted, as long as they fit within the 64 characters (the length of the LO VR). One or more Items may be permitted in this Sequence. |
| >Include 'Code Sequence Macro' Table 8.8-1 | | No Baseline Context ID is defined. | |
| Person's Address | (0040,1102) | 3 | Person's mailing address |
| Person's Telephone Numbers | (0040,1103) | 3 | Person's telephone number(s) |
| Institution Name | (0008,0080) | 1C | Institution or organization to which the identified individual is responsible or accountable. Required if Institution Code Sequence (0008,0082) is not present. |
| Institution Address | (0008,0081) | 3 | Mailing address of the institution or organization to which the identified individual is responsible or accountable. |
| Institution Code Sequence | (0008,0082) | 1C | Institution or organization to which the identified individual is responsible or accountable. Required if Institution Name (0008,0080) is not present. Only a single Item shall be permitted in this Sequence. |
| >Include 'Code Sequence Macro' Table 8.8-1 | | No Baseline Context ID is defined 5002 . | |

Amend PS 3.16 Section 8 to add ISO 9834-3 as coding scheme:

Table 8-1 Coding Schemes

| Coding Scheme Designator | Coding Scheme UID | Description |
|--------------------------|-------------------------|--|
| ... | ... | ... |
| ISO639_1 | 2.16.840.1.113883.6.99 | Two-letter language codes (Note: HL7 uses "ISO639-1" for the symbolic name, with a hyphen rather than an underscore) |
| ISO639_2 | 2.16.840.1.113883.6.100 | Three-letter language codes (Note: HL7 uses "ISO639-2" for the symbolic name, with a hyphen rather than an underscore) |
| ISO3166_1 | 2.16.1 | ISO 3166-1 alpha-2_Country Codes (Note: HL7 uses "ISO3166-1" for the symbolic name, with a hyphen rather than an underscore) |
| ISO5218_1 | | Representation of Human Sexes (not used – see note) |

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|-----------------------|-----|---|
| <u>ISO_OID</u> | | <u>ISO/IEC 8824-1– Information Technology – Abstract Syntax 1 (ASN.1): Specification of Basic Notation, and ISO/IEC 9834-1 – Information technology -- Open Systems Interconnection -- Procedures for the operation of OSI Registration Authorities: General procedures and top arcs of the ASN.1 Object Identifier tree</u> |
| ... | ... | ... |

Add PS 3.16 Section 8.2 to describe ISO 9834-1 as coding scheme:

8.2 ISO_OID

ISO 8824 and ISO 9834-1 are the standards defined for the generation of object identifiers that are used as DICOM Unique Identifiers (see PS 3.5), can also serve as a general mechanism for identifying organizations and objects defined by those organizations.

When the Coding Scheme Designator is ISO_OID, the Code Value shall be the numeric (dot delimited) form of a valid object identifier.

A repository of known existing object identifiers can be found at <http://www.oid-info.com/index.htm>. For example:

- the ISO 9834-1 assigned numeric object identifier for the country France, is “1.0.3166.2.2.1.250” (since ISO 3166 defines a means for maintaining country codes using object identifiers)
- the object identifier for the RIPEMD-160 cryptographic hash function is “1.0.10118.3.0.49”
- the object identifier for the HL7 V2 table of codes for marital status is “2.16.840.1.113883.12.2”

The re-use of object identifiers for existing concepts that do not have an alternative more appropriate coding scheme compatible with DICOM provides a mechanism to avoid defining new codes. For example, HL7 assigned object identifiers can be found at <http://www.hl7.org/oid/index.cfm>.

Though the intent of ISO_OID is to define organizational roots for the hierarchical assignment of object identifiers, and not specifically to identify organizations per se, the organizational root values can be construed as identifying the organization. For example, the DICOM Standards Organization itself can be identified by the value “1.2.840.10008”. See also CID 5002.

Add PS 3.16 context group for organizations:

CID 5002 Organizations

Context Group ID 5002 comprises the object identifier scheme of ISO 8824-1 and ISO 9834-1, when applied to organizational identifiers (see Section 8.2). The Coding Scheme Designator (0008,0102) shall be ISO_OID.

Add context group UID to PS 3.6:

Table A-3
CONTEXT GROUP UID VALUES

| Context UID | Context Identifier | Context Group Name |
|------------------------------|---------------------------|---------------------------|
| ... | ... | ... |
| <u>1.2.840.10008.6.1.822</u> | <u>5002</u> | <u>Organizations</u> |
| | | |