

DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2012/01/16
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Correction Number	CP-1156
Log Summary: UUID as UID	
Name of Standard	PS 3.5 2011
Rationale for Correction	ISO, IEC, and ITU-T have agreed on a standard for OIDs based on the UUID. In many cases of SOP instance UIDs, such an OID is preferable to an OID based on the organizational root of the implementing organization.
Correction Wording:	

<i>Add reference to PS 3.5 Section 2</i>
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ISO/IEC 9834-8 / ITU-T X.667 Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities: Generation and registration of Universally Unique Identifiers (UUIDs) and their use as ASN.1 object identifier components

<i>Change PS3.5 Annex B</i>

Annex B (Informative) Creating a privately defined unique identifier

Privately defined Unique Identifiers (UIDs) are used in DICOM to uniquely identify items such as Specialized or Private SOP Classes, Image SOP Instances, Study SOP Instances, etc.

B.1 ORGANIZATIONALLY DERIVED UID

A UID ~~is~~**may be** formed using a registered root (see Annex C) and an organization specific suffix. The manner in which the suffix of **such** a Privately Defined UID is defined is not constrained by the DICOM Standard. Only the guarantee of its uniqueness by the defining organization is required by DICOM.

~~This~~**The following** example presents a particular choice made by a specific organization in defining its suffix to guarantee uniqueness **of a SOP Instance UID. A variant is discussed.**

"1.2.840.xxxxx.3.152.235.2.12.187636473"

root. suffix

In this example, the root is:

1	Identifies ISO
2	Identifies ANSI Member Body
840	Country code of a specific Member Body (U.S. for ANSI)
xxxxx	Identifies a specific Organization. (provided <u>assigned</u> by ANSI)

In this example the first two components of the suffix relate to the identification of the device:

3	Manufacturer or user -defined device type
152	Manufacturer or user -defined serial number

The remaining four components of the suffix relate to the identification of the image:

235	Study number
2	Series number
12	Image number
187636473	Encoded date and time stamp of image acquisition

In this example, the organization has chosen these components to guarantee uniqueness. Other organizations may choose an entirely different series of components to uniquely identify its images. ~~In this example, the organization has chosen these components to guarantee uniqueness. Other organizations may choose an entirely different series of components to uniquely identify its images.~~ For example it may have been perfectly valid to omit the Study Number, Series Number and Image Number if the time stamp had a sufficient precision to ensure that no two images might have the same date and time stamp.

Because of the flexibility allowed by the DICOM Standard in creating **Privately Defined organizationally derived** UIDs, implementations should not depend on any assumed structure of UIDs and should not attempt to parse UIDs to extract the semantics of some of its components.

B.2 UUID DERIVED UID

ISO/IEC 9834-8 / ITU-T X.667 defines a method by which a UID may be constructed from the root "2.25." followed by a decimal representation of a Universally Unique Identifier (UUID). That decimal representation treats the 128 bit UUID as an integer, and may thus be up to 39 digits long (leading zeros must be suppressed).

Note: ISO/IEC 9834-8 / ITU-T X.667 is available at <http://www.itu.int/rec/T-REC-X.667/en>

A UUID derived UID may be appropriate for dynamically created UIDs, such as SOP Instance UIDs, but is usually not appropriate for UIDs determined during application software design, such as private SOP Class or Transfer Syntax UIDs, or Implementation Class UIDs.