

DICOM Correction Item

Change Proposal Number: CP-191	
Abstract: Add optional attribute to convey the availability of objects in a query	
Type of Modification: Addition	Name of Standard: PS 3.4-1999 PS 3.6-1999
Rationale for change: It is important to know how long it will take to retrieve instances from where they are stored. It is proposed to add new attribute "Instance Availability".	
Correction wording:	

Item: Add to PS 3.4 Section C.4.1.1.3.2:

C.4.1.1.3.2 Response Identifier Structure

The C-FIND response shall not contain Attributes that were not in the request or specified in this section.

An Identifier in a C-FIND response shall contain:

- Key Attributes with values corresponding to Key Attributes contained in the Identifier of the request.
- Query/Retrieve Level, element (0008,0052) which defines the level of the query. The Query/Retrieve level shall be equal to the level specified in the request.
- Conditionally, the Attribute Specific Character Set (0008,0005). This Attribute is required if expanded or replacement character sets are used.

The C-FIND SCP is required to support either or both the Retrieve AE Title Data Element or the Storage Media File-Set ID/Storage Media File Set UID Data Elements. An Identifier in a C-FIND response shall contain:

- Storage Media File-Set ID (0088,0130) which defines a user or implementation specific human readable Identifier that identifies the Storage Media on which the composite object instance(s) reside. This element pertains to the set of composite object instances available at the Query/Retrieve Level specified in the Identifier of the C-FIND request (e.g. Patient, Study, Series, Composite object instance). This Attribute shall be present if the Retrieve AE Title Data Element is not present. A null value (Data Element length of 0) is valid for all levels except the lowest level in the Information Model as defined by the SOP Class.
- Storage Media File-Set UID (0088,0140) which uniquely identifies the Storage Media on which the composite object instance(s) reside. This element pertains to the set of composite object instances available at the Query/Retrieve Level specified in the Identifier of the C-FIND request (e.g. Patient, Study, Series, Composite object instance). This Attribute shall be present if the Retrieve AE Title Data Element is not present. A null value

(Data Element length of 0) is valid for all levels except the lowest level in the Information Model as defined by the SOP Class.

Note: The File-Set concepts are used in PS 3.10.

- Retrieve AE Title (0008,0054) which defines a list of DICOM Application Entity Title(s) that identify the location from which the composite object instance(s) may be retrieved on the network. This element pertains to the set of composite object instances available at the Query/Retrieve Level specified in the Identifier of the C-FIND request (e.g. Patient, Study, Series, Composite object instance). This Attribute shall be present if the Storage Media File-Set ID and Storage Media File-Set UID elements are not present. The Application Entity named in this field shall support either the C-GET or C-MOVE SOP Class of the Query/Retrieve Service Class. A null value (Data Element length of 0) is valid for all levels except the lowest level in the Information Model as defined by the SOP Class.

- Notes:
1. For example, a DICOM AE with the AE Title of "A" performs a C-FIND request to a DICOM AE with the AE Title of "B" with the Query/Retrieve level set to "STUDY". DICOM AE "B" determines that the composite object instances for each matching study may be retrieved by itself and sets the Data Element Retrieve AE Title to "B".
 2. File-Sets may not be defined at every Query/Retrieve Level. If the SCP supports the File-Set ID/File-Set UID option but does not define these Attributes at the Query/Retrieve Level specified in the C-FIND request it may return these Data Elements with a length of 0 to signify that the value is unknown. An SCU should reissue a C-FIND at a Query/Retrieve Level lower in the hierarchy.
 3. The fact that the value of the Key Attribute is unknown to the SCP of the Query/Retrieve Service Class does not imply that it is not present in the underlying Information Object. Thus, a subsequent retrieval may cause a Storage of a SOP Instance which contains the value of the Attribute.

The C-FIND SCP may also, but is not required to, support the Instance Availability (0008,0056) Data Element. This Data Element shall not be included in a C-FIND request. An Identifier in a C-FIND response may contain:

- **Instance Availability (0008,0056) which defines how rapidly composite object instance(s) become available for transmission after a C-MOVE or C-GET retrieval request. This element pertains to the set of composite object instances available at the Query/Retrieve Level specified in the Identifier of the C-FIND request (e.g. Patient, Study, Series, Composite object instance). When some composite instances are less rapidly available than others, the availability of the least rapidly available shall be returned. If this Data Element is not returned, the availability is unknown or unspecified. A null value (Data Element length of 0) is not permitted. The Enumerated Values for this Data Element are:**
 - **“ONLINE” which means the instances are immediately available,**
 - **“NEARLINE” which means the instances need to be retrieved from relatively slow media such as optical disk or tape,**
 - **“OFFLINE” which means the instances need to be retrieved by manual intervention.**

<i>Item: Add to PS 3.6:</i>
