DICOM Correction Proposal

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| --- | --- |
| STATUS | New |
| Date of Last Update | 2016/05/28 |
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| Submission Date | 2016/05/28 |

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| --- |
| Correction Number CPXXXX |
| Log Summary: QIDO Include Query Parameter |
| Name of Standard  PS3.2, PS3.17, PS3.18 2016b |
| Correction Wording: |

*Update PS3.18, Section 6.7.1.1 as follows:*

**6.7.1.1 Request**

* …
* include**~~field~~**={attributeID**\***} | all

**~~0-n includefield / {attributeID} pairs allowed, where "all" indicates that all available attributes should be included for each response.~~**

**The "include" Query Parameter has a value that is a comma-separated list of attributeIDs or the keyword "all". A QIDO requests may have zero or more "include" Query Parameters.**

…

*Update PS3.18, Section 6.7.1.1.1 as follows:*

**6.7.1.1.1 {attributeID} encoding rules**

…

If an {attributeID} is passed as the value of an "include**~~field~~**" **~~query~~****~~key~~** **Query Parameter**, **~~this~~** **it** is equivalent to C-FIND Universal matching for the specified attribute (see [Section C.2.2.2.3 in PS3.4](file:///C:\Users\jim\Documents\part04.pdf#sect_C.2.2.2.3)).

{attributeID} can be one of the following:

* {dicomTag}
* {dicomKeyword}
* {dicomTag}.{attributeID}, where {attributeID} is an element of the sequence specified by {dicomTag}
* {dicomKeyword}.{attributeID}, where {attributeID} is an element of the sequence specified by {dicomKeyword}

{dicomTag} is the **~~eight character~~** **eight-character** hexadecimal string corresponding to the Tag of a DICOM Attribute (see [Chapter 6 in PS3.6](file:///C:\Users\jim\Documents\part06.pdf#chapter_6)).

{dicomKeyword} is the Keyword of a DICOM Attribute (see [Chapter 6 in PS3.6](file:///C:\Users\jim\Documents\part06.pdf#chapter_6)).

Note

Examples of valid values for {attributeID}:

* 0020000D
* StudyInstanceUID
* 00101002.00100020
* OtherPatientIDsSequence.PatientID
* 00101002.00100024.00400032
* OtherPatientIDsSequence.IssuerOfPatientIDQualifiersSequence.UniversalEntityID

Note

Examples of valid QIDO-RS URLs:

* http://dicomrs/studies​?PatientID=11235813
* http://dicomrs/studies​?PatientID=11235813​&StudyDate=20130509
* http://dicomrs/studies​?00100010=SMITH\*​&00101002.00100020=11235813​&limit=25
* http://dicomrs/studies​?00100010=SMITH\*​&OtherPatientIDsSequence.00100020=11235813
* http://dicomrs/studies​?PatientID=11235813​&include**~~field~~**=00081048,include**~~field~~**=00081049​&include**~~field~~**=00081060
* http://dicomrs/studies​?PatientID=11235813​&StudyDate=20130509-20130510

* <http://dicomrs/studies​?StudyInstanceUID=1.2.392.200036.9116.2.2.2.2162893313.1029997326.94587​%2c1.2.392.200036.9116.2.2.2.2162893313.1029997326.94583>

*Update PS3.18, Section 6.7.1.2.2 as follows:*

**6.7.1.2.2 Query Result Attributes**

**…**

**Table 6.7.1-2. QIDO-RS STUDY Returned Attributes**

| **Attribute Name** | **Tag** | **Notes** |
| --- | --- | --- |
| … |  |  |
| All other Study Level DICOM Attributes passed as "include**~~field~~**" query values that are supported by the service provider as return attributes | | |
| All available Study Level DICOM Attributes if the "include**~~field~~**" query key is included with a value of "all" | | |

Series Level and Instance Level attributes passed as "include**~~field~~**" query values shall not be returned.

**Update PS3.18, Section 6.7.1.2.2.2 as follows:**

**6.7.1.2.2.2 Series Result Attributes**

For each matching Series, the QIDO-RS provider shall return all attributes listed in [Table 6.7.1-2a](#table_6_7_1_2a):

**Table 6.7.1-2a. QIDO-RS SERIES Returned Attributes**

| **Attribute Name** | **Tag** | **Notes** |
| --- | --- | --- |
| … |  |  |
| All other Study or Series Level DICOM Attributes passed as "include**~~field~~**" query values that are supported by the service provider as return attributes | | |
| All available Instance Level DICOM Attributes if the "include**~~field~~**" query key is included with a value of "all" | | |
| If {StudyInstanceUID} is not specified, all Study-level attributes specified in [Table 6.7.1-2](#table_6_7_1_2) | | |

Instance Level attributes passed as "include**~~field~~**" query values shall not be returned.

**6.7.1.2.2.3 Instance Result Attributes**

For each matching instance, the QIDO-RS provider shall return all attributes listed in [Table 6.7.1-2b](#table_6_7_1_2b):

**Table 6.7.1-2b. QIDO-RS Instance Returned Attributes**

| **Attribute Name** | **Tag** | **Notes** |
| --- | --- | --- |
| … |  |  |
| All other Study, Series or Instance Level DICOM Attributes passed as "include**~~field~~**" query values that are supported by the service provider as return attributes | | |
| All available Instance Level DICOM Attributes if the "include**~~field~~**" query key is included with a value of "all" | | |
| If {StudyInstanceUID} is not specified, all Study-level attributes specified in [Table 6.7.1-2](#table_6_7_1_2) | | |
| If {SeriesInstanceUID} is not specified, all Series-level attributes specified in [Table 6.7.1-2a](#table_6_7_1_2a) | | |

*Update PS3.18, Section 6.8.1.2.2.3 as follows:*

**6.8.1.2.2.3 Search Methods**

The Search methods define the capabilities of a QIDO-RS resource (see [6.7](#sect_6_7)) or a SearchForUPS resource (see [6.9.3](#sect_6_9_3)).

The Search methods shall contain the following attributes:

* A "name" attribute with a value of "GET"
* An "id" attribute with a value of "SearchForStudies", "SearchForStudySeries", "SearchForSeries", "SearchForStudySeriesInstances", "SearchForStudyInstances", "SearchForSeriesInstances", "SearchForInstances" or "SearchForUPS"

The Search methods shall contain a "request" element with "param" elements documenting the following:

* supported Accept header values
* support for the Cache-control header
* support of "limit", "offset" and "fuzzymatching" query parameters
* supported search parameters (both tag and keyword variants shall be listed)
* supported options for the "include**~~field~~**" parameter (both tag and keyword variants shall be listed)

The Search methods shall contain one or more "response" elements documenting the following:

* supported Status Codes
* returned "header" parameters, including use of "warning headers"
* Media Types returned for each Status Code (if applicable)

Note

More than one Status Code can be described by a single "response" element.

Example:

<method name="GET" id="SearchForStudies">  
 <request>  
 <param name="Accept" style="header" default="multipart/related; type=application/dicom+xml">  
 <option value="multipart/related; type=application/dicom+xml" />  
 <option value="application/json" />  
 </param>  
 <param name="Cache-control" style="header">  
 <option value="no-cache" />  
 </param>  
 <param name="limit" style="query" />  
 <param name="offset" style="query" />  
 <param name="fuzzymatching" style="query" />  
 <param name="StudyDate" style="query" />  
 <param name="00080020" style="query" />  
 <param name="StudyTime" style="query" />  
 <param name="00080030" style="query" />  
 …  
 <param name="include**~~field~~**" style="query" repeating="true" />  
 <option value="all" />  
 <option value="00081049" />  
 <option value="PhysiciansOfRecordIdentificationSequence" />  
 <option value="00081060" />  
 <option value="NameOfPhysiciansReadingStudy" />  
 …  
 </param>  
</request>  
<response status="200">  
 <representation mediaType="multipart/related; type=application/dicom+xml" />  
 <representation mediaType="application/json" />  
</response>  
<response status="400 401 403 413 503" />  
</method>

*Update PS3.18, Section 6.9.3.1 as follows:*

**6.9.3.1 Request**

…

* include**~~field~~**={attributeID**\***} | all

**~~0-n includefield / {attributeID} pairs allowed, where "all" indicates that all attributes with values should be included for each response.~~**

**The "include" query parameter has a value that is a comma-separated list of attributeIDs or the keyword "all". A QIDO requests may have zero or more "include" Query Parameters.**

Each {attributeID} shall refer to an attribute of the Unified Procedure Step IOD (see [Section B.26.2 in PS3.3](file:///C:\Users\jim\Documents\part03.pdf#sect_B.26.2)).

See [Section 6.7.1.1](#sect_6_7_1_1) for {attributeID} and {value} encoding rules

* fuzzymatching=true | false
* limit={maximumResults}
* offset={skippedResults}

*Update PS3.18, Section 6.9.3.3.2 as follows:*

**6.9.3.3.2 Query Result Attribute**

For each matching UPS Instance, the Origin-Server shall return:

* All Unified Procedure Step Instance Attributes in [Table CC.2.5-3 in PS3.4](file:///C:\Users\jim\Documents\part04.pdf#table_CC.2.5-3) with a Return Key value of 1 and 2.
* All Unified Procedure Step Instance Attributes in [Table CC.2.5-3 in PS3.4](file:///C:\Users\jim\Documents\part04.pdf#table_CC.2.5-3) with a Return Key value of 1C for which the conditional requirements are met.
* All other Unified Procedure Step Instance Attributes passed as {attributeID} query keys that are supported by the Origin-Server as matching or return attributes
* All other Unified Procedure Step Instance Attributes passed as "include**~~field~~**" query values that are supported by the Origin-Server as return attributes.

*Update PS3.18, Section F.4 as follows:*

**F.4 DICOM JSON Model Example**

// The following example is a QIDO-RS SearchForStudies response consisting   
// of two matching studies, corresponding to the example QIDO-RS request:  
// GET http://qido.nema.org/studies?PatientID=12345&include**~~field~~**=all&limit=2