

DICOM Correction Proposal

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|---------------------|---------------------------------------|
| STATUS | Letter Ballot |
| Date of Last Update | 2023-11-13 |
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|---|---------|
| Correction Number | CP-2285 |
| Log Summary: Harmonize description of Directory Records and clarify their applicability | |
| Name of Standard | |
| PS3.3 | |
| Rationale for Correction: | |
| <p>The description of the various Directory Records in the standard is not very consistent: sometimes the text refers to specific IODs and sometimes to IEs, which are used for multiple IODs. In a few cases, it is not clear which Directory Record is really applicable. To address these problems, it is proposed to harmonize the descriptions.</p> <p>This CP also tries to remove remaining references to outdated concepts, such as those that were retired with Supplement 98 "Retirement of Detached, Standalone and other Services".</p> <p><i>Editorial changes:</i></p> <ul style="list-style-type: none">The term "Key[s]" should probably be written with a capital initial letter throughout Section F.5. Currently, this is not very consistent. | |
| Correction Wording: | |

Change PS3.3 Section F.5

F.5 Definition of Specific Directory Records

The following Sections specify a number of Directory Records that were introduced by the Basic Directory IOD Information Model presented in Section F.4. For each one, it identifies the SOP Classes that may be referenced and the related mandatory **k**Keys. Keys are assigned a Type designation that indicates if it is required for all Media Storage Operations of the Directory (see Section 5).

Type 2 and Type 3 Keys may be changed to Type 1 and Type 2 or 3 respectively by Application Profiles defined in PS3.11. Keys based on Private Data Elements, or Private Keys may also be used in addition to Standard defined Keys. However such Private **k**Keys may be ignored by any File-set Reader or Updater.

Note

Normalized Print media storage was previously defined in DICOM. It is now retired. See PS3.3-1998.

F.5.1 Patient Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (**0004,1430**) of Value "PATIENT". Table F.5-1 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Patient IOD or the Patient IE of Image IODs. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-1. Patient Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Patient's Name | (0010,0010) | 2 | |
| Patient ID | (0010,0020) | 1 | |
| Any other Attribute of the Patient IE Modules | | 3 | |

For a given File-set, the Patient ID (0010,0020) shall be unique. This means that it shall not appear in different Patient Directory Records.

F.5.2 Study Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "STUDY". Table F.5-2 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Study IE of Composite IODs. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1. ~~Only one Study Directory Record per Study Instance UID shall be present in a Basic Directory Instance; this implies that a Study belongs to a single patient and shall be referenced only once for that patient.~~

Table F.5-2. Study Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|---------------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Study Date | (0008,0020) | 1 | |
| Study Time | (0008,0030) | 1 | |
| Study Description | (0008,1030) | 2 | |
| Study Instance UID | (0020,000D) | 1C | Required only if (0004,1511) is absent (see Note). |
| Study ID | (0020,0010) | 1 | |
| Accession Number | (0008,0050) | 2 | |
| Any other Attribute of the Study IE Modules | | 3 | |

For a given File-set, the Study Instance UID (0020,000D) shall be unique. This means that it shall not appear in different Study Directory Records

Note

~~The Study Instance UID shall be present as a mandatory key only if no file is referenced by this Directory Record. In the case where this Directory Record references a file, the Directory Record contains in the Referenced SOP Instance UID in File (0004,1511). In this case (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3) and need not be duplicated.~~

F.5.3 Series Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "SERIES". Table F.5-3 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Series IE and Equipment IE of

Composite IODs. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1. Only one Series Directory Record per Series Instance UID shall be present in a Basic Directory Instance; this implies that a Series belongs to a single Study and shall be referenced only once for that Study.

Table F.5-3. Series Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Modality | (0008,0060) | 1 | |
| Series Instance UID | (0020,000E) | 1 | |
| Series Number | (0020,0011) | 1 | |
| Icon Image Sequence | (0088,0200) | 3 | This Icon Image is representative of the Series. It may or may not correspond to one of the images of the Series. Only a single Item is permitted in this Sequence. |
| >Include Table C.7-11b "Image Pixel Macro Attributes" | | | See Section F.7. |
| Any other Attribute of the Series IE Modules | | 3 | |

F.5.4 Image Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "IMAGE". Table F.5-4 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Image IE of Image IODs. This Directory Record shall be used to reference an Image SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-4. Image Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Icon Image Sequence | (0088,0200) | 3 | This Icon Image is representative of the Image. Only a single Item is permitted in this Sequence. |
| >Include Table C.7-11b "Image Pixel Macro Attributes" | | | See Section F.7. |
| Any other Attribute of the Image IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.5 Standalone Overlay Directory Record Definition

Retired. See PS3.3-2004.

F.5.6 Standalone Modality LUT Directory Record Definition

Retired. See PS3.3-2004.

F.5.7 Standalone VOI LUT Directory Record Definition

Retired. See PS3.3-2004.

F.5.8 Standalone Curve Directory Record Definition

Retired. See PS3.3-2004.

F.5.9 Topic Directory Record Definition

Retired. See PS3.3-2004.

F.5.10 Visit Directory Record Definition

Retired. See PS3.3-2004.

F.5.11 Results Directory Record Definition

Retired. See PS3.3-2004.

F.5.12 Interpretation Directory Record Definition

Retired. See PS3.3-2004.

F.5.13 Study Component Directory Record Definition

Retired. See PS3.3-2004.

F.5.14 Print Queue Directory Record Definition

~~This section was previously defined in DICOM. It is now retired.~~ Retired. See PS3.3-1998.

F.5.15 Film Session Directory Record Definition

~~This section was previously defined in DICOM. It is now retired.~~ Retired. See PS3.3-1998.

F.5.16 Film Box Directory Record Definition

~~This section was previously defined in DICOM. It is now retired.~~ Retired. See PS3.3-1998.

F.5.17 Basic Image Box Directory Record Definition

~~This section was previously defined in DICOM. It is now retired.~~ Retired. See PS3.3-1998.

F.5.18 Stored Print Directory Record Definition

Retired. See PS3.3-2004.

F.5.19 RT Dose Directory Record Definition

This Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "RT DOSE". Table F.5-19 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Dose IE of the RT Dose IOD. This Directory Record shall be used to reference an RT Dose SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-19. RT Dose Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Dose Summation Type | (3004,000A) | 1 | |
| Dose Comment | (3004,0006) | 3 | |
| Icon Image Sequence | (0088,0200) | 3 | This Icon Image is representative of the RT Dose. Only a single Item is permitted in this Sequence. |
| >Include Table C.7-11b "Image Pixel Macro Attributes" | | | See Section F.7. |
| Any other Attribute of the Dose IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.20 RT Structure Set Directory Record Definition

This Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "RT STRUCTURE SET". Table F.5-20 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Structure Set IE of the RT Structure Set IOD. This Directory Record shall be used to reference an RT Structure Set SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-20. RT Structure Set Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Structure Set Label | (3006,0002) | 1 | |
| Structure Set Date | (3006,0008) | 2 | |
| Structure Set Time | (3006,0009) | 2 | |
| Any other Attribute of the Structure Set IE Modules | | 3 | |

Note

Because (0004,1511) Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.21 RT Plan Directory Record Definition

This Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type of Value "RT PLAN". Table F.5-21 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Plan IE of the RT Plan IODs. This Directory

Record shall be used to reference an RT Plan SOP Instance, or RT Ion Plan SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-21. RT Plan Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| RT Plan Label | (300A,0002) | 1 | |
| RT Plan Date | (300A,0006) | 2 | |
| RT Plan Time | (300A,0007) | 2 | |
| Any other Attribute of the Plan IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.22 RT Treatment Record Directory Record Definition

This Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "RT TREAT RECORD". Table F.5-22 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Treatment Record IE of the RT Treatment Record IODs. This Directory Record shall be used to reference an RT Beams Treatment Record SOP Instance, RT Brachy Treatment Record SOP Instance, or RT Treatment Summary Record SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-22. RT Treatment Record Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Treatment Date | (3008,0250) | 2 | |
| Treatment Time | (3008,0251) | 2 | |
| Any other Attribute of the Treatment Record IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.23 Presentation State Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "PRESENTATION". Table F.5-23 lists the set of keys with their associated Types for such a

Directory Record Type. The description of these keys may be found in the Modules related to the Presentation State IE of Softcopy Presentation State-~~Storage~~ and Structured Display IODs. This Directory Record shall be used to reference a ~~Softcopy~~ Presentation State-~~Storage~~ SOP Instance or a Structured Display SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-23. Presentation Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|---|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Presentation Creation Date | (0070,0082) | 1 | Date on which this presentation was created. Note This date may be different from the date that the DICOM SOP Instance was created, since the presentation information contained may have been recorded earlier. |
| Presentation Creation Time | (0070,0083) | 1 | Time at which this presentation was created. Note This time may be different from the time that the DICOM SOP Instance was created, since the presentation information contained may have been recorded earlier. |
| <i>Include Table 10-12 "Content Identification Macro Attributes"</i> | | | |
| Referenced Series Sequence | (0008,1115) | 1C | Sequence of Items where each Item includes the Attributes of one Series to which the Presentation <u>State</u> applies. One or more Items shall be included in this Sequence. Required if the IOD of the Presentation <u>State</u> SOP Instance referenced by this dD Directory R Record includes the Presentation State Relationship Module. |
| >Series Instance UID | (0020,000E) | 1 | Unique identifier of a Series that is part of this Study. |
| >Referenced Image Sequence | (0008,1140) | 1 | Sequence of Items where each Item provides reference to an Image SOP Instance. One or more Items shall be included in this Sequence. |
| <i>>>Include Table 10-11 "SOP Instance Reference Macro Attributes"</i> | | | |
| Blending Sequence | (0070,0402) | 1C | Sequence of Items where each Item includes the Attributes of a Study to which the Presentation <u>State</u> applies. Only two Items shall be included in this Sequence. Required if the SOP Instance referenced by this dD Directory R Record includes Blending Sequence (0070,0402). |
| >Study Instance UID | (0020,000D) | 1 | Unique identifier for a Study that contains the images to which the Presentation <u>State</u> applies. |
| >Referenced Series Sequence | (0008,1115) | 1 | Sequence of Items where each Item includes the Attributes of one Series to which the Presentation <u>State</u> applies. |

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| | | | Only a single Item shall be included in this Sequence. |
| >>Series Instance UID | (0020,000E) | 1 | Unique identifier of the Series. |
| >>Referenced Image Sequence | (0008,1140) | 1 | Sequence of Items where each Item provides reference to an Image SOP Instance to which the Presentation State applies. One or more Items shall be included in this Sequence. |
| >>>Include Table 10-11 "SOP Instance Reference Macro Attributes" | | | |
| Any other Attribute of the Presentation State IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.24 Waveform Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "WAVEFORM". Table F.5-24 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in PS3.3 of the DICOM Standard in the Modules related to the Waveform IE **of Waveform IODs**. This Directory Record shall be used to reference a Waveform SOP Instance. This Type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-24. Waveform Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Any other Attribute of the Waveform IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.25 SR Document Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "SR DOCUMENT". Table F.5-25 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the SR Document IE of Structured Report IODs. This Directory Record shall be used to reference an SR Document. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Note

This Directory Record shall not be used for Key Object Selection Documents (see Section F.5.26).

Table F.5-25. SR Document Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|---|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Completion Flag | (0040,A491) | 1 | |
| Verification Flag | (0040,A493) | 1 | |
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Verification DateTime | (0040,A030) | 1C | Most recent Date and Time of verification among those defined in the Verifying Observer Sequence (0040,A073). Required if Verification Flag (0040,A493) is VERIFIED. |
| Concept Name Code Sequence | (0040,A043) | 1 | Code describing the concept represented by the root Content Item (Document Title). Only a single Item shall be included in this Sequence. |
| >Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |
| Content Sequence | (0040,A730) | 1C | Contains the Target Content Items that modify the Concept Name Code Sequence of the root Content Item (Document Title). One or more Items shall be included in this Sequence. All, and only, Content Items with the HAS CONCEPT MOD relationship from the root Content Item shall be included in this Sequence. Required if the root Content Item is the Source Content Item of HAS CONCEPT MOD relationships. |
| >Relationship Type | (0040,A010) | 1 | Enumerated Values: HAS CONCEPT MOD |
| >Include Table C.17-5 "Document Content Macro Attributes" | | | |
| Any Attribute of the SR Document IE Modules | | 3 | |

Commented [JR1]: Made italics.

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.26 Key Object Document Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "KEY OBJECT DOC". Table F.5-256 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the SR Document IE of the Key Object Selection **Document** IOD. This Directory Record shall be used to reference a Key Object Selection

Document **SOP Instance**. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-26. Key Object Document Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|---|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Concept Name Code Sequence | (0040,A043) | 1 | Code describing the concept represented by the root Content Item (Document Title). Only a single Item shall be included in this Sequence. |
| >Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |
| Content Sequence | (0040,A730) | 1C | Contains the Target Content Items that modify the Concept Name Code Sequence of the root Content Item (Document Title). One or more Items shall be included in this Sequence. All, and only, Content Items with the HAS CONCEPT MOD relationship from the root Content Item shall be included in this Sequence. Required if the root Content Item is the Source Content Item of HAS CONCEPT MOD relationships. |
| >Relationship Type | (0040,A010) | 1 | Enumerated Values: HAS CONCEPT MOD |
| >Include Table C.17-5 "Document Content Macro Attributes" | | | |
| Any Attribute of the SR Document IE Modules | | 3 | |

Commented [JR2]: Made italics.

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.27 Spectroscopy Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "SPECTROSCOPY". Table F.5-27 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the MR Spectroscopy IE of **the** MR Spectroscopy IODs. This Directory Record shall be used to reference a Spectroscopy SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-27. Spectroscopy Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Image Type | (0008,0008) | 1 | |
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Instance Number | (0020,0013) | 1 | |
| Referenced Image Evidence Sequence | (0008,9092) | 1C | Required if present in the ss Spectroscopy Instance. One or more Items shall be included in this Sequence. |
| >Include Table C.17-3 "Hierarchical SOP Instance Reference Macro Attributes" | | | |
| Number of Frames | (0028,0008) | 1 | |
| Rows | (0028,0010) | 1 | |
| Columns | (0028,0011) | 1 | |
| Data Point Rows | (0028,9001) | 1 | |
| Data Point Columns | (0028,9002) | 1 | |
| Icon Image Sequence | (0088,0200) | 3 | This Icon Image is representative of the Spectroscopy Instance. Only a single Item is permitted in this Sequence. |
| >Include Table C.7-11b "Image Pixel Macro Attributes" | | | See Section F.7. |
| Any other Attribute of the MR Spectroscopy IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.28 Raw Data Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "RAW DATA". Table F.5-28 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Raw Data IE of Raw Data IODs. This Directory Record shall be used to reference a Raw Data SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-28. Raw Data Keys

| Key | Tag | Type | Attribute Description |
|------------------------|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |

| Key | Tag | Type | Attribute Description |
|---|-------------|------------------|--|
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Instance Number | (0020,0013) | 2 | |
| Icon Image Sequence | (0088,0200) | 3 | This Icon Image is representative of the Raw Data Instance. Only a single Item is permitted in this Sequence. |
| >Include Table C.7-11b "Image Pixel Macro Attributes" | | See Section F.7. | |
| Any other Attribute of the Raw Data IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.29 Registration Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "REGISTRATION". Table F.5-29 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Spatial Registration IE of the Spatial Registration IOD. This Directory Record shall be used to reference a Spatial Registration SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-29. Registration Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Spatial Registration IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.30 Fiducial Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type of Value "FIDUCIAL". Table F.5-30 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Spatial Fiducials IE of **the** Spatial Fiducials IOD. This Directory Record shall be used to reference a Spatial Fiducials SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-30. Fiducial Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Spatial Fiducials IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.31 Hanging Protocol Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "HANGING PROTOCOL". Table F.5-31 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to **the Hanging Protocol IE** of the Hanging Protocol IOD. This Directory Record shall be used to reference a Hanging Protocol SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-31. Hanging Protocol Keys

| Attribute Name | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Hanging Protocol Name | (0072,0002) | 1 | |
| Hanging Protocol Description | (0072,0004) | 1 | |
| Hanging Protocol Level | (0072,0006) | 1 | |
| Hanging Protocol Creator | (0072,0008) | 1 | |
| Hanging Protocol Creation DateTime | (0072,000A) | 1 | |
| Hanging Protocol Definition Sequence | (0072,000C) | 1 | Sequence that defines the type of imaging Studies to which this Hanging Protocol applies. One or more Items shall be included in this Sequence. |
| >Modality | (0008,0060) | 1C | Required if Anatomic Region Sequence (0008,2218) is not present. May be present otherwise. |
| >Anatomic Region Sequence | (0008,2218) | 1C | One or more Items shall be included in this Sequence. Required if Modality (0008,0060) is not present. May be present otherwise. |
| >>Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |

| Attribute Name | Tag | Type | Attribute Description |
|--|-------------|------|---|
| >Laterality | (0020,0060) | 2C | Required if Anatomic Region Sequence (0008,2218) is present. |
| >Procedure Code Sequence | (0008,1032) | 2 | Zero or more Items shall be included in this Sequence. |
| >>Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |
| >Reason for Requested Procedure Code Sequence | (0040,100A) | 2 | Zero or more Items shall be included in this Sequence. |
| >>Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |
| Number of Priors Referenced | (0072,0014) | 1 | |
| Hanging Protocol User Identification Code Sequence | (0072,000E) | 2 | Sequence that provides a coded identifier for the person, group, or site for which this Hanging Protocol was defined. Zero or one Item shall be included in this Sequence. |
| >Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |
| Any other Attribute of the Hanging Protocol IOD Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.32 Encapsulated Document Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "ENCAP DOC". Table F.5-32 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Encapsulated Document IE of Encapsulated **Document** IODs. This Directory Record shall be used to reference an Encapsulated Document SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Note

Other Encapsulated Document SOP Classes may be added to the Standard in the future and these will likely be referenced by this directory record. Therefore, the MIME Type should be checked rather than assuming that the referenced file contains PDF.

Table F.5-32. Encapsulated Document Keys

| Key | Tag | Type | Attribute Description |
|------------------------|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 2 | The date the content creation started. |
| Content Time | (0008,0033) | 2 | The time the content creation started. |
| Instance Number | (0020,0013) | 1 | A number that identifies this Instance. |
| Document Title | (0042,0010) | 2 | The title of the document. |

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| HL7 Instance Identifier | (0040,E001) | 1C | Instance Identifier from the referenced HL7 Structured Document, encoded as a UID (OID or UUID), concatenated with a caret ("^") and Extension value (if Extension is present in Instance Identifier). Required if encapsulated document is an HL7 Structured Document. |
| Concept Name Code Sequence | (0040,A043) | 2 | A coded representation of the document title. Zero or one Item shall be included in this Sequence. |
| >Include Table 8.8-1 "Code Sequence Macro Attributes" | | | BCID 7020 "Document Title". |
| MIME Type of Encapsulated Document | (0042,0012) | 1 | The type of the encapsulated document stream described using the MIME Media Type (see RFC 2046). |
| Any other Attribute of the Encapsulated Document <u>IE</u> Modules except Encapsulated Document (0042,0011) | | 3 | |

F.5.33 HL7 Structured Document Directory Record Definition

Retired. See PS3.3-2018b.

F.5.34 Real World Value Mapping Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "VALUE MAP". Table F.5-34 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Real World Value Mapping IE of **the** Real World Value Mapping IOD. This Directory Record shall be used to reference a Real World Value Mapping SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-34. Real World Value Mapping Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Real World Value Mapping IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.35 Stereometric Relationship Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "STEREOMETRIC". Table F.5-35 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Stereometric Relationship IE of **the Stereometric Relationship IOD**. This Directory Record shall be used to reference a Stereometric Relationship SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-35. Stereometric Relationship Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| <i>Any other Attribute of the Stereometric Relationship IE Modules</i> | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.36 Palette Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "PALETTE". Table F.5-36 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to **the Color Palette IE of the Color Palette IOD**. This Directory Record shall be used to reference a Color Palette SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-36. Palette Keys

| Attribute Name | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Label | (0070,0080) | 1 | A label that is used to identify the palette. |
| Content Description | (0070,0081) | 2 | A description of the content of the palette. |
| <i>Any other Attribute of the Color Palette IOD</i> | | 3 | |

Note

Because ~~(0004,1511)~~ Referenced SOP Instance UID in File **(0004,1511)** may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.37 Implant Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "IMPLANT". Table F.5-37 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in **the Implant Template IE of the Generic Implant Template IOD**. This Directory Record shall be used to reference a Generic Implant Template SOP Instance. **This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.**

Table F.5-37. Implant Keys

| Key | Tag | Type | Attribute Description |
|---------------------|-------------|------|--|
| Manufacturer | (0008,0070) | 1 | Name of the manufacturer that produces the implant. |
| Implant Name | (0022,1095) | 1 | The (product) name of the implant. |
| Implant Size | (0068,6210) | 1C | The size descriptor of the component. Required if present in the referenced Instance. |
| Implant Part Number | (0022,1097) | 1 | The (product) identifier of the implant. |

Note

Because (0004,1511)-Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.38 Implant Assembly Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "IMPLANT ASSY". Table F.5-38 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Implant Assembly IE of the Implant Assembly Template IOD. This Directory Record shall be used to reference an Implant Assembly Template SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-38. Implant Assembly Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|---|
| Implant Assembly Template Name | (0076,0001) | 1 | A name given to the assembly described in this Instance. |
| Manufacturer | (0008,0070) | 1 | Name of the manufacturer that produces the implant. |
| Procedure Type Code Sequence | (0076,0020) | 1 | A code describing the Intervention in which the implant is used. One or more Items shall be included in this Sequence. |
| >Include Table 8.8-1 "Code Sequence Macro Attributes" | | | |

Note

Because (0004,1511)-Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.39 Implant Group Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "IMPLANT GROUP". Table F.5-39 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Implant Template Group IE of the Implant Template Group IOD. This Directory Record shall be used to reference an Implant Template Group SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-39. Implant Group Keys

| Key | Tag | Type | Attribute Description |
|------------------------------------|-------------|------|----------------------------------|
| Implant Template Group Name | (0078,0001) | 1 | Name of this group. |
| Implant Template Group Description | (0078,0010) | 3 | Purpose or intent of this group. |

| Key | Tag | Type | Attribute Description |
|-------------------------------|-------------|------|--|
| Implant Template Group Issuer | (0078,0020) | 1 | Person or Organization that issued this group. |

Note

Because ~~(0004,1511)~~ Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.40 Plan Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "PLAN". Table F.5-40 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Plan IEs of RT-specific Plan IODs and RT Ion Plan IOD. This Directory Record shall be used to reference one of the class of Plan SOP Instances having a Modality (0008,0060) of "PLAN", such as the RT Beams Delivery Instruction IOD or the RT Brachy Application Setup Delivery Instruction IOD. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-40. Plan Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Any other Attribute of the Plan IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.41 Measurement Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "MEASUREMENT". Table F.5-41 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Measurements IE of the Measurement IODs. This Directory Record shall be used to reference a Measurement SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-41. Measurement Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Measurements IE Modules | | 3 | |

Note

Because ~~(0004,1511)~~ Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.42 Surface Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "SURFACE". Table F.5-42 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Surface IE of the Surface Segmentation IOD. This Directory Record shall be used to reference a Surface Segmentation SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-42. Surface Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Surface IE Modules | | 3 | |

Note

Because **(0004,1511)**-Referenced SOP Instance UID in File **(0004,1511)** may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.43 Surface Scan Mesh Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "SURFACE SCAN". Table F.5-43 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Surface IE of the Surface Scan Mesh and Surface Scan Point Cloud IODs. This Directory Record shall be used to reference a Surface Scan Mesh SOP Instance or Surface Scan Point Cloud SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-43. Surface Scan Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Any other Attribute of the Surface IE Modules | | 3 | |

Note

Because **(0004,1511)**-Referenced SOP Instance UID in File **(0004,1511)** may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.44 Tractography Results Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "TRACT". Table F.5-44 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Tractography Results IE of the Tractography Results IOD. This Directory Record shall be used to reference a Tractography Results SOP Instance.

This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-44. Tractography Results Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| <i>Include Table 10-12 "Content Identification Macro Attributes"</i> | | | |
| <i>Any other Attribute of the Tractography Results IE Modules</i> | | 3 | |

Note

Because ~~(0004,1511)~~ Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.45 Content Assessment Results Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "ASSESSMENT". Table F.5-45 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Content Assessment Results IE of the Content Assessment Results IOD. This Directory Record shall be used to reference a Content Assessment Results SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-45. Content Assessment Results Directory Record Results Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| Instance Creation Date | (0008,0012) | 1 | |
| Instance Creation Time | (0008,0013) | 2 | |
| <i>Any other Attribute of the Content Assessment Results IE Modules</i> | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (see Table F.3-3), it is not duplicated in this list of keys.

F.5.46 Radiotherapy Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type (0004,1430) of Value "RADIOTHERAPY". Table F.5-46 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Instance-level IEs of the RT Second-Generation IODs. This Directory Record shall be used to reference one of the classes of RT Second-Generation SOP Instances having a Modality (0008,0060) as defined in Section A.86.1. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-46. Radiotherapy Keys

| Key | Tag | Type | Attribute Description |
|--|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Instance Number | (0020,0013) | 1 | |
| User Content Label | (3010,0033) | 1C | Required if User Content Label (3010,0033) is present. |
| User Content Long Label | (3010,0034) | 1C | Required if User Content Long Label (3010,0034) is present. |
| Content Description | (0070,0081) | 2 | |
| Content Creator's Name | (0070,0084) | 2 | |
| Any other Attribute of the RT Second-Generation IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (Ssee Table F.3-3), it is not duplicated in this list of keys.

F.5.47 Microscopy Bulk Simple Annotations Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "ANNOTATION". Table F.5-47 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in the Modules related to the Annotation IE of the Microscopy Bulk Simple Annotations IOD. **This Directory Record shall be used to reference a Microscopy Bulk Simple Annotations SOP Instance.** This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-47. Microscopy Bulk Simple Annotations Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | The date the content creation started. |
| Content Time | (0008,0033) | 1 | The time the content creation started. |
| Include Table 10-12 "Content Identification Macro Attributes" | | | |
| Any other Attribute of the Annotation IE Modules | | 3 | |

Note

Because Referenced SOP Instance UID in File (0004,1511) may be used as a "pseudo" Directory Record Key (Ssee Table F.3-3), it is not duplicated in this list of keys.

F.5.48 Inventory Directory Record Definition

The Directory Record is based on the specification of Section F.3. It is identified by a Directory Record Type **(0004,1430)** of Value "INVENTORY". Table F.5-48 lists the set of keys with their associated Types for such a Directory Record Type. The description of these keys may be found in **the Inventory IE** of the Inventory IOD. This Directory Record shall be used to reference an Inventory SOP Instance. This type of Directory Record may reference a Lower-Level Directory Entity that includes one or more Directory Records as defined in Table F.4-1.

Table F.5-48. Inventory Keys

| Key | Tag | Type | Attribute Description |
|---|-------------|------|--|
| Specific Character Set | (0008,0005) | 1C | Required if an extended or replacement character set is used in one of the keys. |
| Content Date | (0008,0023) | 1 | |
| Content Time | (0008,0033) | 1 | |
| Inventory Purpose | (0008,0401) | 2 | |
| Inventory Level | (0008,0403) | 1 | |
| <i>Include Table C.38.2-1 "Scope of Inventory Macro Attributes"</i> | | | |
| Inventory Completion Status | (0008,0426) | 1 | |
| Total Number of Study Records | (0008,0428) | 1 | |