DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2024/01/14
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Correction Number   CP-1636
Log Summary: Examples of Specific Character Set Usage in PS3.2
Name of Standard: PS3.2 2023e
Rationale for Correction:
Clarification on how to document in Part 2 the support and usage of Specific Character Set would be helpful.
In particular, show an example of meeting the following requirement from PS3.4 C.2.2.2: "If the SCP does not support the value(s) of Specific Character Set (0008,0005) in the Request Identifier, then the manner in which matching is performed is undefined and shall be specified in the conformance statement."
Recall that "The Specific Character Set (0008,0005) Attribute may be present in the Identifier but is never matched. Rather, it specifies how other Attributes are encoded in the Request and Response Identifiers."; i.e., Specific Character Set (0008, 0005) in Modality Worklist is neither a Matching Key nor a Return Key.
Correction Wording:

Modify PS3.2 N.1.7 as shown

N.1.7 Specific Character Sets

[List all supported Character Sets and the IANA name as well as a description in the Table below.]

Table N.1-15. Supported Specific Character Sets

Defined Term	IANA	Description
Single-Byte Character Sets without Code Extensions		
ISO_IR 6	ISO-646 **or US-ASCII**	Default Repertoire
ISO_IR 100	*ISO-8859-1*	*Latin Alphabet No.1 (West Europe)*
Single-Byte Character Sets with Code Extension		
ISO 2022 IR 6		***Default Repertoire***
ISO 2022 IR 100		*Latin Alphabet No. 1 (West Europe)*
Multi-Byte Character Sets without Code Extensions		

Defined Term	IANA	Description
ISO_IR 192	***UTF-8***	***Unicode in UTF-8 Level 3***
GB18030	GB18030	GB18030-2000 (P.R China Norm GB18030)
Multi-Byte Character Sets with Code Extensions		
ISO 2022 IR 87	ISO-2022-JP	Japanese ***JIS X 0208***
ISO 2022 IR 149	***ISO-2022-KR***	***Korean***

8
9
10 *Modify PS3.2 N.5.2.1 as shown*

N.5.2.1 Basic Worklist Management Service

N.5.2.1.1 SCU of the Modality Worklist Information Model - FIND SOP Class

As a Service Class User of the Modality Worklist Information Model - FIND SOP Class, the *<Product>* uses the C-FIND-RQ message to query the SCP. It supports the Query Keys listed in Table N.5-2.

…

[Modify the Table N.5-2 to include all Attributes supported by your system and use the terms defined for Matching Type, Query Value Source and Display on UI above. If Display on UI Values are modified from the ones received, indicate in a footnote. If multiple Values are supported for the Query Value Source, list all of them.]

Table N.5-2. Supported C-FIND Query Parameters for Modality Worklist - SCU

Attribute Name	Tag	Matching Type	Query Value Source	Value	Display on UI	Comments
…						
Patient Identification						
Patient's Name	(0010,0010)	*WILDCARD*	*USER*		*D*	
…						

[Describe scenarios in which the product can issue C-FIND-CANCEL requests, e.g.,

The product issues C-FIND CANCEL requests in the following scenarios:* Configurable maximum of matches detected* Initiated by user]

[Also describe the SCU behavior if the cancellation request is ignored by the SCP and the SCP continues sending responses.]

*[Document your product's query capabilities and behavior for handling non-default character sets, especially for handling person names (VR of PN).**, e.g.,***

When configured for Japanese character set support, Person Name query attributes may contain ideographic (kanji) and/or phonetic (hiragana and katakana) and/or Romanized (romaji) representations.

When configured for Chinese character set support, Person Name query attributes may contain ideographic (hanzi) and/or phonetic (pinyin) representations are supported. For Patient's Name (0010,0010), the representation which is displayed by default in the worklist is configurable.

33 *When configured for Korean character set support, Person Name query attributes may contain ideographic*
34 *(hanja) and/or phonetic (hangul) and/or Romanized representations.*

35 *If the product receives from the SCP a C-FIND response containing unsupported values in Specific Character*
36 *Set (0008,0005), characters in that character set will be treated as unknown characters as described in PS3.5*
37 *6.1.2.3.*

38 *If a Person Name attribute contains multiple representations, the GUI will display one representation based on*
39 *a configurable order of preference.]*

40 N.5.2.1.2 SCP of the Modality Worklist Information Model - FIND SOP Class

41 As a Service Class Provider of the Modality Worklist Information Model - FIND SOP Class, the *<Product>* uses the C-
42 FIND-RSP to communicate matches back to the SCU. It supports the Matching Keys listed in Table N.5-3.

43 …

44 *[Table N.5-3 below contains a set of Attributes that could be supported by a product. Add and remove Attributes in*
45 *order to match your product implementation using the matching type as defined above. If multiple codes are supported,*
46 *list all of them. Use the "Comments" column if clarification is needed.]*

47 **Table N.5-3. Supported C-FIND Return Keys for Modality Worklist - SCP**
48

Attribute Name	Tag	Matching Type	Comments
…			

49 *[Describe the behavior of the product when it receives a C-FIND-CANCEL request.]*

50 *[Document your product's query capabilities and behavior for handling non-default character sets, especially for*
51 *handling person names (VR of PN).**, e.g.,***

52 *If the product receives from the SCU a Request Identifier containing unsupported values in the Specific*
53 *Character Set (0008,0005), then no matching is performed and an error will be returned indicating the SCP is*
54 *unable to process the request.]*

55

56 *Modify PS3.2 N.5.2.7.1 as shown*

57 N.5.2.7.1 SCU of the Study Root Q/R Information Model - FIND SOP Class

58 As a Service Class User of the Study Root Q/R - Information Model - FIND SOP Class, the *<Product>* uses the C-
59 FIND-RQ message and supports the Query Keys listed in Table N.5-17 for hierarchical queries.

60 *…*

61 *[If <product> supports Extended Negotiation for Relational Queries, describe supported matching Attributes.]*

62 *[Describe scenarios in which the SCU can issue C-FIND-CANCEL requests, e.g.*

63 *The product issues C-FIND CANCEL requests in the following scenarios:* Configurable maximum of matches detected**
64 *Initiated by user]*

65 *[Also describe the behavior if the SCP ignores the cancellation request and continues sending responses.]*

66 *[Document your product's query capabilities and behavior for handling non-default character sets, especially for*
67 *handling person names (VR of PN)**, e.g.***

68 *When configured for Japanese character set support, Person Name query attributes may contain ideographic*
69 *(kanji) and/or phonetic (hiragana and katakana) and/or Romanized (romaji) representations.*

70 *When configured for Chinese character set support, Person Name query attributes may contain ideographic*
71 *(hanzi) and/or phonetic (pinyin) representations are supported. For Patient's Name (0010,0010), the*
72 *representation which is displayed by default in the worklist is configurable.*

73 *When configured for Korean character set support, Person Name query attributes may contain ideographic*
74 *(hanja) and/or phonetic (hangul) and/or Romanized representations.*

75 *If the product receives from the SCP a C-FIND response containing unsupported values in Specific Character*
76 *Set (0008,0005), characters in that character set will be treated as unknown characters as described in PS3.5*
77 *6.1.2.3.*

78 *If a Person Name attribute contains multiple representations, the GUI will display one representation based on*
79 *a configurable order of preference.]*

80
81

82 *Modify PS3.2 N.5.2.7.5 as shown*

N.5.2.7.5 SCP of the Study Root Q/R Information Model - FIND SOP Class

84 As a Service Class Provider of the Study Root Q/R - Information Model - FIND SOP Class, the *<Product>*uses the C-
85 FIND-RSP to communicate matches back to the SCU. It supports the Matching Keys listed in Table N.5-18 for
86 hierarchical queries.

87 …

88 *[Document your product behavior in case you are encountering non supported private Attributes.]*

89 *[Describe the behavior of the product if it receives a C-FIND-CANCEL request.]*

90 *[Document your product's query capabilities and behavior for handling non-default character sets, especially for*
91 *handling person names (VR of PN)~., e.g.,*

92 *If the product receives from the SCU a Request Identifier containing unsupported values in the Specific*
93 *Character Set (0008,0005), then no matching is performed and an "Unable to calculate number of matches"*
94 *error will be returned indicating the SCP is unable to process the request.]*

95 *[If your product supports Extended Negotiation for fuzzy semantic matching of person names describe how matching is*
96 *performed, e.g., whether your matching is insensitive to case, position, accent, or character encoding, or whether you*
97 *support phonetic matching.]*
98

99 *Modify PS3.2 N.5.7 as shown*

N.5.7 Specific Character Sets

101 ~~For Specific Character Sets supported in addition to the default character repertoire, refer to~~**See** Section N.1.7
102 for **supported**~~the~~ Values for Specific Character Set (0008,0005).

103 **Generic configuration for Specific Character Sets is covered in Section N.6.1. Service specific configuration for**
104 **Specific Character Sets is addressed in respective subsections of Section N.6.2 or Section N.6.3.**

105 *[Describe behaviors such as the whether your product sends value 1, e.g.,*

106 *This product omits Value 1 of Specific Character Set (0008,0005) when multiple values are present. Per PS3.5,*
107 *the empty Value 1 indicates usage of ISO 2022 IR 6.]*

108 *[Describe the presentation of the characters to a user, i.e., capabilities, font limitations and/or substitutions of*
109 *characters.]*

110 *[If your product supports display/editing of non-default Character Sets, fill in the following table, otherwise*
111 *remove the following table and introductory text.]*

112 *<Product>* **supports displaying character sets beyond the default character repertoire (ISO-IR 6) for all**
113 **displayed attributes.**

114 **_<Product>_ supports editing character sets beyond the default character repertoire (ISO-IR 6) for the attributes**
115 **listed in Table N.5-164a.**

116 ### Table N.5-164a. Specific Character Set – Supported Attributes

Attribute Name	Tag	VR
Referring Physician's Name	_(0008,0090)_	_PN_
Study Description	_(0008,1030)_	_LO_
Series Description	_(0008,103E)_	_LO_
Operators' Name	_(0008,1070)_	_PN_
Patient's Name	_(0010,0010)_	_PN_
Other Patient Names	_(0010,1001)_	_PN_
Patient's Address	_(0010,1040)_	_LO_
Allergies	_(0010,2110)_	_LO_
Patient Comments	_(0010,4000)_	_LT_
_…_		

117 _[If your product supports mapping/conversion of ~~the~~ non-default Character Sets, fill in the table below, otherwise_
118 _remove **the** table and the introductory text below.]_

119 _<Product>_ supports mapping/conversion of ~~the supported, non-default Specific~~ Character Sets as listed in
120 Table N.5-165.

121 _[Describe how Specific Character Sets that are received by the system are mapped to Specific Character Sets sent out_
122 _by the system. It does not consider the Character Set used internally within the product. In the "Mapping Situation"_
123 _column describe the scenario in which this mapping occurs, e.g., when mapping Character Sets from a Modality_
124 _Worklist entry or a Query Retrieve response to the instances created.]_

125 ### Table N.5-165. Conversion/Mapping of Non-Default Specific Character Sets
126

Incoming Specific Character Set			Outgoing Specific Character Set			Mapping Situation
Defined Term	IANA	Description	Defined Term	IANA	Description	
ISO 2022 IR 87	ISO-2022-JP	Japanese	ISO_IR 192	UTF-8	Unicode in UTF-8	**_When m~~M~~apping Attribute Values_** _from MWL to instances created_

127 _[Explain your product behavior in case it encounters unsupported character sets.]_

128 _~~[Describe the presentation of the characters to a user, i.e., capabilities, font limitations and/or substitutions of~~_
129 _~~characters.]~~_

130 ~~Generic configuration for Specific Character Sets is covered in Section N.6.1. Service specific configuration for~~
131 ~~Specific Character Sets is addressed in respective subsections of Section N.6.2 or Section N.6.3.~~