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DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2023.11.13
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Correction Number	CP-1636
Log Summary:	Examples of Specific Character Set Usage in PS3.2
Name of Standard:	PS3.2
Rationale for Correction:	<p>Clarification on how to document in Part 2 the support and usage of Specific Character Set would be helpful.</p> <p>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.”</p> <p>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.</p>
Correction Wording:	

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4

<i>Modify PS3.2 N.1.7 as shown</i>

5

N.1.7 Specific Character Sets

6

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

7

Table N.1-15. Supported Specific Character Sets

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

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

8
9

10 Modify PS3.2 N.5.2.1 as shown

11 N.5.2.1 Basic Worklist Management Service

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

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

15 ...

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

19 **Table N.5-2. Supported C-FIND Query Parameters for Modality Worklist - SCU**
20

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

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

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

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

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

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

30 **When configured for Chinese character set support, Person Name query attributes may contain ideographic**
31 **(hanzi) and/or phonetic (pinyin) representations are supported. For Patient's Name (0010,0010), the**
32 **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 (hanqul) 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.5.2.7.5 as shown

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

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

61 ...

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

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

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

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

69 [If your product supports Extended Negotiation for fuzzy semantic matching of person names describe how matching is
70 performed, e.g., whether your matching is insensitive to case, position, accent, or character encoding, or whether you
71 support phonetic matching.]
72

73 Modify PS3.2 N.5.7 as shown

74 **N.5.7 Specific Character Sets**

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

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

79 [Describe behaviors such as the whether you send value 1, e.g.,

80 This product omits value 1 of Specific Character Set (0008,0005) when multiple values are present. Per [PS3.5](#),
 81 the empty value 1 indicates usage of ISO 2022 IR 6.]

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

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

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

88 <Product> supports editing character sets beyond the default character repertoire (ISO-IR 6) for the attributes
 89 listed in Table N.5.164a.

90 **Table N.5-164a. Specific Character Set – Supported Attributes**

<u>Attribute Name</u>	<u>Tag</u>	<u>VR</u>
<u>Referring Physician's Name</u>	<u>(0008,0090)</u>	<u>PN</u>
<u>Study Description</u>	<u>(0008,1030)</u>	<u>LO</u>
<u>Series Description</u>	<u>(0008,103E)</u>	<u>LO</u>
<u>Operators' Name</u>	<u>(0008,1070)</u>	<u>PN</u>
<u>Patient's Name</u>	<u>(0010,0010)</u>	<u>PN</u>
<u>Other Patient Names</u>	<u>(0010,1001)</u>	<u>PN</u>
<u>Patient's Address</u>	<u>(0010,1040)</u>	<u>LO</u>
<u>Allergies</u>	<u>(0010,2110)</u>	<u>LO</u>
<u>Patient Comments</u>	<u>(0010,4000)</u>	<u>LT</u>
...		

91 [If your product supports mapping/conversion of ~~the~~ non-default Character Sets, fill in the table below, otherwise
 92 remove ~~the~~ table and the introductory text below.]

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

95 [Describe how Specific Character Sets that are received by the system are mapped to Specific Character Sets sent out
 96 by the system. It does not consider the Character Set used internally within the product. In the "Mapping Situation"
 97 column describe the scenario in which this mapping occurs, e.g., when mapping Character Sets from a Modality
 98 Worklist entry or a Query Retrieve response to the instances created.]

99 **Table N.5-165. Conversion/Mapping of Non-Default Specific Character Sets**
 100

<u>Incoming Specific Character Set</u>			<u>Outgoing Specific Character Set</u>			<u>Mapping Situation</u>
<u>Defined Term</u>	<u>IANA</u>	<u>Description</u>	<u>Defined Term</u>	<u>IANA</u>	<u>Description</u>	
<u>ISO 2022 IR 87</u>	<u>ISO-2022-JP</u>	<u>Japanese</u>	<u>ISO_IR 192</u>	<u>UTF-8</u>	<u>Unicode in UTF-8</u>	<u>When mMapping attribute values from MWL to instances created</u>

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

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

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