Correction Number CP-2101

Log Summary: Clarify multiple frames used as tiles in planar ROI

Name of Standard

PS3.16

Rationale for Correction:

Multiple frames may be used as tiles for a whole slide image in a planar ROI, rather than every frame being in a different plane as for radiology cross-sectional imaging.

Correction Wording:
Amend DICOM PS3.16 as follows (changes to existing text are bold and underlined for additions and struckthrough for removals):

TID 1410 Planar ROI Measurements and Qualitative Evaluations

This Template provides a general structure to report measurements for some metric, e.g., density, flow, or concentration, and/or qualitative evaluations, over a planar region of interest in an image. The ROI may be specified by an SCOORD on an image, by a Segmentation Image, by an SCOORD3D defining an area relative to a 3D Frame of Reference, or by a reference to an ROI defined in a radiotherapy Structure Set.

Table TID 1410. Planar ROI Measurements and Qualitative Evaluations

<table>
<thead>
<tr>
<th>NL</th>
<th>Rel with Parent</th>
<th>VT</th>
<th>Concept Name</th>
<th>VM</th>
<th>Req Type</th>
<th>Condition</th>
<th>Value Set Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>&gt; CONTAINS SCOORD</td>
<td>EV (111030, DCM, &quot;Image Region&quot;)</td>
<td>1</td>
<td>MC</td>
<td>XOR Row 7, 7b, 8b</td>
<td>GRAPHIC TYPE = not {MULTIPOINT}</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>&gt;&gt; SELECTED FROM IMAGE</td>
<td>1</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>&gt; CONTAINS IMAGE</td>
<td>EV (121214, DCM, &quot;Referenced Segmentation Frame&quot;)</td>
<td>1</td>
<td>MC</td>
<td>XOR Row 5, 7b</td>
<td>Reference shall be to a Segmentation Image, with a single value specified in Referenced Frame Number, and with a single value specified in Referenced Segment Number (0062,000B). For references to tiled Segmentation Images, one or more values shall be specified in Referenced Frame Number (0008,1160), unless all frames in the referenced Segmentation Image are selected and there is only a single Segment, in which case Referenced Frame Number (0008,1160) will be absent. The referenced tiles shall all be in the same plane. For references to non-tiled Segmentation Images, a single value shall be specified in Referenced Frame Number (0008,1160), unless there is only one frame in the referenced Segmentation Image, in which case Referenced Frame Number (0008,1160) will be absent.</td>
<td></td>
</tr>
</tbody>
</table>

Content Item Descriptions

Row 6 (260753009, SCT, "Source"). may be used as a generic Concept Name when there is a desire to avoid having an anonymous (unnamed) content item.

Rows 6-7 Referenced Frame Number (0008,1160) and Referenced Segment Number (0062,000B) is an attribute of the IMAGE Content Item, and shall be present with a single value.

If the Referenced Segmentation SOP Instance has Segmentation Type (0062,0001) value BINARY, it identifies the area of defined (measured) region of interest by pixel values in the referenced frame with value 1. For Segmentation Type value FRACTIONAL, the area is computed by an implementation dependent method.

Frame number shall be specified even if the Segmentation SOP Instance has only a single frame. Referenced Frame Number (0008,1160) may reference multiple frames in the same plane for tiled Segmentation Images (such as segmentations of Whole Slide Microscopy images).