

## DICOM Correction Item

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| Correction Number : CP-948   |                                   |
| Log Summary: C-Move new association obligation.  |                                   |
| Type of Modification<br>Modification   | Name of Standard<br>PS 3.4 - 2008 |
| <p>Rationale for Correction:</p> <p>PS 3.4, C.4.2.3.1 states as baseline behavior that the SCP shall perform the C-STORE sub-operations on a different association. In the next 2 paragraphs the standard states that the SCP shall use a new association.</p> <p>The general point is that a SCP doesn't use the association on which it received the C-MOVE requests to perform the C-STORE sub-operations. If an SCU wants that the SCP reuse the same association it can use the C-GET service.</p> <p>A literal reading of the standard requires an SCU retrieving images via a single image level C-MOVE to create a new association each time.</p> <p>It would be much more effective if the SCP is allowed to re-use an existing association if this is possible. Starting a new association has the following disadvantages:</p> <ul style="list-style-type: none"><li>• TCP/IP employs a slow-start algorithm. It takes some time to achieve the optimal bandwidth throughput.</li><li>• Creating a TCP/IP network connection, including a possible TLS connection and a DICOM association cost time and overhead.</li><li>• Closing and opening TCP/IP sockets in rapid succession will result in multiple sockets on the SCU in the TIME_WAIT state. This can result in connection problems when the available sockets are exhausted on the SCU.</li></ul> |                                   |
| Sections of documents affected<br>PS 3.4, C.4.2.3.1  |                                   |
| Correction Wording   |                                   |

### C.4.2.3.1 Baseline Behavior of SCP

An SCP conveys the following semantics with a C-MOVE response:

— The SCP shall identify a set of Entities at the level of the transfer based upon the values in the Unique Keys in the Identifier of the C-MOVE request. The SCP shall initiate C-STORE sub-operations for the corresponding storage SOP Instances. These C-STORE sub-operations shall occur on a different Association (**that may already exist**) from the C-MOVE operation. The SCP of the Query/Retrieve Service Class shall serve as an SCU of the Storage Service Class.

— The SCP shall **either reuse an established and compatible Association or** establish a new Association for the C-STORE sub-operations. **The SCP shall initiate C-STORE sub-operations over that Association for all stored SOP Instances related to the Patient ID, List of Study Instance UIDs, List of Series Instance UIDs, or List of SOP Instance UIDs depending on the Query/Retrieve level specified in the C-MOVE request.** A sub-operation is considered Failed if the SCP is unable to negotiate an appropriate presentation context for a given stored SOP Instance.

~~—The SCP shall initiate C-STORE sub-operations over the new Association for all stored SOP Instances related to the Patient ID, List of Study Instance UIDs, List of Series Instance UIDs, or List of SOP Instance UIDs depending on the Query/Retrieve level specified in the C-MOVE request.~~