

DICOM Change Proposal

STATUS	New
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Change Number	CP-2621
Log Summary:	Correct presence of Failed SOP Instance UID List
Name of Standard	PS3.4
Rationale for Change:	<p>The section on the Response Identifier Structure of the C-MOVE states that if no C-STORE sub-operation failed, the Failed SOP Instance UID List of the Identifier is absent (marked below). However, it also states, in the first bullet, that the Identifier in a C-MOVE response with a status of Warning shall contain the Failed SOP Instance UID List. As a C-MOVE SCP should return the status Warning when for instance all sub-operations had a warning status (see marked text in Section C.4.2.3.1 Baseline Behavior of SCP; given for reference below), the current text can be contradictory and should be adapted.</p> <p>Furthermore, this section also states that the Identifier in a C-MOVE response with a status of Cancel shall contain the Failed SOP Instance UID List, again in the first bullet. However, in case no C-STORE sub-operation failed before the C-MOVE was cancelled, there should be no such list (as seen before in the marked text). This text can therefore also be contradictory¹ and should be adapted too.</p> <p>The above is also the case for the response Identifier of the C-GET; adaptation is also required there.</p>
Change Wording:	See below.

Update PS3.4, Section C.4.2.1.4.2 Response Identifier Structure

5 **C.4.2.1.4.2 Response Identifier Structure**

The Failed SOP Instance UID List (0008,0058) specifies a list of UIDs of the C-STORE sub-operation SOP Instances for which this C-MOVE operation has failed. An Identifier in a C-MOVE response shall conditionally contain the Failed SOP Instance UID List (0008,0058) based on the C-MOVE response status value. **If no C-STORE sub-operation failed, the Failed SOP Instance UID List (0008,0058) is absent** and therefore no Data Set shall be sent in the C-MOVE response.

Specific Character Set (0008,0005) shall not be present.

The Identifier in a C-MOVE response with a status of:

- **Cancel, Failure, or Warning** shall contain the Failed SOP Instance UID List Attribute.
- **Cancel or Warning shall contain the Failed SOP Instance UID Attribute if the execution of at least one associated C-STORE sub-operation failed; otherwise, it shall be absent.**
- Pending shall not contain the Failed SOP Instance UID List Attribute (no Data Set).

¹ One could argue that in this case all sub-operations that were not yet performed should be considered failed, but a) such behavior is not specified, b) this is unclear for sub-operations in progress, and c) marking non-executed sub-operations as failed is unnatural.

Update PS3.4, Section C.4.3.1.3.2 Response Identifier Structure

C.4.3.1.3.2 Response Identifier Structure

- 20 The Failed SOP Instance UID List (0008,0058) specifies a list of UIDs of the C-STORE sub-operation SOP Instances for which this C-GET operation has failed. An Identifier in a C-GET response shall conditionally contain the Failed SOP Instance UID List (0008,0058) based on the C-GET response **status value**. **If no C-STORE sub-operation failed, the Failed SOP Instance UID List (0008,0058) is absent** and therefore no Data Set shall be sent in the C-GET response.
- 25 Specific Character Set (0008,0005) shall not be present.
- The Identifier in a C-GET response with a status of:
- **Cancel**, Failure, ~~or Warning~~ shall contain the Failed SOP Instance UID List Attribute.
 - **Cancel or Warning shall contain the Failed SOP Instance UID Attribute if the execution of at least one associated C-STORE sub-operation failed; otherwise, it shall be absent.**
 - 30 • Pending shall not contain the Failed SOP Instance UID List Attribute (no Data Set).

PS3.4, Section C.4.2.3.1 Baseline Behavior of SCP (given for reference; no changes in this CP)

C.4.2.3.1 Baseline Behavior of SCP

- 35 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.
 - 40 • 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 a Failure if the SCP is unable to negotiate an appropriate presentation context for a given stored SOP Instance.
 - 45 • Optionally, the SCP may generate responses to the C-MOVE with status equal to Pending during the processing of the C-STORE sub-operations. These responses shall indicate the Remaining, Completed, Failed, and Warning C-STORE sub-operations.
 - 50 • When the number of Remaining sub-operations reaches zero, the SCP shall generate a final response with a status equal to Success, Warning or Failure. This response shall indicate the number of Completed sub-operations, the number of Failed sub-operations, and the number of sub-operations with Warning Status. **The status contained in the C-MOVE response shall contain:**
 - Success if all sub-operations were successfully completed
 - Warning if one or more sub-operations were successfully completed and one or more sub-operations were unsuccessful or had a warning status
 - 55 • **Warning if all sub-operations had a warning status**
 - Failure if all sub-operations were unsuccessful
 - 60 • The SCP may receive a C-CANCEL-MOVE request at any time during the processing of the C-MOVE. The SCP shall interrupt all C-STORE sub-operation processing and return a status of Cancel in the C-MOVE response. The C-MOVE response with a status of Cancel shall contain the number of Completed, Failed, and Warning C-STORE sub-operations. If present, the Remaining sub-operations count shall contain the number of C-STORE sub-operations that were not initiated due to the C-CANCEL-MOVE request.

- If the SCP manages images in multiple alternate encodings (see Section C.6.1.1.5.1), only one of the alternate encodings of an image shall be included in the set of object instances retrieved by a C-MOVE request at the Patient, Study, or Series level.

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Note

For retrieval of images with alternate encodings using a C-MOVE request at the Patient, Study, or Series level, the SCP may select the appropriately encoded Instance for the retrieval based on identity of the SCU, transfer syntaxes accepted in the C-STORE Association Negotiation, or other factors.

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Note

If the association on which the C-MOVE operation was issued is abnormally terminated, then it will not be possible to issue any further pending responses nor a final response, nor will C-CANCEL-MOVE requests be received. The behavior of the C-MOVE SCP acting as a C-STORE SCU is undefined in this condition. Specifically, whether or not any uncompleted C-STORE sub-operations continue is undefined.

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