DICOM Correction Item

Correction Number
CP-355

Log Summary: Clarify SCP/SCU Role Selection

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Rationale for Correction

The description of Part 7 SCP/SCU Role Selection Negotiation describes default behavior for several specific cases.

There are two issues to clarify:
- is the acceptor of a reverse role negotiation required to explicitly respond?
- When the acceptor does not explicitly return the roles, what is the role interpretation?

There are two interpretations to the last question:
- the acceptor (e.g. Commit SCU) accepted the reversed role and is the SCU
- the acceptor accepted the association with the role defined as SCP (according to the text in D.3.3.4 that states: "If the SCP/SCU Role Selection item is not returned by the Association-acceptor than the role of the Association-requester shall be SCU and the role of the Association-acceptor shall be SCP")

Normative statements in section D.3.3.4 clearly state that when an acceptor does not return item-type 54H, the proposed reverse role negotiation is ignored. In other words, when an SCP attempts to start an association with the SCU using reverse role negotiation, and if the SCU accepts without explicitly acknowledging the proposed role, then the role context of the association is opposite of that intended and no reverse role is in effect.

Unfortunately, this subtlety is poorly understood and implementations exist that do not return item-type 54H upon reverse role negotiation but nevertheless assume that reverse role negotiation has been accepted.

The proposal adds additional clarifying notes.

Sections of documents affected
PS 3.7, D.3.3.4

Correction Wording:

2 Item 1: Amend Section D.3.3.4 of PS 3.7:

4 D.3.3.4 SCP/SCU ROLE SELECTION NEGOTIATION

The SCP/SCU role selection negotiation allows peer AEs to negotiate the roles in which they will serve for each SOP Class or Meta SOP Class supported on the Association. This negotiation is optional.

The Association-requester, for each SOP Class UID or Meta SOP Class UID, may use one SCP/SCU Role Selection item. The SOP Class or Meta SOP Class shall be identified by its corresponding Abstract Syntax Name followed by one of the three role values:

- Association-requester is SCU only
- Association-requester is SCP only
- Association-requester is both SCU and SCP
If the SCP/SCU Role Selection item is absent the default role of the Association-requester shall be SCU and the default role of the Association-acceptor shall be SCP.

The Association-acceptor, for each SCP/SCU Role Selection item offered, either accepts the Association-requester proposal by returning the same value (1) or turns down the proposal by returning the value (0).

If the SCP/SCU Role Selection item is not returned by the Association-acceptor then the role of the Association-requester shall be SCU and the role of the Association-acceptor shall be SCP. Figure D.3-7 illustrates the SCP/SCU Role Selection negotiation.

If the SCP/SCU Role Selection items do not exist in the A-ASSOCIATE indication they shall be omitted in the A-ASSOCIATE response.

Notes: 1. The choices made for the default roles are based on clarification made to previous versions of the Standard. Association-requesters that wish to offer Abstract Syntax Names using the SCP role must support this item. Association-acceptors that wish to accept Abstract Syntax Names using the SCP role must support this item.

2. If an Association-requestor offers an SCP/SCU Role Selection item for an Abstract Syntax Name but the Association-acceptor does not return a SCP/SCU Role Selection item for the same Abstract Syntax Name then the proposed roles have not been accepted and the default roles apply (i.e. Association-requester is SCU and Association-acceptor is SCP).