DICOM Correction Item

Correction Number	CP-646

| Log Summary: Group of Frames for Display Key Object Selection ||

Type of Modification	Name of Standard
Correction	PS 3.16 2006

Rationale for Correction

As acquisition devices become more sophisticated in terms of the number and pattern of acquisition of images and frames, it becomes necessary to correctly group and order images and frames as sets that do not necessarily correspond to the multi-frame image and/or images in series organizations that were created by the modality. Such grouping may be rule-based or involve human intervention, but regardless, it may be necessary to keep a persistent copy of the selected grouping, without re-saving the entire image data as new series or studies.

Some example scenarios include:
- Specifying the subset of single frame images from a dynamic contrast enhanced CT chest, abdomen and pelvis that represent a single phase of timing and contrast injection and reconstruction kernel for use as a volume for 3D rendering
- Re-partitioning one image per series CR skeletal radiographs so as to select all the hand images with multiple views in one set, and all the foot images in another set
- Re-partitioning multiple fluoroscopy series containing spot images and fluroroscopy runs such that the spot images are separated and grouped naturally as per the user's needs as opposed to how they happended to be acquired

The Key Object Selection document is ideal for this purpose, allowing as it does a coded reason, and textual label, and reference to multiple sets of images and frames. In this usage, the textual label could be considered as analogous to the Series Description attribute, though there is no intent in this proposal to formalize any type of relationship to the composite information model in DICOM. Nor is there any intent to constrain how the images or frames might be grouped or duplicated (referenced more than once) in multiple KOS instances, though multiple KOS instances might be considered analogous to multiple series.

There is no intent to specify any order or sequence of display or layout, only the grouping together of images and frames into a set, hence this does not address the need or duplicate the work proposed for Structured Display as envisaged by WG 11. A display device can take advantage of the explicitly defined groups in KOS with the specified Document Title, and then order them and lay them out as appropriate based on the referenced images' own attributes.

The proposed Document Title code is named "Group of Frames for Display", but is not intended to preclude the re-use of the grouping for other purposes (e.g., volume rendering), nor to restrict the use to multi-frame images.

KOS was chosen since it is intended for this type of reference; Presentation States were considered but rejected since there is no implied presentation semantics involved, specifically no windowing, displayed area selection, or annotation; this is despite the use of GSPS in the IHE Presentation of Grouped Procedures (PGP) profile which is in some respects a specific instance of the more general use addressed by this profile.

Sections of documents affected

PS 3.16

Correction Wording:

CID 7010   Key Object Selection Document Title

Context ID 7010
Key Object Selection Document Title
Type: Extensible Version: ~~20040920~~yyyymmdd

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
…	…	…
DCM	**113036**	**Group of Frames for Display**

113036	**Group of Frames for Display**	**A list of frames or single-frame or entire multi-frame instances that together constitute a set for some purpose, such as might be displayed together in the same viewport, as distinct from another set that might be displayed in a separate viewport.**	