DICOM Correction Proposal

STATUS	Assigned
Date of Last Update	2016/09/05
Person Assigned	David Clunie mailto:dclunie@dclunie.com
Submitter Name	Dave Harvey mailto:dave@medicalconnections.co.uk
Submission Date	2016/06/09

Correction Number CP-1654
Log Summary: Clarify that RLE encoding covers all bits allocated.
Name of Standard PS3.5
Rationale for Correction: Annex G has contradictory statements on whether the data to be compressed should be bits allocated or bits stored. The reference to the Composite Pixel Code, which is defined in PS3.3 to include all bits allocated, conflicts with the "note" in this annex that specifies bit stored, which may be less. This is an issue in cases such as when bits stored is 8 but allocated is 16.
Correction Wording:

Amend PS 3.5 Annex G Section G.2 as follows:

G.2 Byte Segments

A Byte Segment is a series of bytes generated by decomposing the Composite Pixel Code (see PS3.3).

If the Composite Pixel Code is not an integral number of bytes in size, sufficient Most Significant zero bits are added to make it an integral byte size. This is known as the Padded Composite Pixel Code.

The first Segment is generated by stripping off the most significant byte of each Padded Composite Pixel Code and ordering these bytes sequentially. The second Segment is generated by repeating this process on the stripped Padded Composite Pixel Code continuing until the last Pixel Segment is generated by ordering the least significant byte of each Padded Component Pixel Code sequentially.

Note

If Photometric Interpretation (0028, 0004) equals RGB and Bits ~~Stored~~ **Allocated** equals 8, then three Segments are generated. The first one holds all the Red values, the second all the Green values, and the third all the Blue values.