DCMTK - Bug #1069

Compression encoders do not handle Enhanced Multiframe images correctly

2023-03-24 10:15 - Marco Eichelberg

Status:	New	**Start date:**	2023-03-24
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:	Library and Apps	**Estimated time:**	0:00 hour
Target version:			
Module:	dcmjpeg, dcmjpls, dcmjp2k	**Compiler:**	
Operating System:			

Description

The compression codecs in DCMTK do not support the special features of Enhanced Multiframe images, but do not reject such images either.
This causes problems if the Modality LUT transformation or the VOI LUT transformation are located in the SharedFunctionalGroupsSequence or in the PerFrameFunctionalGroupsSequence.

For example, the JPEG encoder adapts the values of RescaleSlope, RescaleIntercept, WindowCenter and WindowWidth when an image is down-scaled to 12 or 8 bits for a lossy JPEG process.
In the case of Enhanced Multiframe images, values are inserted in the main dataset and anything in the Shared/PerFrameFunctionalGroupsSequence is ignored.

It should not be difficult to check for WindowCenter/WindowWidth settings in the Shared/PerFrameFunctionalGroupsSequence and to also handle these correctly.
Support for a Modality LUT transformation in the SharedFunctionalGroupsSequence should also be relatively easy to implement.
Support for a Modality LUT transformation in the PerFrameFunctionalGroupsSequence might be more difficult, since the dcmimgle module currently does not handle per-frame modality LUTs

Reported 2023-03-21 by Christian Wetzel <wetzel@phoenix-pacs.de>

Related issues:

Related to DCMTK - Bug #1068: Check whether Frame Type (0008,9007) also needs...	**New**	**2023-02-23**

History

#1 - 2024-08-09 18:42 - Marco Eichelberg

- Related to Bug #1068: Check whether Frame Type (0008,9007) also needs to be updated when using lossy compression added