



MIWG – Displays

Bench testing and simulations of imaging pipelines (Tom Kimpe)



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Kuurne, Belgium

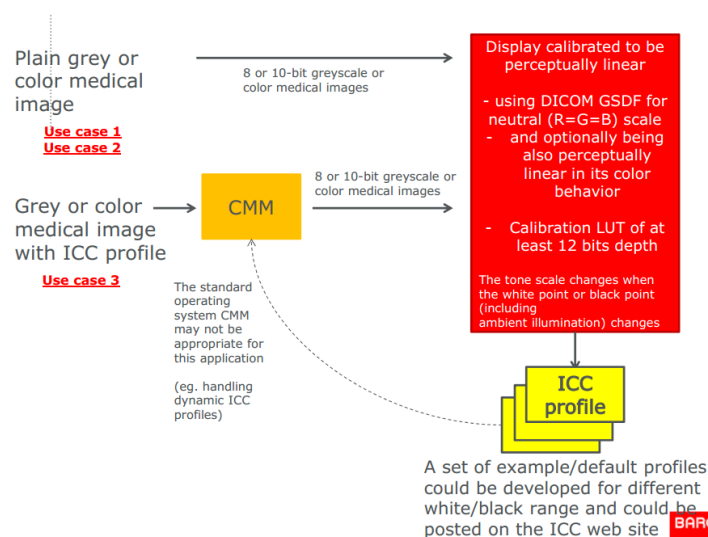
Goal of this session:

Come to agreement on the simulations and bench testing to be performed on imaging pipelines

Background of this exercise

■ Background

- The MIWG Displays defined an architecture of which we believe it is suitable for color medical imaging. (see eg. http://www.color.org/groups/medical/Minutes_Aug2014_SpecialTopics.pdf)
- This architecture however has not been validated yet, so we don't know whether it is possible to meet the requirements and tolerances that are needed for accurate visualization of medical (color) images



Goals of this exercise

- Goal: validating by means of bench testing and software simulations whether the proposed architecture is fit for purpose
 - Assembling a representative set of medical color images, together with corresponding requirements /performance needs for visualization
 - Selecting a number of display systems that will be used for the bench testing & simulations
 - Measuring/characterizing these display systems such that we can run software simulations of different configurations instead of having to “build” all configurations (eg. display bit depth, size of LUTs, ...)
 - Performing the bench testing and simulation work

Data gathered already

- On Oct 3rd 2014 a call for participation was sent out to the MIWG – Displays.
- Many people contributed and collected:
 - Characterization data of various display systems
 - Relevant medical images that can be used for testing/validation
- This data can be found here:
ftp://tok_icc_miwg_displays:xbochi0@ftp.barco.com

Example of simulation results

Agreement on the exact simulation & bench testing
to be performed

AAPM 2015 paper