Comparing subjective and objective quality assessment of HDR images compressed with JPEG-XT

In this paper a subjective test in which participants evaluate the quality of JPEG-XT compressed HDR images is presented. Results show that for the selected test images and display, the subjective quality reached its saturation point starting around 3bpp. Objective evaluations are obtained by applying a model of the display and providing the modeled images to three objective metrics dedicated to HDR content. Objective grades are compared with subjective data both in physical domain and using a gamma correction to approximate perceptually uniform luminance coding. The MRSE metric obtains the best performance with the limit that it does not capture the quality saturation. The usage of the gamma correction prior to applying metrics depends on the characteristics of each objective metric.

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