



D2.5 Real-time HDR to SDR conversion in a generic viewing environment



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1. EXECUTIVE SUMMARY

A framework for the encoding and real-time transformation of HDR images from a digital motion picture camera is presented. The framework includes the following components.

- A new log-type encoding function and color space for HDR camera images. The work is based on existing practises and extended for increased dynamic range of new image sensors. Also, shortcomings of the existing workflow are improved.
- Matlab™ software to create rendering transforms for the HDR images. The transforms target a wide range of displays from SDR to HDR monitors.
- New approaches to tone-map HDR images for display in an electronic viewfinder of the camera.

Tone-mapping transforms are needed to render the images in photographic quality for different displays. In a typical workflow the camera needs to support several different displays: from SDR to HDR with different maximum luminance values.