



D3.5 Non real-time SDR to HDR conversion and HDR to SDR conversion in a generic viewing environment



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Abstract	In this document, we discuss a set of industrial validation experiments, as well as the creation of additional algorithm variations for different color management applications. Additional methods for mapping between different color gamuts and accounting for variable viewing conditions will also be discussed. Finally, an overview of a practical implementation of all of these methods in a unified transform will be delivered.
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1 EXECUTIVE SUMMARY

In order for image appearance to be effectively related between the multiple emerging and legacy image representations which are commonplace in the cinema and television industry, new transforms based in vision science principles must be defined. In the previous deliverable, such a tone mapping approach was introduced as well as several possible solutions for inverse tone mapping. In this document, further work which has been accomplished pertaining to these methods will be discussed including a set of industrial validation experiments, as well as the creation of additional algorithm variations for different color management applications. Additional methods for mapping between different color gamuts and accounting for variable viewing conditions will also be discussed. Finally, an overview of a practical implementation of all of these methods in a unified transform will be delivered.