



## **D5.5 Personalization for viewer preference and numerical optimization for Visualization**



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<b>Author(s)</b>	Trevor Canham, Gino Bolleart, Marcelo Bertalmío
<b>EC Project Officer</b>	Mr. Ralph Dum, Ralph.Dum@ec.europa.eu
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## 1 EXECUTIVE SUMMARY

This deliverable presents a color management pipeline which can be used to translate image appearance between viewing scenarios which differ with regard to various perceptually impactful parameters. This pipeline is derived as a combination of a number of direct translation methods, each having been independently validated for converting between image representations which differ for a particular viewing condition parameter (viewer physiology, display spectral power distribution, size/viewing angle, dynamic range, color gamut, and ambient illumination color and luminance). The following deliverable will summarize the independent research efforts undertaken to derive each method, and then a preliminary architecture is presented, showing how all of the methods can be used in conjunction in a way which complies with our current understanding of how their physiological analogues are ordered in the visual pathway. The modularity of the architecture is highlighted, and a discussion is given on how it can be useful in the greater context of color management/color appearance and vision modelling. Finally, a discussion will be given on how the methods can be computationally simplified to promote real-time model performance for motion picture scenarios.