



Subject: **Liaison Letter to the W3C**

Date: **11/1/2023**

Dear secretary of the W3C,

This liaison letter is to inform you that ISO/TC 42/WG 23 – Extended colour encodings for digital image storage, manipulation and interchange is developing a new project ISO/WD 21496-1 – Digital Photography — Gain map metadata for image conversion — Part 1: Dynamic Range Conversion.

High dynamic range (HDR) images, that have been produced for HDR displays, can provide a better user experience. One challenge is ensuring that there is no image quality regression when displaying an HDR image on a display with limited or no headroom, such as a standard dynamic range (SDR) display.

This can be solved by creating a standardized solution that includes storing in the same file a baseline image and a gain map, to convert between the baseline and the alternate representations with different headrooms. Compared with storing both the representations, the benefit of this solution is the optimization of the file size, obtained by minimizing the amount of redundant data stored. It also avoids the logistical issues caused by having separate files.

The purpose of this document is to define a gain map used in HDR digital photography applications, for dynamic range conversion between image representations. This includes the definition of the gain map metadata and its attributes, how to apply a gain map, and how to specify the gain map and other associated metadata.

Attached is the current working draft being reviewed and discussed by the experts of ISO/TC 42/WG 23.

We would welcome your consideration and potentially joining the JWG for more direct technical participation.

Best regards,

Edward Terhune • Committee Manager • ISO/TC 42 – Photography