

[Metal](#) / HDR content

HDR content






Take advantage of high dynamic range to present more vibrant colors in your apps and games.

Overview

High dynamic range (HDR) content has a wider range of brightness levels than standard definition content. Certain displays, which macOS refers to as extended dynamic range (EDR) displays, can physically replicate those extra brightness values on a screen. You can use Metal to detect EDR displays and work with HDR content, such as from a video asset or directly from your app.

Topics

High dynamic range content

-  Processing HDR images with Metal
Implement a post-processing pipeline using the latest features on Apple GPUs.
-  Displaying HDR content in a Metal layer
Bring your high dynamic range (HDR) content to compatible Mac displays.
-  Determining support for EDR values
Check whether a display supports EDR.
-  Using color spaces to display HDR content
Use a color space when you don't need to edit or process the pixel data.
-  Using system tone mapping on video content
Use EDR metadata to apply the default system tone mapping to a layer.

 Performing your own tone mapping


Apply your own tone mapping to get the exact behavior you want.

 Implementing tone mapping on reference displays

Detect reference displays and keep your content within the capabilities of the display hardware.

See Also

Presentation

 Managing your game window for Metal in macOS

Set up a window and view for optimally displaying your Metal content.

 Managing your Metal app window in iPadOS

Set up a window that handles dynamically resizing your Metal content.

 Adapting your game interface for smaller screens

Make text legible on all devices the player chooses to run your game on.

 Onscreen presentation

Show the output from a GPU's rendering pass to the user in your app.