

[Metal](#) / [Metal sample code library](#) / Modern rendering with Metal

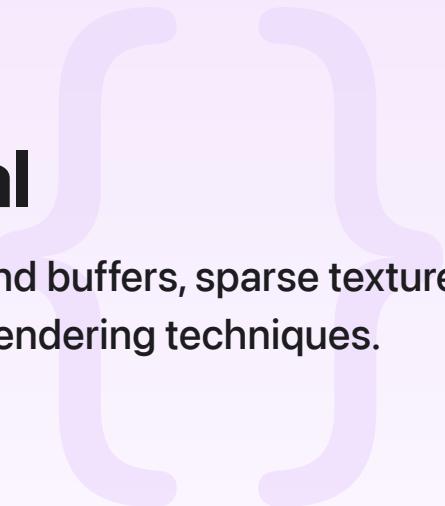
Sample Code

Modern rendering with Metal

Use advanced Metal features such as indirect command buffers, sparse textures, and variable rate rasterization to implement complex rendering techniques.

[Download](#)

iOS 14.1+ | iPadOS 14.1+ | macOS 11.0+ | Xcode 13.0+



Overview

Note

This sample code project is associated with the [Metal Enhancements for A13 Bionic](#) tech talk.

Configure the sample code project

Because this sample app uses indirect command buffers, you can't run this sample in the Simulator — you need to run it on a device. To run this sample, use one of the following:

- A Mac from mid-2016 and later with macOS 11 and later
- An iPad with A11 Bionic and later using iPadOS 14.1 and later
- An iOS device with A11 Bionic and later using iOS 14.1 and later
- Xcode 12 and later

See Also

Multiple techniques

{} Encoding indirect command buffers on the GPU

Maximize CPU to GPU parallelization by generating render commands on the GPU.