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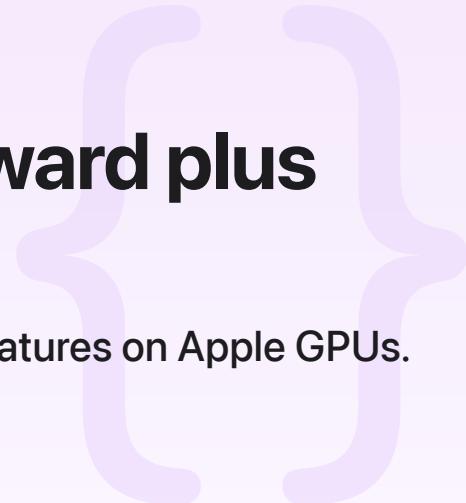
Sample Code

Rendering a scene with forward plus lighting using tile shaders

Implement a forward plus renderer using the latest features on Apple GPUs.

[Download](#)

iOS 13.0+ | iPadOS 13.0+ | macOS 11.0+ | Xcode 12.4+



Overview

Note

This sample code project is associated with WWDC 2019 session [601: Modern Rendering with Metal](#).

Configure the sample code project

To run the app:

- Build the project with Xcode 11 or later.
- Target an iOS device with an A11 chip or later and iOS 11 or later.

See Also

[Lighting techniques](#)

{ } Rendering a scene with deferred lighting in Objective-C

Avoid expensive lighting calculations by implementing a deferred lighting renderer optimized for immediate mode and tile-based deferred renderer GPUs.

{ } Rendering a scene with deferred lighting in Swift

Avoid expensive lighting calculations by implementing a deferred lighting renderer optimized for immediate mode and tile-based deferred renderer GPUs.

{ } Rendering a scene with deferred lighting in C++

Avoid expensive lighting calculations by implementing a deferred lighting renderer optimized for immediate mode and tile-based deferred renderer GPUs.

{ } Rendering reflections with fewer render passes

Use layer selection to reduce the number of render passes needed to generate an environment map.