



Advances in iOS Photography

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Agenda

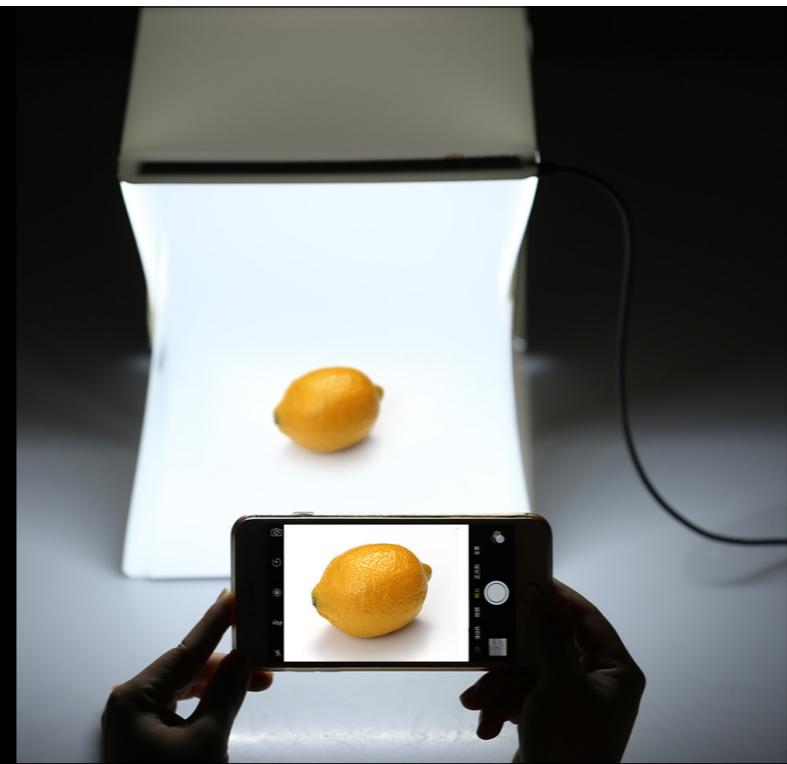
Introduce AV Foundation for Camera

New AVCaptureOutput in iOS 10

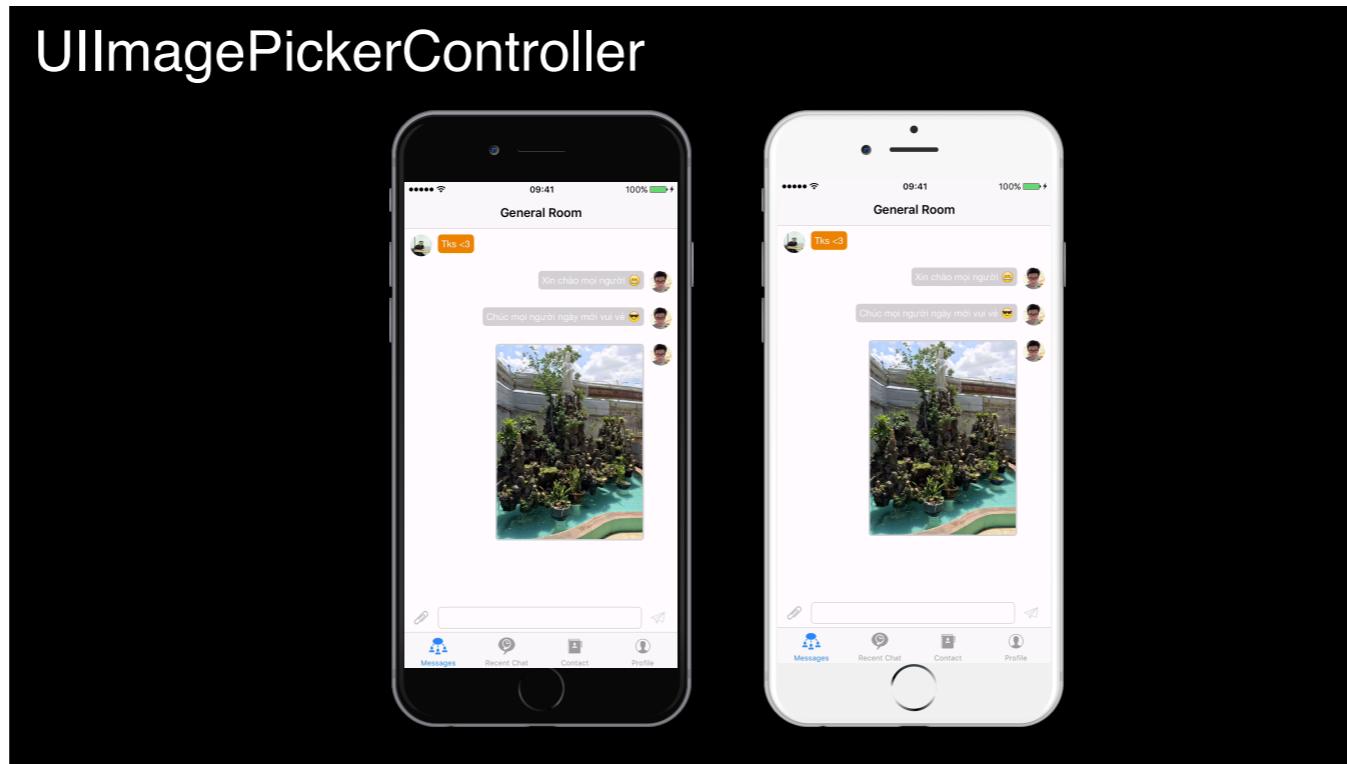
Live Photos in iOS 10

Demo

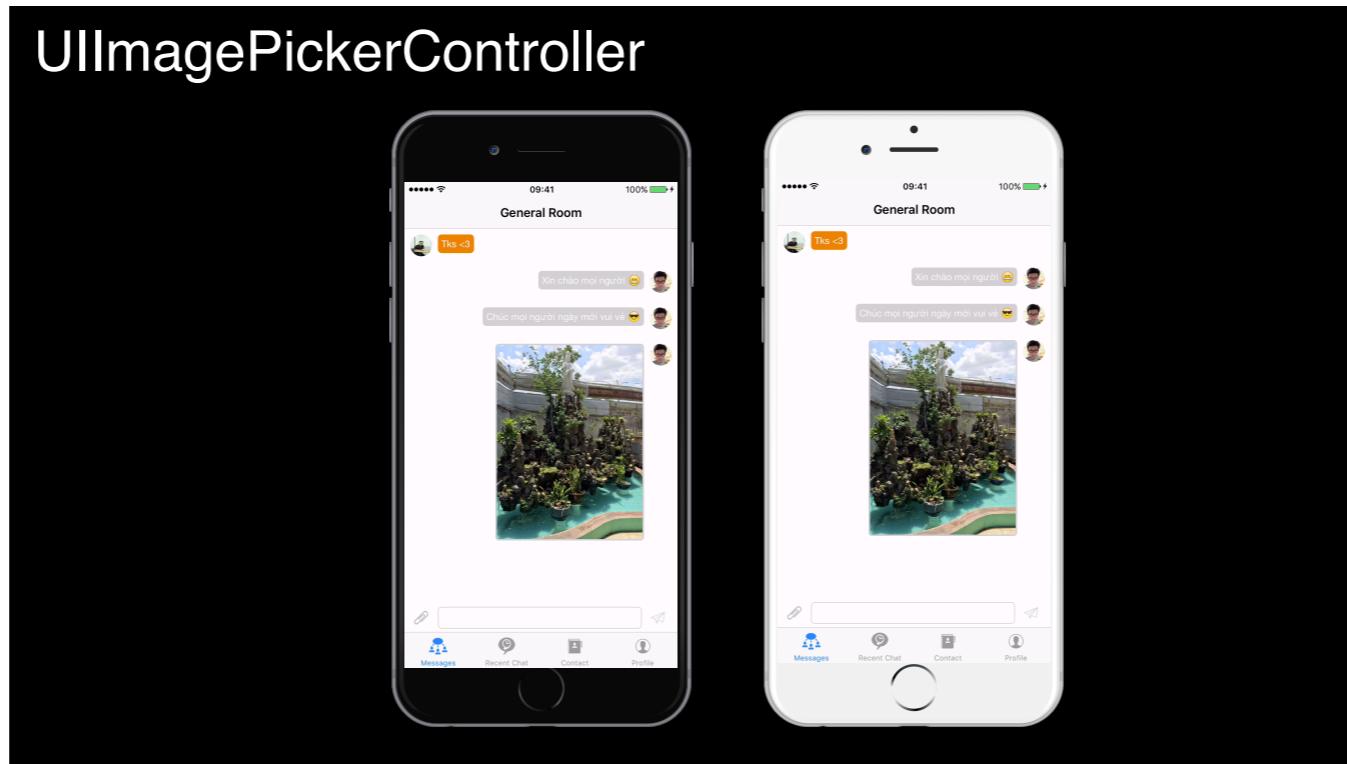
Photography using iPhone



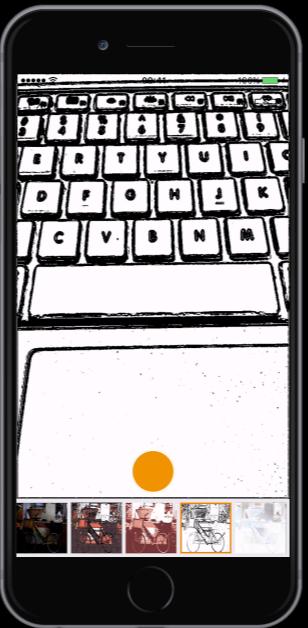
UIImagePickerController



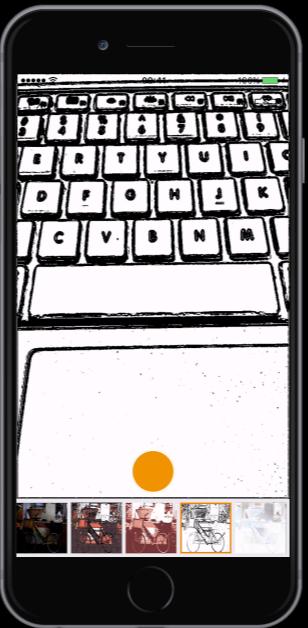
UIImagePickerController



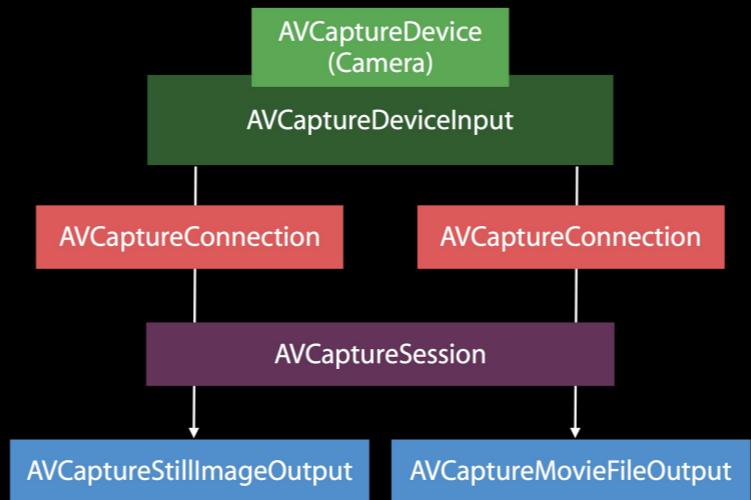
Custom Camera



Custom Camera

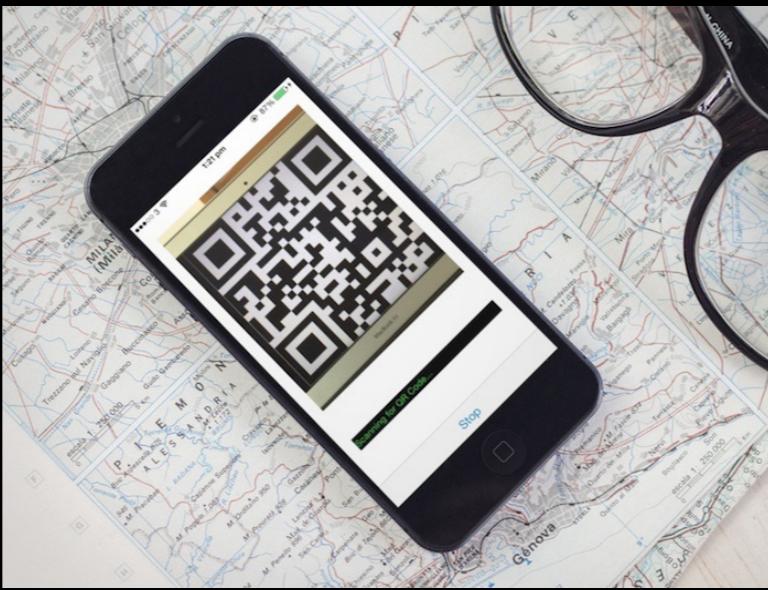


AV Foundation Capture Objects

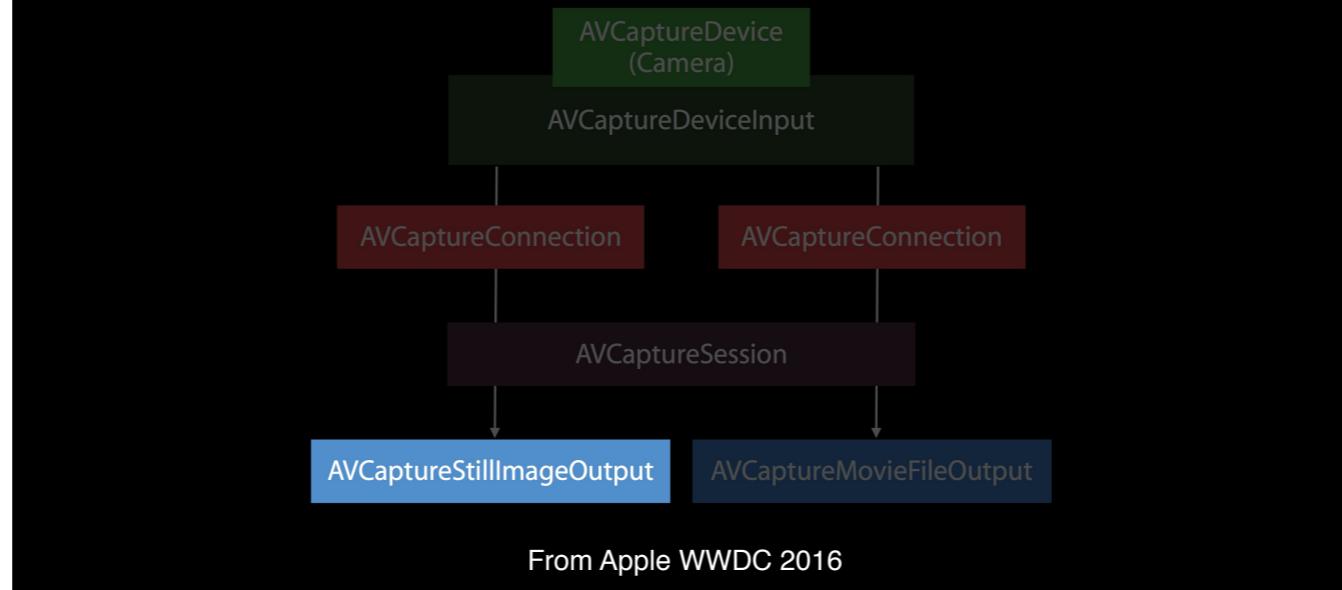


From Apple WWDC 2016

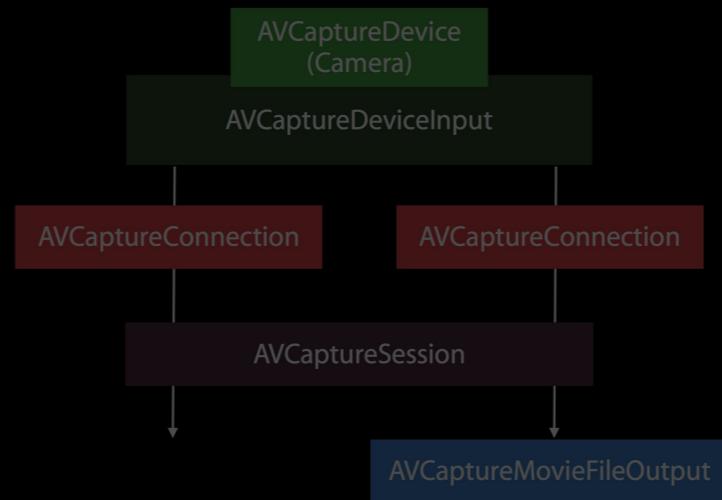
Mini App Scan QR Code



AV Foundation Capture Objects



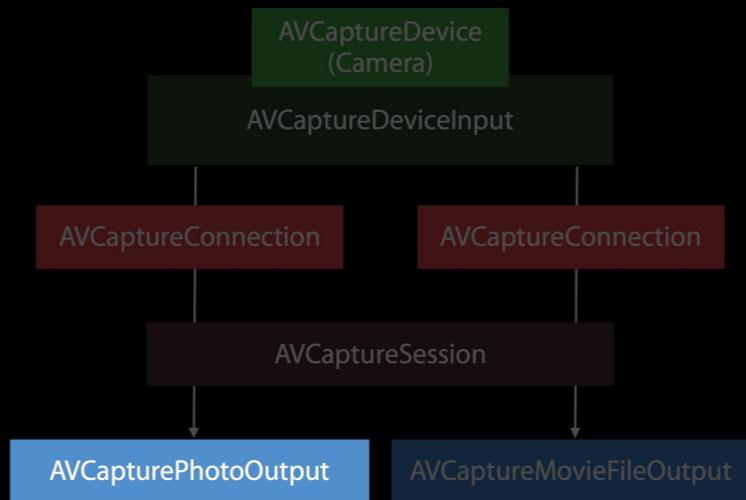
AV Foundation Capture Objects



From Apple WWDC 2016

AV Foundation Capture Objects

NEW



From Apple WWDC 2016

Using AVCapturePhotoOutput

NEW

AVCapturePhotoOutput

Read-only properties

Feature opt-in properties

Methods

From Apple WWDC 2016

Using AVCapturePhotoOutput

NEW

AVCapturePhotoOutput

isLivePhotoCaptureSupported
availablePhotoPixelFormatTypes
availablePhotoCodecTypes

Feature opt-in properties

Methods

From Apple WWDC 2016

Using AVCapturePhotoOutput

NEW

AVCapturePhotoOutput

isLivePhotoCaptureSupported
availablePhotoPixelFormatTypes
availablePhotoCodecTypes

isHighResolutionCaptureEnabled
isLivePhotoCaptureEnabled

Methods

From Apple WWDC 2016

Using AVCapturePhotoOutput

NEW

`AVCapturePhotoOutput`

`isLivePhotoCaptureSupported`
`availablePhotoPixelFormatTypes`
`availablePhotoCodecTypes`

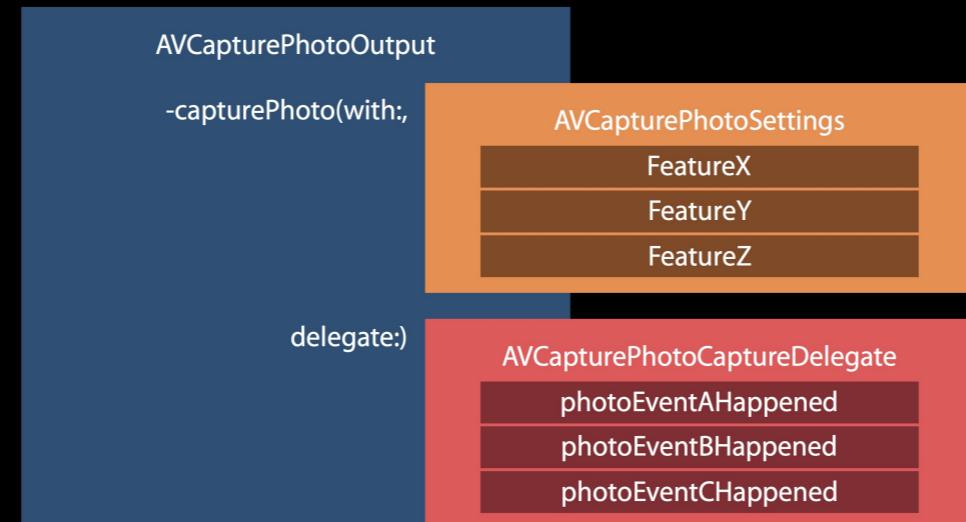
`isHighResolutionCaptureEnabled`
`isLivePhotoCaptureEnabled`

`capturePhoto(with:, delegate:)`

From Apple WWDC 2016

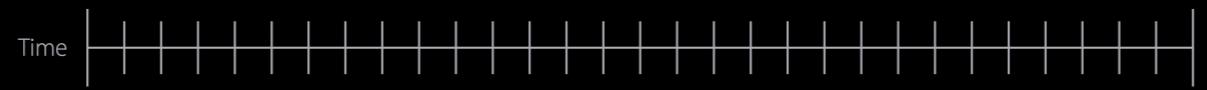
Using AVCapturePhotoOutput

NEW



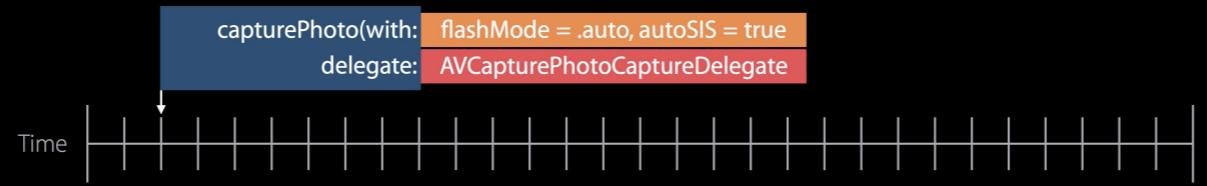
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



From Apple WWDC 2016

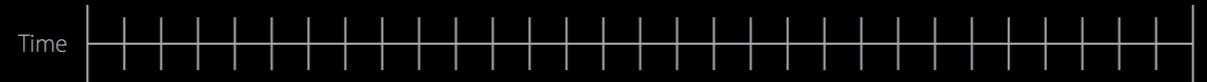
AVCapturePhotoCaptureDelegate Usage



From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage

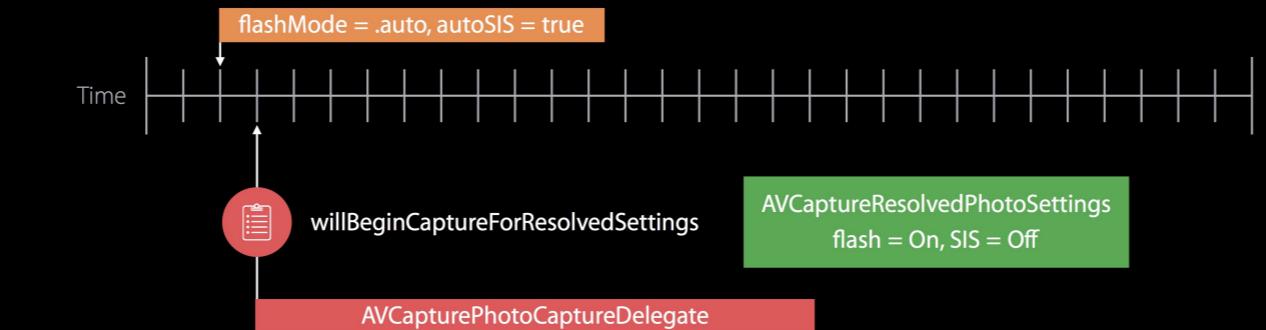
flashMode = .auto, autoSIS = true



AVCapturePhotoCaptureDelegate

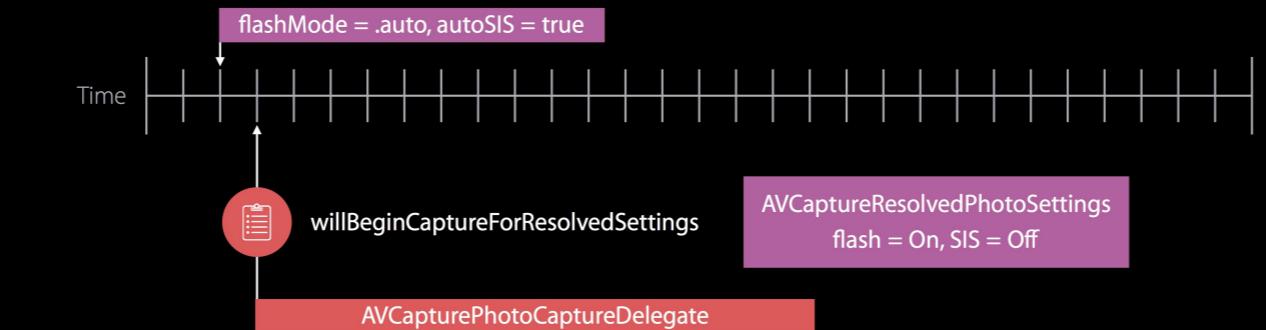
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



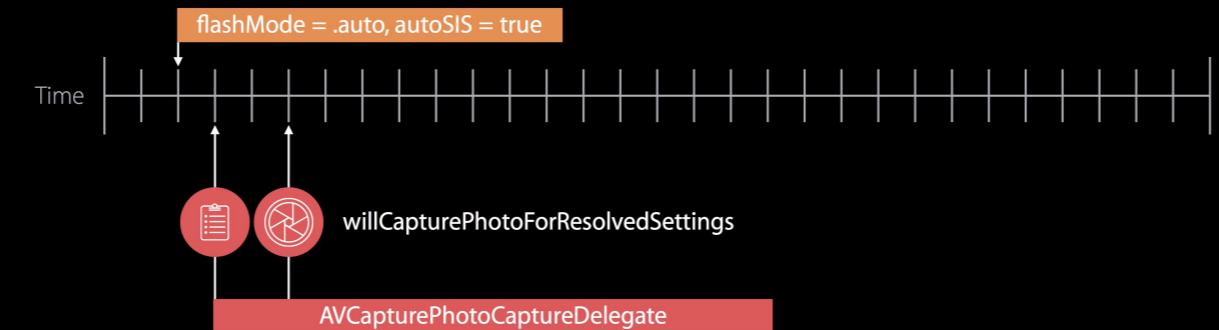
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



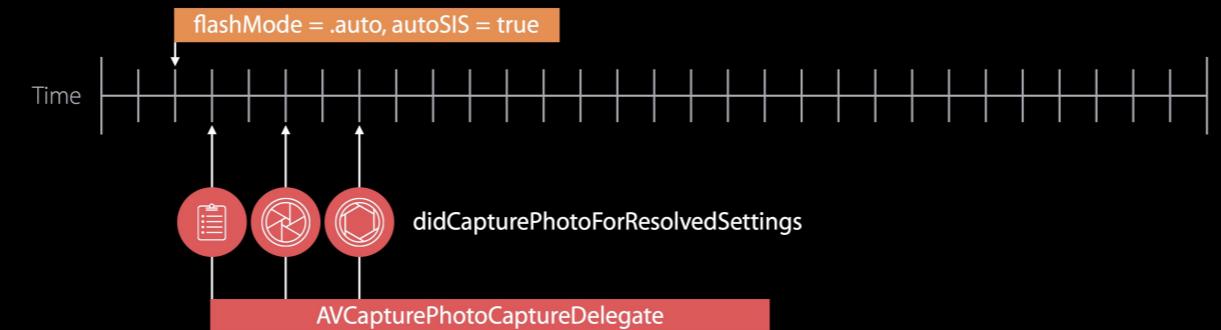
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



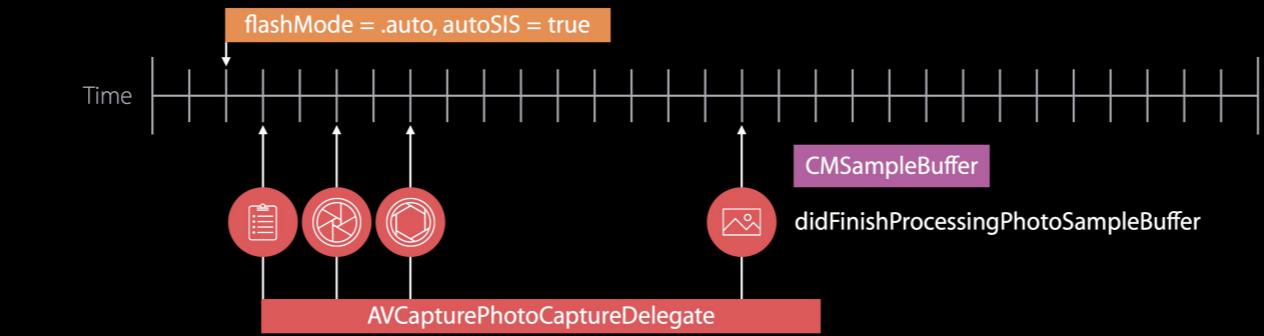
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



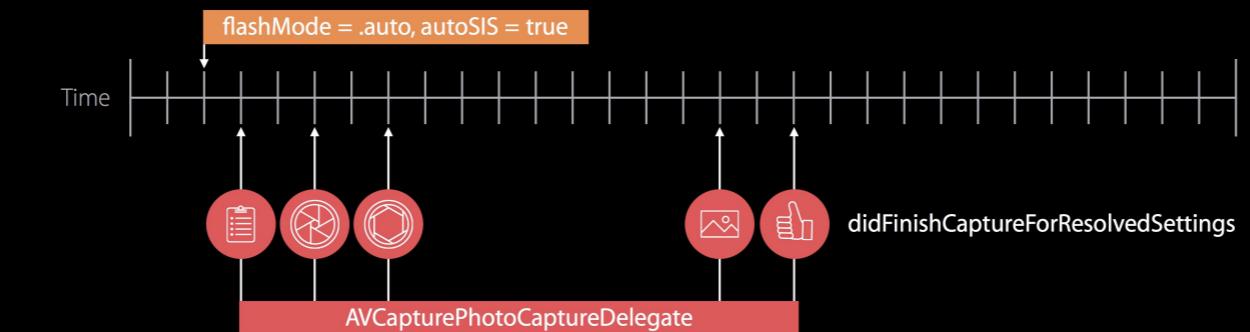
From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



From Apple WWDC 2016

AVCapturePhotoCaptureDelegate Usage



From Apple WWDC 2016

```
// Initiating a photo capture using AVCapturePhotoOutput

func takeHighResolutionPhoto()
{
    let settings = AVCapturePhotoSettings()
    settings.isHighResolutionPhotoEnabled = true

    photoOutput.capturePhoto(with: settings, delegate: self)
}

func takeFlashPhoto()
{
    let settings = AVCapturePhotoSettings()
    settings.flashMode = .auto

    photoOutput.capturePhoto(with: settings, delegate: self)
}

func takeBGRAphoto()
{
    let bgraFormat: [String : AnyObject] = [kCVPixelBufferPixelFormatTypeKey as String :
                                            NSNumber(value: kCVPixelFormatType_32BGRA)]
    let settings = AVCapturePhotoSettings(format: bgraFormat)

    photoOutput.capturePhoto(with: settings, delegate: self)
}
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```

Demo

AVCapturePhotoOutput Benefits

- Easier bookkeeping
- Immediate settings resolution
- Confident request tracking
- Expandable palette of callbacks

Deprecated in iOS 10



AVCaptureStillImageOutput



AVCapturePhotoOutput



AVCaptureDevice.flashActive



AVCapturePhotoOutput.isFlashScene



AVCaptureDevice isFlashModeSupported(_:)



AVCapturePhotoOutput.supportedFlashModes



AVCaptureDevice.flashMode



AVCapturePhotoSettings.flashMode

From Apple WWDC 2016

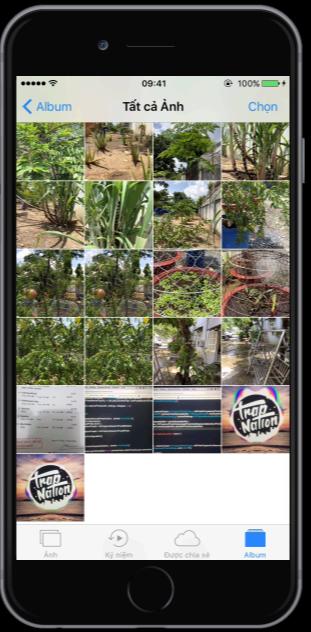
Live Photos

Capturing memories

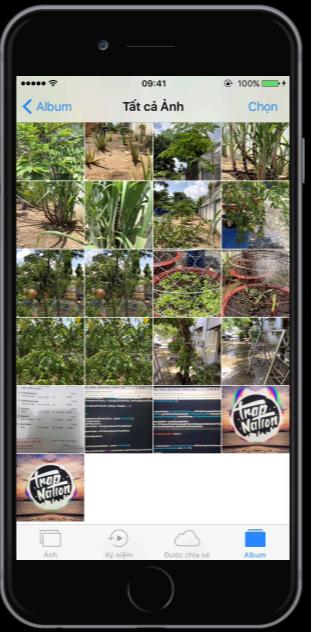


*"A still photo captures an instant frozen in time.
With Live Photos, you can turn those instants into unforgettable living memories."*

Live Photos



Live Photos



What is a Live Photo

Moment or memory?

It's a memory!

- A short movie encompassing the still time
- Screen resolution (1440x1080 or 1290x960)
- Includes audio

In iOS 9.1 — “Shoe shot” auto trimming

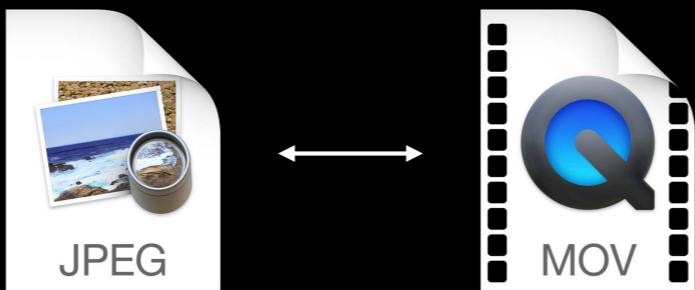
New in iOS 10 — Video stabilization

New in iOS 10 — Interruption-free
music during capture

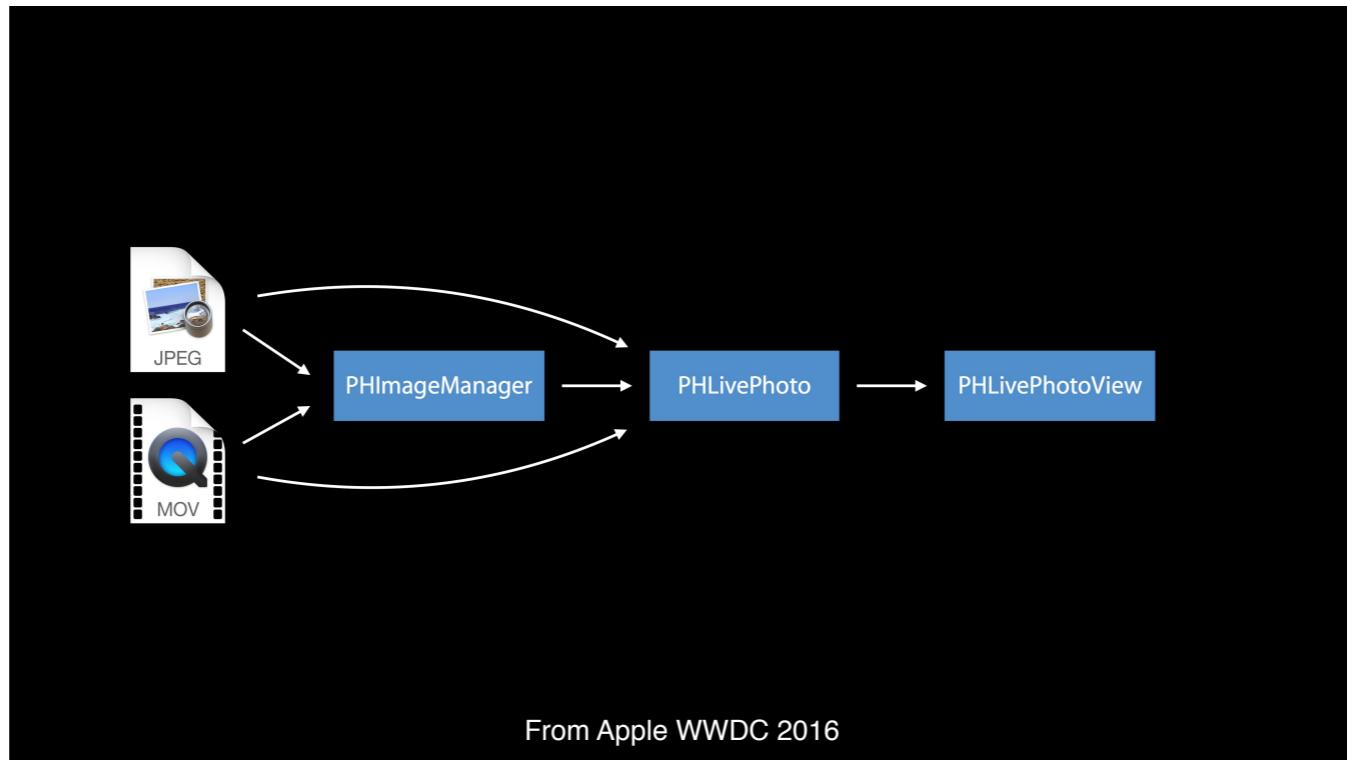


From Apple WWDC 2016

What is a Live Photo
It's a moment and a memory



From Apple WWDC 2016



Live Photo Capture Support

iPhone 6s

iPhone 6s Plus

iPhone SE

9.7-inch iPad Pro

From Apple WWDC 2016

Demo

Summary

Introduce AV Foundation for Camera

New AVCaptureOutput in iOS 10

Live Photos in iOS 10

Q&A



Thank you

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