How to build examples using Xcode 10 and higher

Preparing examples for building

Building with local SDK archive

> **Warning**
>
> This way is obsoleted and not recommended since iOS SDK build 2.6.97

1. Install Cocoapods to build dependencies

```
sudo gem install cocoapods
```

2. Download the source code of the examples for Mac

```
git clone https://github.com/flashphoner/wcs-ios-sdk-samples.git
```

3. Download and unpack the iOS SDK

```
wget http://flashphoner.com/downloads/builds/flashphoner_client/wcs-ios-
sdk/2.6/WCS-iOS-SDK-2.6.x.tar.gz
tar -xvzf WCS-iOS-SDK-2.6.x.tar.gz
```

4. After unpacking, there are the following frameworks:

- two frameworks in builds before 2.6.86

  ```
  FPWCSApi2.framework
  FPWCSApi2Swift.xcframework
  ```

- three frameworks since build 2.6.86

  ```
  FPWCSApi2.framework
  FPWCSApi2Swift.xcframework
  WebRTC.xcframework
  ```

- since build 2.6.95 Objective C framework is shipped as XCFramework like others

```
FPWCSApi2.xcframework
FPWCSApi2Swift.xcframework
WebRTC.xcframework
```

- since build 2.6.97 SDK archive contains unpacked Cocoapods bundles

```
FPWCSApi2
FPWCSApi2Swift
FPWebRTC
```

5. Copy the unpacked frameworks to the sample folder

- iOS SDK builds before 2.6.97

```
mkdir -p wcs-ios-sdk-samples/Frameworks
cp -R FPWCSApi2.xcframework FPWCSApi2Swift.xcframework WebRTC.xcframework
wcs-ios-sdk-samples/Frameworks
```

- iOS SDK builds since 2.6.97

```
mkdir -p wcs-ios-sdk-samples/sdk/fp_wcs_api2/Pods
cp -R FPWCSApi2 FPWCSApi2Swift WebRTC wcs-ios-sdk-
samples/sdk/fp_wcs_api2/Pods
cd wcs-ios-sdk-samples
mv Podfile Podfile.public
mv Podfile.local Podfile
```

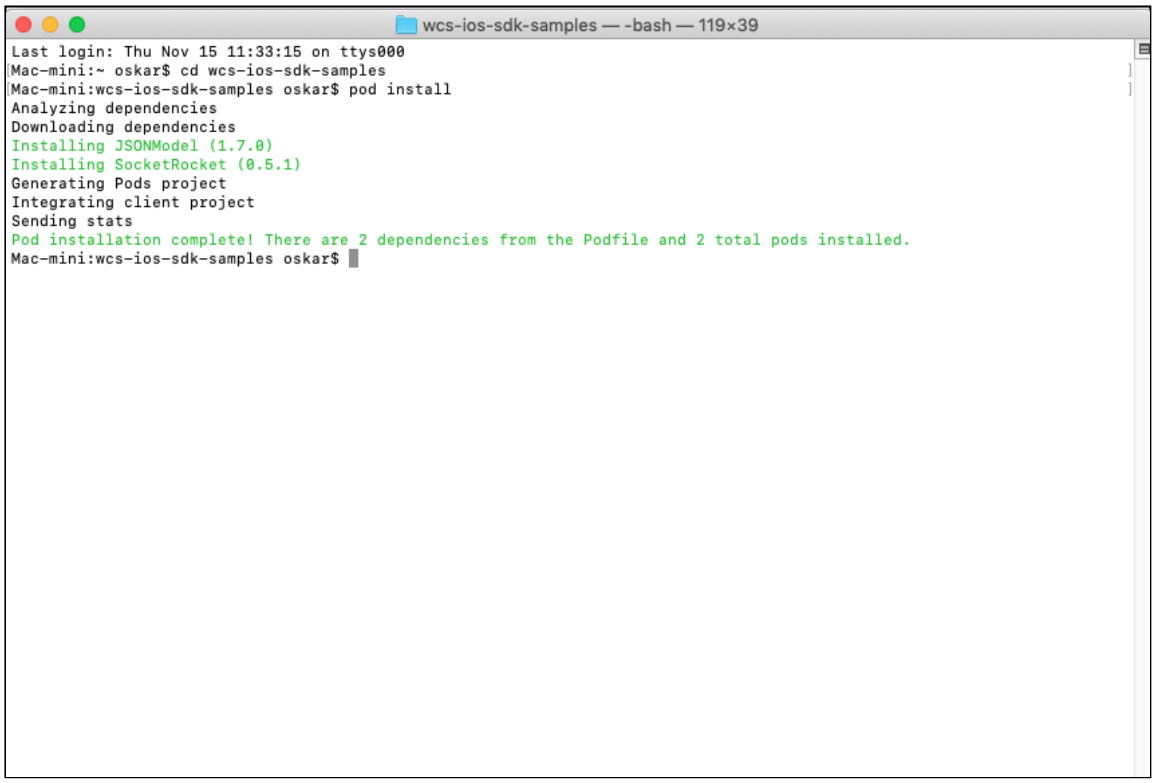
6. Samples are ready to build

As a result, we have got the sample folder with the framework (iOS SDK). Now we can start building.

```
bash-3.2$ ls -la
total 64
drwxr-xr-x  14 Flashphoner  staff    448 Jun 17 13:12 .
drwxr-xr-x+ 47 Flashphoner  staff   1504 Jun 17 13:07 ..
drwxr-xr-x   5 Flashphoner  staff    160 Jun 17 13:11 Frameworks
-rw-r--r--   1 Flashphoner  staff    245 Apr 22  2019 Info.plist
-rw-r--r--   1 Flashphoner  staff   1567 Apr 13 13:16 Podfile
-rw-r--r--   1 Flashphoner  staff    465 Jun 17 13:12 Podfile.lock
drwxr-xr-x  10 Flashphoner  staff    320 Jun 17 13:12 Pods
-rw-r--r--   1 Flashphoner  staff     27 Apr 22  2019 README.md
-rw-r--r--   1 Flashphoner  staff     35 Apr 22  2019 README.txt
drwxr-xr-x  12 Flashphoner  staff    384 Apr 13 13:16 Swift
drwxr-xr-x  19 Flashphoner  staff    608 Oct 16  2020 WCSExample
drwxr-xr-x@  6 Flashphoner  staff    192 Jun 17 12:24 WCSExample.xcodeproj
drwxr-xr-x@  5 Flashphoner  staff    160 Jul  2  2020 WCSExample.xcworkspace
-rwxr-xr-x   1 Flashphoner  staff  10331 Apr 13 13:16 build_example.sh
```

7. Run Cocoapods

```
pod install
```



Building with SDK from Cocoapods

> ✓ **Success**
>
> This way is preferrable since iOS SDK build 2.6.97

1. Install Cocoapods to build dependencies

```
sudo gem install cocoapods
```

2. Download the source code of the examples for Mac

```
git clone https://github.com/flashphoner/wcs-ios-sdk-samples.git
```

3. Run Cocoapods

This step may take a time because FPWebRTC framework is slightly fat.

```
pod install
```

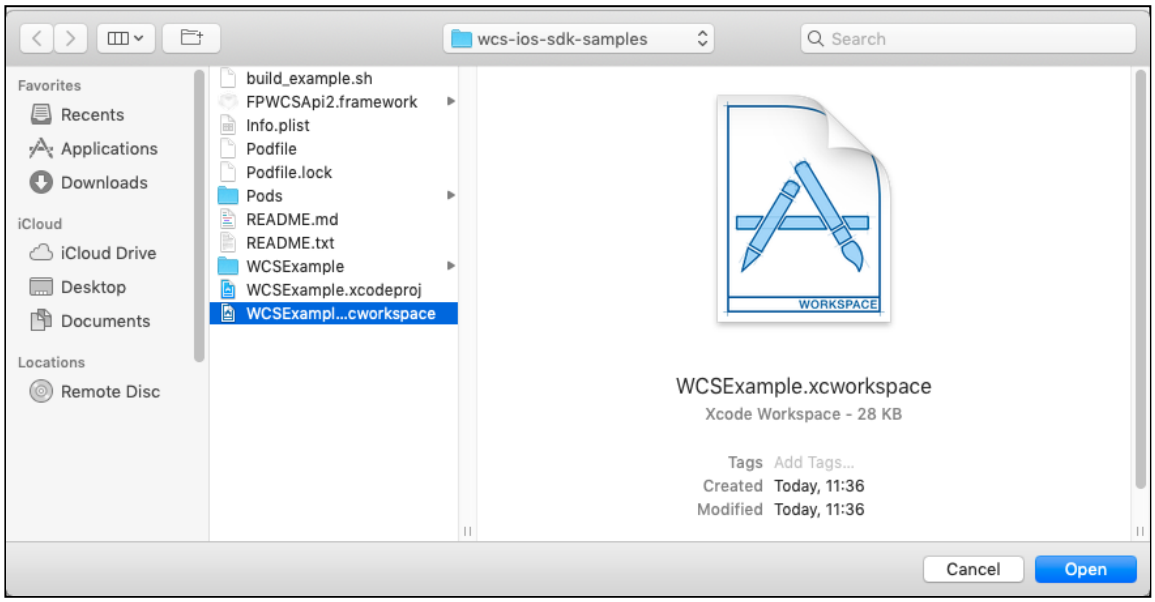
```
Alexanders-MacBook-Pro:iOS-SDK-Samples-2.6 Flashphoner$ pod install
Analyzing dependencies
Downloading dependencies
Installing FPWCSApi2 (2.6.97)
Installing FPWCSApi2Swift (2.6.97)
Installing FPWebRTC (2.6.97)
Installing GPUImage (0.1.7)
Installing SocketRocket (0.5.1)
Generating Pods project
Integrating client project
Pod installation complete! There are 4 dependencies from the Podfile and 5 total pods installed.
```

Building and launching examples using Xcode

1. Open workspace

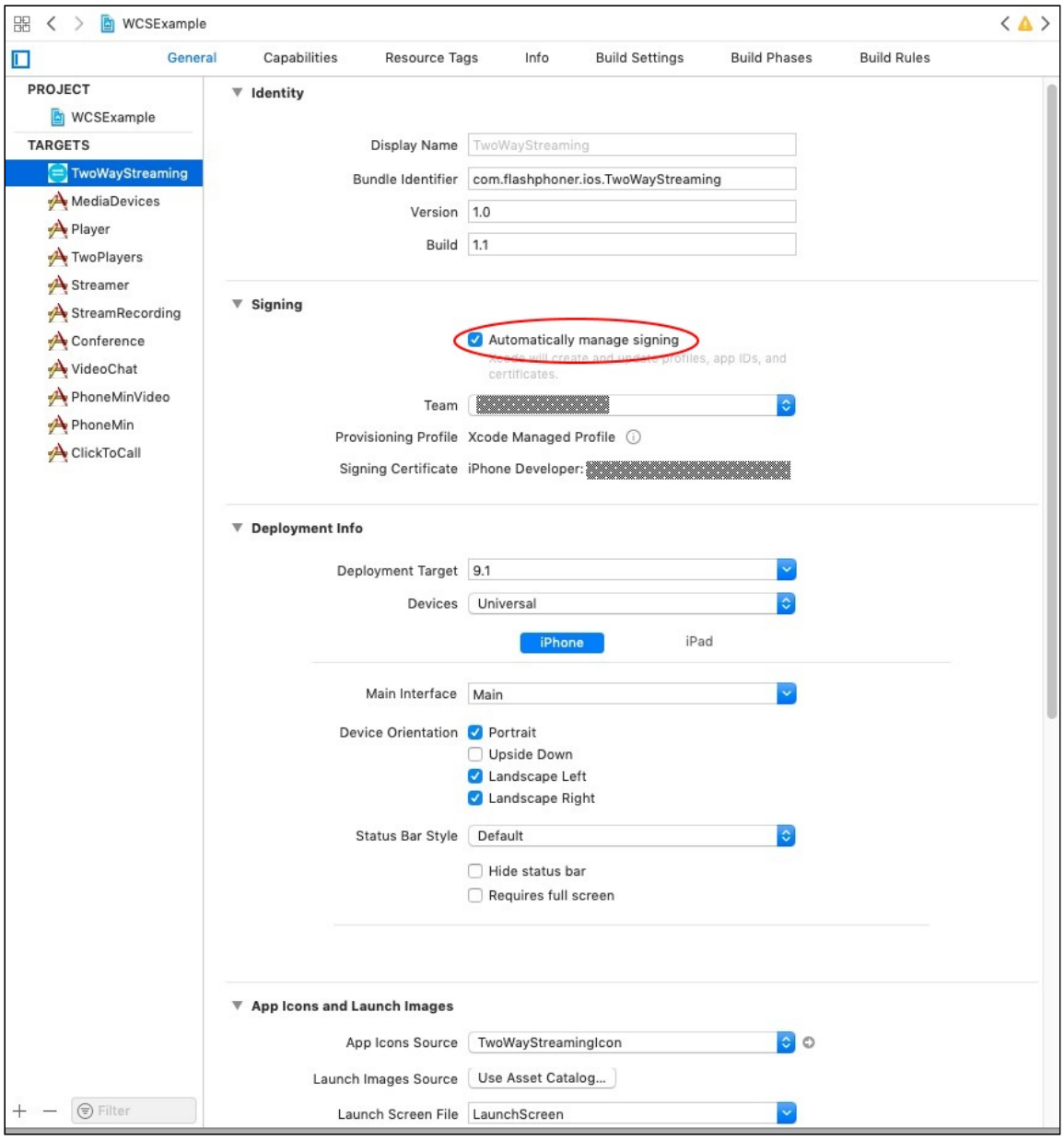
Now, as soon as all dependencies are ready, open workspace in Xcode.

> **Warning**
>
> You should open the workspace, not the project file. Otherwise, the build may be broken.



2. Signing options setup

On `General` page for each example set the checkbox `Automatically manage signing` and set iPhone developer certificate.

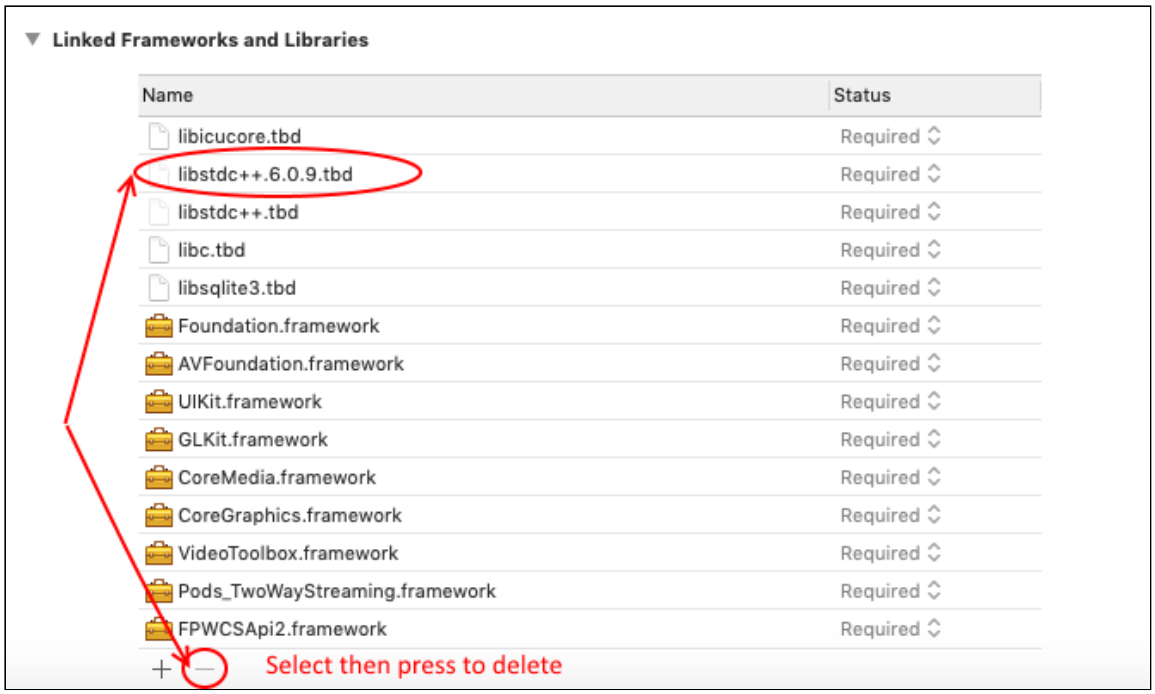


Warning

Since build 2.6.10, steps 3-5 are not required!

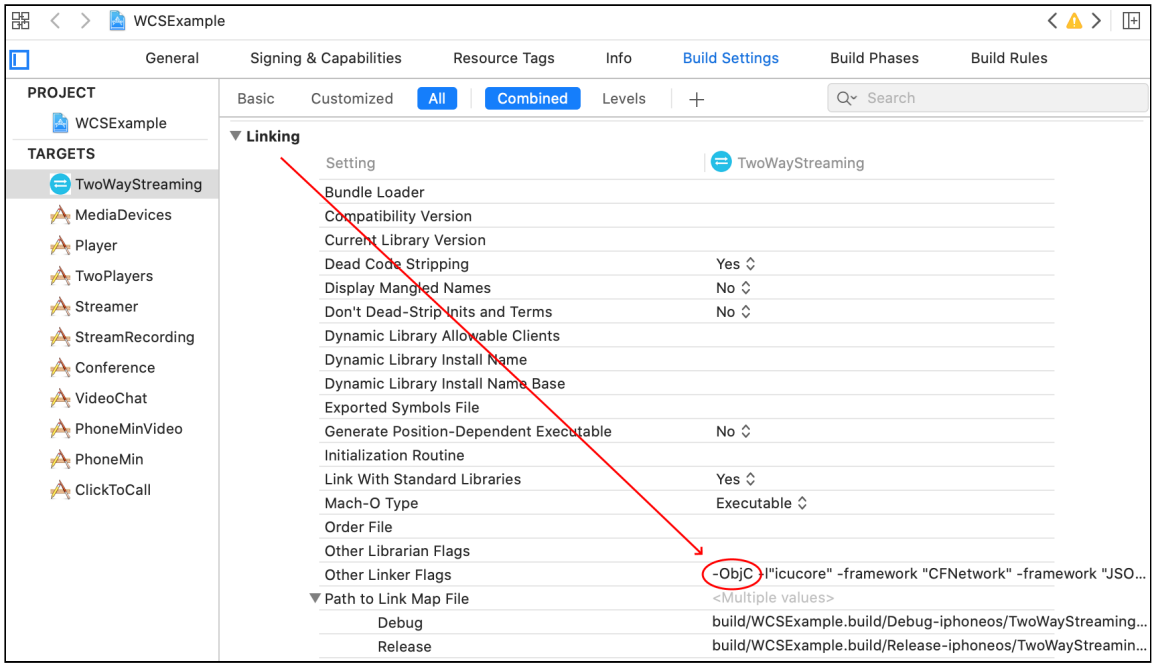
3. Remove exessive libraries

At the bottom of General page delete the libraries `libstdc++.6.0.9.tbd` и `libstdc.tbd` (if they are in list). Add the library `libstdc++.tbd` if it is not in list.



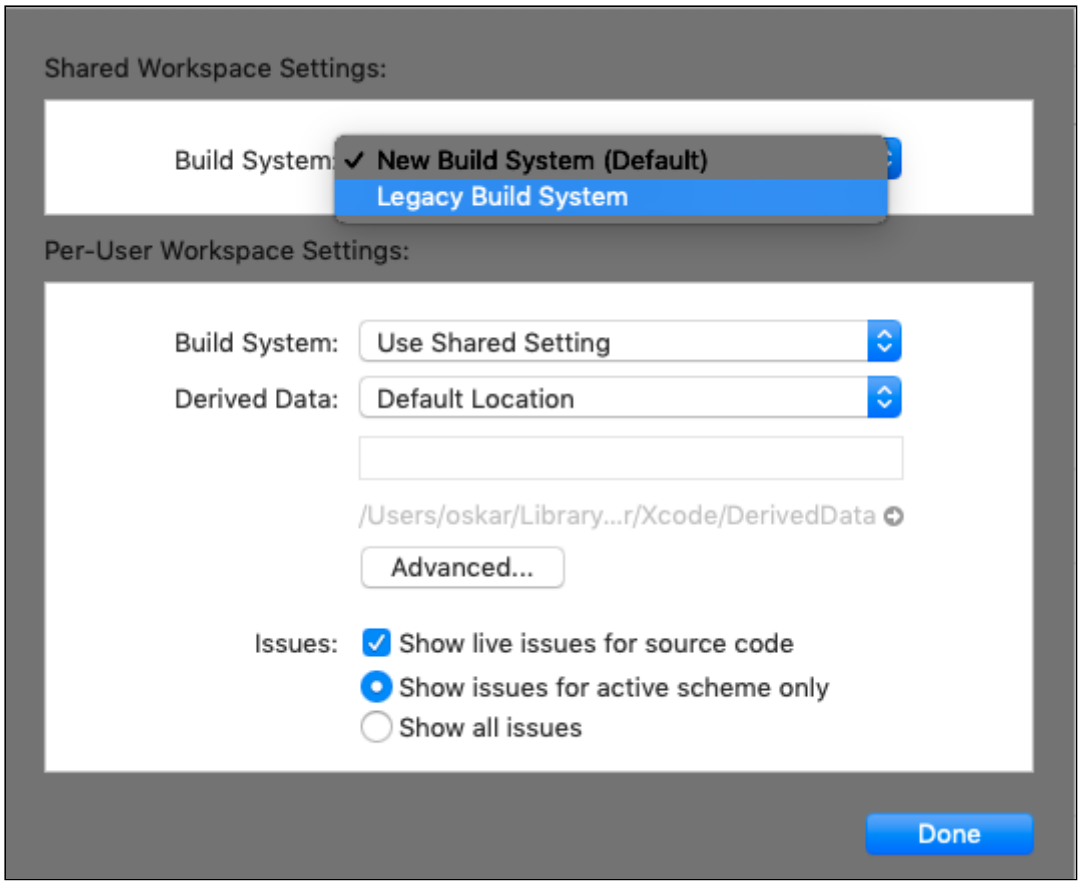
4. Set a propert linker flags

On Build settings tab in Linking section add -ObjC linker flag



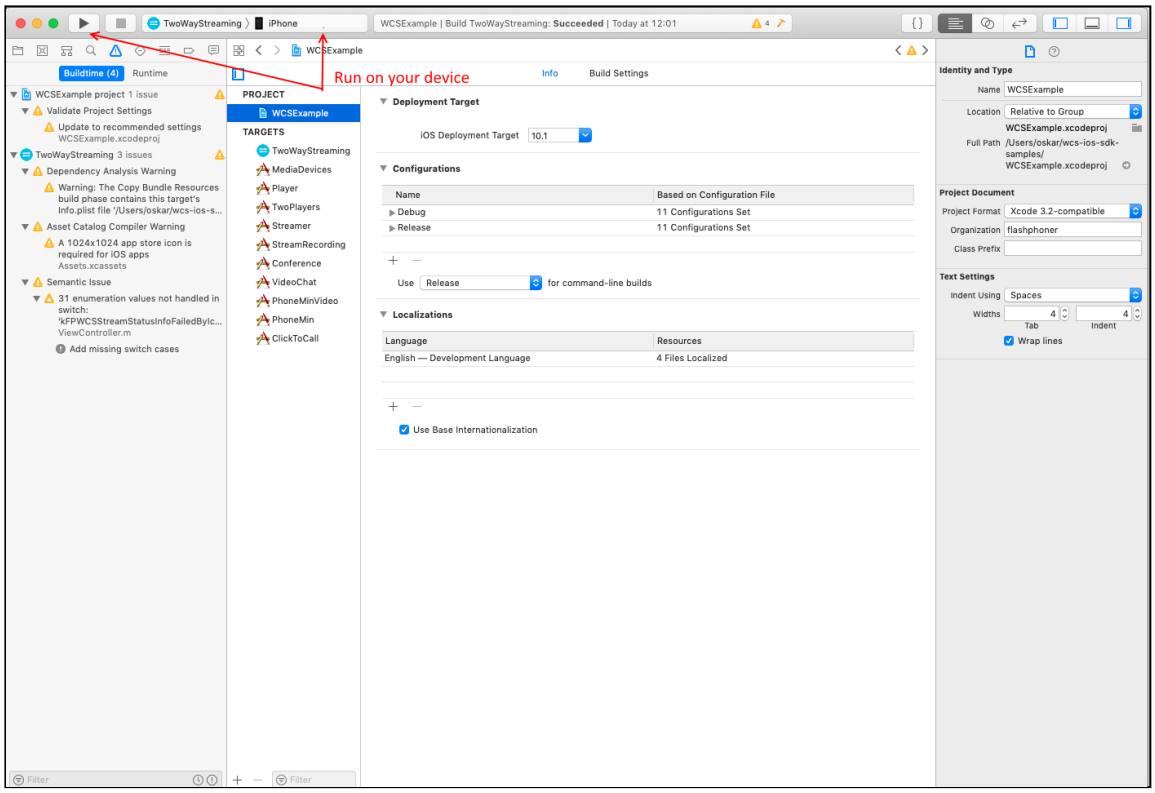
5. Set build system

Choose `File` - `Workspace` settings menu item and set `Legacy Build System` value for `Build System` parameter



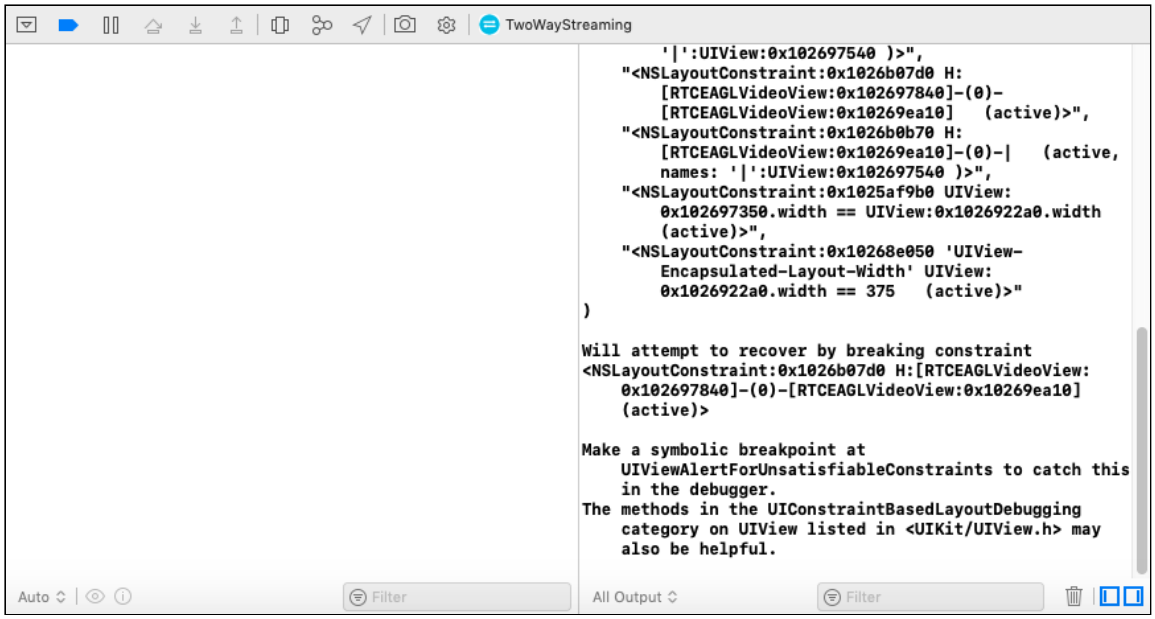
6. Choose target device

For `Two Way Streaming` example choose target `Generic iOS Device` and start building from the `Product` - `Build` menu. Then connect your iPhone or iPad via USB and choose it to run the example.



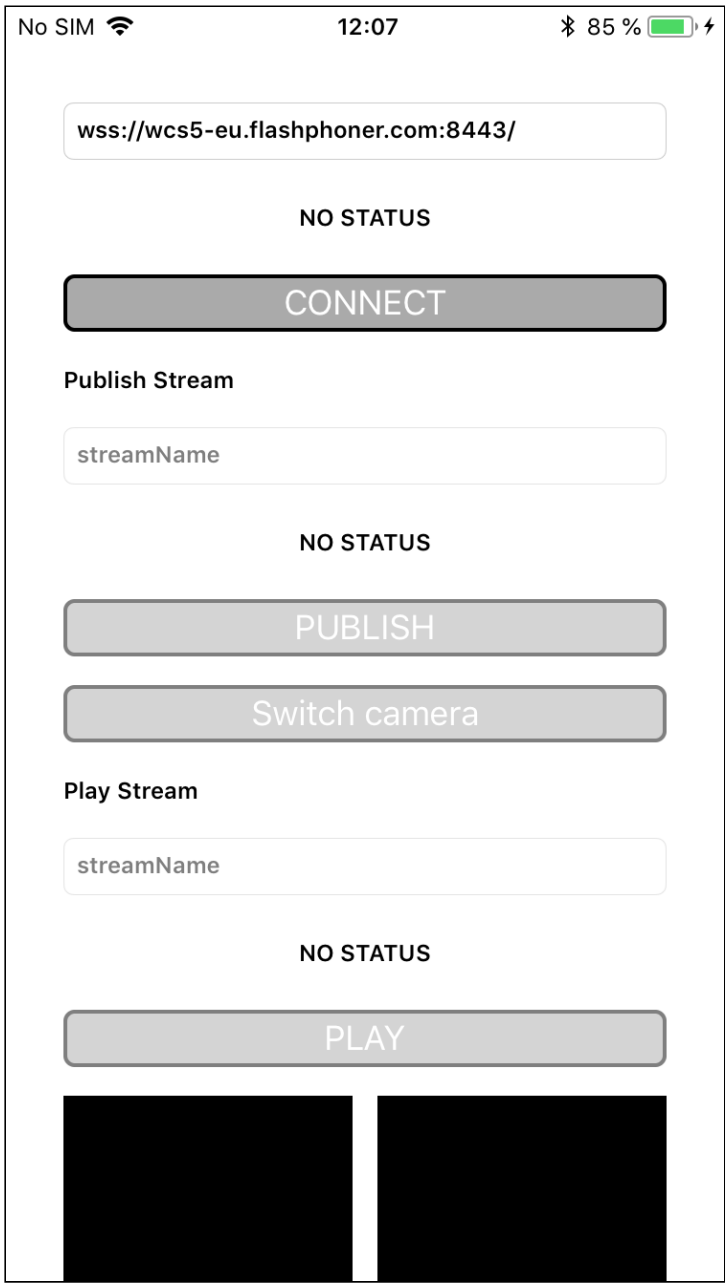
7. View application logs

After successful deployment and launch, the debug information is displayed in the lower part. This means, the Media Devices example has been correctly installed to iPhone or iPad and is running.



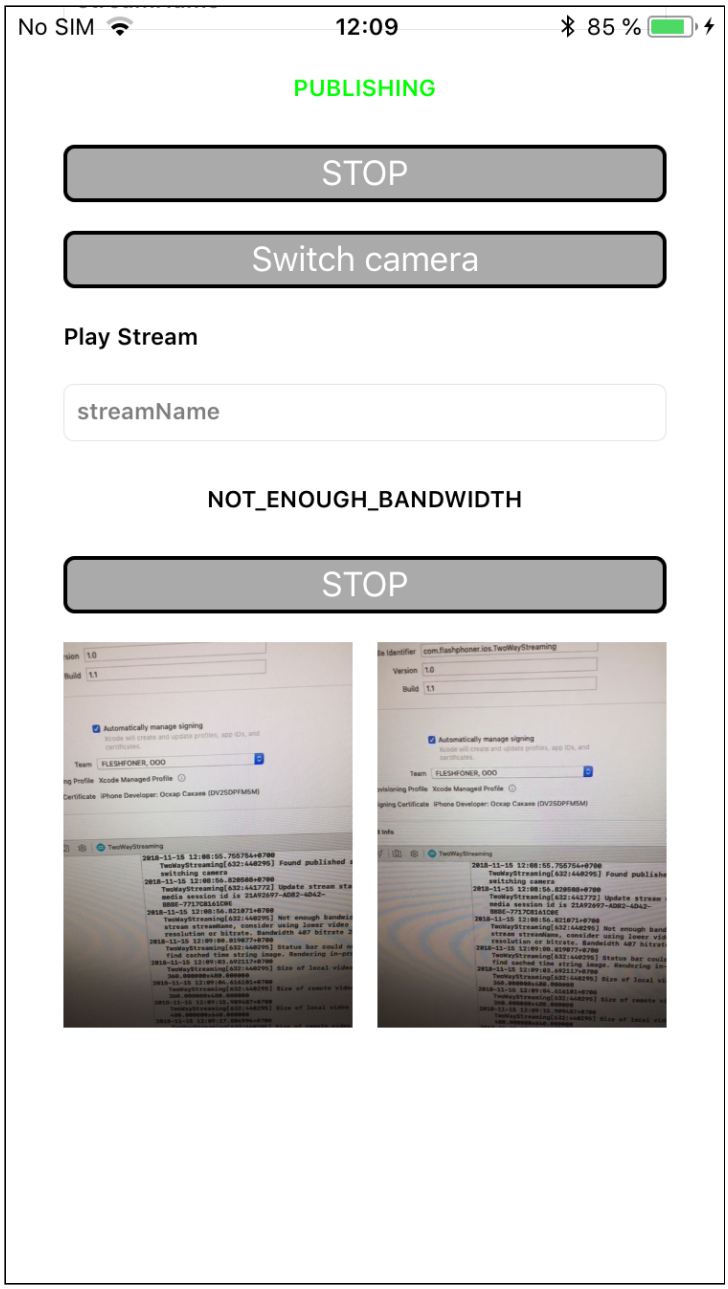
8. Application is started

On iPhone, you should see the interface of the application you can start testing using the WCS server



9. Test streaming

Connect to the server and send a video stream from the web camera to the iPhone.



So, we have built `Two Way Streaming` example on Mac OS Mojave using Xcode 10.1 from the source code using the iOS SDK (FPWCSApi2.framework) and executed this example on iPhone 6. The example demonstrated successful streaming of a video through Web Call Server 5.