Easy StoreKit for iOS

An easy to integrate, extensible plugin for StoreKit (In-App Purchase) integration in Unity3D

Document History

Date	Author	Version
23 August 2013	Preet Kamal Singh Minhas	Initial Release

Contents

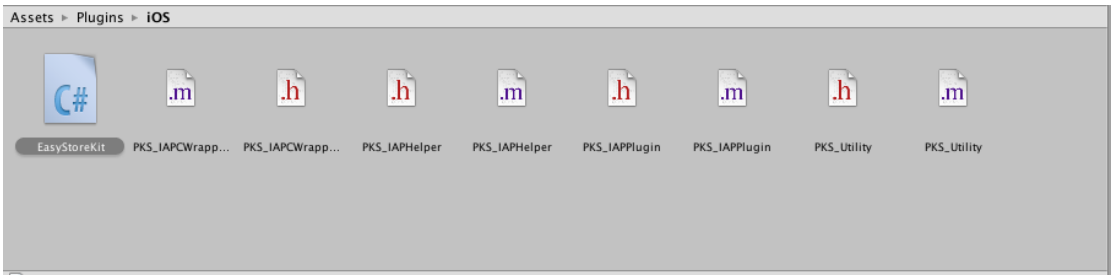
Introduction

Integrating In-App Purchases in Unity3D can be a complicated process. Easy StoreKit aims to simplify this process by providing an easy to use API and an easy to understand plugin design. Easy StoreKit comes with full source code so that advanced users can easily modify the Objective-C/C code and tailor the plugin to work as per their needs.
Easy StoreKit handles all of the heavy lifting associated with In-App Purchases. However, this plugin cannot handle the required iTunesConnect setup process. Before using this plugin, you must set up a bundle identifier for your game and configure your app with In App Purchase identifiers. Please find below links to some wonderful guides and resources prepared by Apple:

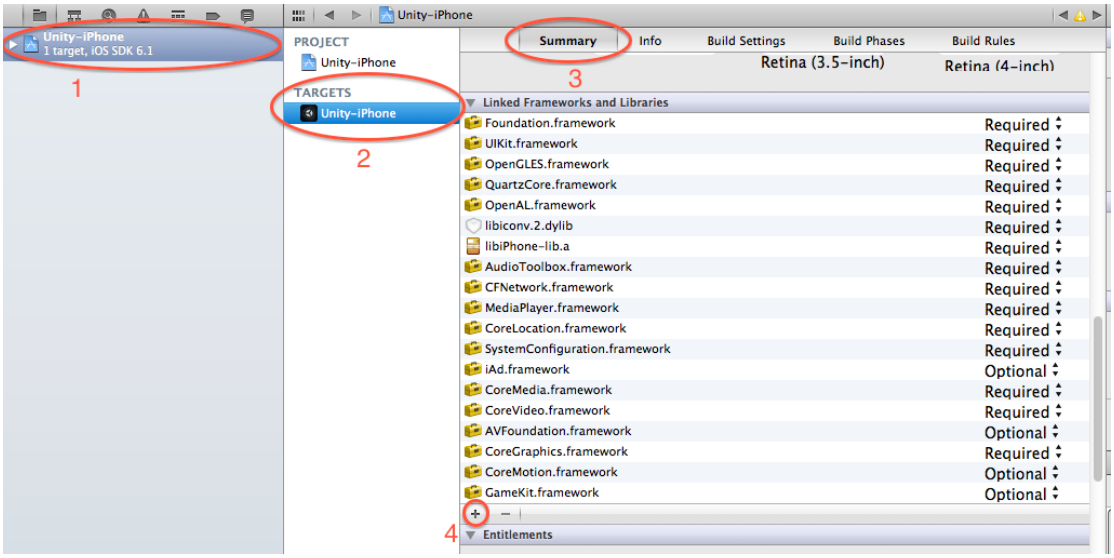
1. Apple Technical Note TN2259
2. In-App Purchase Programming Guide

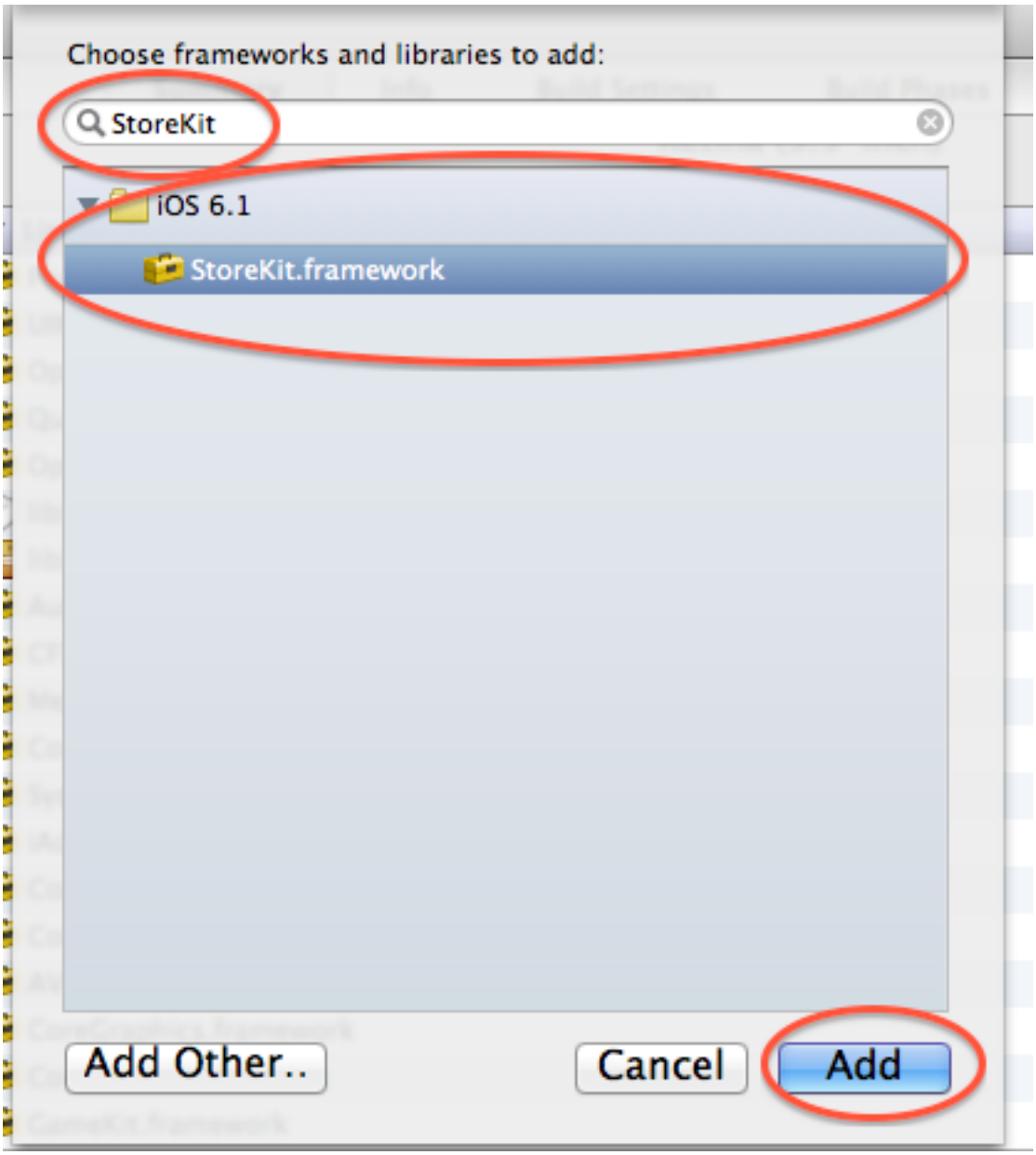
Integrating Easy StoreKit with your Unity3D project

1. Once you have imported the Easy StoreKit package into your project, you must ensure that Assets->Plugins->iOS folder contains the files listed in the screenshot below:



2. It is mandatory that your scene has a GameObject with the EasyStoreKit.cs script attached to it. This script receives all the callbacks from the native code.
3. **(One time step only)** Build your project and then add the StoreKit.framework to your generated Xcode project.


Unity-iPhone
1 target, iOS SDK 6.1
1
PROJECT
Unity-iPhone
TARGETS
Unity-iPhone
2
Summary
Info
Build Settings
Build Phases
Build Rules
3
Retina (3.5-inch)
Retina (4-inch)
Linked Frameworks and Libraries
Foundation.framework Required
UIKit.framework Required
OpenGLES.framework Required
QuartzCore.framework Required
OpenAL.framework Required
libiconv.2.dylib Required
libiPhone-lib.a Required
AudioToolbox.framework Required
CFNetwork.framework Required
MediaPlayer.framework Required
CoreLocation.framework Required
SystemConfiguration.framework Required
iAd.framework Optional
CoreMedia.framework Required
CoreVideo.framework Required
AVFoundation.framework Optional
CoreGraphics.framework Required
CoreMotion.framework Optional
GameKit.framework Optional
4
Entitlements


Choose frameworks and libraries to add:
StoreKit
iOS 6.1
StoreKit.framework
Add Other..
Cancel
Add

4. You are now ready to use Easy StoreKit!

Using Easy StoreKit

1. The EasyStoreKit.cs script must be attached to any one GameObject in the scene.
2. Initialize StoreKit by calling
   EasyStoreKit.AssignIdentifiers(string[] productIdentifiers);
   This method must be called only once in your scene.
3. Configure the event handlers. StoreKit is an asynchronous API. Hence, the various callbacks are raised as events by the Easy StoreKit plugin. Refer Easy StoreKit events.
4. Verify whether the user is allowed to make payments by calling *EasyStoreKit.CanMakePayments();* This method returns a boolean value to indicate whether the user is allowed to make payments or not.
5. Load the products using
   EasyStoreKit.LoadProducts();
   Once the products have been loaded, the *productsLoadedEvent* will be raised.
6. Buy a product by calling
   EasyStoreKit.BuyProductWithIdentifier(string productIdentifier, int quantity);
   This method will return true/false to indicate whether a valid product identifier had been supplied.
   Based on the transaction status of the purchase, any of the following events might be called:
   a) transactionPurchasedEvent
   b) transactionFailedEvent
   c) transactionCancelledEvent
   You must provide the relevant content to the user when the t*ransactionPurchasedEvent* is called. Also, in case of non-consumable products, it is recommended to save the purchased state of this identifier for later use.
7. To restore any previously purchased non-consumable products, you can call
   EasyStoreKit.RestoreProducts();
   The *transactionRestoredEvent* is called for every restored transaction.
   If the restore process completes successfully, *restoreCompletedEvent* is called. Otherwise, the *restoreFailedEvent* is called.

Easy StoreKit exposed methods

//Initializes the StoreKit using the provided identifiers
public static void AssignIdentifiers(string[] identifiers)

//Checks whether the user is allowed to make payments

public static bool CanMakePayments();

//Loads the products from the App Store
public static void LoadProducts();

//Buy the product identified by the identifier and in the quantity specified. Returns true if a valid product identifier is supplied as an argument and false otherwise.
public static bool BuyProductWithIdentifier(string identifier, int quantity);

//Restores already purchased non-consumable items
public static void RestoreProducts();

Easy StoreKit events

//The delegate definitions
public delegate void ProductsLoadedEventHandler(StoreKitProduct[] products);
public delegate void TransactionPurchasedEventHandler(string productIdentifier);
public delegate void TransactionFailedEventHandler(string productIdentifier,string errorMessage);
public delegate void TransactionRestoredEventHandler(string productIdentifier);
public delegate void TransactionCancelledEventHandler(string productIdentifier);
public delegate void RestoreFailedEventHandler(string errorMessage);
public delegate void RestoreCompletedEventHandler();

//Events
//Called when the products have been loaded
public static event ProductsLoadedEventHandler productsLoadedEvent;
//Called when the transaction has been successfully purchased
public static event TransactionPurchasedEventHandler transactionPurchasedEvent;
//Called when the transaction has failed
public static event TransactionFailedEventHandler transactionFailedEvent;
//Called when the transaction has been cancelled by the user
public static event TransactionCancelledEventHandler transactionCancelledEvent;
//Called when any product is restored
public static event TransactionRestoredEventHandler transactionRestoredEvent;
//Called when the restore process is complete
public static event RestoreCompletedEventHandler restoreCompletedEvent;
//Called when the restore process has failed
public static event RestoreFailedEventHandler restoreFailedEvent;

Sample method for configuring events

```
private function ConfigureStoreKitEvents() {
        EasyStoreKit.productsLoadedEvent += ProductsLoaded;
        EasyStoreKit.transactionPurchasedEvent += TransactionPurchased;
        EasyStoreKit.transactionFailedEvent += TransactionFailed;
        EasyStoreKit.transactionRestoredEvent += TransactionRestored;
        EasyStoreKit.transactionCancelledEvent += TransactionCancelled;
        EasyStoreKit.restoreCompletedEvent += RestoreCompleted;
        EasyStoreKit.restoreFailedEvent += RestoreFailed;
}


function ProductsLoaded(products : StoreKitProduct[]) {
        //refresh the UI
}

function TransactionPurchased(productIdentifier : String) {
        //Unlock feature based on the identifier
}

function TransactionFailed(productIdentifier : String, errorMessage : String) {
        //display the error message to the user
}

function TransactionRestored(productIdentifier : String) {
        //Unlock feature based on the identifier restored.
}

function TransactionCancelled(productIdentifier : String) {
        //Remove any activity indicators as the user has cancelled the transaction
        //Do not display any message to the user
}

function RestoreCompleted() {
        //change ui state
}

function RestoreFailed(errorMessage : String) {
        //change ui state and display error message
}
```

Advanced

Plugin Architecture

PKS_IAPCWrapper : C Wrapper over the Objective-C methods
PKS_IAPPlugin : Methods to expose StoreKit functionality as a plugin
PKS_IAPHelper : Contains the implementation for iOS StoreKit
PKS_Utility : Utility methods to convert char* to NSString* and vice versa.

Implementing server side receipt verification

Provide an implementation for the method
-(BOOL) verifyTransaction:(SKPaymentTransaction)transaction* in
PKS_IAPHelper.m

Suggestions/Queries?

Please write in to mobile@pksarena.com