Interaction Design for Emotional Electronic Device

Han JiaQi
Email: hanjiaqileon@gmail.com
Video: https://www.youtube.com/user/hanjiaqileon
Drop Box: https://www.dropbox.com/sh/3myjaig8gxwk8k9/AAAkwI5wF5DSw8IPUpY_4Ca
Air for IOS: http://sdrv.ms/1fVe3h4
AIRKinect: http://sdrv.ms/1gxed1w
About Me
Han JiaQi (韩嘉祺)(Hanleon)

Shanghai

China

Dongseo University

IAI Lab final semester

cold plus seven 寒+7
Han JiaQi (韩嘉祺)(Hanleon)
cold plus seven 寒+7

Undergraduate:  Multi Media

Postgraduate:  Visual Contents
Flow Chart

- Adobe Flash
- Application for iOS
- Kinect
- Arduino
- Leap Motion
- Mini Car
- Capture University work
- Research Direction
Adobe Flash
Application
Music Light
Flow Chart

- Apply for Apple Developer ID
- Setting certificate
- Create “P12” and “Prov” files
- Create Air for iOS file in Flash
- Air for iOS publish setting
- Publish “app” file and Install
• Apply for Apple Developer ID

• Register Apple Developer ID

$99

https://developer.apple.com
• Open certificate interface
Certificates, Identifiers & Profiles

Manage your certificates, App IDs, devices, and provisioning profiles.
• Setting certificate
What type of certificate do you need?

Development

- **iOS App Development**
  Sign development versions of your iOS app.

- **Apple Push Notification service SSL (Sandbox)**
  Establish connectivity between your notification server and the Apple Push Notification service sandbox environment. A separate certificate is required for each app you develop.

[Continue]
Generate your certificate.

With the creation of your CSR, Keychain Access simultaneously generated a public and private key pair. Your private key is stored on your Mac in the login Keychain by default and can be viewed in the Keychain Access application under the "Keys" category. Your requested certificate will be the public half of your key pair.

Upload CSR file.
Select .certSigningRequest file saved on your Mac.
• Create CSR file
• Upload CSR file

Certificates, Identifiers & Profiles

iOS Apps

Certificates
- All
- Pending
- Development
- Production

Identifiers
- App IDs
- Pass Type IDs
- Website Push IDs

Devices
- All

Provisioning Profiles
- All
- Development
- Distribution

Add iOS Certificate

Select Type  Request  Generate  Download

Generate your certificate.

With the creation of your CSR, Keychain Access simultaneously generated a public and private key pair. Your private key is stored on your Mac in the login Keychain by default and can be viewed in the Keychain Access application under the "Keys" category. Your requested certificate will be the public half of your key pair.

Upload CSR file.
Select .certSigningRequest file saved on your Mac.

Choose File...  CertificateSigningRequest.certSigningRequest
- Download certificate

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Han JiaQi</td>
<td>iOS Development</td>
<td>Jan 27, 2014</td>
</tr>
</tbody>
</table>
• Export P12 file
• Setting P12 password
• Get P12 file
<table>
<thead>
<tr>
<th>Name</th>
<th>ID</th>
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</thead>
<tbody>
<tr>
<td>Flash Developer ID</td>
<td>com.hanjiqi.hanleon</td>
</tr>
<tr>
<td>gu</td>
<td>com.domainname.gu</td>
</tr>
<tr>
<td>hanleon</td>
<td>com.domainname.hanleon</td>
</tr>
<tr>
<td>Hanleon first App</td>
<td>com.domainname.hanleonapp</td>
</tr>
<tr>
<td>Hanleon Multimedia All Design</td>
<td>com.domainname.multimediaalldesign</td>
</tr>
<tr>
<td>Hanleon Second App</td>
<td>com.domainname.hanleonseapp</td>
</tr>
<tr>
<td>lookedu Apps</td>
<td>com.markus.lookedu</td>
</tr>
<tr>
<td>md</td>
<td>com.domainname.md</td>
</tr>
<tr>
<td>Miao Pu</td>
<td>com.miaopu.magicalpad</td>
</tr>
<tr>
<td>nnd</td>
<td>com.domainname.nnd</td>
</tr>
<tr>
<td>Pro Jin</td>
<td>com.domainname.projin</td>
</tr>
<tr>
<td>Pro Kiljag</td>
<td>com.domainname.kiljag</td>
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</table>
• Create your devices

<table>
<thead>
<tr>
<th>Name</th>
<th>UDID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fu Jia</td>
<td>a21d34de1563456356456</td>
</tr>
<tr>
<td>Hanleon's mini2</td>
<td>632143456456456456456</td>
</tr>
<tr>
<td>Hua IP4</td>
<td>6742434567676767676767</td>
</tr>
<tr>
<td>IAI-Din의 iPad</td>
<td>6456789012345678901234</td>
</tr>
<tr>
<td>LCF iphone 4s</td>
<td>67456789012345678901234</td>
</tr>
<tr>
<td>Li SiLu</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>Prof LBG iPad</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>YF mini</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>Yun iphone5</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>dr</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>kim iPad</td>
<td>567890123456789012345678</td>
</tr>
<tr>
<td>marcus iPad</td>
<td>567890123456789012345678</td>
</tr>
</tbody>
</table>

Devices <= 100
• Create PROV file

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Flash Developer PROV</td>
<td>Development</td>
<td>Active</td>
</tr>
<tr>
<td>Hanleon first Develop Pro</td>
<td>Development</td>
<td>Expired</td>
</tr>
<tr>
<td>iOS Team Provisioning Profile: *</td>
<td>Development</td>
<td>Active (Managed by Xcode)</td>
</tr>
<tr>
<td>lookedu PROFILE</td>
<td>Development</td>
<td>Expired</td>
</tr>
<tr>
<td>md</td>
<td>Development</td>
<td>Expired</td>
</tr>
<tr>
<td>Miao Pu Dev</td>
<td>Development</td>
<td>Active</td>
</tr>
<tr>
<td>ningshujia</td>
<td>Development</td>
<td>Expired</td>
</tr>
<tr>
<td>nd</td>
<td>Development</td>
<td>Active</td>
</tr>
<tr>
<td>Unity3d first PROV</td>
<td>Development</td>
<td>Active</td>
</tr>
</tbody>
</table>
What type of provisioning profile do you need?

Development

- iOS App Development
  Create a provisioning profile to install development apps on test devices.

Distribution

- App Store
  Create a distribution provisioning profile to submit your app to the App Store.

- Ad Hoc
Select App ID.

If you plan to use services such as Game Center, In-App Purchase, and Push Notifications, or want a Bundle ID unique to a single app, use an explicit App ID. If you want to create one provisioning profile for multiple apps or don't need a specific Bundle ID, select a wildcard App ID. Wildcard App IDs use an asterisk (*) as the last digit in the Bundle ID field. Please note that iOS App IDs and Mac App IDs cannot be used interchangeably.

App ID: Flash Developer ID (H7UY332XL8.com.hanjiqi.hanleon)
Select certificates.

Select the certificates you wish to include in this provisioning profile. To use this profile to install an app, the certificate the app was signed with must be included.

- [ ] Select All
- [x] Han JiaQi (iOS Development)
Select devices.

Select the devices you wish to include in this provisioning profile. To install an app signed with this profile on a device, the device must be included.

- Fu Jia
- Hanleon's mini2
- Hua IP4
- IAI-Din? iPad
- LCF iphone 4s
- Li SiLu
Name this profile and generate.

The name you provide will be used to identify the profile in the portal. You cannot use special characters such as @, &, *, , " for your profile name.

Profile Name: 

Type: Development

App ID: Flash Developer ID (H7UY332XL8.com.hanjiaqi.hanleon)

Certificates: 1 Included

Devices: 18 Included
### Download PROV file

#### iOS Provisioning Profiles (Development)

<table>
<thead>
<tr>
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<th>Status</th>
</tr>
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<tbody>
<tr>
<td>Flash Developer PROV</td>
<td>Development</td>
<td>Active</td>
</tr>
</tbody>
</table>

- **Name**: Flash Developer PROV
- **Type**: Development
- **App ID**: Flash Developer ID (com.hanjiaqi.hanleon)
- **Certificates**: 1 total
- **Devices**: 18 total
- **Enabled Services**: In-App Purchase, Game Center
- **Expires**: Dec 23, 2014
- **Status**: Active

#### Provisioning Profiles

<table>
<thead>
<tr>
<th>Name</th>
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</tr>
<tr>
<td>lookedu PROFILE</td>
<td>Development</td>
<td>Expired</td>
</tr>
</tbody>
</table>
• Get 2 important files for publish in Flash
• Publish Setting in Flash Pro CC
• Install Application into IOS
- Upload your Application

https://itunesconnect.apple.com/
Kinect
1. Download Kinect SDK and Install

Kinect for Windows

2. Download Library

AIRKinect

http://as3nui.github.io/airkinect-2-core/

AIRKinect Extension is a Native Extension for use with Adobe AIR 3.0. AIRKinect allows AIR developers to tap into the rich experience of the Microsoft Kinect and push interactivity to a new level.

Authors

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- Ross Gerbasi (rgerbasi@gmail.com)
- Justin Imhof (justin@justinimhoff.com)

Documentation

View documentation online

Driver Installation

Before you can use the native extension in your AIR project, you will need to install the kinect drivers. You have several options, depending on your platform.
3. Setting in Flash Pro CC
Advanced ActionScript 3.0 Settings

Document class: [ ]

Export classes in frame: [ ]

Errors:
- [ ] Strict Mode
- [ ] Warnings Mode

Stage:
- [ ] Automatically declare stage instances

Dialect: [ ] ActionScript 3.0 (Recommended)

Source path

Library path

Config constants

SWC and ANE files or folders

- [ ] $(AppConfig)/ActionScript 3.0/libs
- [ ] airkinect-2-core-mssdk.ane - /Volumes/BOOTCAMP/Users/Ha

Runtime Shared Library Settings

Default linkage: [ ] Runtime shared library (RSL)

Preloader method: [ ] Preloader SWF

Preloader SWF: $(AppConfig)/ActionScript 3.0

[Cancel] [OK]
3. Write AS3.0 code into Flash

Flash CS6

1. Go the File > Actionscript settings.
2. On the Library Path tab, click on the "Browse to a Native Extension (ANE)" button (button to the right of the SWC button)
3. Choose the ane file you just downloaded.

IntelliJ IDEA

1. Right click on your module and choose "Open Module Settings".
2. Select the build configuration for your Module and open the Dependencies tab
3. Click on the plus (+) button on the bottom of that window and choose "New Library..."
4. Choose the ane file you just downloaded

Basic Usage

AIRKinect has a lot of built-in features. You can check some examples in our examples repository.

A quick example, showing the depth image would be something like this:

```javascript
private var depthBitmap:Bitmap;
private var device:Kinect;

public function Demo() {
    if (Kinect.isSupported()) {
        device = Kinect.getDevice();
        depthBitmap = new Bitmap();
        addChild(depthBitmap);
        device.addEventListener(CameraImageEvent.DEPTH_IMAGE_UPDATE, depthImageUpdateHandler);
        var settings:KinectSettings = new KinectSettings();
        settings.depthEnabled = true;
        device.start(settings);
    }
}

protected function depthImageUpdateHandler(event:CameraImageEvent):void {
    depthBitmap.bitmapData = event.imageData;
}
```
import com.as3mui.nativeExtensions.air.kinect.events.CameraImageEvent
import com.as3mui.nativeExtensions.air.kinect.Kinect;
import com.as3mui.nativeExtensions.air.kinect.KinectSettings

var depthBitmap:Bitmap;
var device:Kinect;

if (Kinect.isSupported()) {
    device = Kinect.getDevice();
    depthBitmap = new Bitmap();
    addChild(depthBitmap);
    device.addEventListener(CameraImageEvent.DEPTH_IMAGE_UPDATE, depthImageUpdateHandler);
    var settings:KinectSettings = new KinectSettings();
    settings.depthEnabled = true;
    device.start(settings);
}

function depthImageUpdateHandler(event: CameraImageEvent): void {
    depthBitmap.bitmapData = event.imageData;
}
1. Download Arduino and Driver

Arduino

http://www.arduino.cc

Arduino can sense the environment by receiving input from a variety of sensors and can affect its surroundings by controlling lights, motors, and other actuators.
1. Download Arduino and Driver

http://www.microduino.cc/
Leap Motion
Ink painting
Mini Car
Mini Car using Kinect and Arduino
Ciputra University work
Research Direction
Software & Hardware

Flash Professional
What is Interaction Design?
Flash Professional

AS3.0
JAVA
Kinect for windows SDK
AIRKienct-as3NUI

Arduino
Kinect
iPhone’s devices

Interesting
Interaction
Design
What is interaction design for emotional electronic device?
What is interaction design for EMOTIONAL electronic device?
In interaction design we focus on

- interesting
- easy of use
- interfaces
- useful
- effect
- emotion
emotion
emotion
emotion
emotion
emotion
1. H. KINELT & Arduino (Microbit) & Robo Nova & iPhone
S: Flash & Arduino & Edinburgh

2. Idea Flow chart.

- face (head)
- arm
- leg
- control face
- control gesture
Application - Electronic Pet Man

+ \[ \text{Heart} \]

Human Face

Chessboard Trick

\[ \text{Monitors} \]
Thanks