phonegap

By John 2012/07/06

Intro

- What's phonegap ?
- Getting start (Android)
- Make your own plugin
- Supports
- Reference

What is phonegap?

- An easier way to make mobile apps
- Build mobile using web-tech
- HTML for layout
- CSS and Image for rich look and feel
- Make your JavaScript do more

What is phonegap?

・Phonegap's app

OS) 是在寫網頁嗎？

OS) 好 low 啊

OS) 拜托不要用這個

What is phonegap?

OS) 好像有好一點點了
OS) 這也是 phonegap ?

What is phonegap?

Easymap 真是中心一大資産～好東西不繼續用真可惜～～

What is phonegap?

A FPS Game !?

What is phonegap?

HTML5 Game (OS：看起來又不怎好玩～)
GAME LINK

What is phonegap?

弄上手機了 !!!!!???

What is phonegap?

How To ?

So...HTM5 Angry Bird !?

?

- http://chrome.angrybirds.com/

What is phonegap?

PhoneGap 宗旨： Write once , and deploy it to any mobile device

HomePage : http://phonegap.com/

Now Release : 1.9.0

License : Apache License V2.0

It will always remain **free** and **open source**
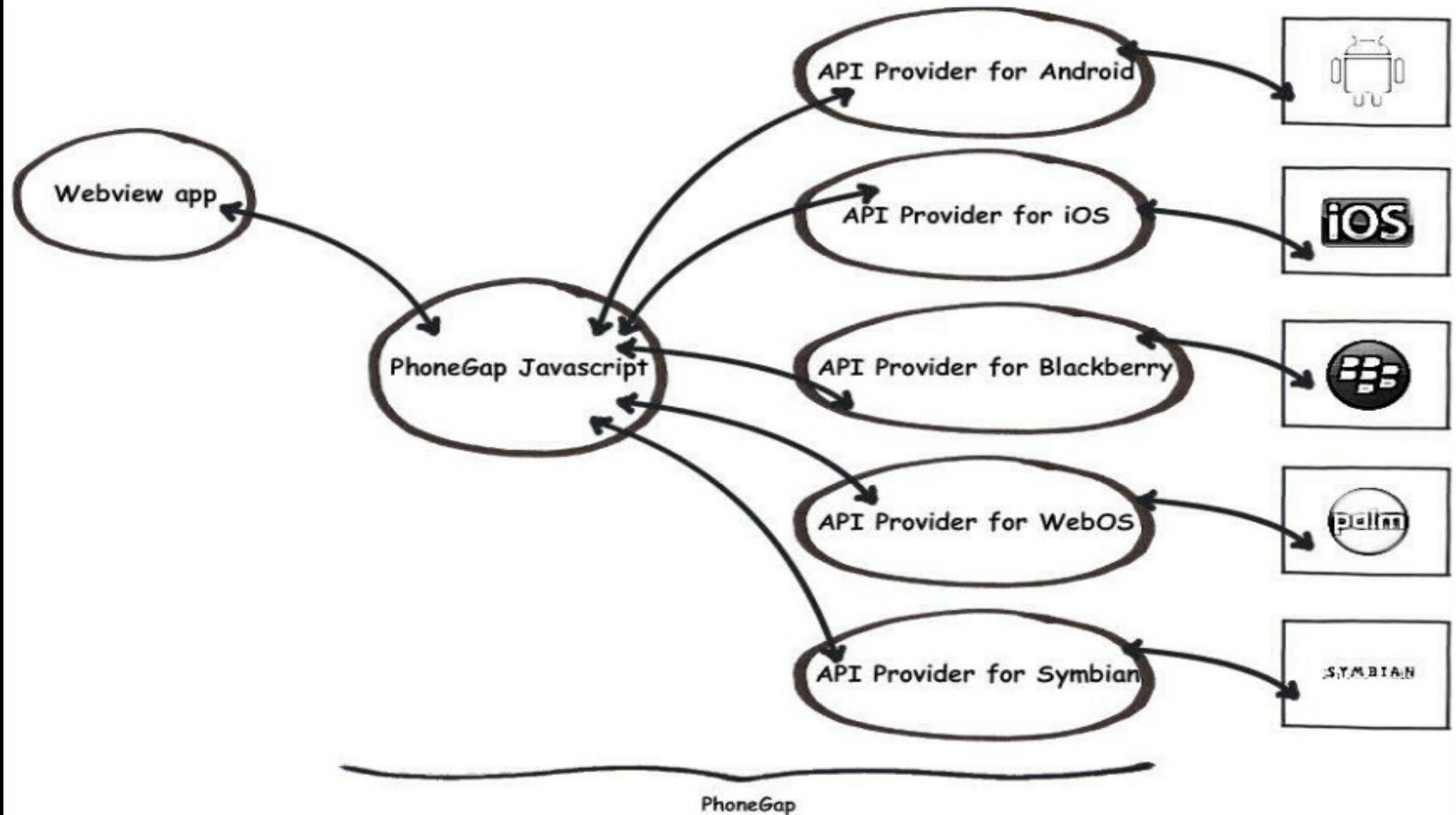under the Apache License.

Start Weight : 1~1.5MB (Android)

API Docs : http://docs.phonegap.com/en/1.9.0/index.html

PhoneGap is a standards-based, open-source development framework for building cross-platform mobile apps with HTML, CSS and JavaScript
for iPhone/iPad, Google Android, Windows Phone 7, Palm, Symbian, BlackBerry and more.
Write a PhoneGap app once with HTML and Javascript and deploy it to any mobile device without losing features of a native app.

What is phonegap?

Concepts in PhoneGap

Webview app → PhoneGap Javascript

API Provider for Android
API Provider for iOS
API Provider for Blackberry
API Provider for WebOS
API Provider for Symbian

PhoneGap

Now Supports

	iOS iPhone / iPhone 3G	iOS iPhone 3GS and newer	Android	OS 5.x	OS 6.0+	WebOS	WP7	Symbian	Bada
ACCELEROMETER	✓	✓	✓	✓	✓	✓	✓	✓	✓
CAMERA	✓	✓	✓	✓	✓	✓	✓	✓	✓
COMPASS	✖	✓	✓	✖	✖	✖	✓	✖	✓
CONTACTS	✓	✓	✓	✓	✓	✖	✓	✓	✓
FILE	✓	✓	✓	✓	✓	✖	✓	✖	✖
GEOLOCATION	✓	✓	✓	✓	✓	✓	✓	✓	✓
MEDIA	✓	✓	✓	✖	✖	✖	✓	✖	✖
NETWORK	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (ALERT)	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (SOUND)	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (VIBRATION)	✓	✓	✓	✓	✓	✓	✓	✓	✓
STORAGE	✓	✓	✓	✓	✓	✓	✓	✓	✖

Getting Start (Android) -1

- 參考
- 編輯器： **Eclipse 3.4+**
  - 請平凡的建置 **Android** 的開發環境
  - **(AVD 、 Android manager…)**
- 新增或使用舊專案
  - 建立二個目錄
    - **/libs**
    - **/assets/**www
- **Download phonegap && unzip**
- **Copy cordova-1.9.0.js to assets/**www
- **Copy cordova-1.9.0.jar to /libs**
- **Copy xml to /res**

Getting Start (Android) -2

- 調整 **AndroidManifest.xml**

  <uses-permission android:name="android.permission.VIBRATE" />
  <uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
  <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
  ....

- 設定 **assets/www/index.html**

- **<!DOCTYPE HTML>**
  <html>
  <head>
  <title>Cordova</title>
  <script type="text/javascript" charset="utf-8"
  **   src="cordova-1.9.0.js"></script>**
  </head>
  <body>
  <h1>Hello World, 世界你好 </h1>
  </body>
  </html>

Getting Start (Android) -3

- **Java Build Path 要指名加掛　cordova**

結果…

Hello World, 世界你好
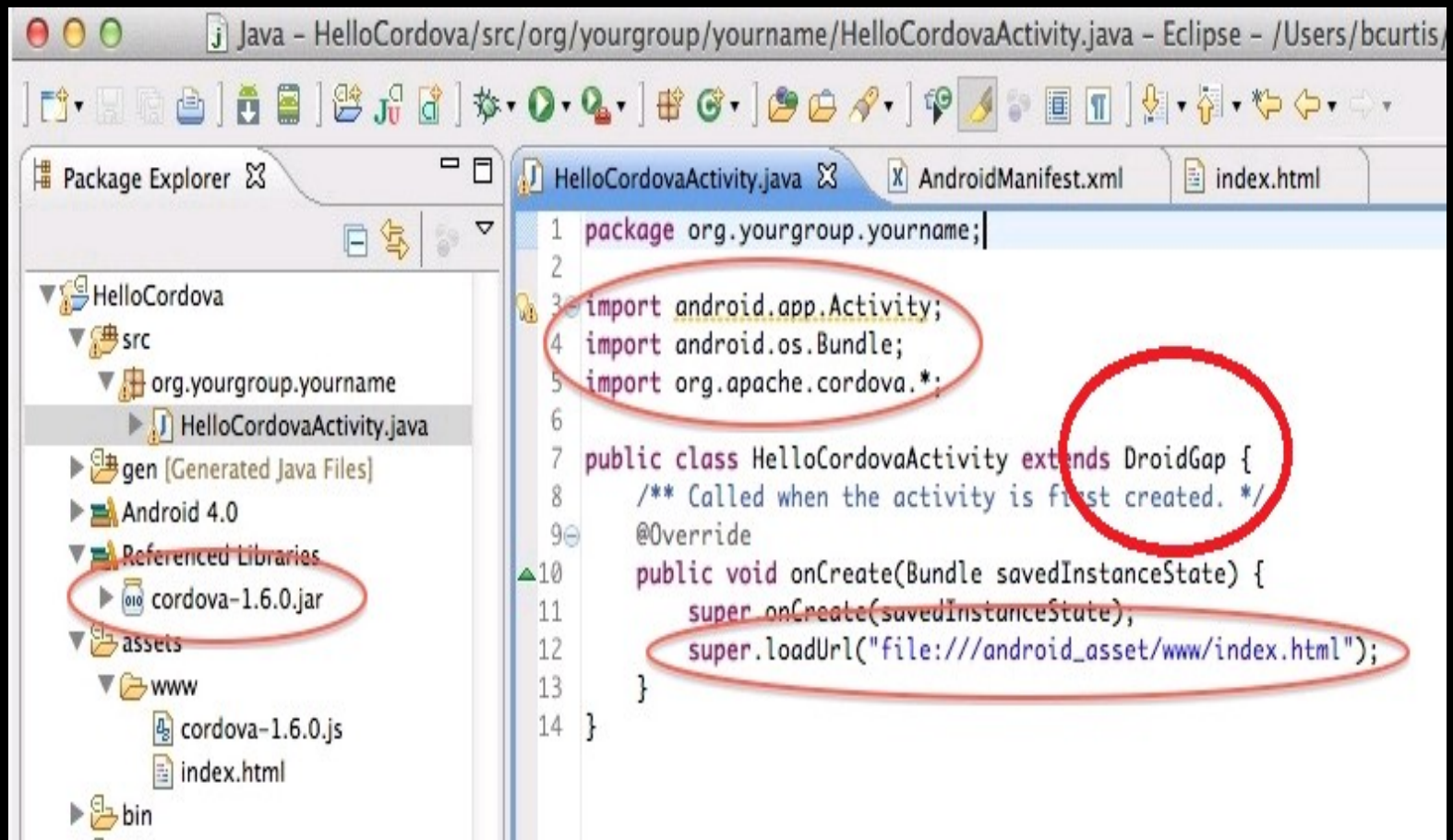
於是～～～
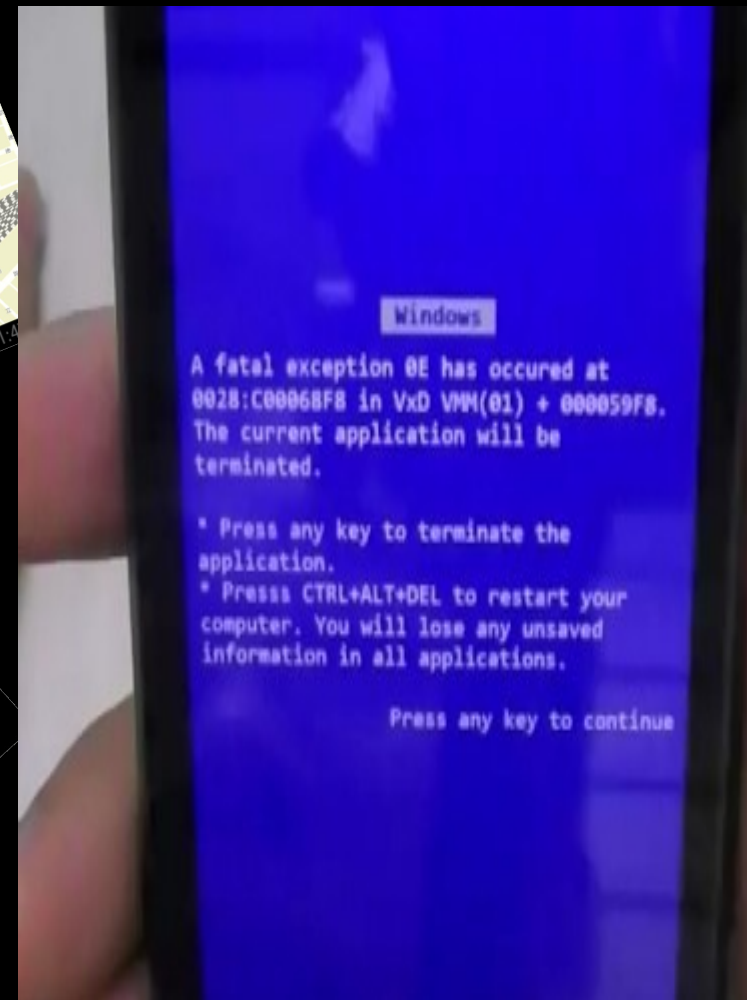
創意與感受
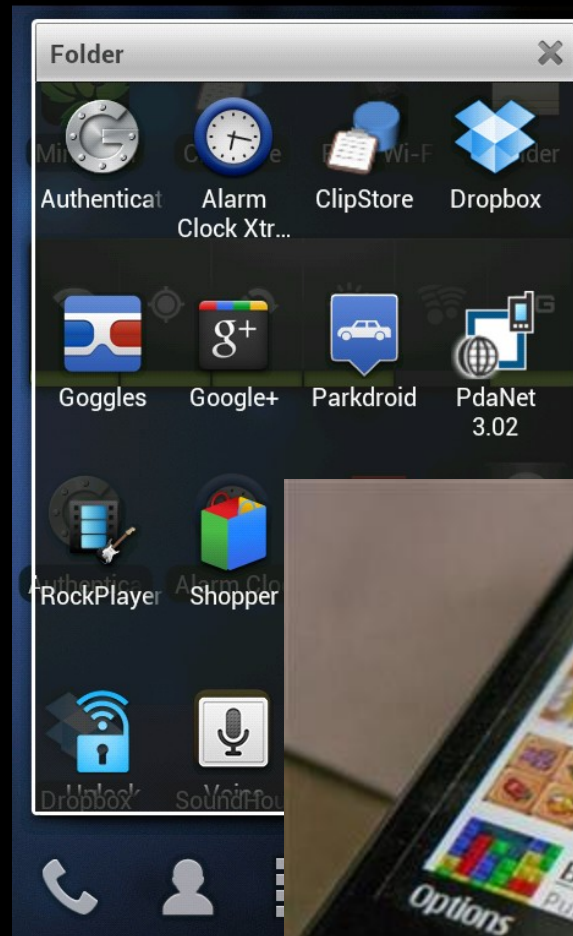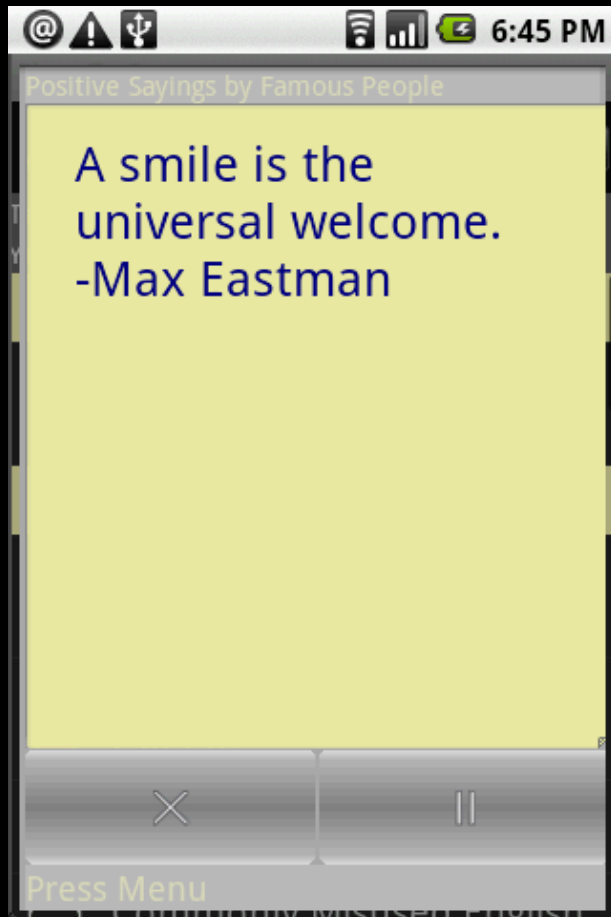
Docs

API Reference

API Reference

Accelerometer
Tap into the device's motion sensor.

Camera
Capture a photo using the device's camera.

Capture
Capture media files using device's media capture applications.

Compass
Obtain the direction that the device is pointing.

Connection
Quickly check the network state, and cellular network information.

Contacts
Work with the devices contact database.

Device
Gather device specific information.

Events
Hook into native events through JavaScript.

File
Hook into native file system through JavaScript.

Geolocation
Make your application location aware.

Media
Record and play back audio files.

Notification
Visual, audible, and tactile device notifications.

Storage
Hook into the devices native storage options.

- **http://docs.phonegap.com/en/1.9.0/index.html**

Make your own plugin-1

試想之～

```
<script language="javascript">
    var SQL="SELECT * FROM `datas`";
    $("#output").html(dbArray(SQL));
</script>
</head>
<body>
    <div id="output"></div>
</body>
```

Make your own plugin-2

試想之～

<script language="javascript">

   var data_json=getJson('web_service');

   $("#name").html(data_json[0][' 姓名']);

</script>

</head>

<body>

   姓名： **<div id="name"></div>**

</body>

Make your own plugin-3

```
<script language="javascript">
      saveToDb("man_data",$("#datas"));
      upload("http….","#datas",function(data){
       showProcessBar(data.value);
      },function(err){
        alert(err.message();
      });
</script>
<form id="#datas">
姓名： <div id="name"></div>
電話： <div id="tel"></div>

  <input type="submit" value=" 送出"  >
</form>
```

Make your own plugin-4

Make your own plugin-4..

- **Maps to (From) SQLite**
- **Base64 string images**
- **ContentProvider**
- **Sync 、 Async Javascript Plugin**
- **Compass**
- **GPS**
- **File assets 、 sdcard**
- **Http upload 、 download**
- **……**

Make your own plugin-HowTo

- **1.** 寫 **native java** 接口

- **2.** 於 **plugin** 註冊該函式

- **3.** 於 **javascript** 登入使用函式

自編 plugin: Native Java Plugin

```java
public class helloWorld extends Plugin {
    public PluginResult execute(String action, JSONArray args, String callinglbackId) {
        //PluginResult
        try{
            if(action=="helloWorld"){
                String name = args.getString(0);
                // sendJavascript("alert('Hello, World!!!');
                PluginResult result = new PluginResult(PluginResult.Status.OK,"Hello World!!");
                return result;
            } catch(Exception e) {
                return new PluginResult(PluginResult.Status.INVALID_ACTION, "hello missing
    parameter!");
            }
        }
    }
    public boolean isSynch(String action) {
        return true;
    }
}
```

自編 plugin: 於 plugin 註冊該函式

- **res/xml/plugins.xml**

- *<plugin name="helloWorld"*
  value="com.phonegap.plugins.helloWorld.helloWorld"/>

自編 plugin: 於 jscript 註冊該函式

```
window.plugins.helloWorld. helloWorld(value,
  function(win){
    data=print_r(win,true);
  }
);
```

如此一來，就有自己定的函式可以使用了 ~
```
<script language="javascript">
  helloWorld();
</script>
```

自編 plugin: 於 jscript 註冊該函式

```
window.plugins.helloWorld. helloWorld(value,
  Var data="";
  function(win){
    data=win,true;
  }
  return data;
);
```

如此一來，就有自己定的函式可以使用了～
```
<script language="javascript">
  helloWorld();
  alert("test");
</script>
```

Supports

使用 **Html** 、 **javascript** 、 **css** 的支援:
有超級多的 **framework** 如 **jQuery** 、 **phpjs** 、 **extps…** 。

從古至今很多 **javascript** 特效, 且免費的。

可以自定 **javascript** 的 **plugin** 與後端 **JAVA** 、硬體溝通, 那
等同於你的介面幾乎可以作任何事, 如 **javascript** 開、關新
的 **activity** 、 檔案 **IO** 、資料庫連線、相機呼叫、指南針、
GPS 、各種資訊…
且 **java** 也可以直接 **sendJavascript("alert([json data]);");**
與 **webview** 溝通 **!!**
原本的 **webview : webview.load("javascript:…");**

Supports

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CONTACTS	✓	✓	✓	✓	✓	✖	✓	✓	✓
FILE	✓	✓	✓	✓	✓	✖	✓	✖	✖
GEOLOCATION	✓	✓	✓	✓	✓	✓	✓	✓	✓
MEDIA	✓	✓	✓	✖	✖	✖	✓	✖	✖
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NOTIFICATION (VIBRATION)	✓	✓	✓	✓	✓	✓	✓	✓	✓
STORAGE	✓	✓	✓	✓	✓	✓	✓	✓	✖

心得

PhoneGap 的優勢在於快速成型 **UI** 的調整。

將畫面以 **HTML** 編寫至裝置中，也方便與客戶討論。

速度仍輸 **Native code**，但同時考驗開發者熟悉程度。

Dreamweaver CS 5.5 已支援 **phonegap** 的開發了。

滑鼠與觸控事件的關係要非常熟悉，平移、雙指縮放、三指使用，也不成問題。

盡可能將預先載入的內容減少。

Reference

Nokia Stars

PhoneGap

EnyoJS

How to create HTML5 applications

Images From Google Search