

Accelerator Device API Guide Program

Outline

Accelerator guide program is a guide application for eGov Device API, using the mobile device API framework to be used as a tool and a reference when developing hybrid applications. It supports the inquiry of Accelerator related functions of mobile smart devices through JavaScript-based Accelerator DeviceAPI.

Also, it is comprised of a feature to send and inquire Accelerator information within the Device, in conjunction with eGovFramework based web server application.

Feature

In order to guide Accelerator features, this Guide Program provides **Acceleration information inquiry, save Acceleration information, Acceleration information list, Delete list** features.

For effective inquiry of changes to acceleration information, the information will be displayed in the form of changing 3D shape in addition to the notification window at the top. The 3D shape is generated through Three.js, an open source resource, and rotates in a direction that corresponds to the changes to the Device's acceleration information.

Assumptions

Category	Description
Local Device Environments	Xcode 6.3.2, PhoneGap 4.3.0
Server-side Developmental Environment	eGov Standard Framework Deveopment Environment 3.5
Works in sync with Mash up Open API	N/A
Test Device	iPhone4, iPhone6
Test Platform	iOS 7.1.2, iOS 8.3
Libraries Added	three.js library added for 3D UI visualiation

Restriction

Category	Description
Supported devices and platforms	A rotating image in shape of a compass for visualization of Compass information is provided. However, screen may appear cropped when viewed horizontally. Therefore, it is advisable to change settings to prevent auto coversion in horizontal view mode when running API Guide Program.

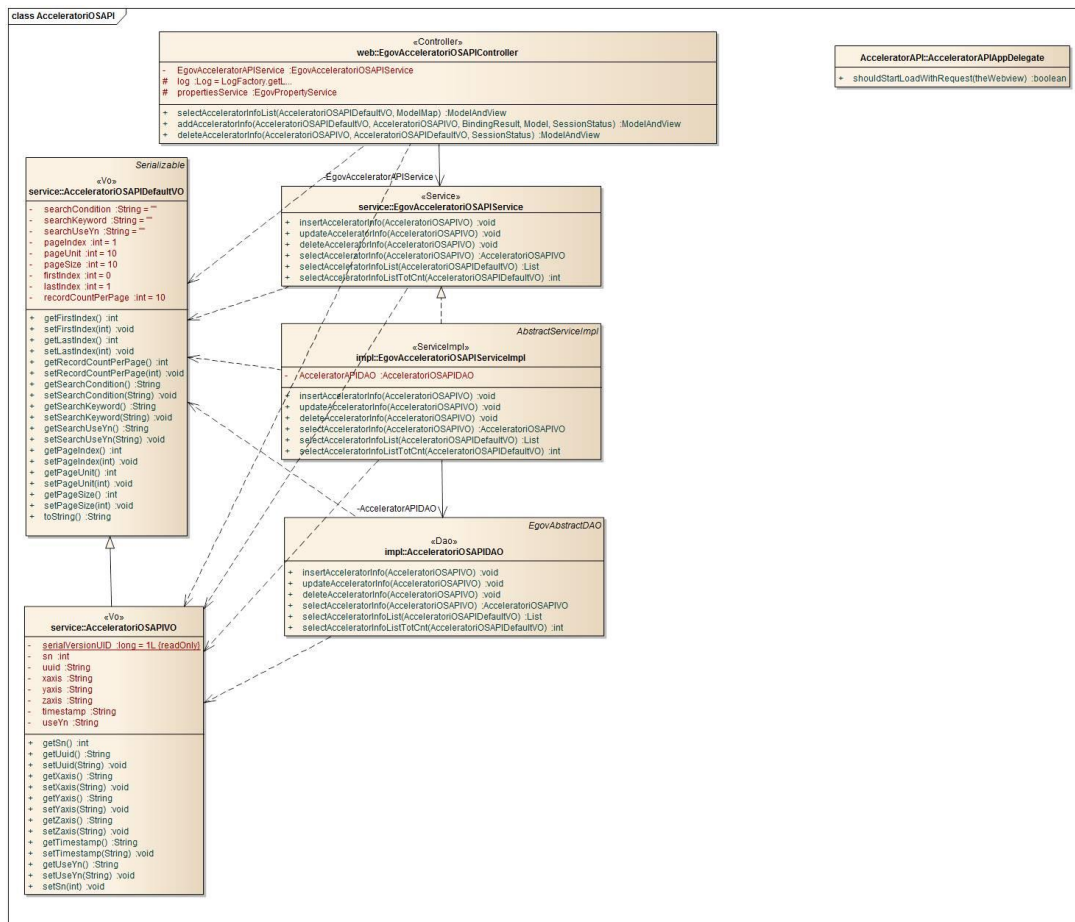
Using cross domain When using certain outside domains or its subdomains on PhoneGap, add such domains on <key>ExternalHosts</key> at Resource/Cordova.plist.

License N/A

Description

Accelerator DeviceAPI Guide Program is comprised of features that inquire the Device's accelerator information and sends/inquires the information from the inquiry to the web server application.

Class Diagram



Device Application

Source

Type	Title	Remark
CSS	www/css/egovframework/mbl/hyb/AcceleratorAPI.css	AcceleratorAPI Guide Program Core Cascading Style Sheets
IMAGE	www/images/egovframework/mbl/hyb/	AcceleratorAPI Guide Program main Image folder

JS	www/js/egovframework/mb1/hyb/AcceleratorAPI.js	AcceleratorAPI Guide Program main JavaScript
RES	AcceleratorAPIGuide_iOS_V1.9/Resources/	AcceleratorAPI Guide Program main Resource folder
PLIST	AcceleratorAPIGuide_iOS_V1.9/AcceleratorAPIGuide_iOS_V1.9-Info.plist	iOS application settings file
HTML	www/AcceleratorAPI.html	AcceleratorAPI main page
HTML	www/license.html	AcceleratorAPI License page
HTML	www/overview.html	AcceleratorAPI feature description page

APIs Used

accelerator.getPicture

- Loads picture shot or in album
- Loads images encoded in base64 or in album

```

navigator.accelerometer.getCurrentAcceleration(accelerometerSuccess, accelerometerError);
function onSuccess(acceleration) {
    alert('Acceleration X: ' + acceleration.x + '\n' +
        'Acceleration Y: ' + acceleration.y + '\n' +
        'Acceleration Z: ' + acceleration.z + '\n' +
        'Timestamp: ' + acceleration.timestamp + '\n');
};
acceleratorOption

```

Option	Description	Remark
--------	-------------	--------

frequency	Frequency of inquiry for acceleration information	
-----------	---	--

Server Application

Source

Type	Title	Remark
Controller	egovframework.hyb.ios.acl.web.EgovAcceleratorAndroidAPIController.java	Controller Class for AcceleratorAPI Guide Program
Service	egovframework.hyb.ios.acl.service.EgovAcceleratorAndroidAPIService.java	Service Class for AcceleratorAPI Guide Program
ServiceImpl	egovframework.hyb.ios.acl.service.impl.EgovAcceleratorAndroidAPIServiceImpl.java	ServiceImpl Class for AcceleratorAPI Guide Program
VO	egovframework.hyb.ios.acl.service.AcceleratorAndroidAPIDefaultVO.java	VO Class for AcceleratorAPI Guide Program
VO	egovframework.hyb.ios.acl.service.AcceleratorAndroidAPIFileVO.java	VO Class for AcceleratorAPI Guide Program

VO	egovframework.hyb.ios.acl.service.AcceleratorAndroidAPIVO.java	VO Class for AcceleratorAPI Guide Program
VO	egovframework.hyb.ios.acl.service.AcceleratorAndroidAPIXMLVO.java	AcceleratorAPI Guide Program XML related VO Class
DAO	egovframework.hyb.ios.acl.service.impl.AcceleratorAndroidAPIDAO.java	DAO Class for AcceleratorAPI Guide Program
Util	egovframework.hyb.ios.acl.service.impl.EgovAcceleratorAndroidFileMngUtil.java	Util Class for AcceleratorAPI Guide Program
QUERY XML	resources/egovframework/sqlmap/hyb/ios/acl/EgovAcceleratorAndroidAPIGuide_XXX_mysql.xml	QUERY XML for AcceleratorAPI Guide Program
Idgen XML	resources/egovframework/spring/com/context-idgen.xml	IdGen XML for AcceleratorAPI Guide Program

Related Tables

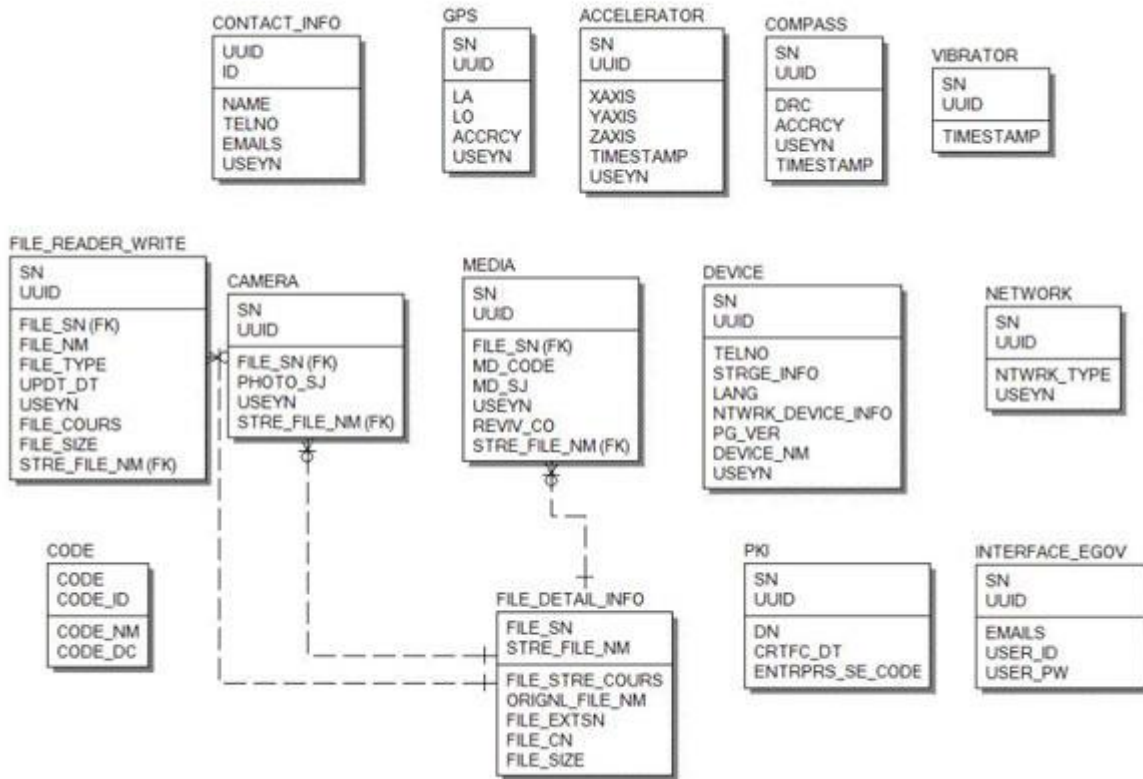
Title	Table	Remark
accelerator	ACCELERATOR	Manages acceleration information

Table Definition

- ACCELERATOR

No	Column ID	Title of Column	Type	Length	Null
1	SN	Serial No.	NUMERIC	6	NotNull
2	UUID	UUID	VARCHAR	50	NotNull
3	XAXIS	X-axis	VARCHAR	20	Null
4	YAXIS	Y-axis	VARCHAR	20	Null
5	ZAXIS	Z-axis	VARCHAR	20	Null
6	TIMESTAMP	timestamp	VARCHAR	20	Null
7	USEYN	Activation	CHAR	1	Null

ERD



Configuration Settings

Device properties required for use of Accelerator-related functions of Accelerator Device API Guide Program are as follows:

Device Application

Cordova.plist

```
<featurename="Accelerometer">
<paramname="ios-package" value="CDVAccelerometer"/>
</feature>
<featurename="InterfaceAPI">
<paramname="ios-package" value="EgovInterface"/>
</feature>
```

[Project_Name]/eGovModule/EGovComModule.h

```
#define kSERVER_URL    @"Suerver_URL"
Server Application
```

resource/egovframework/sqlmap/sql-map-config_[DB_NAME].xml

```
<sqlMapresource="egovframework/sqlmap/hyb/ios/dvc/EgovAcceleratoriOSAPIGuide_SQL_[DB
NAME].xml"/>
```

Related features

Accelerator Device API Guide Program comprises **Acceleration Information Update** , **Storage of Acceleration Information out of Server**, **Acceleration Information List Update** and **Acceleration Information Removal**.

Inquiry for Acceleration Information

Business Logic

Device API calls the present acceleration information on the monitor, causing the figure circulating to the acceleration direction.

Related Code

Updates real-time accelerator information via JavaScript Code using Device API Accelerator function.

```
function fn_egov_update_Acceleration(accelInfo)
{
    xaxis = accelInfo.x;
    yaxis = accelInfo.y;
    zaxis = accelInfo.z;
    timeStamp = accelInfo.timestamp;
// saves acceleration information (x, y, z, timestamp) within accelInfo object

    var html = "X : " + xaxis + "<BR />" + "Y : " + yaxis + "<BR />" + "Z : " + zaxis;

    $("#infoDetail").css("text-align", "center");
    $("#infoDetail").css("margin-left", "1px");

    html += ""
    $("#infoDetail").html(html);

    if (firstRefresh)
    {
        accInitX = xaxis;
        accInitY = yaxis;
        accInitZ = zaxis;
        firstRefresh = false;
    }

    console.log("DeviceAPIGuide fn_egov_update_Acceleration Success");
}
```

Related Screen and Implementation Manual

Acceleration information inquiry window



Save acceleration information: to send the acceleration information to server, click on the "Save" button at the bottom.

Acceleration information list: moves to **Acceleration information list** window.

Save acceleration information

Business Logic

Sends the acceleration information from the inquiry to the server and saves it in a list form.

Related Code

```
function fn_registAcceleratorInfo() {  
    useYn = "Y";
```

```

var url = "/acl/xml/addAcceleratorInfo.do";
var accept_type = "json";
var params = {uuid : device.uuid,
              xaxis: xaxis + ",
              yaxis: yaxis + ",
              zaxis: zaxis + ",
              timestamp: timeStamp + ",
              useYn: useYn};

// send the data
egovHyb.post(url, accept_type, params, function(jsondata) {
    var data = JSON.parse(jsondata);

    if(data.useYn == "OK"){
        fn_InquireAccelerationInfoListXml();
    }else{
        $("#alert_dialog").click( function() {
            jAlert('Error occured while sending data.', 'Transmission
Error', 'c');
        });
    }

});

console.log("DeviceAPIGuide fn_registAcceleratorInfo request Completed");
}

```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Sending acceleration information to server	/acl/addAcceleratorInfo.do	EgovAcceleratorAndroidAPI Controller	addAcceleratorInfoXml	AcceleratorAPI.html



Click on "Save" to send the information data to the server.

Save acceleration information: to send the acceleration information to server, click on the "Save" button at the bottom.

Acceleration information list: moves to **Acceleration information list** window.

Acceleration information list

Business Logic

Prints the saves Acceleration information list in a list form.

Related Code

```
function fn_InquireAccelerationInfoListXml()
{
```

```

if(!fn_egov_network_check(false)){
    return;
}

var url = "/acl/xml/acceleratorInfoList.do";
var accept_type = "xml";
// get the data from server
window.plugins.EgovInterface.get(url,accept_type, null, function(xmldata) {
    var list_html = "";

    $(xmldata).find("acceleratorInfoList").each(function(){
        var uuid = $(this).find("uuid").text();
            var x = $(this).find("xaxis").text();
            var y = $(this).find("yaxis").text();
            var z = $(this).find("zaxis").text();
        var t = $(this).find("timestamp").text();

            list_html += "<li><h3>UUID : " + uuid + "</h3>";
            list_html += "<p><strong>xaxis : " + x + "</strong></p>";
            list_html += "<p><strong>yaxis : " + y + "</strong></p>";
            list_html += "<p><strong>zaxis : " + z + "</strong></p>";
            list_html += "<p>timestamp : " + t + "</p></li>";

    });

    var theList = $('#theList');
    theList.html(list_html);
    $.mobile.changePage("#btnMoveAcceleratorInfoList", "slide", false, false);
    theList.listview("refresh");
    if(myScroll != null) {
        myScroll.refresh();
    }

});

console.log("DeviceAPIGuide fn_InquireAccelerationInfoListXml request Completed");
}

```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Acceleration information inquiry	li /acl/acceleratorInfoList.do	EgovAcceleratorAndroidAPI Controller	selectAcceleratorInfoXMLList	AcceleratorAPI.html



To inquire the Acceleration information list saved in server, click on the "Acceleration information list."

Acceleration information inquiry: moves to **Acceleration information inquiry** window.

Delete list: to reset the Acceleration information list, click on the "Delete Acceleration information inquiry" button.

Delete Acceleration information

Business Logic

Resets the Acceleration information list saved on server.

Related Code

```
function fn_DelAccelerationInfoList() {
```

```

var url = "/acl/xml/withdrawal.do";
var accept_type = "json";
// send the data
egovHyb.post(url, accept_type, null, function(jsondata) {
    var data = JSON.parse(jsondata);

    if(data.useYn == "OK"){
        $.mobile.changePage("#acceleratorInfo", { transition: "slide", reverse:
true });
    }else{
        $("#alert_dialog").click( function() {
            jAlert('Error encountered while deleting data.', 'Deletion
error', 'c');
        });
    }

});

console.log("DeviceAPIGuide fn_DelAccelerationInfoList request Completed");
}

```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Reset Acceleration information list	/acl/withdrawal.do	EgovAcceleratorAndroidAPIControl	withdrawalXml	AcceleratorAPI.htm 1



To reset the Acceleration information list saved in server, click on the "Delete Acceleration information inquiry."

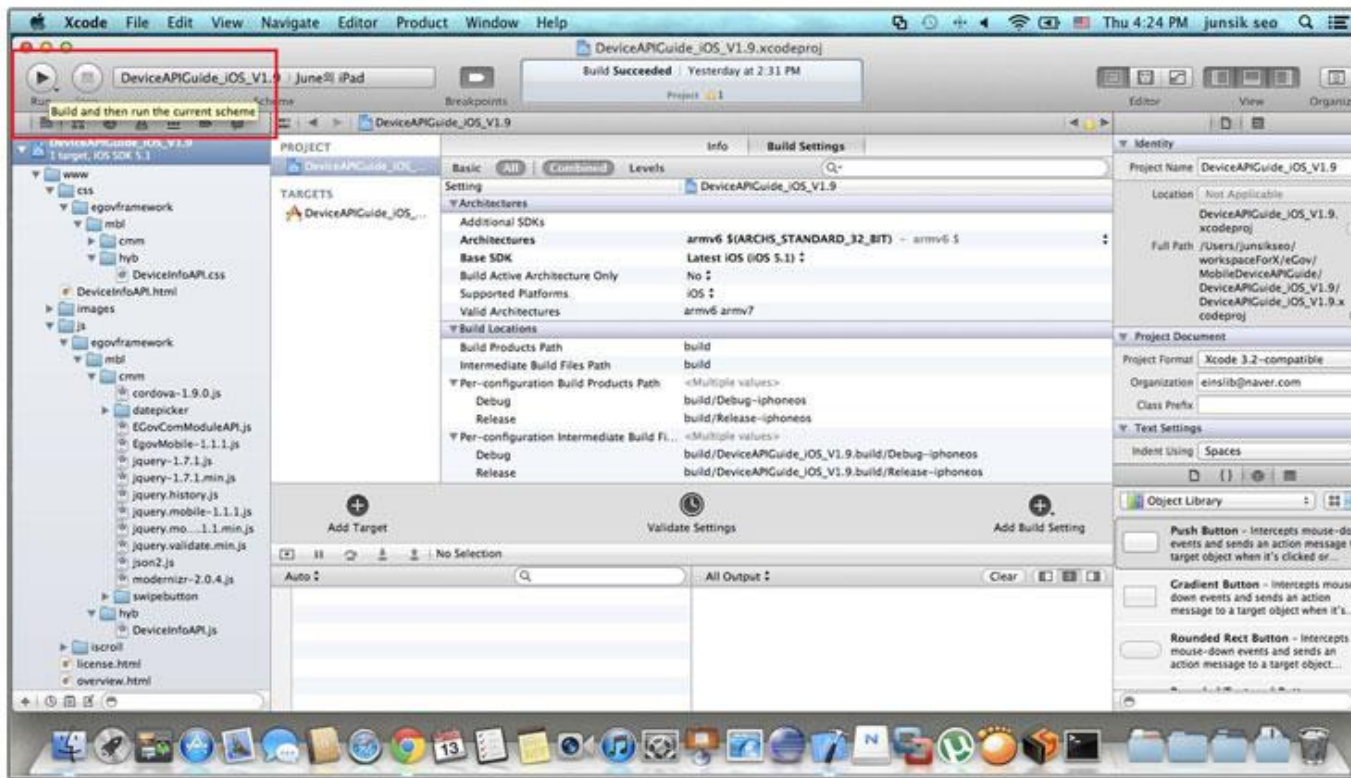
Acceleration information inquiry: moves to **Acceleration information inquiry** window.
Delete list: to reset the Acceleration information list, click on the "Delete Acceleration information inquiry" button.

Compiling, debugging, distributing

Compiling

How to compile Accelerator Device Application

- Click the triangular button on top left to build the Guide Program and install it to the iPhone Device.

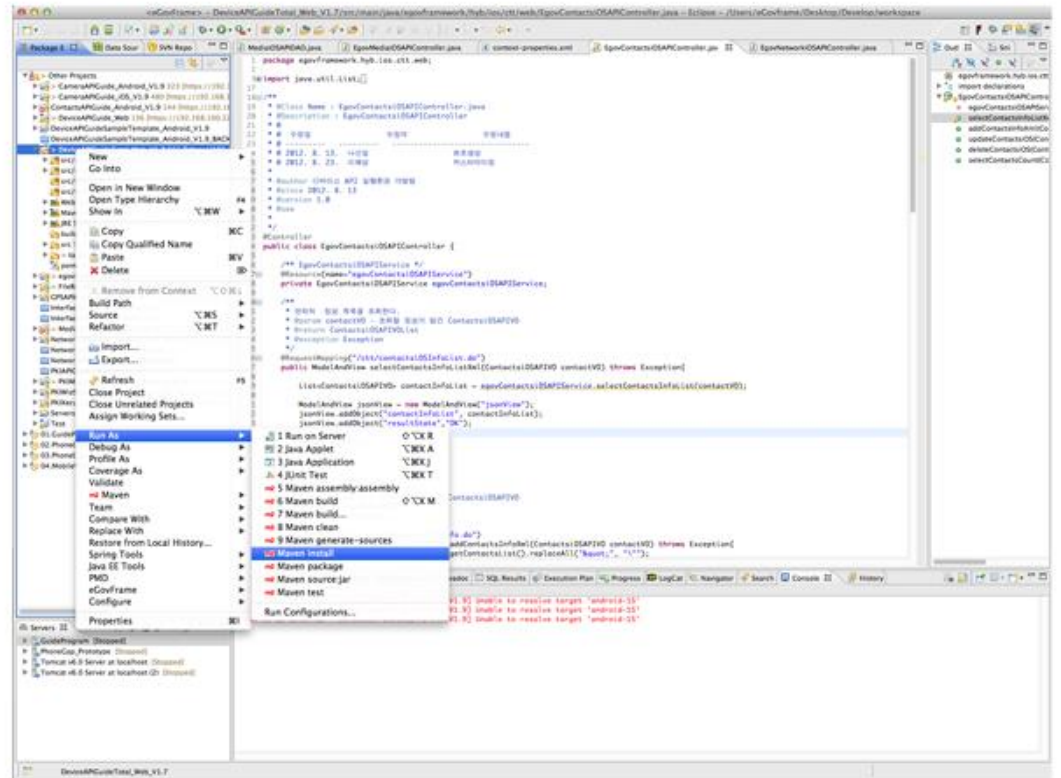


- Upon successful build, the following screen is displayed.



How to compile Accelerator Server Applicaton

1. Right-click on the project>Run as>Maven install to build.



2. Build successful (check console information)



```
<terminated> /System/Library/Java/JavaVirtualMachines/1.6.0.jdk/Contents/Home/bin/java (2012. 9. 13. 오후 4:18:33)
[INFO] --- maven-compiler-plugin:2.3.2:testCompile (default-testCompile) @ DeviceAPIGuide_Web ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.7.1:test (default-test) @ DeviceAPIGuide_Web ---
[INFO] Surefire report directory: /Users/eGovframe/Desktop/Develop/workspace/DeviceAPIGuideTotal_Web_V1.7/target/surefire-reports

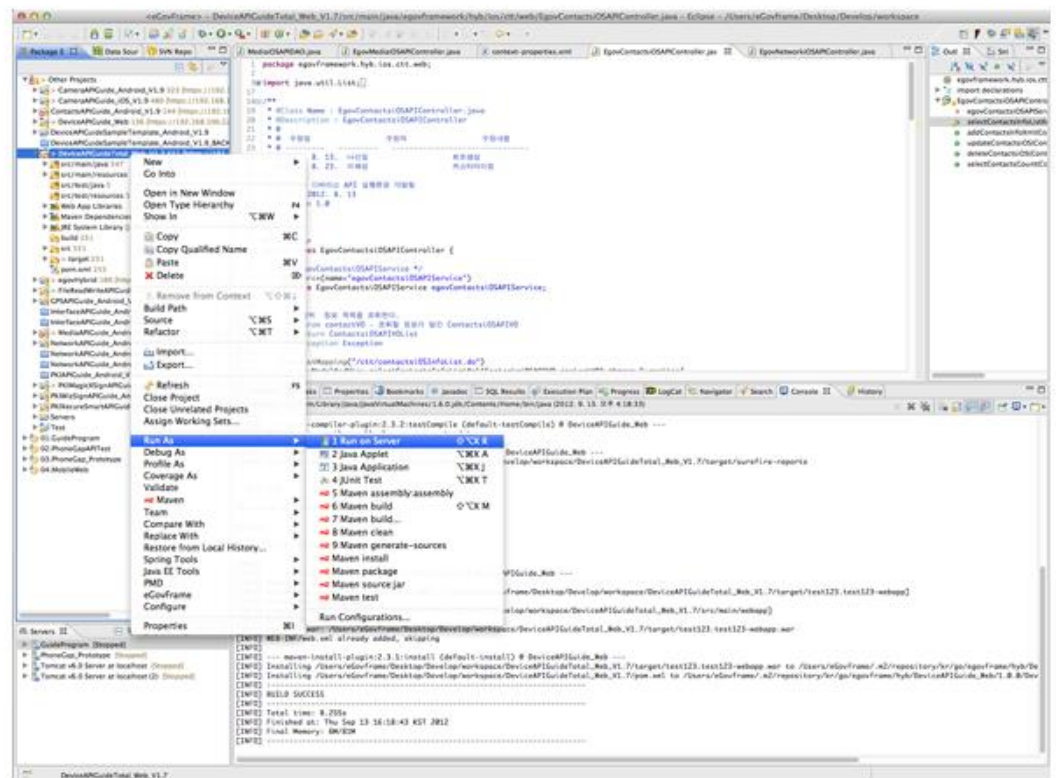
-----
T E S T S
-----
There are no tests to run.

Results :

Tests run: 0, Failures: 0, Errors: 0, Skipped: 0

[INFO] --- maven-war-plugin:2.1.1:war (default-war) @ DeviceAPIGuide_Web ---
[INFO] Packaging webapp
[INFO] Assembling webapp [DeviceAPIGuide_Web] in [/Users/eGovframe/Desktop/Develop/workspace/DeviceAPIGuideTotal_Web_V1.7/target/test123-test123-webapp]
[INFO] Processing war project
[INFO] Copying webapp resources [/Users/eGovframe/Desktop/Develop/workspace/DeviceAPIGuideTotal_Web_V1.7/src/main/webapp]
[INFO] Webapp assembled in [1438 msecs]
[INFO] Building war: /Users/eGovframe/Desktop/Develop/workspace/DeviceAPIGuideTotal_Web_V1.7/target/test123-test123-webapp.war
[INFO] WEB-INF/web.xml already added, skipping
[INFO]
[INFO] --- maven-install-plugin:2.3.1:install (default-install) @ DeviceAPIGuide_Web ---
[INFO] Installing /Users/eGovframe/Desktop/Develop/workspace/DeviceAPIGuideTotal_Web_V1.7/target/test123-test123-webapp.war to /Users/eGovframe/.m2/repository/kr/go/egovframe/hy/DeviceAPIGuide_Web/1.0.0
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] -----
[INFO] Total time: 8.255s
[INFO] Finished at: Thu Sep 13 16:18:43 KST 2012
[INFO] Final Memory: 6M/81M
[INFO] -----
```

3. Right-click on project>Run as>Run on Server to execute.



4. Check to see if project is successfully executed.

```

Tomcat v6.0 Server at localhost (2) [Apache Tomcat] /System/Library/Java/JavaVirtualMachines/1.6.0.jdk/Contents/Home/bin/java (2012. 9. 13. 오후 4:19:54)
[org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating shared instance of singleton bean 'viewResolver'
2012-09-13 16:28:02,295 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating instance of bean 'viewResolver'
2012-09-13 16:28:02,295 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Eagerly caching bean 'viewResolver' to allow for resolving potential circular
2012-09-13 16:28:02,298 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Finished creating instance of bean 'viewResolver'
2012-09-13 16:28:02,298 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating shared instance of singleton bean 'jsonView'
2012-09-13 16:28:02,300 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating instance of bean 'jsonView'
2012-09-13 16:28:02,300 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Eagerly caching bean 'jsonView' to allow for resolving potential circular
2012-09-13 16:28:02,306 DEBUG [org.springframework.web.context.support.XmlWebApplicationContext] Finished creating instance of bean 'jsonView'
2012-09-13 16:28:02,306 DEBUG [org.springframework.web.context.support.XmlWebApplicationContext] Unable to locate LifecycleProcessor with name 'lifecycleProcessor': using default
2012-09-13 16:28:02,306 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'lifecycleProcessor'
2012-09-13 16:28:02,306 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'multipartResolver'
2012-09-13 16:28:02,308 DEBUG [org.springframework.web.servlet.DispatcherServlet] Using MultipartResolver [org.springframework.web.multipart.commons.CommonsMultipartResolver#46
2012-09-13 16:28:02,310 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating instance of bean 'org.springframework.web.servlet.i18n.AcceptHead
2012-09-13 16:28:02,310 DEBUG [org.springframework.web.servlet.DispatcherServlet] Finished creating instance of bean 'org.springframework.web.servlet.i18n.Ac
2012-09-13 16:28:02,310 DEBUG [org.springframework.web.servlet.DispatcherServlet] Unable to locate LocaleResolver with name 'localeResolver': using default [org.springframework
2012-09-13 16:28:02,313 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating instance of bean 'org.springframework.web.servlet.theme.Fixe
2012-09-13 16:28:02,313 DEBUG [org.springframework.web.servlet.DispatcherServlet] Finished creating instance of bean 'org.springframework.web.servlet.theme.Fixe
2012-09-13 16:28:02,313 DEBUG [org.springframework.web.servlet.DispatcherServlet] Unable to locate ThemeResolver with name 'themeResolver': using default [org.springframework.w
2012-09-13 16:28:02,314 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.servi
2012-09-13 16:28:02,314 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.servi
2012-09-13 16:28:02,316 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.servi
2012-09-13 16:28:02,316 DEBUG [org.springframework.web.servlet.DispatcherServlet] Creating instance of bean 'org.springframework.web.servlet.view.DefaultReq
2012-09-13 16:28:02,318 DEBUG [org.springframework.web.servlet.DispatcherServlet] Finished creating instance of bean 'org.springframework.web.servlet.view.De
2012-09-13 16:28:02,318 DEBUG [org.springframework.web.servlet.DispatcherServlet] Unable to locate RequestToViewNameTranslator with name 'viewNameTranslator': using default [
2012-09-13 16:28:02,318 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.servi
2012-09-13 16:28:02,318 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'viewResolver'
2012-09-13 16:28:02,319 DEBUG [org.springframework.web.servlet.DispatcherServlet] Published WebApplicationContext of servlet 'action' as ServletContext attribute with name [org
2012-09-13 16:28:02,319 INFO [org.springframework.web.servlet.DispatcherServlet] FrameworkServlet 'action': initialization completed in 962 ms
2012-09-13 16:28:02,319 DEBUG [org.springframework.web.servlet.DispatcherServlet] Servlet 'action' configured successfully
2012. 9. 13 오후 4:20:02 org.apache.coyote.http11.Http11Protocol start
일정: Starting Coyote HTTP/1.1 on http-8080
2012. 9. 13 오후 4:20:02 org.apache.jk.common.ChannelSocket init
일정: JK: ajp13 listening on /0.0.0.0:8009
2012. 9. 13 오후 4:20:02 org.apache.jk.server.JkMain start
일정: Jk running ID=0 time=0/22 config=null
2012. 9. 13 오후 4:20:02 org.apache.catalina.startup.Catalina start
일정: Server startup in 6482 ms

```

Debugging

Use console.log in order to check the details on any errors on the device application, and to conduct debugging. Debug codes in console.log are available in JavaScript syntaxes that you can use in both Eclipse and Xcode.

- Example of actual console log

```

function fn_egov_network_check(doCheck)
{
    console.log('DeviceAPIGuide fn_egov_network_check');
    var networkState = navigator.network.connection.type;
    ...
}

```

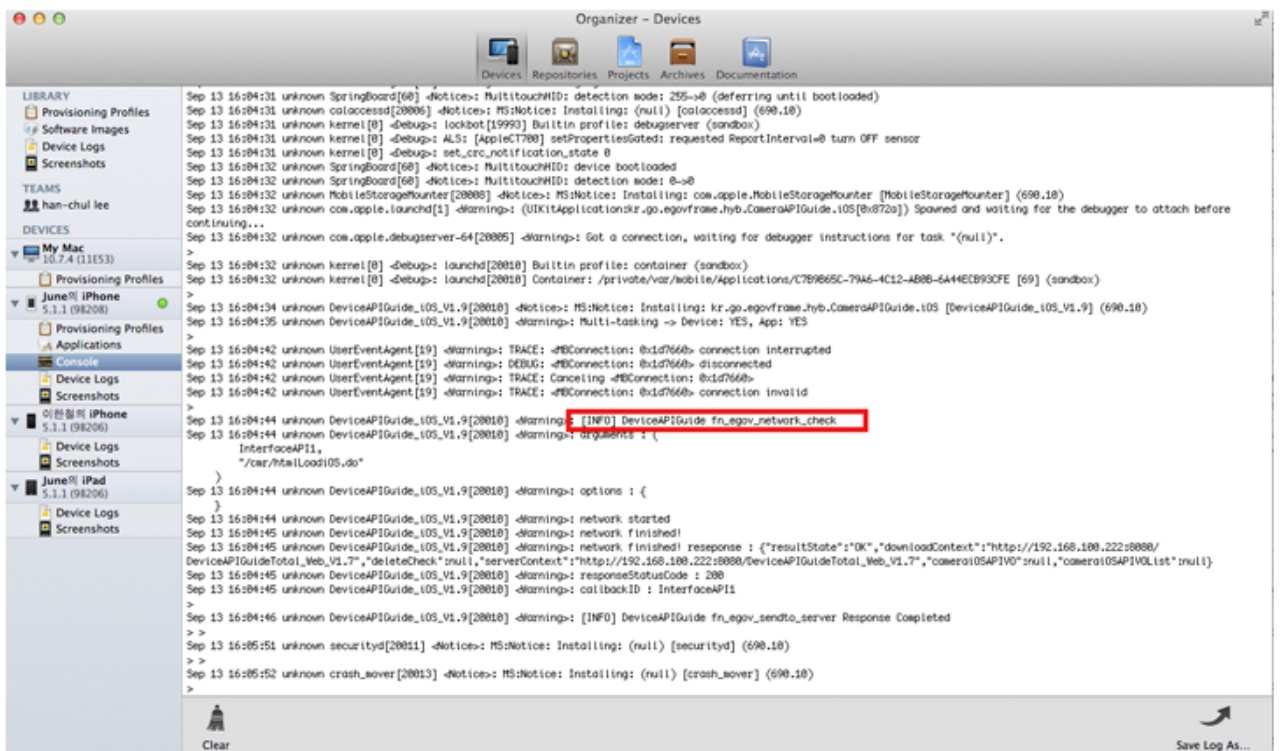
- xCode console window

```

DeviceAPIGuide_iOS_V1.9
All Output
2012-09-13 16:04:35.190 DeviceAPIGuide_iOS_V1.9[20010:707]
2012-09-13 16:04:44.329 DeviceAPIGuide_iOS_V1.9[20010:707] [INFO] DeviceAPIGuide_fn_egov_network_check
2012-09-13 16:04:44.744 DeviceAPIGuide_iOS_V1.9[20010:707]
InterfaceAPI1,
"/cmr/htmlLoadIOS.do"
}
2012-09-13 16:04:44.757 DeviceAPIGuide_iOS_V1.9[20010:707] options : {
}
2012-09-13 16:04:44.799 DeviceAPIGuide_iOS_V1.9[20010:707] network started
2012-09-13 16:04:45.350 DeviceAPIGuide_iOS_V1.9[20010:707] network finished!
2012-09-13 16:04:45.353 DeviceAPIGuide_iOS_V1.9[20010:707] network finished! reponse : {"resultState":"OK","downloadContext":"http://
192.168.100.222:8080/DeviceAPIGuideTotal_Web_V1.7?","deleteCheck":null,"serverContext":"http://192.168.100.222:8080/
DeviceAPIGuideTotal_Web_V1.7?","cameraIOSAPIV0":null,"cameraIOSAPIV0List":null}
2012-09-13 16:04:45.365 DeviceAPIGuide_iOS_V1.9[20010:707] responseStatusCode : 200
2012-09-13 16:04:45.373 DeviceAPIGuide_iOS_V1.9[20010:707] callbackID : InterfaceAPI1
2012-09-13 16:04:46.076 DeviceAPIGuide_iOS_V1.9[20010:707] [INFO] DeviceAPIGuide_fn_egov_sendto_server Response Completed

```

- Organizer log window



Debug code

Debug information

[DeviceAPIGuide] fn_egov_dispatch_accelerato
rInfoList : Completed

Inquiry of Device Accelerator information list successful

[DeviceAPIGuide] fn_egov_registAcceleratorIn
fo : Completed

Information saving on related functions (after the inquiry of Device Accelerator information) successful

[DeviceAPIGuide] fn_egov_DelAccelerationInf
oList : Completed

Deletion of Device Accelerator information successful

[DeviceAPIGuide] fn_egov_get_acceleration :

Inquiry of Device Accelerator information started

start

[DeviceAPIGuide] fn_egov_get_acceleration : Inquiry of Device Accelerator information stopped
stop

Distribution

Download Accelerator Device API Guide: [Click](#)

References

- UX/UI library : jQuery Mobile [Click](#)
- Phonegap 4.3.0 : [Click](#)
- 3D rendering: [Three.js](#)