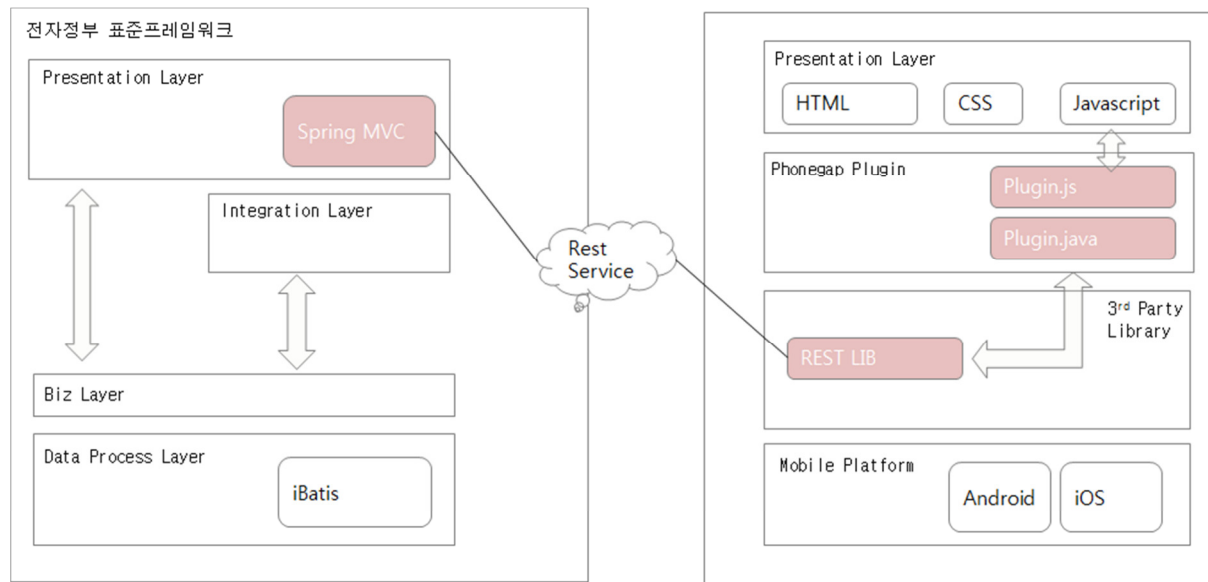


Outline

Mobile Hybrid Application and eGovFramework Server Application are “loosely coupled” and establish communication in the web services by way of Restful.

Concept



- eGovFramework server applications and mobile clients are loosely coupled.
- Web service communicates with the client using REST Service Protocol.
- Mobile clients using web services establish communication with the server where the standard REST service is implemented.

Open Sources used.

Services	Version	License
Android SDK	revision 18	Apache License 2.0
Android Platform	Android 2.2 Froyo or better	
PhoneGap(cordova)	Cordova 4.3.0	MIT License
JavaScript Framework	eGovFramework User Experience (UX)	Apache License 2.0
iOS SDK	Xcode 6.3.0	
iOS Platform	iOS 6.0 or better	
ASIHttpRequest	1.8.1	Apache License 2.0

Description

EgovInterface API

Being a static library, EgovInterface API establishes HTTP/HTTPS communications with the specific server. You can upload / download the communication files to the specific servers using the functions GET, POST, PUT and DELETE. Commencement, result and failure of communications are transferred in the form of Delegates, making the code analyses much easier.

Android

Spring for Android

Spring for Android expands the Spring Framework for simplified development of the Android application.

Category	Description
Strengths	<ul style="list-style-type: none">- REST Client that supports use of Java-based RestTemplate- Supports authentication via social networks such as Twitter and Facebook- Supports use of the third-party library for JSON, XML, RSS and Atom- Recently updated for Ver. 1.0- Supports Maven

Weaknesses Supports REST only

Configuration

File	Description
res/values/serverinfo.xml	Modifies SERVER_URL of serverinfo.xml <pre><?xml version="1.0" encoding="utf-8"?> <resources> <string name="SERVER_URL"> http://192.168.100.87:8080/APIGuide_Web </string> </resources></pre>
plugins.xml	Add, in plugins.xml: <pre><plugin name="EgovInterfacePlugin" value="kr.go.egovframework.hyb.plugin.EgovInterfacePlugin" /></pre>

Function List

Category	Description
window.plugins.EgovInterface.get	Implement HTTP GET Method:
window.plugins.EgovInterface.post	Performs HTTP POST Method:

Standard Coding

```
get the data from server

window.plugins.EgovInterface.get(url,accept_type, null, function(jsondata) {
    var data = JSON.parse(jsondata);
    var list_html = "";
```

```

var totcnt = data.networkInfoList.length;
for (var i = 0; i < totcnt; i++) {
    result = data.networkInfoList[i];

    list_html += "<li><h3>UUID : " + result.uuid + "</h3>";
    list_html += "<p><strong>Network Connection Type : " + result.networktype +
"</strong></p>";
    list_html += "<p>Availability : " + result.useYn + "</p></li>";

}

var theList = $('#theList');
theList.html(list_html);

$.mobile.changePage("#networkInfoList", "slide", false, false);
theList.listview("refresh");
setTimeout(loadiScroll, 200);
});

server uri

var uri = "/nwk/deleteNetworkInfo.do";
//Accept_Type setting
var accept_type = "json";
// http post method call
egovHyb.post(url, accept_type, null, function(jsondata) {
    var data = JSON.parse(jsondata);
    if(data.resultState == "OK"){
        $.mobile.changePage("#networkInfo", { transition: "slide", reverse: true });
    }else{
        $("#alert_dialog").click( function() {
            jAlert('Error encountered while deleting data.', 'Deletion error', 'c');
        });
    }
});

iOS

```

Additional Files

Additional Items	Additional Elements	Description
	- CFNetwork.framework - MobileCoreServices.framework	
EgovInterface.framework	SystemConfiguration.framework	Visit http://developer.apple.com/library/ios/#documentation/iPhone/Conceptual/iPhoneOSProgrammingGuide/Introduction/Introduction.html for more details.
	- Security.framework - libz.dylib	

Libraries

- EgovCom - Header file that links EgovInterface API
- Module.h - Static library that establishes HTTP/HTTPS communications with the specific server and
- libEgovCom upload / download of the specific server and communication files using the functions GET, POST, PUT and DELETE. Provides delegate of the communication progress.

EgovInterface.h

- EgovInterface
- PhoneGap Plug-In establishing link to EgovInterface API. Interworking with EgovInterface
- EgovInterface API is not feasible unless the header file and the implementor file are available.
- ace.m

EgovStorageInfo.h

- EgovStorage
- PhoneGap Plug-In that collects the capacity information of the device. Collection of information
- EgovStorage information is not feasible unless the header file and the implementor file are available.
- geInfo.m

Configuration

Category	Settings	Description
Delegate	onRequestStarted	- Alerts start of transfer or request of data to the specific server.
	onRequestFailed	- Alerts connection error or timeout.
	onRequestCompleted	- Alerts specific data from the server. Returns the specific server value.
PhoneGap	cordovaPlugins	The key in Plugins Dictionary should be made available in the form of strings in EgovInterface. Keys and Values are to be stored in StorageInfoAPI and EgovStorageInfo, in the form of strings, for seamless operation of EgovInterface API with PhoneGap.

Function List

Category	Description
initWithURL:delegate:	Initiation and basic configurations.
setURL:	Setting URL for target communication.
setTimeoutSeconds:	Configuring timeout in the unit of second. Default: 10 seconds
addPost:key:	Configuring the desired value in the parameter Request in the key value.
startAsynchronous	Starts asynchronous communication by the value configured.

Delegate List

Category	Description
onNetworkStarted	Events arising after start of communication
onNetworkFailed:	Events arising after failure of communication

onNetworkFinished:responseString:responseStatusCode: Events arising after successful communication

Standard Coding

```
//Generation
EGovComModule *m_module = [[[EGovComModule alloc] initWithURL:[NSString
stringWithFormat:@"%s/index.do",kSERVER_URL] delegate:self] autorelease];

//Wi-Fi and Network Check
if (m_module.isWifi) {
    NSLog(@"wi-fi");
} else {
    if (m_module.isNetworkConnected) {
        NSLog(@"3G/4G");
    } else {
        NSLog(@"Network Disconnected");
    }
}

//Communication starts
[m_module startAsynchronous];

//Adding key value
[m_module addPost:@"data" key:@"key"];

//Starting communication
- (void)onNetworkStarted
{
}

//Communication failed
- (void)onNetworkFailed:(NSError*)error
{
}

//Communication finished
- (void)onNetworkFinished:(NSData*)responseData responseString:(NSString*)responseString
responseStatusCode:(NSInteger)responseStatusCode
{
}
```

References

Category	Link
ASIHTTPRequest	http://allseeing-i.com/ASIHTTPRequest
Apple Developer Library	https://developer.apple.com/library/ios/navigation/
PhoneGap Developing a Plug in on iOS	http://docs.phonegap.com/en/1.9.0/guide_plugin-development_ios_index.md.html#Developing%20a%20Plugin%20on%20iOS
PhoneGap Developing a Plug	http://docs.phonegap.com/en/1.9.0/guide_plugin-development_android_index.md.html#Dev

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Spring for Android

<http://www.springsource.org/spring-android>