Common UI Controls

Relevant to:

- Hybrid
- Download MobileFirst project (https://github.com/MobileFirst-Platform-Developer-Center/UIControls)

Overview

Some controls are common to most hybrid environments, such as modal pop-up windows, loading screens, and tab bars.

With IBM MobileFirst Platform Foundation, you can use a JavaScript API to invoke these controls regardless of the environment. This API automatically renders these controls in a native way for each mobile platform.

The WL namespace

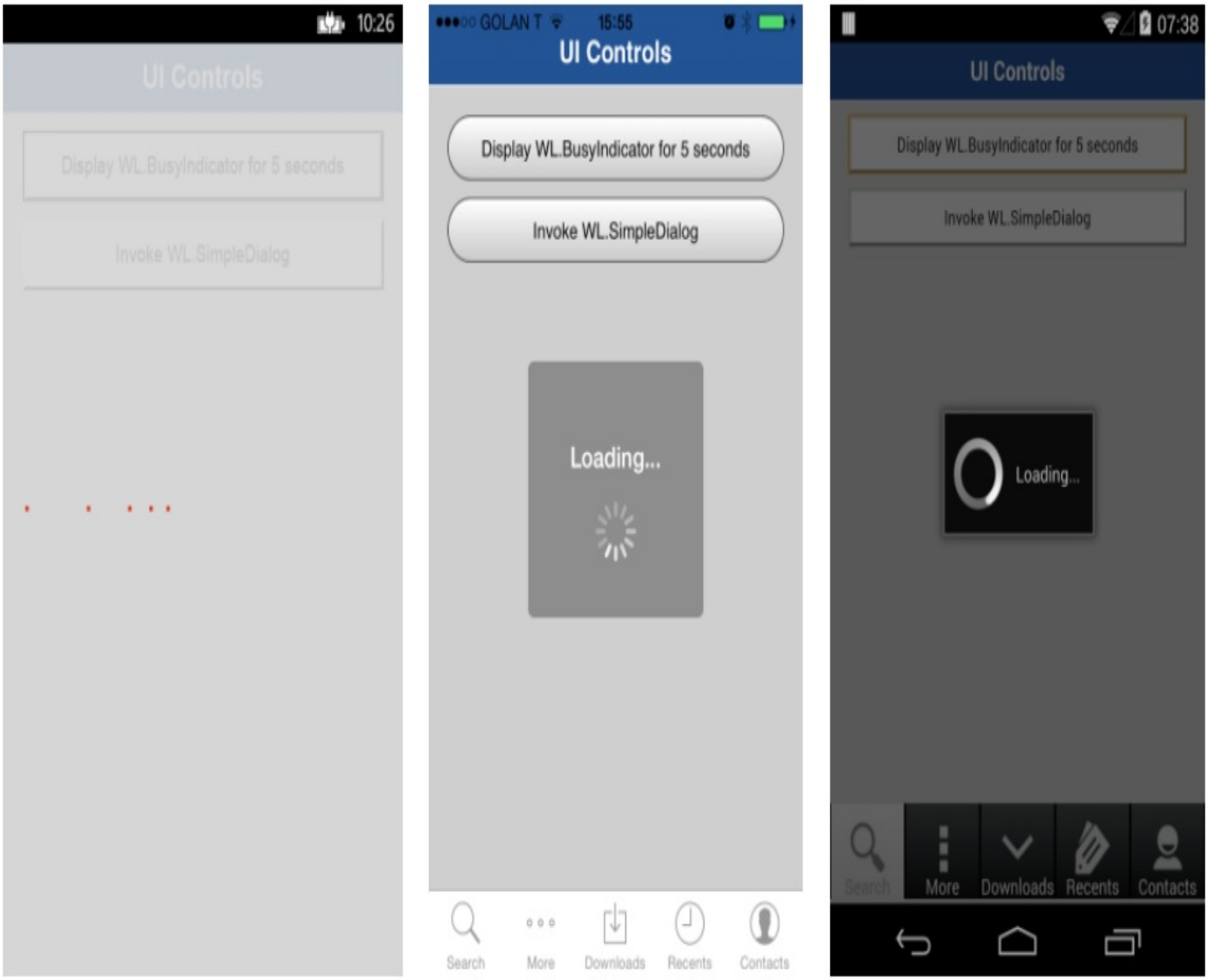
The WL namespace is used to invoke MobileFirst APIs: `WL.Client`, `WL.App`, `WL.SimpleDialog` and so on.
The WL namespace exposes API objects, methods, and constants (usually enums).

The WL namespace is made available in the application by referencing worklight.js in index.html.
This is done automatically by the MobileFirst SDK.

- WL.BusyIndicator
- WL.SimpleDialog
- WL.TabBar
- WL.OptionsMenu
- Splash Screen
- Sample application

WL.BusyIndicator

`WL.BusyIndicator` implements a common API to display a modal activity indicator.
It uses native implementation on the following platforms: Android, iOS, and Windows Phone 8.



(http://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2014/07/05_02_busyind.png)

It must be initialized before use.

[code lang="javascript"]
busyIndicator = new WL.BusyIndicator(null, {text : 'Loading...'});
[/code]

The first parameter, the parent element ID for `WL.BusyIndicator`, is ignored in iOS, Android, Windows Phone, and BlackBerry environments. It only applies to the web environment.
For the second parameter, the available options are:

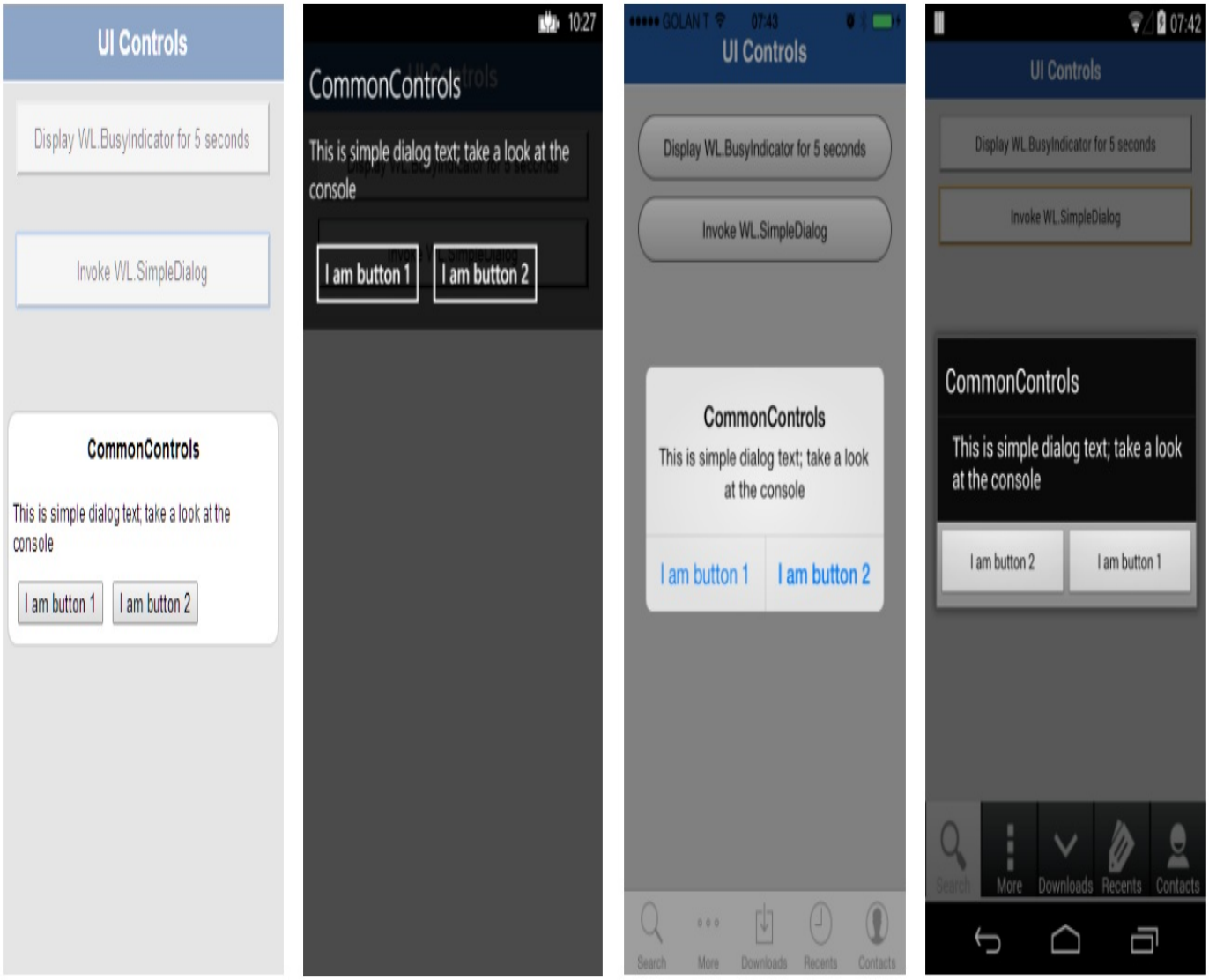
- `text` – Sets the modal text.
- `color` – Sets the text color.
- `fullScreen` – Determines whether to display the modal message full screen (iOS only).

For more information about the options, see the MobileFirst user documentation.
`WL.BusyIndicator` provides the following API:

- `void myBusyIndicator.show()` – Displays the "busy" indicator.
- `void myBusyIndicator.hide()` – Hides the "busy" indicator.
- `boolean myBusyIndicator.isVisible()` – Returns whether the busy indicator is visible.

WL.SimpleDialog

The `WL.SimpleDialog` implements a common API for showing a modal dialog window with buttons.
It uses a native implementation on the following platforms: Android, iOS, Windows Phone 8, and BlackBerry 10.
Adobe Air, BlackBerry 6/7, Desktop webpage, and Mobile Web use a JavaScript-based implementation.



(http://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2014/07/05_02_simpledialog.png)

The invocation syntax is:

[code lang="javascript"]
WL.SimpleDialog.show(title, text, buttons, options);
[/code]

The parameters are `title`, `text`, and `buttons` as an array of button objects.
The dialog is closed when any of the buttons is pressed.

Each button object has two properties:

- `text` – The text that displayed on the button.
- `handler` – The function to invoke if the button is pressed.

[code lang="javascript"]
var dialogTitle = "CommonControls";
var dialogText = "This is simple dialog text; take a look at the console";

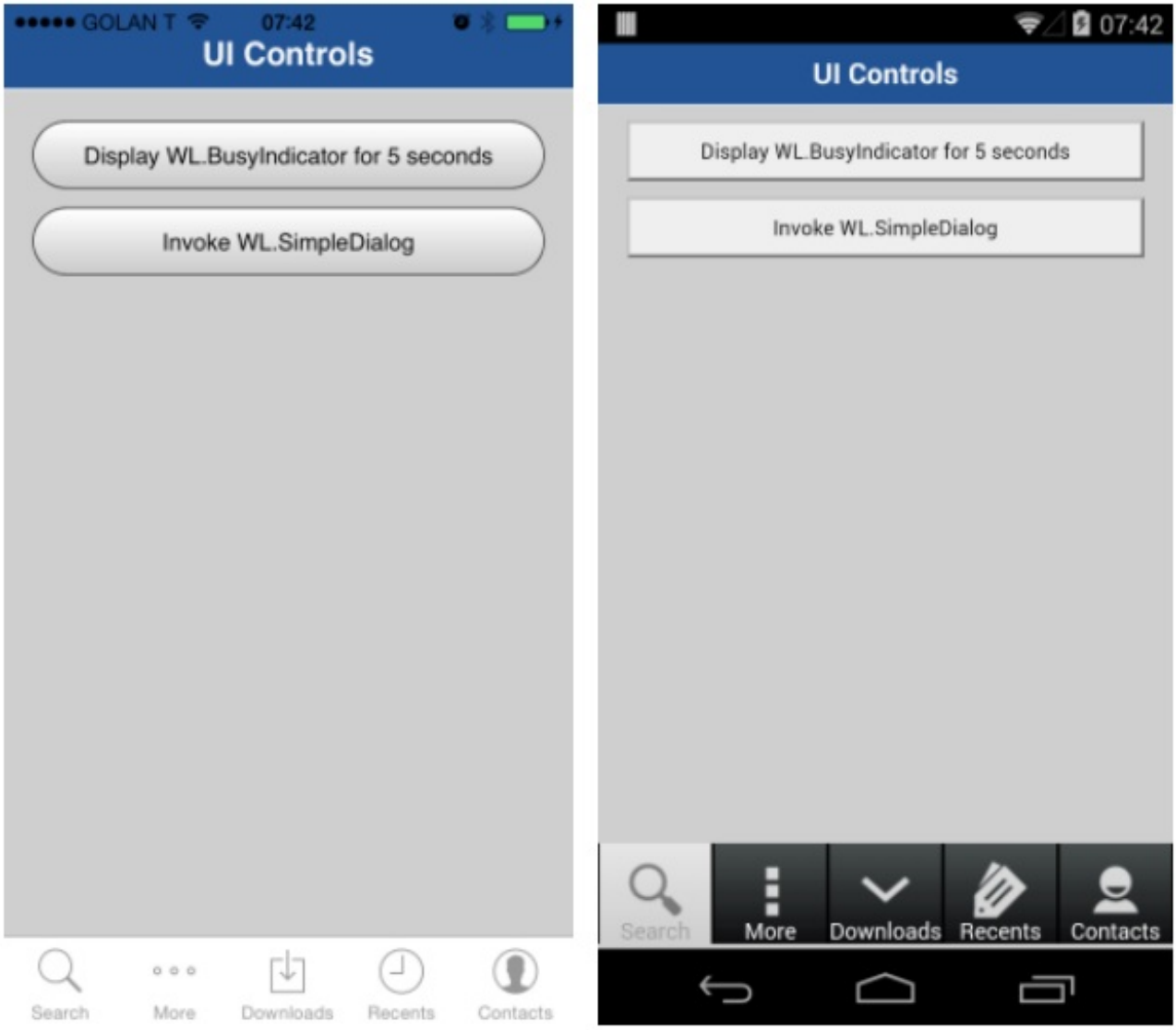
```
WL.SimpleDialog.show(dialogTitle, dialogText, [
{
text : 'I am button 1',
handler : simpleDialogButton1Click
}, {
text : 'I am button 2',
handler : simpleDialogButton2Click
}
]);
[/code]
```

Limitations

- In **Windows Phone 8**, you can use at most four buttons in each instance of `WL.SimpleDialog`.
- In **Android**, you can use at most three buttons in each instance of `WL.SimpleDialog`.
- Only 1 SimpleDialog can be open at a time.

WL.TabBar

`Wl.TabBar` provides application navigation with a tab bar component.
Supported environments: Android and iOS.



(http://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2014/07/05_02_tabbar.png)

The iOS implementation uses a native component, but Android uses an HTML-generated tab bar.
The syntax is similar, though with some minor differences.
`WL.TabBar` must be initialized before it can be used.

Because `WL.TabBar` is only available for Android and iOS, it is recommended to initialize it at the environment level (`android\js\main.js` and `iphone-or-ipad\js\main.js`) and not in the common folder (`common\js\main.js`).

Use the following syntax to add a tab bar item:

[code lang="javascript"]
WL.TabBar.addItem(id, callback, title, options);
[/code]

- `id` – The internal reference for this tab.
- `callback` – The JavaScript function to run when a tab item is pressed.
- `title` – The text to display on the tab bar item.
- `options` – Varies between iOS and Android. See below.

iOS options

- `badge` – The string to display on the badge of the item.
- `image` – The file name of an image to use or the native iOS button identifier:
    - tabButton:More
    - tabButton:Favorites
    - tabButton:Featured
    - tabButton:TopRated
    - tabButton:Recents
    - tabButton:Contacts
    - tabButton:History
    - tabButton:Bookmarks
    - tabButton:Search
    - tabButton:Downloads
    - tabButton:MostRecent
    - tabButton:MostViewed

[code lang="javascript"]
WL.TabBar.addItem("item1",
function(){ alert("item 1 pressed"); },
"Item 1",{
image: "tabButton:Search",
//image: "images/tabImage.png",}
);
[/code]

Android options

- `image` – The file name of an image to use for an unselected state.
- `imageSelected` – The file name of an image to use for a selected state.

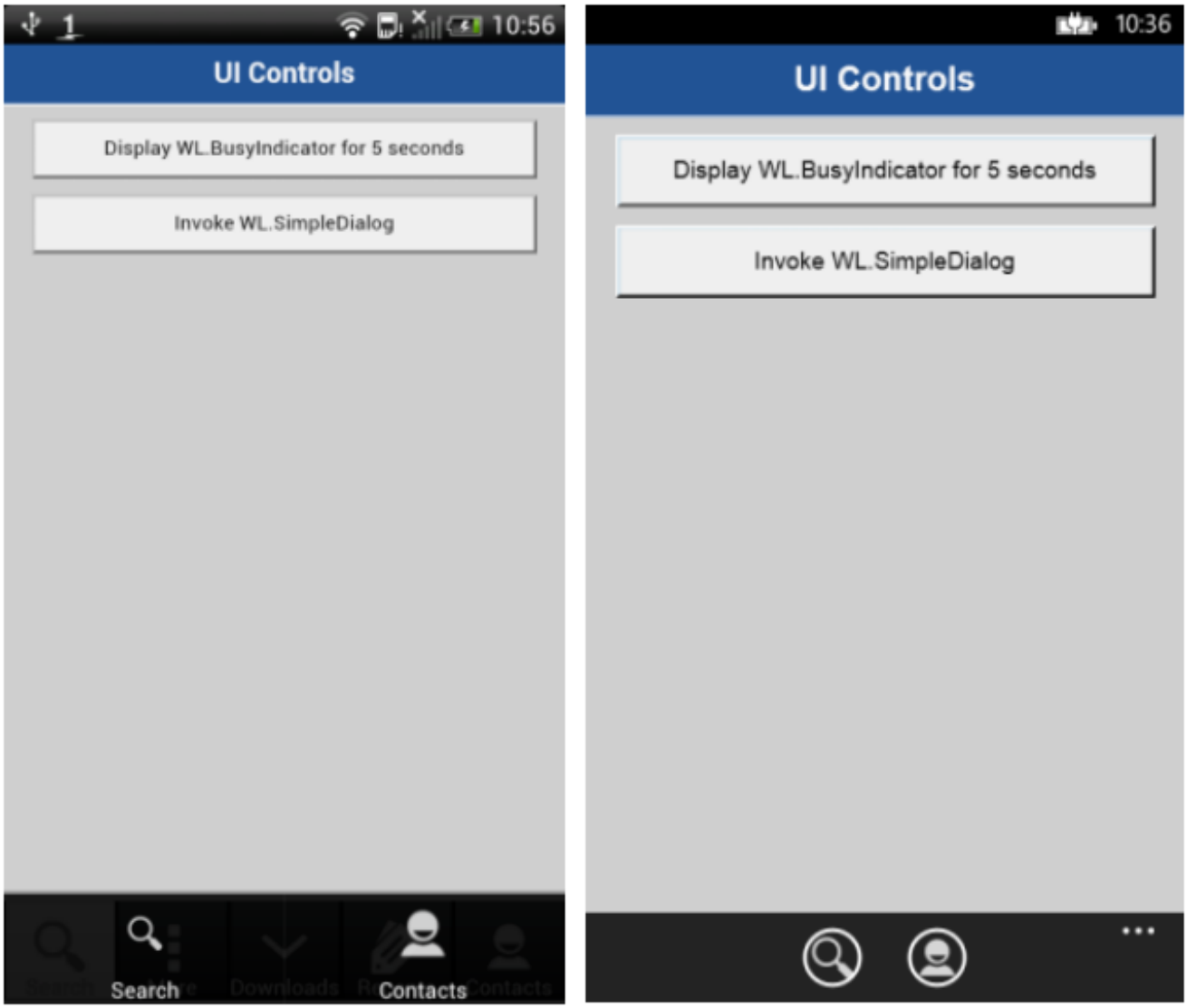
[code lang="javascript"]
WL.TabBar.addItem("item1",
function(){ alert("item 1 pressed"); },
"Item 1",{
image: "images/tabImage.png",}
);
[/code]

Other API signatures

- `WL.TabBar.init()`
- `WL.TabBar.addItem`: Returns WL.TabBarItem
- `WL.TabBar.removeAllItems`: iOS only
- `WL.TabBar.setParentDivId`: Android only
- `WL.TabBar.setVisible(true/false)`
- `WL.TabBar.setSelectedItem(itemID)`
- `WL.TabBar.setEnabled (true/false)`
- `WL.TabBarItem.setEnabled(true/false)`
- `WL.TabBarItem.updateBadge(string)`: iOS only

WL.OptionsMenu

Supported environments: Android 2.x, Windows 8, and Windows Phone 8.
By using `WL.OptionsMenu`, you can display a menu of options.
In Windows Phone 8, this also functions as a tab bar.
Note: If your application targets Android 3.0 (API level 11) or later, `WL.OptionsMenu` might have no effect, depending on the device. For more information, see the MobileFirst user documentation.



(http://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2014/07/05_02_optionsmenu.png)

Because WL.OptionsMenu is only available for Android 2.x, Windows 8 and Windows Phone 8, it is recommended to initialize it at the environment level (`android\js\main.js`, `windows8\js\main.js`, `windowsphone8\js\main.js`) and not in the common folder (`common\js\main.js`).

`WL.OptionsMenu` must be initialized before use.
Here are the API signatures:

- `WL.OptionsMenu.init()`
- `WL.OptionsMenu.addItem`: Returns a reference to a new options item.
- `WL.OptionsMenu.getItem(itemID)`
- `WL.OptionsMenu.getItem(itemID).setEnabled (true/false)`
- `WL.OptionsMenu.setVisible (true/false)`
- `WL.OptionsMenu.setEnabled (true/false)`
- `WL.OptionsMenu.removeItem (itemID)`
- `WL.OptionsMenu.removeItems()`

Use the following syntax to add an option of a menu:

[code lang="javascript"]
WL.OptionsMenu.addItem(id, callbackFunction, title, options);
[/code]

- `id` – An internal reference for this menu option.
- `callback` – The JavaScript function to run when the menu option is pressed.
- `title` – The text of the menu item.
- `options` – An options object with the following properties:
    - `image` – A path to a designated image, relative to the resource root directory.
    - `enabled` – A Boolean value, which states whether the item is enabled or disabled.

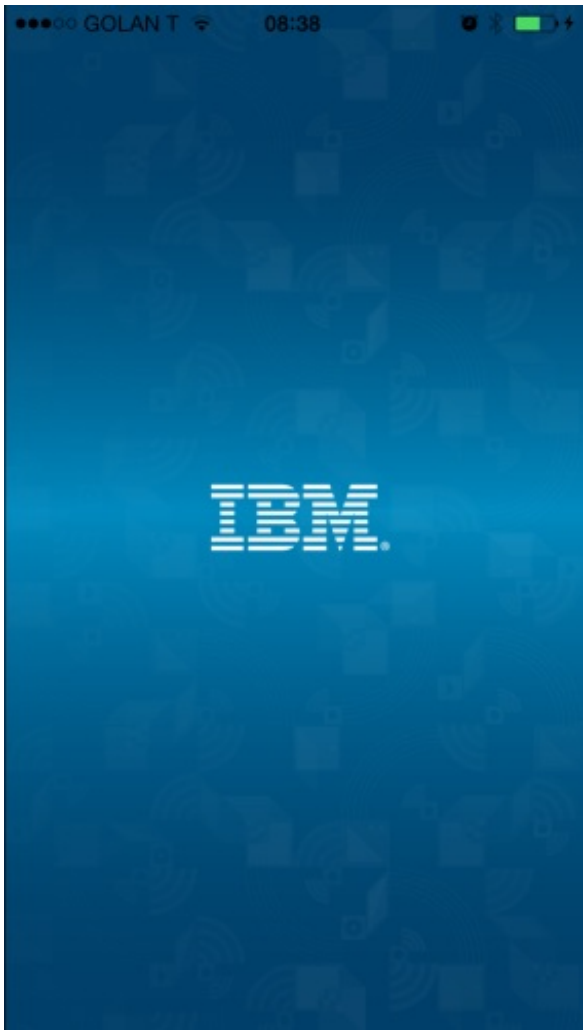
[code lang="javascript"]
WL.OptionsMenu.addItem("item2",
function(){ alert("item 2 pressed");},
"Contacts", {
image: "contacts.png"}
);
[/code]

Paths to image files must not be given; instead, place the files at the following locations:

- **Android**: `nativeResouces\drawable-*`
- **Windows 8**: `Resources\applicationBar`
- **Windows Phone 8**: `nativeResources\applicationBar`

Splash screen

Supported environments: Android, iOS, and WP8.



(http://developer.ibm.com/mobilefirstplatform/wp-content/uploads/sites/32/2014/07/05_02_splash.png)

The framework provides a default behavior for how the splash screen is loaded.
The splash screen is shown after the application launches. Paths:

- **Android:** `android\native\src\com\app-name\app-name.java`
- **iOS:** `iphone-or-ipad\native\Classes\app-name.m`
- **Windows Phone 8:** `Windowsphone8\native\App.xaml.cs`

You can extend the default behavior or create a new one altogether.

Hiding the splash screen

The splash screen is hidden after the framework finishes initializing.
As mentioned, you can handle when to hide the splash screen by using MobileFirst framework. To do so:

1. Uncomment the `autoHideSplash` option in the `initOptions.js` file.
2. Use the following API method at the point in the JavaScript code where you want the splash screen to be hidden. For example:
   [code lang="javascript"]
   function wlCommonInit() {
   WL.App.hideSplashScreen();
   }
   [/code]

Extending the splash screen duration

If an application requires extra processing time while it launches, you can, for example, extend the splash screen duration by implementing custom JavaScript code to that effect.
This might happen when waiting for data from a back end or while loading more frameworks.

[code lang="javascript"]
function wlCommonInit(){
// Custom app logic...
customLogicCallback();
}
function customLogicCallback() {
WL.App.hideSplashScreen();
}
[/code]

Redisplaying the splash screen

Similarly, the splash screen can be manually displayed again. Use the JavaScript API method:

[code lang="javascript"]
WL.App.showSplashScreen();
[/code]

This example forces a reload of the application.

[code lang="javascript"]
function wlCommonInit() {
WL.App.hideSplashscreen();
// Custom app logic…
reloadApplication();
}

function reloadApplication() {
WL.App.showSplashScreen();
// More custom app code…
WL.Client.reloadApp();
}
[/code]

Using a different splash screen image

By default, the splash screen that is used in a MobileFirst application is a static image.
To use a different image, replace the following with another image:

- **Android**: `native\res\drawable\splash.9.png`
- **iOS**: `native\Resources\Default-*.png`
- **WP8**: `native\SplashScreenImage.png`

The splash screen can also be more than a static image.
A developer can implement custom code which, by extending the time the splash screen is displayed, displays an animated "loading…" screen, a short video clip, etc.

> For more information about creating a custom splash screen, see the user documentation topic about managing the splash screen.

Sample application

Click to download (https://github.com/MobileFirst-Platform-Developer-Center/UIControls) the MobileFirst project.