

Intel® HTML5 Tools for developing mobile applications

HTML5 is the new HTML standard. Recently, Intel Corporation announced a set of HTML5 Tools for developing mobile applications. This paper shows you how to port an Apple iOS* accelerometer app to HTML5 using these tools. Please note: Auto-generated code created by the XDK may contain code licensed under one or more of the licenses detailed in Appendix A of this document. Please refer to the XDK output for details on which libraries are used to enable your application.

Intel® HTML5 App Porter Tool

The first thing we'll do is take an iOS accelerometer app and convert the Objective-C* source code to HTML5. We'll do this using the Intel® HTML5 App Porter Tool and the source code found here: **[iOS_source.zip]** (Note: IOS_source sample code is provided under the Intel Sample Software License detailed in Appendix B). You can download the Intel HTML5 App Porter Tool from the Tools tab here: <http://software.intel.com/en-us/html5>. After filling in and submitting the form with your e-mail address, you will get links for downloading this tool. The instructions for how to use this tool can be found on this site <http://software.intel.com/en-us/articles/tutorial-creating-an-html5-app-from-a-native-ios-project-with-intel-html5-app-porter-tool>.

When you are finished performing all the steps, you will get HTML5 source code.

Intel® XDK

You can open the HTML5 code in any IDE. Intel offers you a convenient tool for developing HTML5 applications: Intel® XDK – Cross platform development kit (<http://html5dev-software.intel.com/>). With Intel XDK, developers can write a single source code for deployment on many devices. What is particularly good is it is not necessary to install it on your computer. You can install it as an extension for Google Chrome*. If you use another browser, you have to download a JavaScript* file and run it. Sometimes it's necessary to update Java*.

After installing Intel XDK, you will see the main window:



If you want to port existing code, press the big “Start new” button.

If you’re creating a new project, enter the Project Name and check “Create your own from scratch,” as shown in the screen shot below.

Let’s set up a new HTML5 app project.



Please create a name and select a development path for your project.

Project Name

Intel_HTML5AppPorter

Project ID: egorchuraev:Intel_HTML5AppPorter 

Development Path

- Use the [App Starter](#) wizard to set up pages, navigation & more.
- Work from the [App Framework](#) kitchen sink demo.
- Create a new game app. (XDK Game Dev Mode)
- Build upon or explore a Demo app.
- Create your own from scratch. [[requirements](#)]

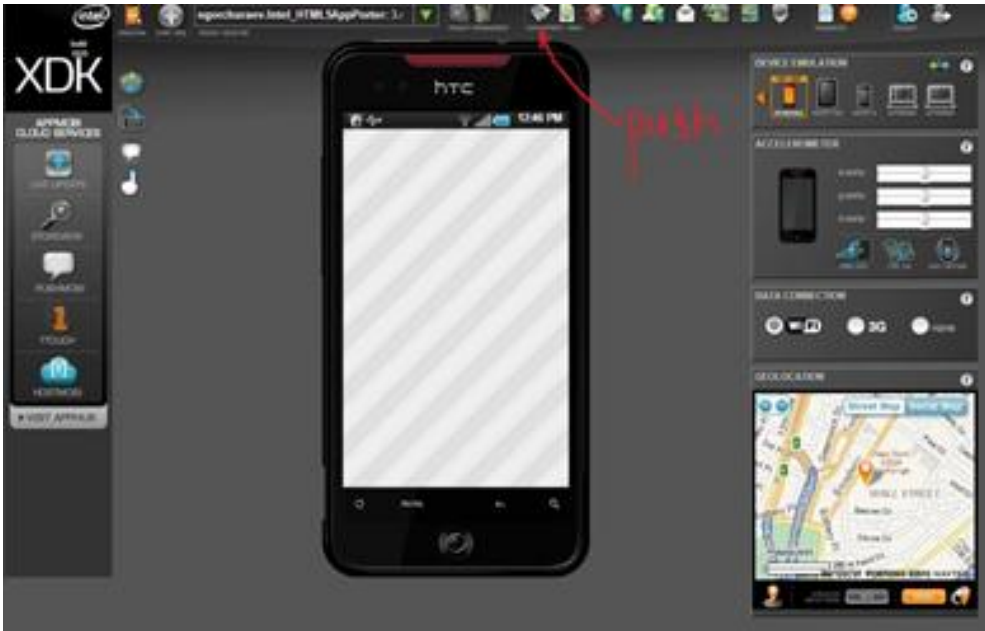
Back

Next

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Check “Use a blank project.” Wait a bit, and you will see the message “Application Created Successfully!”

Click “Open project folder.”



Remove all files from this folder and copy the ported files. We haven't quite ported the accelerometer app yet. We still have to write an interface for it. It is possible to remove the hooks created by the Intel HTML5 App Porter tool. Remove these files:

- `todo_api_application__uiaccelerometerdelegate.js`
- `todo_api_application_uiacceleration.js`
- `todo_api_application_uiaccelerometer.js`
- `todo_api_js_c_global.js`

To update the project in Intel XDK, go to the editor window in the Windows emulator.

Open the **index.html** file and remove the lines left from the included files.



Open the ***todo_api_application_appdelegate.js*** file and implement the unmapped "window" property of the delegate.

```

application.AppDelegate.prototype.setWindow = function(arg1) {
    // =====
    // REFERENCES TO THIS FUNCTION:
    // line(17): C:\Work\Blogging\echuraev\Accelerometer\Accelerometer\AppDelegate.m
    // In scope: AppDelegate.application_didFinishLaunchingWithOptions
    // Actual arguments types: [*js.APT.View]
    // Expected return type: [unknown type]
    //
    //if (APT.Global.THROW_IF_NOT_IMPLEMENTED)
    //{
        // TODO remove exception handling when implementing this method
        // throw "Not implemented function: application.AppDelegate.setWindow";
    //}
    this._window = arg1;
};

```

```

application.AppDelegate.prototype.window = function() {
    // =====
    // REFERENCES TO THIS FUNCTION:
    // line(20): C:\Work\Blogging\echuraev\Accelerometer\Accelerometer\AppDelegate.m
    // In scope: AppDelegate.application_didFinishLaunchingWithOptions
    // Actual arguments types: none
    // Expected return type: [unknown type]
    //
    // line(21): C:\Work\Blogging\echuraev\Accelerometer\Accelerometer\AppDelegate.m
    // In scope: AppDelegate.application_didFinishLaunchingWithOptions
    // Actual arguments types: none
    // Expected return type: [unknown type]
    //
    //if (APT.Global.THROW_IF_NOT_IMPLEMENTED)
    //{
        // TODO remove exception handling when implementing this method
        // throw "Not implemented function: application.AppDelegate.window";
    //}
    return this._window;
};

```

Open the **viewController.js** file. Remove all the functions used for working with the accelerometer in the old iOS app. In the end we get this file:

```

APT.createNamespace("application");

document.addEventListener("appMobi.device.ready",onDeviceReady,false);

APT.ViewController = Class.$define("APT.ViewController");

application.ViewController = Class.$define("application.ViewController", APT.ViewController, {
    __init__: function() {
        this.$super();
    },
});

```

In the **ViewController_View_774585933.css** file, we have to change styles of element colors from black to white to be readable on the black background: `color: rgba(0,0,0,1);` → `color: rgba(256,256,256,1);`. As a result we get:

```
div#Label_590244915
{
    left: 20px;
    color: rgba(256,256,256,1);
    height: 21px;
    position: absolute;
    text-align: left;
    width: 320px;
    top: 0px;
    opacity: 1;
}
div#Label_781338720
{
    left: 20px;
    color: rgba(256,256,256,1);
    height: 21px;
    position: absolute;
    text-align: left;
    width: 42px;
    top: 29px;
    opacity: 1;
}
div#Label_463949782
{
    left: 20px;
    color: rgba(256,256,256,1);
    height: 21px;
    position: absolute;
    text-align: left;
    width: 42px;
    top: 51px;
    opacity: 1;
}
div#Label_817497855
{
    left: 20px;
    color: rgba(256,256,256,1);
    height: 21px;
    position: absolute;
    text-align: left;
    width: 42px;
    top: 74px;
    opacity: 1;
}
div#Label_705687206
{
    left: 70px;
```

```
        color: rgba(256,256,256,1);
        height: 21px;
        position: absolute;
        text-align: left;
        width: 42px;
        top: 29px;
        opacity: 1;
    }
    div#Label_782673145
    {
        left: 70px;
        color: rgba(256,256,256,1);
        height: 21px;
        position: absolute;
        text-align: left;
        width: 42px;
        top: 51px;
        opacity: 1;
    }
    div#Label_1067317462
    {
        left: 70px;
        color: rgba(256,256,256,1);
        height: 21px;
        position: absolute;
        text-align: left;
        width: 42px;
        top: 74px;
        opacity: 1;
    }
    div#View_774585933
    {
        left: 0px;
        height: 548px;
        position: absolute;
        width: 320px;
        top: 20px;
        opacity: 1;
    }
}
```

After updating the emulator window, you see:



To code the accelerometer functions, we need to use the *appMobi JavaScript Library*. Documentation for this library can be found [here](#). It's installed when you download Intel XDK.

Open the **index.html** file and add this line into the list of scripts:

```
<script type="text/javascript" charset="utf-8" src="http://localhost:58888/_appMobi/appmobi.js"></script>
```

Open the **ViewController_View_774585933.html** file. We have to rename fields to more logical names from:

```
<div data-apt-class="Label" id="Label_705687206">0</div>
<div data-apt-class="Label" id="Label_782673145">0</div>
<div data-apt-class="Label" id="Label_1067317462">0</div>
```

to:

```
<div data-apt-class="Label" id="accel_x">0</div>
<div data-apt-class="Label" id="accel_y">0</div>
<div data-apt-class="Label" id="accel_z">0</div>
```

The same should be done in the **ViewController_View_774585933.css** file, where we have to rename the style names.

Open the **viewController.js** file and write some functions for using the accelerometer.

```
function suc(a) {
    document.getElementById('accel_x').innerHTML = a.x;
    document.getElementById('accel_y').innerHTML = a.y;
```

```

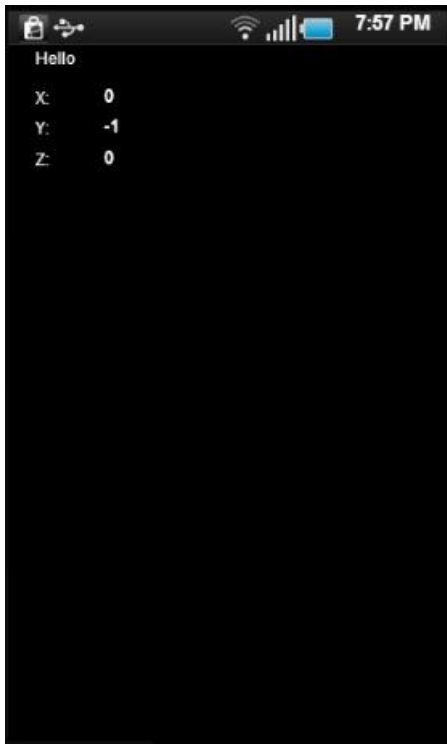
    document.getElementById('accel_z').innerHTML = a.z;
}

var watchAccel = function () {
    var opt = {};
    opt.frequency = 5;
    timer = AppMobi.accelerometer.watchAcceleration(suc, opt);
}

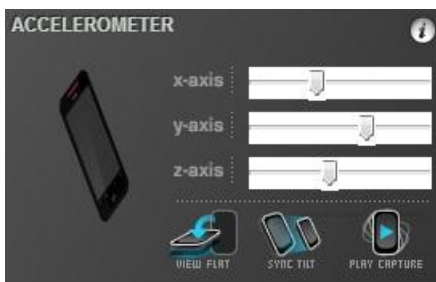
function onDeviceReady() {
    watchAccel();
}
document.addEventListener("appMobi.device.ready",onDeviceReady,false);

```

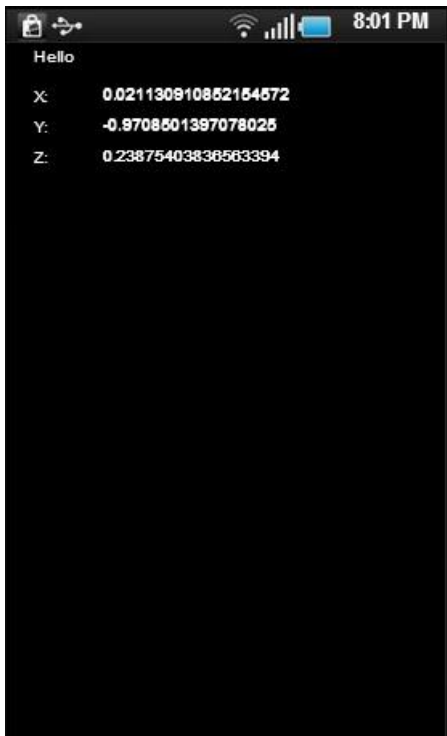
Update the project, and you can see it on the emulator window:



You can see how the accelerometer works on Intel XDK using the “ACCELEROMETER” panel:



The application will look like this:



The complete application source code can be found [here \[Result.zip\]](#).

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Mobiscroll JQuery component

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Classy JavaScript library

Classy is written and maintained by Armin Ronacher.

- Armin Ronacher <armin.ronacher@active-4.com>

Implementation is heavily inspired by John Resig's simple JavaScript inheritance: <http://ejohn.org/blog/simple-javascript-inheritance/>

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jQuery.Color library

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sprintf() for JavaScript 0.6

NOTE: some portions of code of the file "apt.util.js" are based on this library

(<http://www.diveintojavascript.com/projects/javascript-sprintf>)

sprintf() for JavaScript 0.6

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sax.js (<https://github.com/isaacs/sax-js>)

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