



Delivering best in class HTML5 software development tools accelerating x-platform app development

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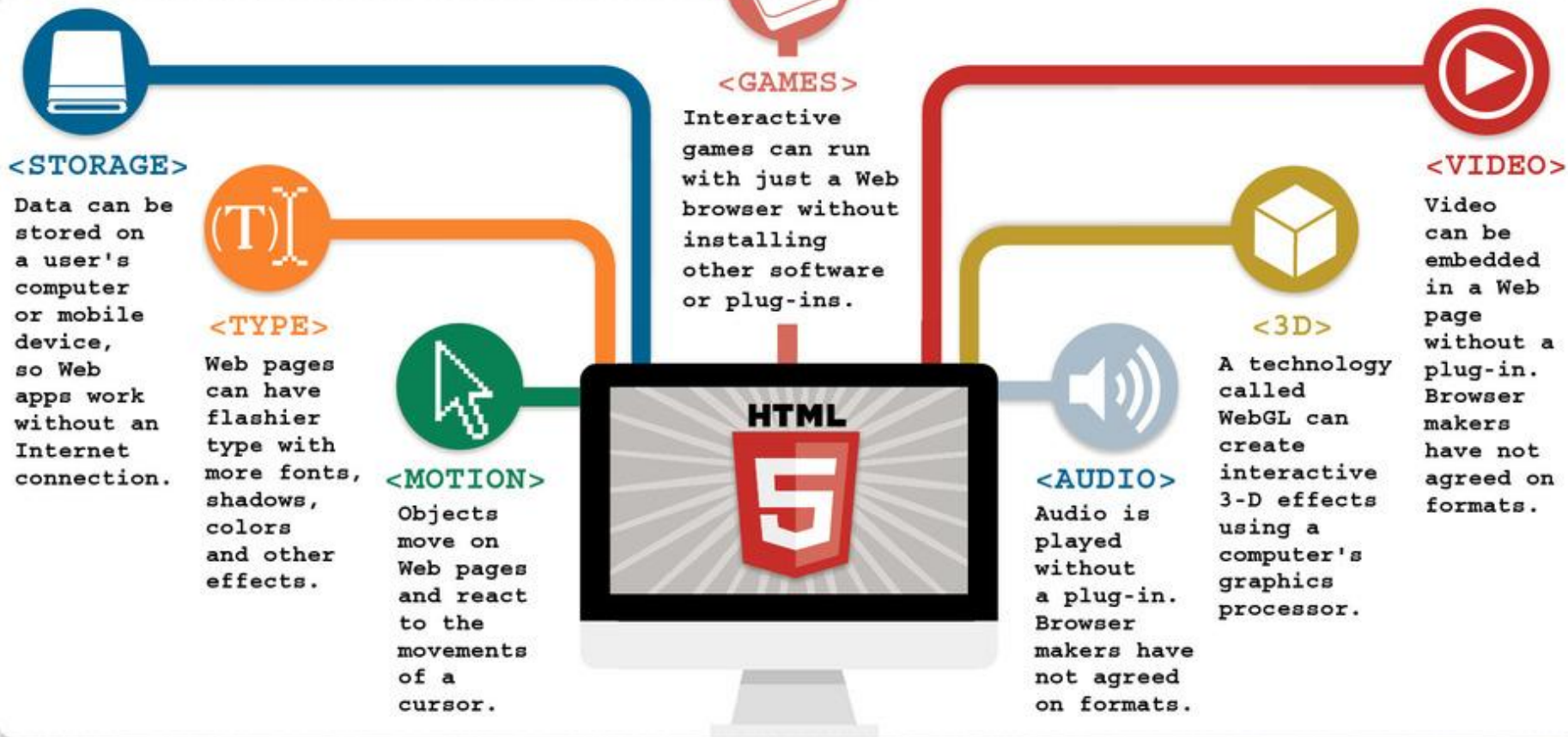


The new software spiral



What Does HTML5 Do?

Key features of the next Web programming standard.



NEWS

Jan 2013 HTML5 is Gaining Momentum

W3C extends its presence and commitment into China

Dec 2012

W3C publishes complete definition of HTML5 spec, on track to publish final spec by 2014

Nov 2012

VentureBeat reports that 94% of software developers are betting on HTML5

Oct 2012

W3C announces Web Platform Docs, a community-driven site that aims to become a comprehensive and authoritative source for web developer documentation

Oct 2012

W3C launches System Applications Working Group—the first group dedicated to defining and driving application API standards for HTML, JavaScript and CSS

Nov 2011

Adobe discontinues Flash development, re-channels investment into HTML5
— **Forbes**

Feb 2011

W3C extends charter of its HTML Working Group with clear milestones for HTML5

April 2010

Steve Jobs issues “Thoughts on Flash” letter, creates mainstream buzz around HTML5
— **MacWorld**

Web Apps

Benefits

For Consumers

- Available on all platforms / connected devices
- Easier discovery from centralized store front + user reviews

For Developers

- Low development cost / high ROI – simpler language (HTML / JavaScript) + shorter / cheaper debugging process + much larger potential reach
- Low maintenance cost
- Free from carrier / device manufacturer approval control / revenue share
- Integrated billing service

For Platform Owners

- Competitive advantage from unique application ecosystems

Challenges

For Consumers

- Lower usability due to UI design limitations
- Lower performance due to added browser layer
-  Harder to discover cool apps without store front / user reviews (initially)

For Developers

- Limited HTML5-compliant browser support in the near term
- Performance-critical apps will likely remain local
- Unproven discovery (search) / billings support on mobile web
- Unproven monetization models – advertising / subscription / paid access / virtual goods?
-  Dependent on wireless data connection – no 3G / Wi-Fi = no web app

For Platform Owners

-  No competitive advantage

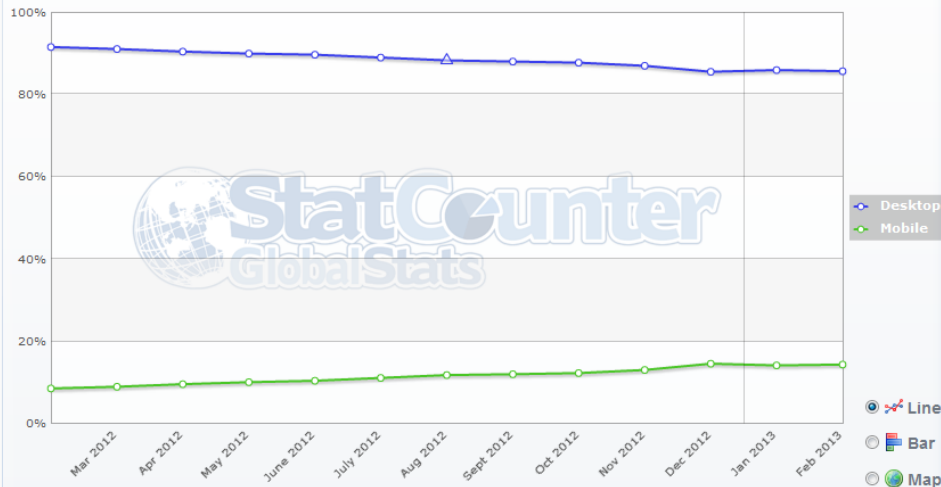
194

A huge opportunity for developers but challenges exist and must first be overcome

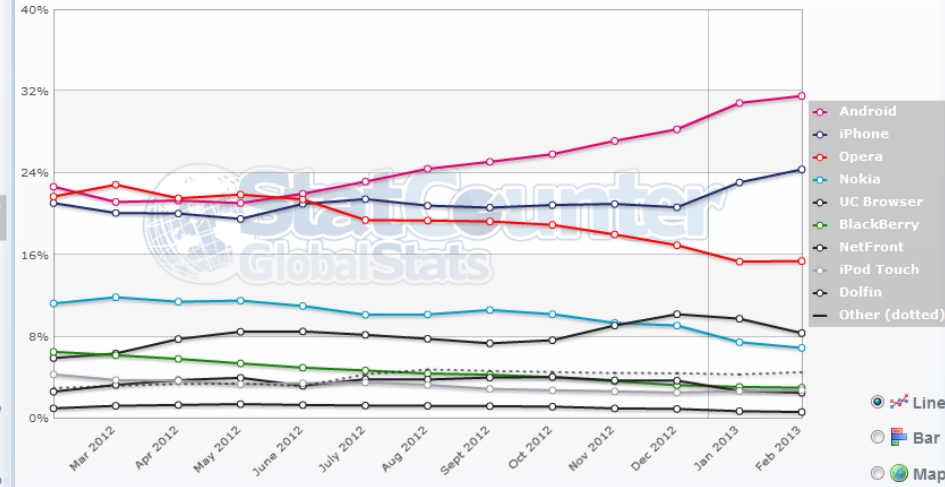
Browser Usage: Desktop vs Mobile



StatCounter Global Stats
Mobile vs. Desktop from Feb 2012 to Feb 2013



StatCounter Global Stats
Top 9 Mobile Browsers from Feb 2012 to Feb 2013



Desktop browser usage still dominates mobile. Android browser dominates mobile with safari trending up

Key feature support advantage (Mobile)



Browsers			 	
Canvas (basic support)	19 (0.04%)	6.0 (6.32%)	4.2 (0.07%) / 25 (0.39%)	12.1 (0.06%)
Text API for Canvas				
WebGL - 3D Canvas graphics				
Video element				
Web Storage (Local)				
Audio element				
Offline web applications				
Geolocation				
Communication (Web Sockets)				
Filesystem & FileWriter API				
Web Workers				
Local Multimedia (WebM/VP8)			Google Talk	
Web Notifications				

Source: <http://caniuse.com/> - March 11th 2013

Note: Firefox grading based on Firefox on Android – Numbers in cells are current browser versions

Supported	Partially Supported	Not Supported
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HTML

Cross-Platform Development

*Emerging and
prevalent*

*Key to a rich
application
ecosystem*



40%
*of app developers
are using HTML5*

Another
40%
*are planning to
use HTML5*

Intel's HTML5 Vision



Build a cross platform HTML5 ecosystem

Maximize reach without porting

Actively engage the developer community

Help create a responsive web experience

**Build the next software spiral around
HTML5**

More applications with native like performance

*Faster time to market and choice for
differentiation using Intel platform capabilities*

Let HTML5 Thrive...

Intel is helping software developers around the globe to create and deploy incredible cross-platform experiences, reach more customers, reduce costs and improve time-to-market



- **Intel contributes** to Open Source, Standards, and provides Tools & Resources to support HTML5
- **Intel® HTML5 Developer Zone** provides everything to learn, develop, test and deploy true cross-platform HTML5 apps
- **Intel® HTML5 Development Environment**, a no cost, integrated and front-to-back HTML5 App Dev Environment for True Cross-Platform Apps for multiple App Stores, and form factor devices
- **Intel® HTML5 App Porter Tool – Beta**, an iOS* app to HTML5 source-code and API converter to broaden the market reach for iOS developers

Visit the Intel® HTML5 Developer Zone and get started immediately with HTML5 Cross-Platform app development
<http://software.intel.com/html5>

Active involvement in HTML5



*Key upstream project
Where everything is derived from*

WebKit

Graphics
(Skia/Cairo)

W3C
API Definition

Helper projects/libraries

Chromium

PhoneGap

jQuery

Downstream Products

Chrome PC
Browser

Android
Chrome
Browser

Tizen
Browser

Runtimes

Simulators

Bringing Value to HTML5



- Intel continuously delivers software optimizations covering the whole Web runtime stack:
 - **JavaScript* Engine:** V8, JavaScriptCore
 - **Layout:** WebCore for DOM and CSS
 - **Rendering:** Chromium GPU acceleration, Skia (both CPU and GPU backend)
 - **Software stack:** OS, Windows* Manager, Graphic
- Upstream contributions help influence and optimize for Intel Architecture platforms (Android* Phone/Tablet, Tizen*, Chrome* on Windows/Mac*)
 - **New API's and enhancements:** Intel collaborates with Google* through W3C and other forums
 - **Chrome for Android:** Ported and optimized for Next Generation Intel® Smartphone with Android Jelly Bean OS



Open Standards Contribution



W3C HTML WG

HTML5 core, elements, layouts, DOM
Three Intel members



W3C WebApp Security WG

Security and policy mechanisms to improve security of web applications
Two Intel members



W3C Web Cryptography WG

Define cryptography APIs to provide common functionality to web applications
Two Intel members



W3C Web Performance WG

Enhance application performance of user agent features and APIs
Two Intel members



W3C Device API WG

Enable web application interaction with device HW, services, and applications
Three Intel members



W3C CSS WG

Develop and maintain cascading style sheets
Three Intel members



W3C System Applications WG

Define runtime environment, security model and associated APIs to build web apps similar to native
Twelve Intel members



W3C Tracking Protection WG

Improve privacy and user control
One Intel member



W3C Web Applications WG

Improve client-side application development on the web
Five Intel members



W3C Audio WG

Add more advanced audio capabilities, such as the processing and synthesis of audio streams
One Intel member



W3C NFC WG

Develop ways for web pages to interact with NFC devices
Four Intel members
Intel chair



W3C Browser Testing and Tools

Develop technologies for use in testing, debugging, and troubleshooting of web applications
Two Intel members



** Partial List as of January, 2013

Lets talk about tools!



Delivering Tools & Resources: From Development to Deployment



Intel® HTML5 Developer Zone

Tutorials, videos, documentation, forums

Intel®
HTML5
Development
Environment

HTML5 Playground
BETA

Intel® HTML5 App
Porter Tool BETA

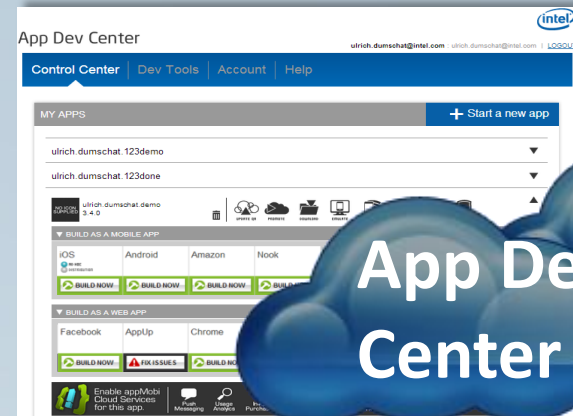
Let's have a closer look! ☺

<http://software.intel.com/html5>

Intel® HTML5 Development Env



A Free, fully integrated HTML5 App Dev Environment for true cross-platform apps targeting multiple App Stores, and form factor devices



- Developer Frontend
- Chrome* Browser plug-in with local project file storage capabilities
- Develop offline and online
- Windows*, OS X*

- Intel cloud-based tools & build service for
 - Apple* App Store
 - Google* Play
 - Windows*/Windows* Phone Store
 - HTML5 Web Apps
- No need to download and learn Native Platform SDKs

Intel® HTML5 Development Environment = Intel® XDK + App Dev Center

<http://software.intel.com/html5>

Intel® HTML5 App Porter Tool – BETA

iOS* App to HTML5 App Converter



Expands market reach for
iOS* Objective-C* app
developers

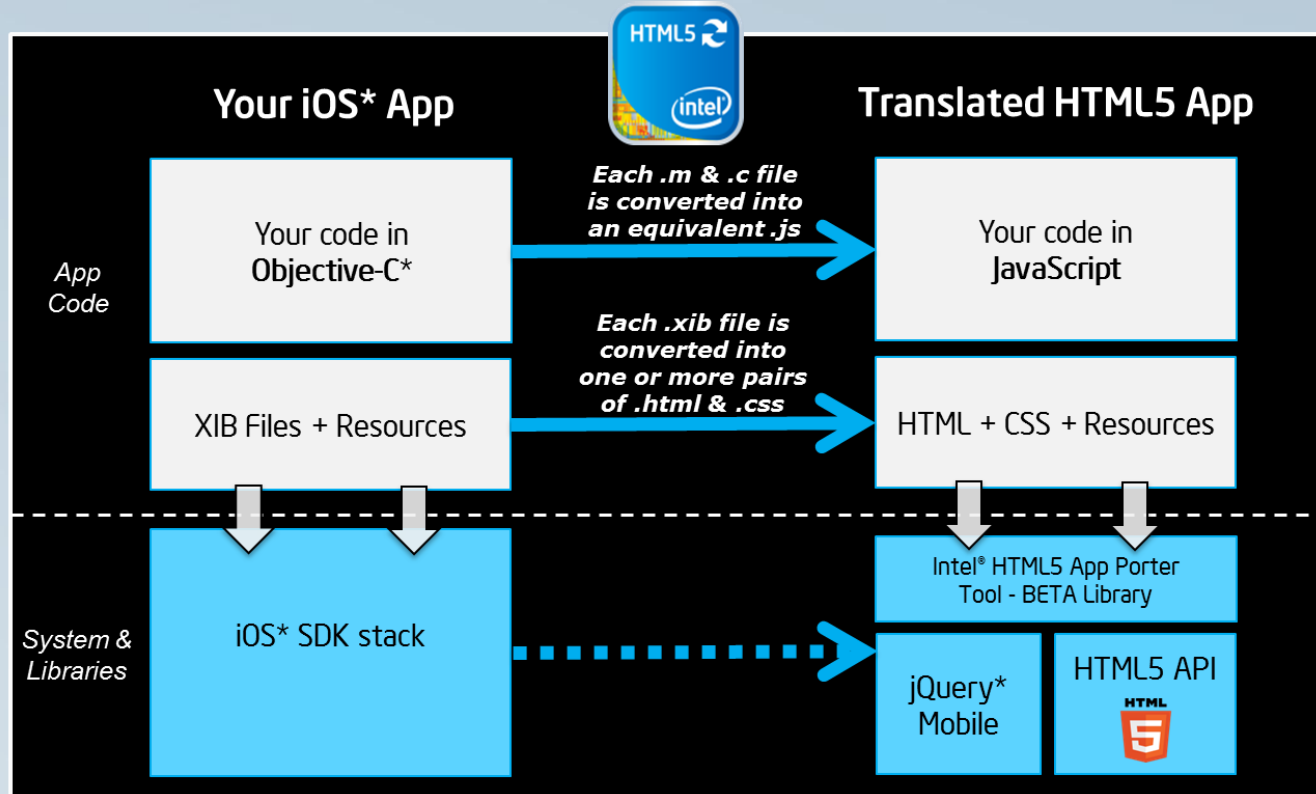
Minimizes porting effort to
generic HTML5

1-to-1 source code
conversion, incl. comments

Identifies source code
needing manual translation

80% API match helps reduce
porting efforts

Industry leading solution



Download, test and use it at no cost at:
software.intel.com/html5

Helping expand market reach for iOS* Objective-C* app developers

Intel® HTML5 Development Env

Intel® XDK & App Dev Center



App Dev Tools to Develop, Test & Deploy True Cross Platform HTML5 Apps.
Write Once, Deploy Everywhere
software.intel.com/html5

Intel® HTML5 Development Environment

Feature / Benefits Overview #1



Phase	Feature	Benefit	Tool
Develop	 App Starter, Style Builder	• App Starter is an App Wizard to start right away with HTML5 app development • Choose color schemes and Style Builder generates a CSS file automatically	Intel® XDK App Dev Center
	 Coding Editor	• Integrated HTML5 Editor with syntax coloring – no need for an external editor • Local project file handling to develop offline • Alternatively pick your own editor	Intel® XDK
	 App Framework	• Highly optimized JS libraries for a better end-user experience	Intel® XDK
	 App Game Interface	• App Game Interface augments the HTML5 canvas for smoother gameplay • More like native capabilities and performance for games	Intel® XDK

Intel® HTML5 Development Env

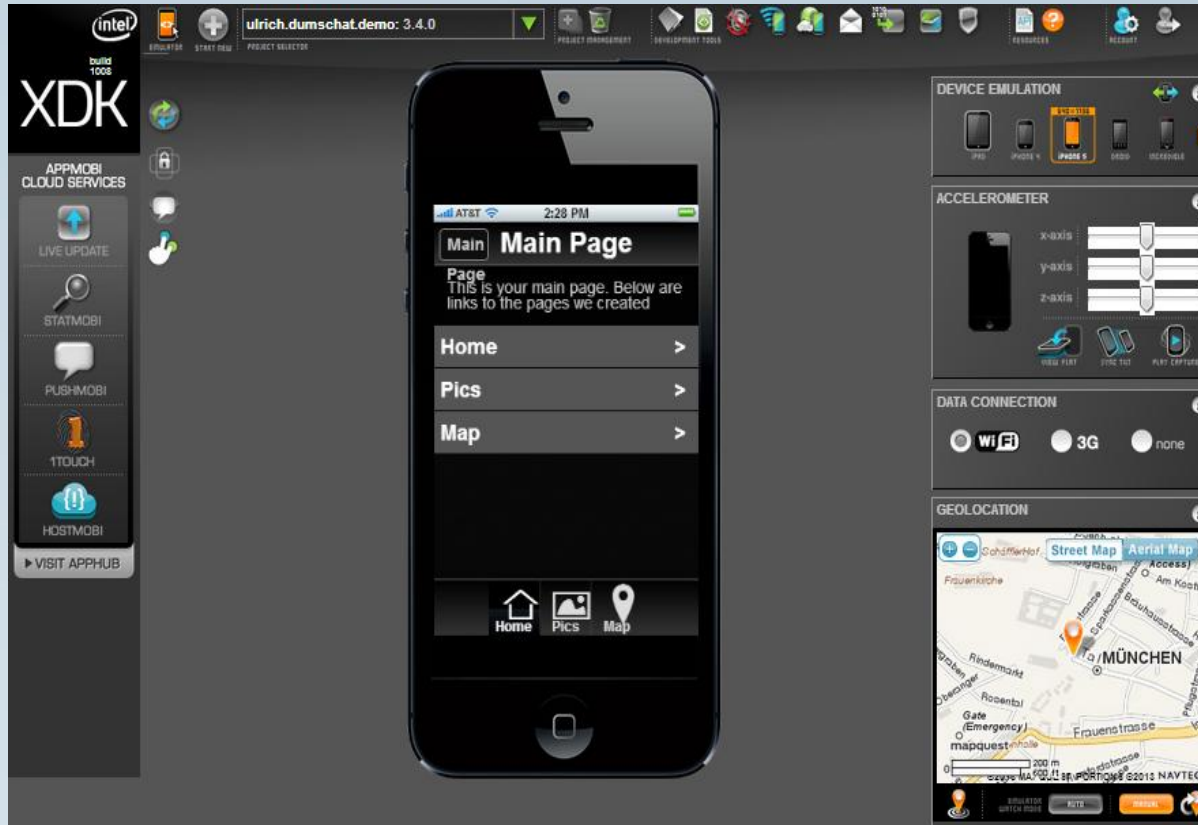
Feature / Benefits Overview #2



Phase	Feature	Benefit	Tool
Test	 Device Emulator	• Pre-testing without real devices • Emulates various data sources, e.g. GPS coordinates, data connection, and accelerometer for more robust apps	Intel® XDK
	 On-Device App Tester	• Testing on a real device, without the need to go through an app store submission process	App Dev Center
	 JS Debugger	• Profiling and debugging while testing the HTML5 app in the Chrome* browser	Intel® XDK
	 On-Device App Debugger	• A simple way to send debug messages from a real-living app on a device to the developer. Debug under real conditions	App Dev Center
Deploy	 Build System For Hybrid & Web Apps	• No need to download native platform SDKs to create Hybrid apps for Apple* AppStore*, Google* Play*, Windows* Store* • Creates web apps for various stores as well	App Dev Center

Develop!

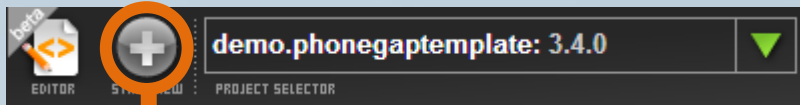




- **Downloadable Development Front End**
- **Chrome* Browser Plug-in**
 - Win*, OS X*
- **Java Backend**
 - Local project file handling
 - Offline Development
- **Connects to App Dev Center**

Intel® XDK – An Easy Cross-Platform App Development Environment Hosted In A Browser

Intel® XDK Project Setup



Let's set up a new HTML5 app project.

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

(1) Project Name:

Project ID: ulrich.dumschat:

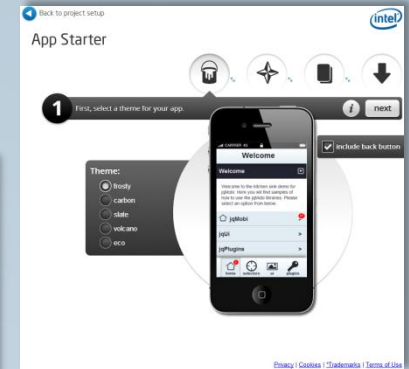
(2) Development Path:

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

Project Setup Page

[Back](#) [Next](#)

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Let's set up a new HTML5 app project.

+ Please select a demo from App Gallery.

CSP Identity
 Flood Puzzle Game
 BPA Calculator
 Towers of Hanoi
 QWY Tab New

Authenticate your user with Intel Cloud Services Platform Identity service.
[View Documentation](#)

[Back](#) [Next](#)

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Where Do You Want To Go?
WebApp, Hybrid App, Game... Just Click

Alternatively: App Starter In The Cloud



App Dev Center

ulrich.dumschat@intel.com : ulrich.dumschat@intel.com | [LOGOUT](#)

Control Center | Dev Tools | Account | Help

MY APPS

+ Start a new app



ulrich.dumschat.123demo
3.4.0



▼ BUILD AS A MOBILE APP

▼ BUILD AS A WEB APP



Enable appMobi
Cloud Services
for this app.



GET STARTED

ulrich.dumschat.123done ▼

ulrich.dumschat.demo123done ▼

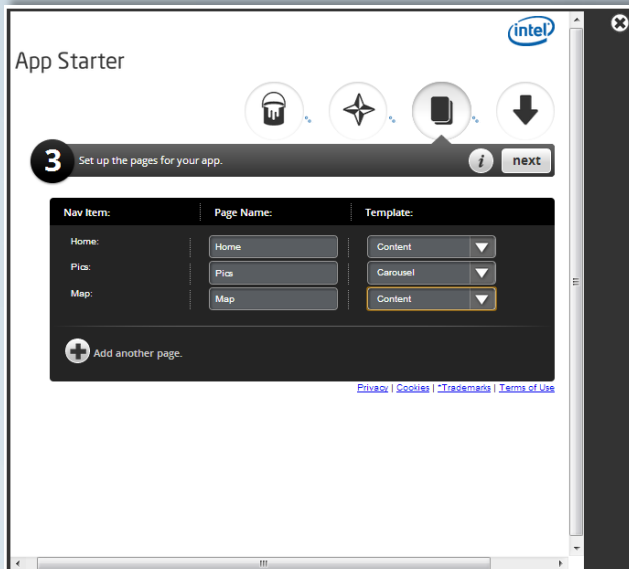
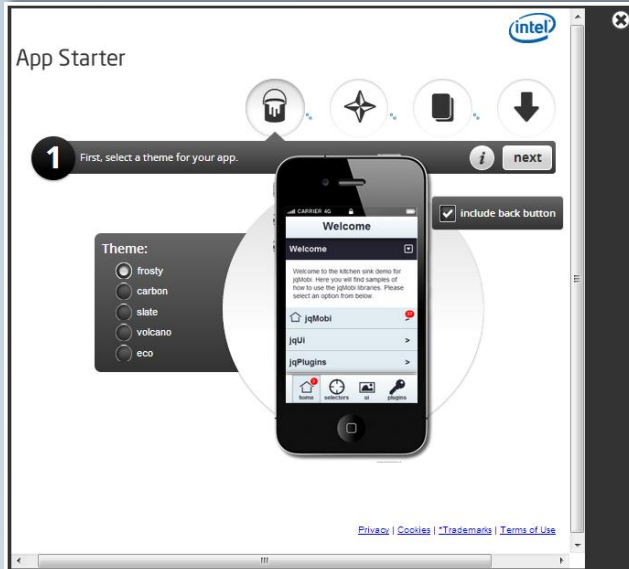
ulrich.dumschat.schachern ▼

App Starter

Develop

Test

Deploy



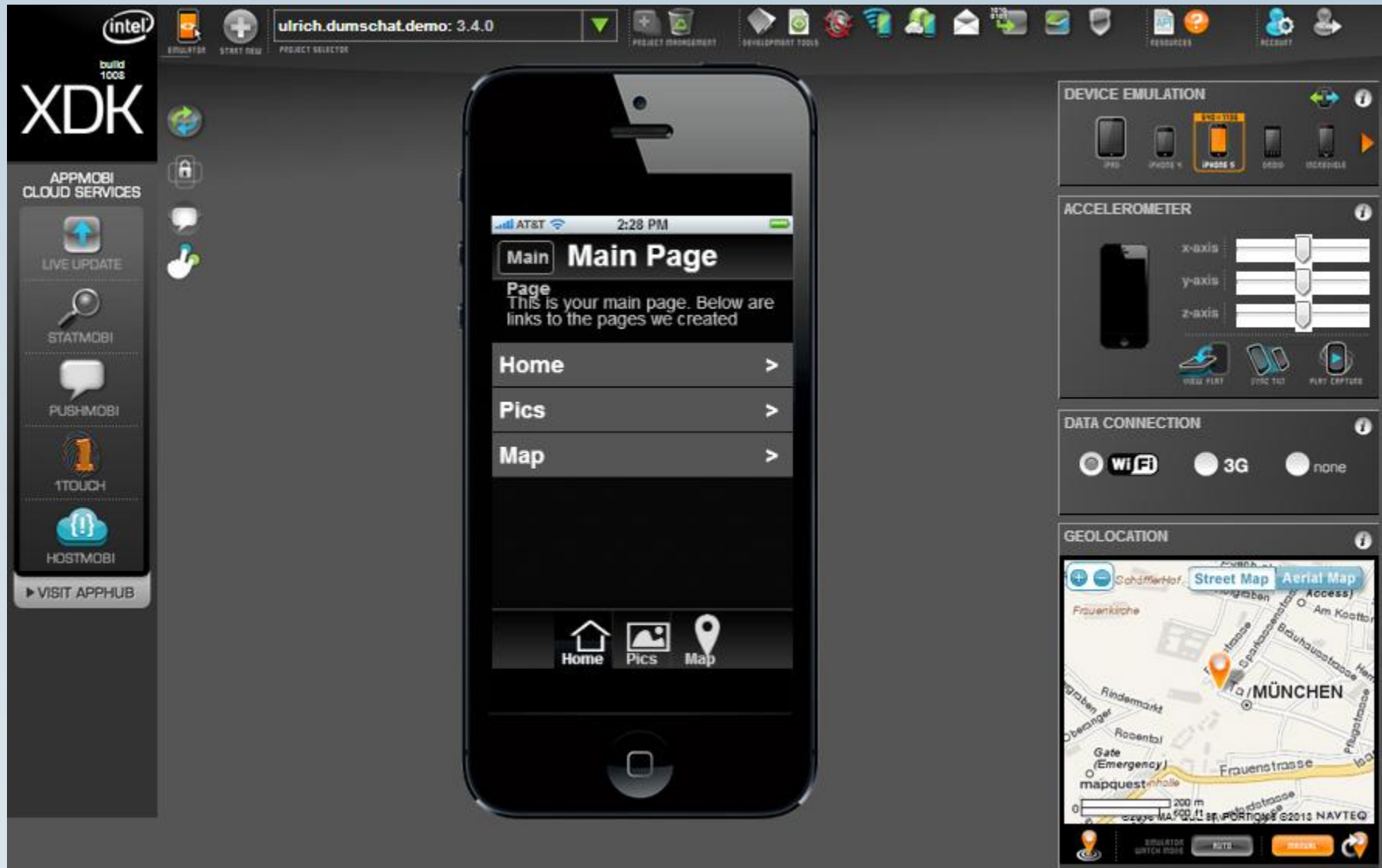
- **For website-like apps**
 - Themes, menu structure, etc.
- **Create in App Dev Center**
- **Continue development with Intel® XDK**

Develop

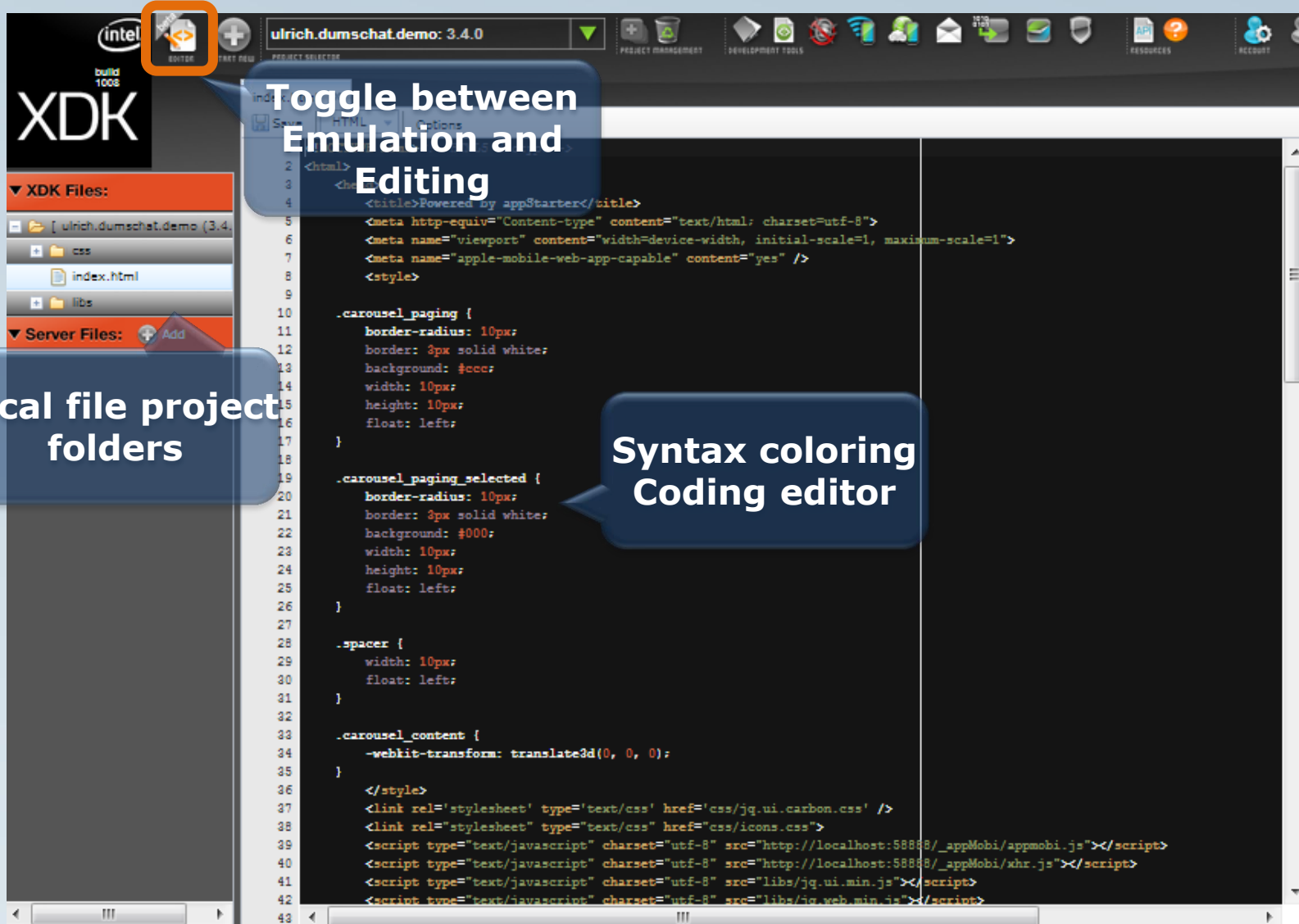
Test

Deploy

Continue App Dev With Intel® **XDK**



Coding Editor



App Framework: Optimized JS Libraries



jQMobi

- jQuery compatible APIs
- 60+ APIs
- built from ground up
- light, fast, and excel on mobile devices.
- takes advantage of new browser features
- supports valid W3C CSS selectors

jQUi

- Optimized for Android*, iOS*, BlackBerry*
- Works on webkit browsers for mobile smartphones
- Supports fixed headers and footers for a more native-like look & feel

jQPlugins

- Plug-ins power the core of jQUi
- Utilizes
 - Scrolling bar lib
 - CSS3 Animation lib
 - Popup box
 - Animation sheet, etc.

- Designed for mobile devices supporting latest CSS3 and HTML5 features
- Using browsers built-in features, makes the framework fast and light
- Uses CSS3 animations, W3C selectors and native scrolling on iOS for a great performance

`$.is$``$.map``$.ui.popup``.find``$.isFunction``$.ui.setBackButtonStyle``.addClass``$.ui.setTitle`

App Framework provides a great JS performance

Style Builder: A CSS File Generator



App Framework | Style Builder 



Start with a theme

Background Color:

Masthead Background Color:

List Item Background Color:

Footer Background Color:

Footer Icon/Text Color:

Button Color:

Heading Font:

Heading Text Size:

Heading Color:

Body Copy Font:

Body Copy Size:

Body Copy Color:

Input Border Radius:

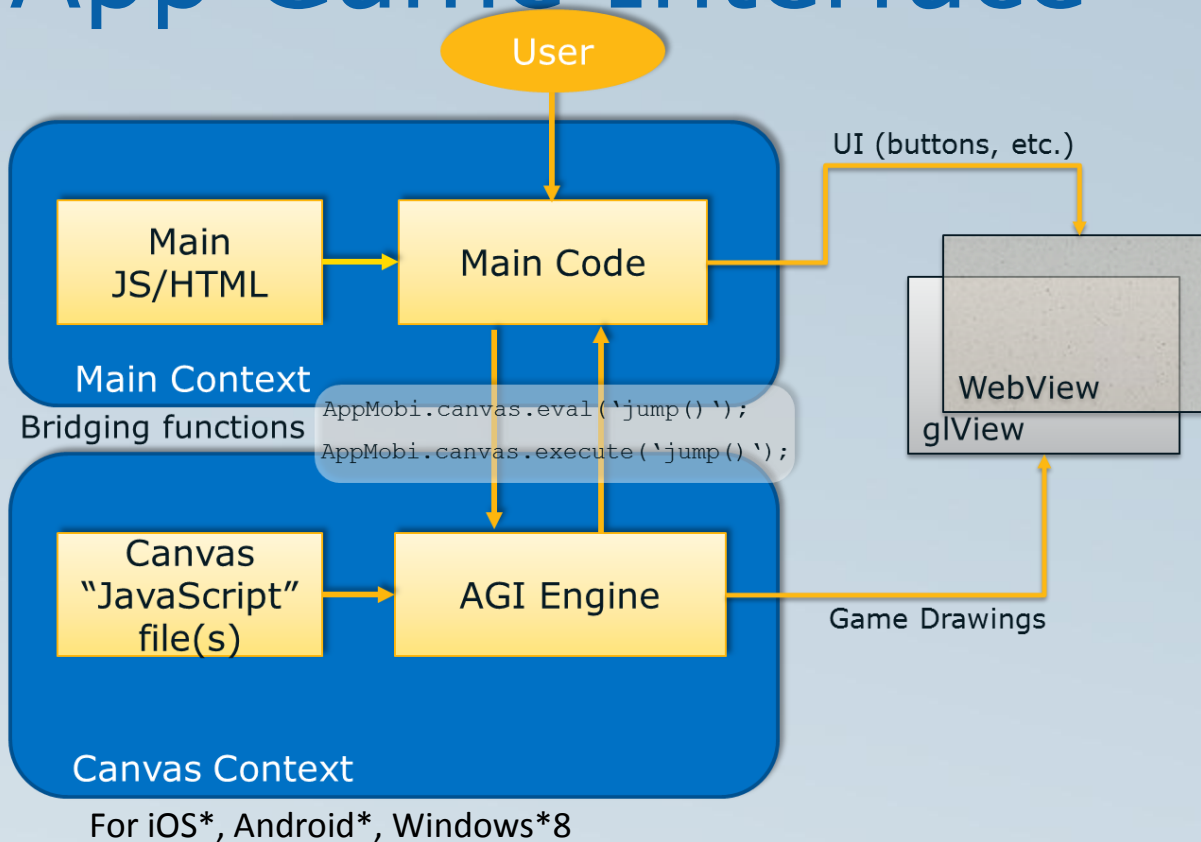


Privacy | Cookies | *Trademarks | Terms of Use

Let Style Builder
Create Your CSS file

Some Tools Make Life A Little Bit Easier...

App Game Interface



App Game Interface, provides:

- Accelerated Canvas implementation similar to HTML5 Canvas
- Along with multi channel sound, and
- Accelerated physics, to enable more realistic modeling and smoother gameplay

App Game Interfaces For Faster HTML5 Games
Native like capabilities and performance

Test!



Device Emulator

Develop

Test

Deploy



ulrich.dumschat demo: 3.4.0

XDK build 1008

APPMOBI CLOUD SERVICES

LIVE UPDATE

STATMOBI

PUSHMOBI

1TOUCH

HOSTMOBI

VISIT APPHUB

And more devices...

DEVICE EMULATION

iPhone 4, iPhone 5, iPad, Kindle

ACCELEROMETER

x-axis, y-axis, z-axis

DATA CONNECTION

Wi-Fi, 3G, none

GEOLOCATION

Street Map, Aerial Map

mapquest

Device Emulator

GPS, Accelerometer, Data Connection simulation

Main Page

MENU

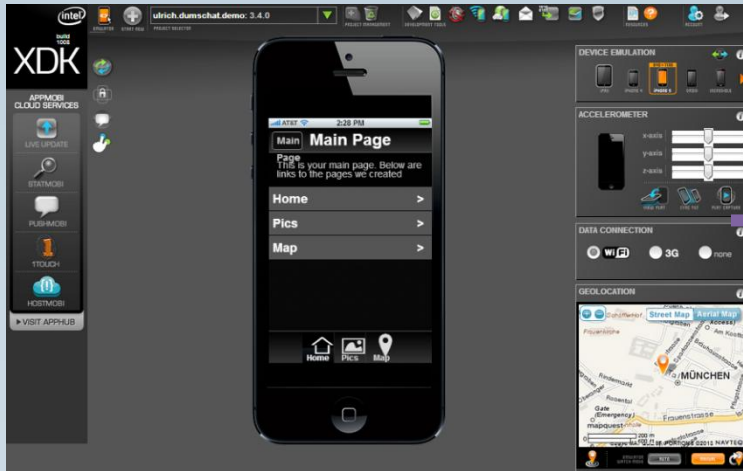
- Home
- Pics
- Map

Main Page

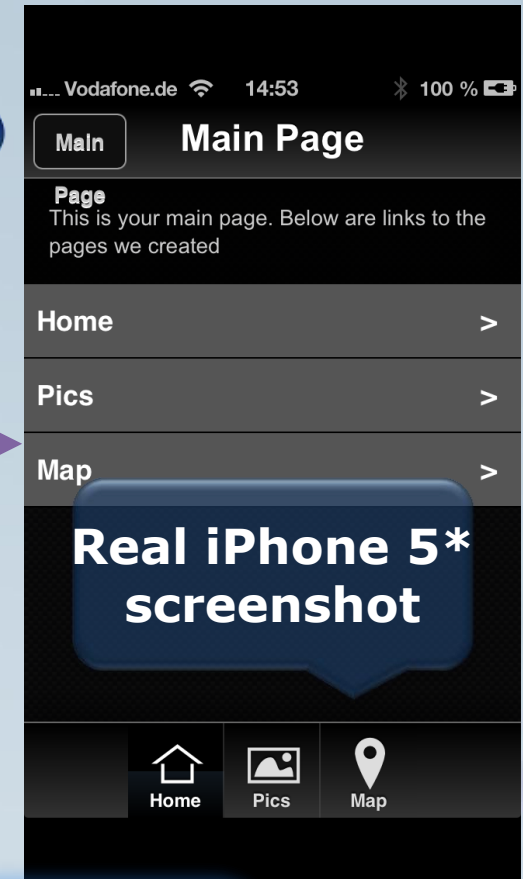
This is your main page. Below are links to the pages we created

- Home
- Pics
- Map

On-Device App Testing

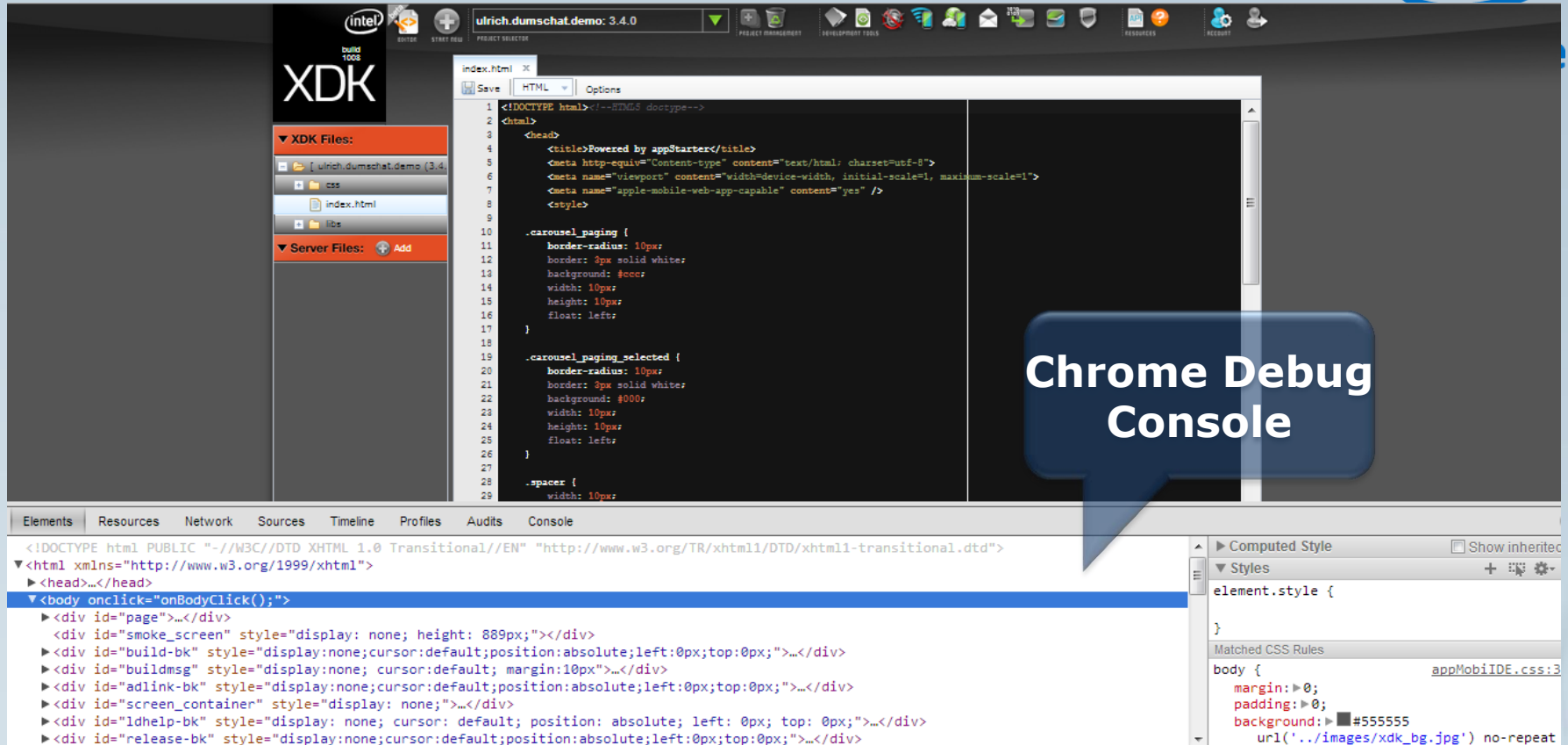


**Required
App on real
Device
Emulates
Phonegap**



**On-device app preview – no need to submit app
through Apple* App Store or Google* Play for testing**

Debugging



App Debugging Through Chrome* Debug Console

On Device Debugging

Develop

Test

Deploy



Software

App Debugger



GET STARTED NOW!

- 1 FIRST, ENTER YOUR UNIQUE ID.
OR, USE THE RANDOMLY GENERATED ONE BELOW.

ebc6a3b8-c6cb-7ed1-01cc-e8bffe3dc3e2

- 2 ADD THIS SCRIPT TO YOUR INDEX FILE.

```
<script src="http://debug-software.intel.com/target/target-script-min.js#ebc6a3b8-c6cb-7ed1-01cc-e8bffe3dc3e2"></script>
```

- 3 THEN, [CLICK HERE](#) TO START DEBUGGING.



Powered by 

Simple way to send debug messages from your App to your host computer
– via the internet

Deploy!



App Building Process

Develop

Test

Deploy



App Dev Center

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Control Center | Dev Tools | Account | Help

MY APPS

+ Start a new app

ulrich.dumschat.123demo

ulrich.dumschat.123done

NO ICON SUPPLIED
ulrich.dumschat.demo
3.4.0



▼ BUILD AS A MOBILE APP

iOS AD-NOV DISTRIBUTION	Android	Amazon	Nook

▼ BUILD AS A WEB APP

Facebook	AppUp	Chrome	hostMobi	WebApp



GET STARTED

- Upload Project With Intel® XDK to App Dev Center
- Select Target Platforms and Build Apps
- No need to download and learn native platform SDKs to create Apps for Apple* App Store, Google* Play, Windows* Store

Cloud Build Process For HYBRID and WEB APPS

Intel® HTML5 App Porter Tool - Beta!

Make it
HTML5
Without Boundaries

Have You Created An iOS* App?



...and you want to broaden your market reach, by extending your iOS* app to other platforms?

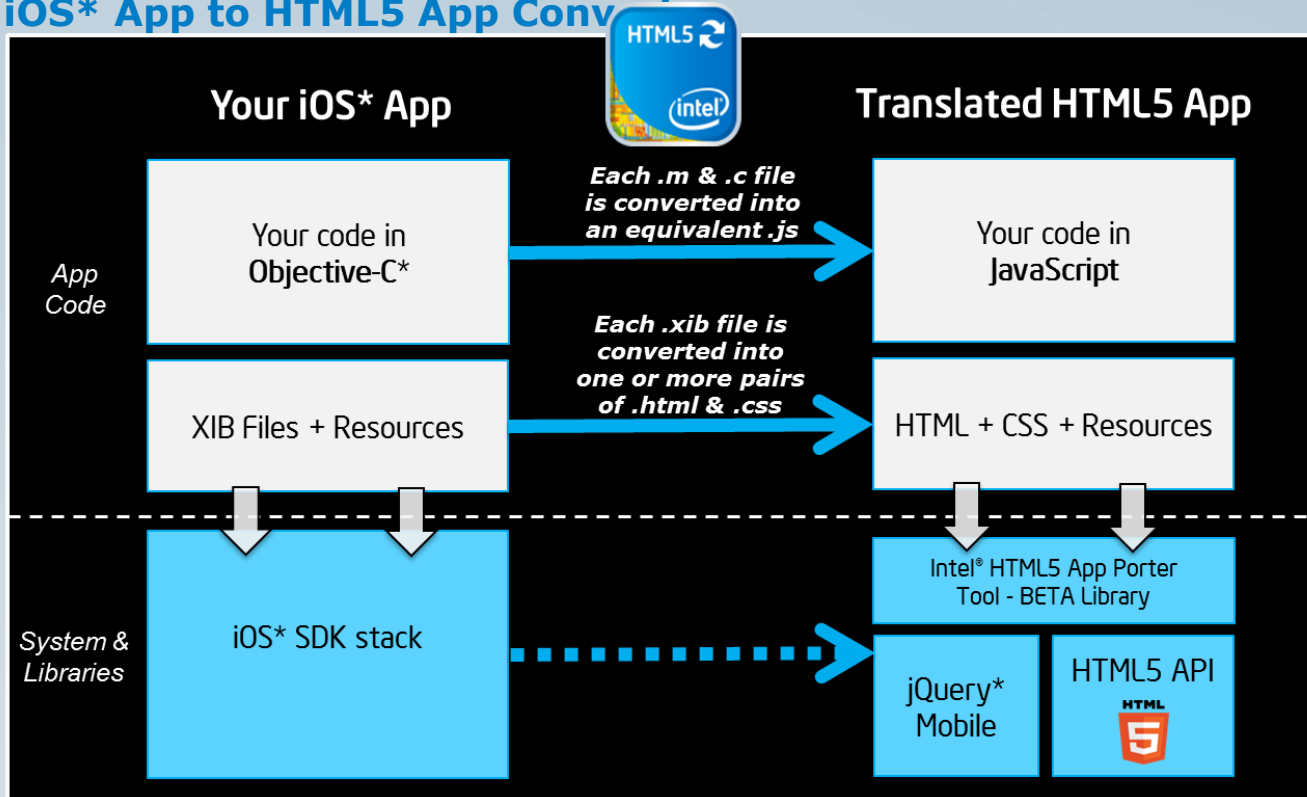
...wait a second, we might have something for you! 😊

Intel® HTML5 App Porter Tool – BETA

iOS* App to HTML5 App Converter



Software



Download, test and use it at no cost
software.intel.com/html5

Helps to expand market reach for iOS*
Objective-C* app developers

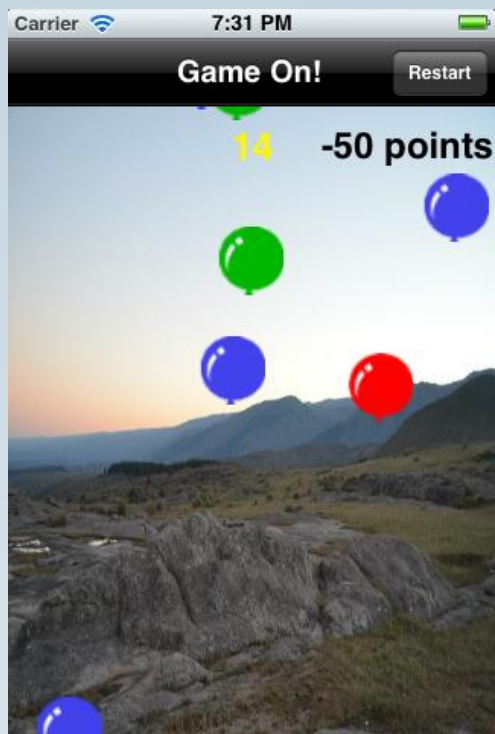
App Is Ready For Next Steps



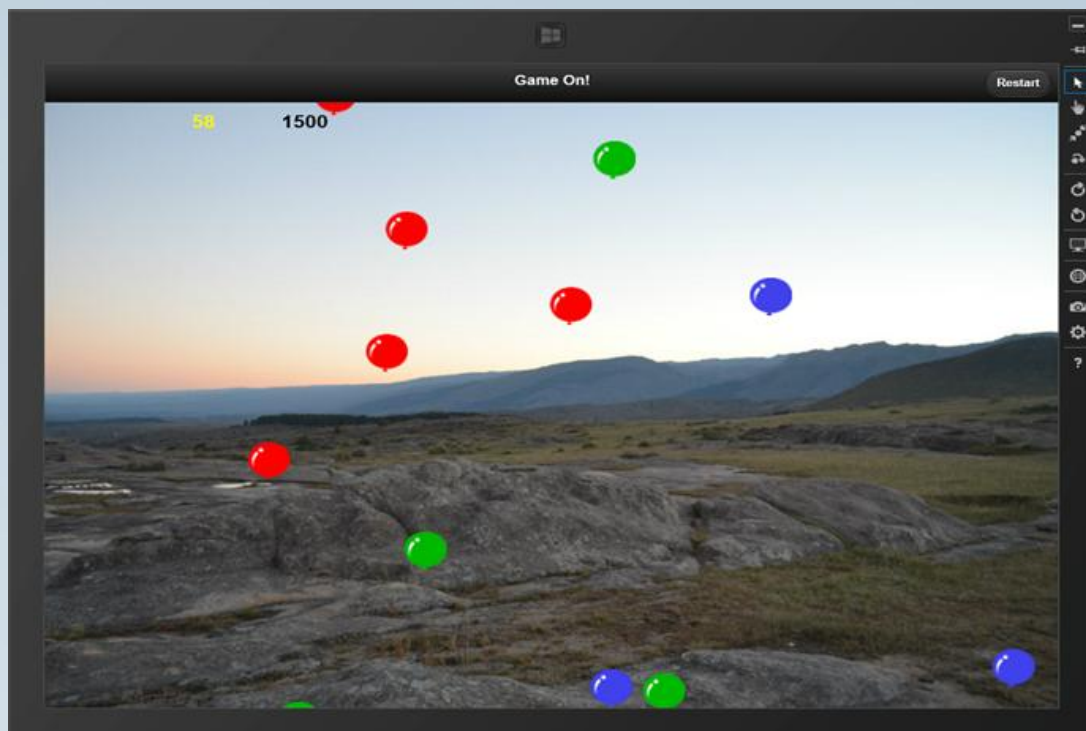
**App Porter Clearly Indicates Which Parts
Need To Be Converted Manually**

Before / After

iOS* App



HTML5 App



What you learned...

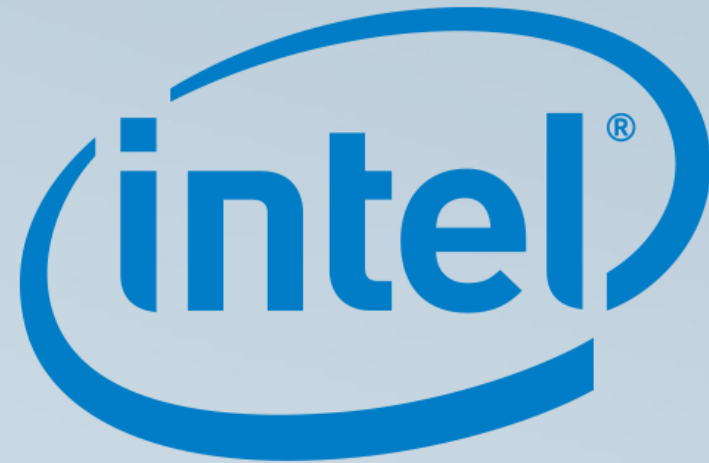


Summary



- Intel is making HTML5 better through Open Source Contributions, Standards, Tools & Resources
- Intel provides a free, complete, integrated HTML5 development environment to support true cross-platform apps
- Intel® HTML5 App Porter Tool - Beta helps to broaden the market reach for existing iOS* apps by converting them to HTML5 cross-platform

Just register and start to build your HTML5 app today!
<http://software.intel.com/html5>



Software

software.intel.com/html5