

Using the Intel® XDK to Create Cross-Platform HTML5 Applications for Mobile

@xmnboy

Paul Fischer, Intel Corporation

HTML5 Developers Conference 2013



Optional: Download App Preview

Trouble scanning? Try using Google Goggles or RedLaser Barcode.
(it is not necessary to start the app, login or create an account)

Android

bit.ly/1i8VEgl

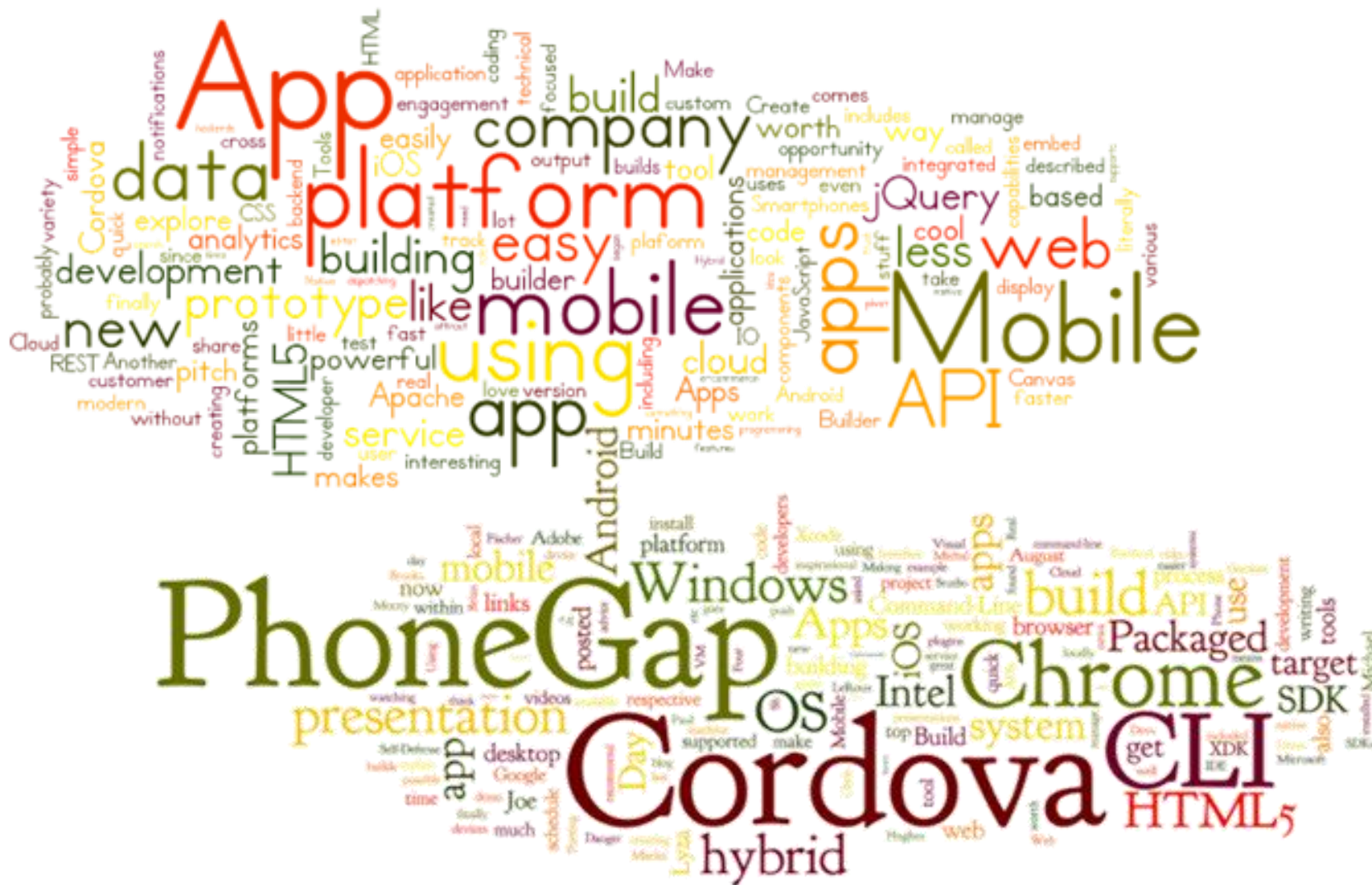


iOS

bit.ly/1a3W7Bk



Having Bad Dreams...



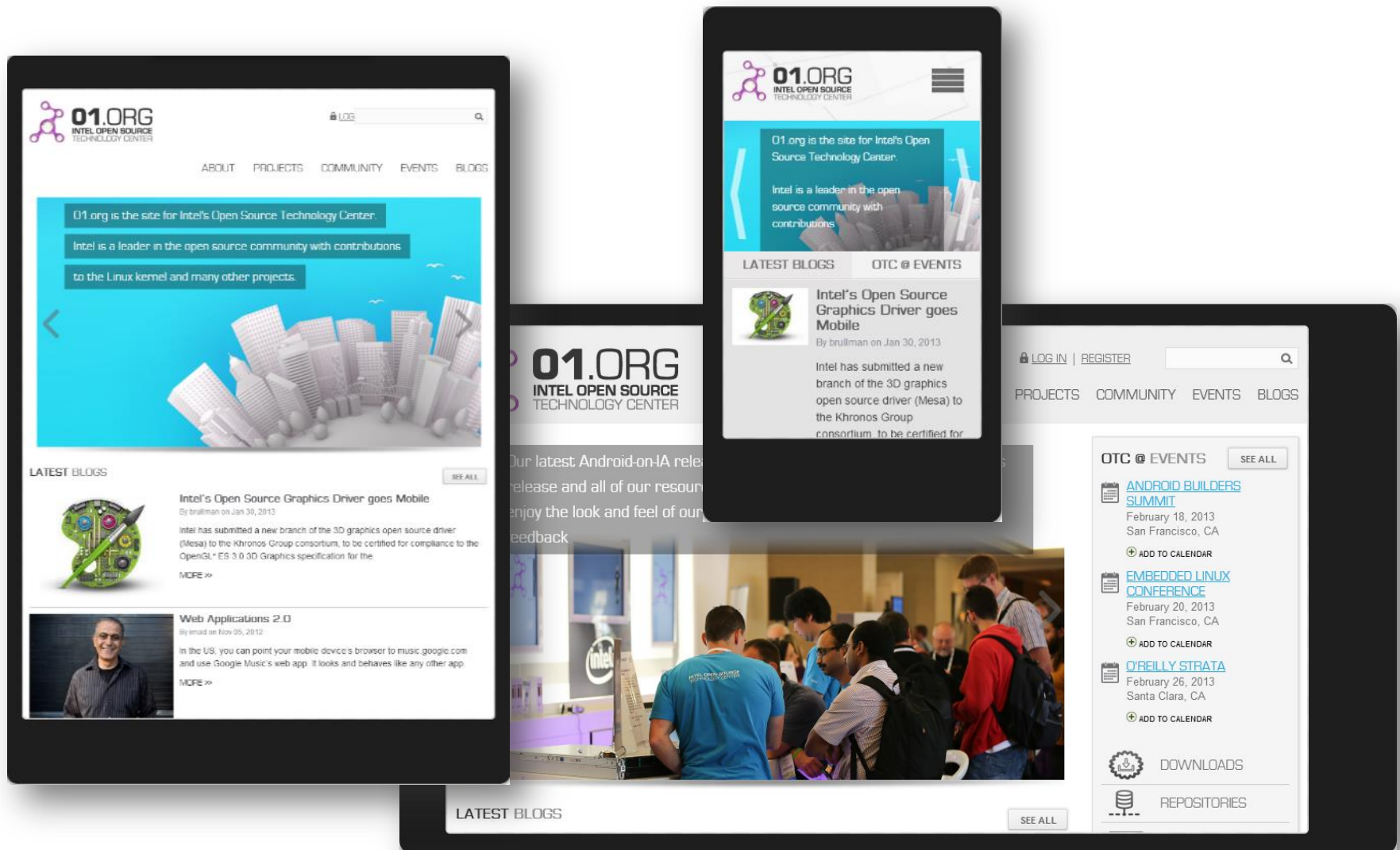
Why Hybrid HTML5 Apps?

Hybrid Apps allow developers to build apps with these skills and tools...

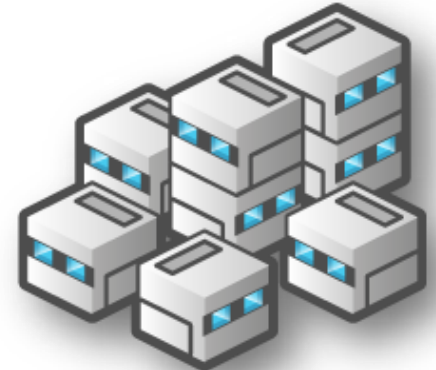
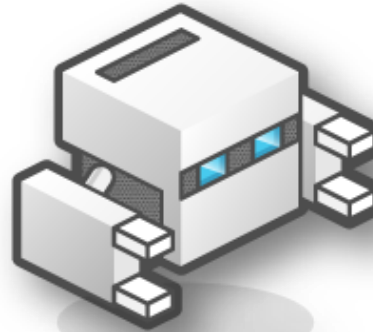
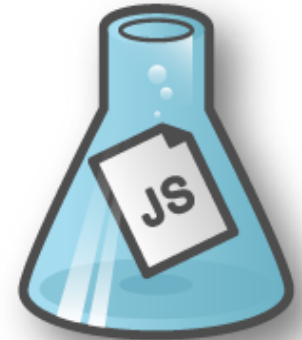
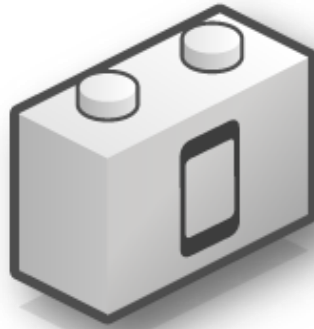


...that can be distributed in native app stores.

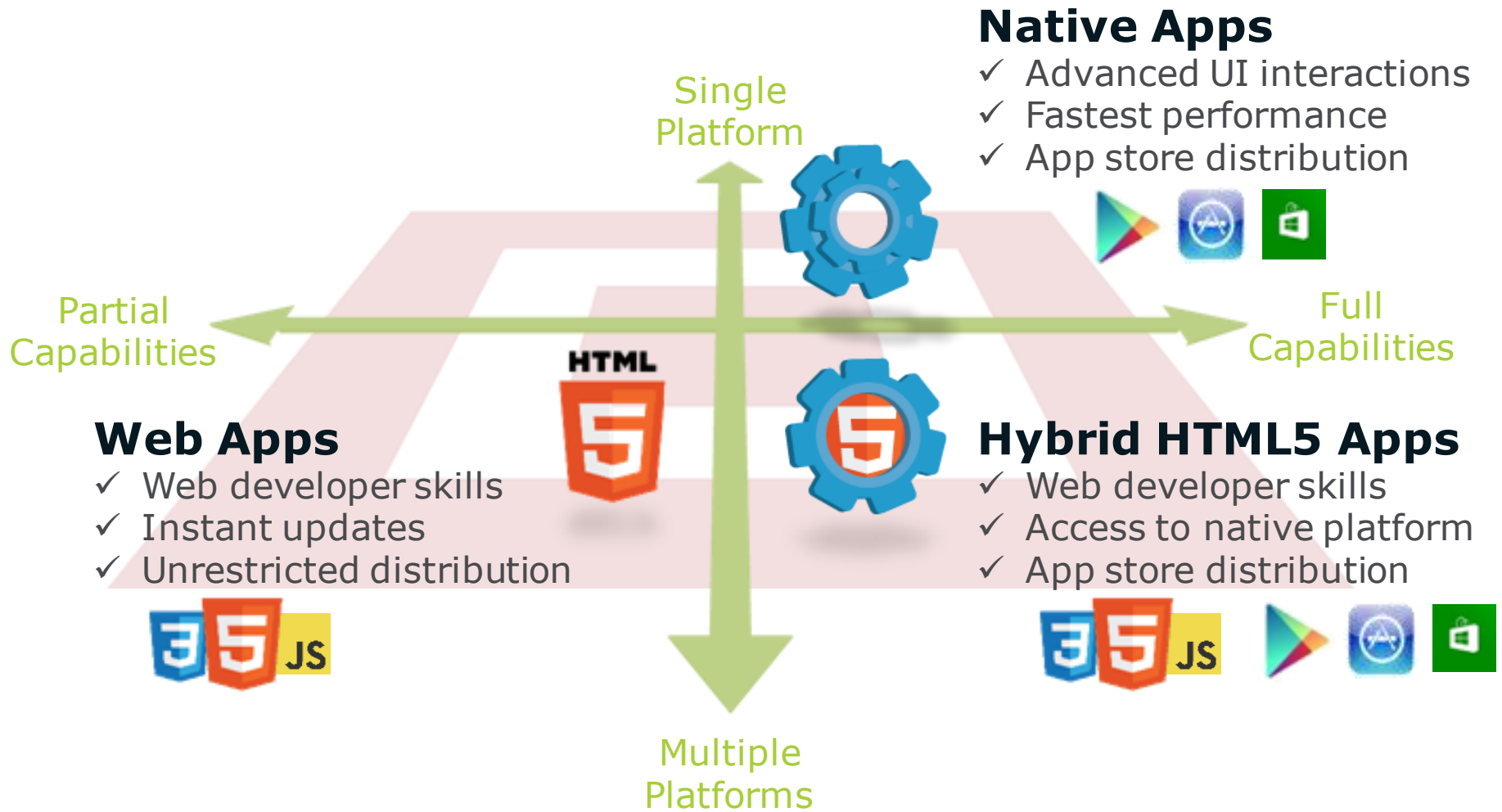
Use HTML/CSS/JS for UI and Program Logic...



...and Cordova (*pronounced /fōn-gap/*) for Device Feature Access



Hybrid HTML5 App Advantage



Web vs. Hybrid vs. HTML5 Applications

	Today		Tomorrow
	Web App <i>limited sensor input</i>	Hybrid App <i>full sensor input</i>	HTML5 App <i>full device access</i>
Runs w/o network	Yes	Yes	Yes
Flexible Layout	Yes	Yes	Yes
Device APIs	Limited	Mostly	Complete
Distribution	URL	Native Binary	URL/WGT
Cross Platform	Yes	Yes & No	Yes
Runs in Web Browser	Yes	No	No
Runs in Web Runtime	No	Yes	Yes

The HTML5 standard is evolving to include device APIs

Hybrid HTML5 App Block Diagram

Your HTML5 Web App

**Hybrid
Extension**

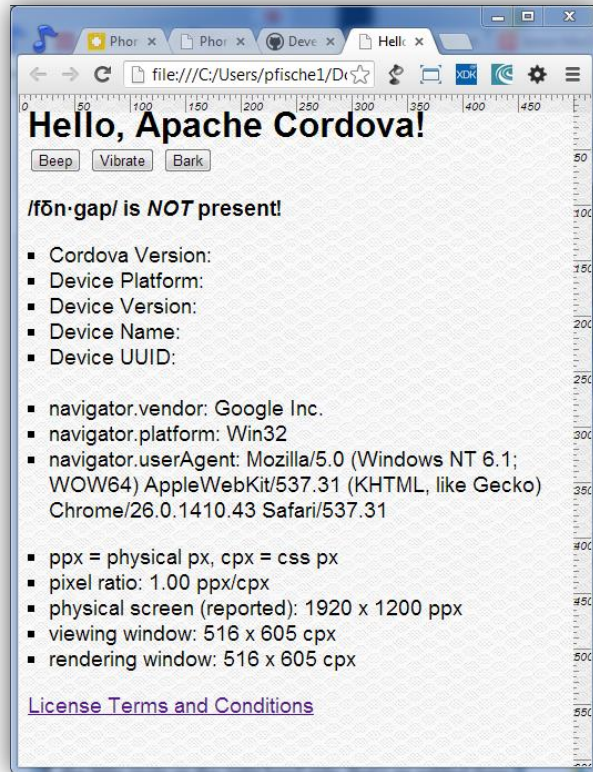
**Native
WebView**

Mobile System Services

Mobile Operating System

Mobile Device Hardware

Inside a Browser vs. Inside a WebView



Desktop Browser



Mobile Browser

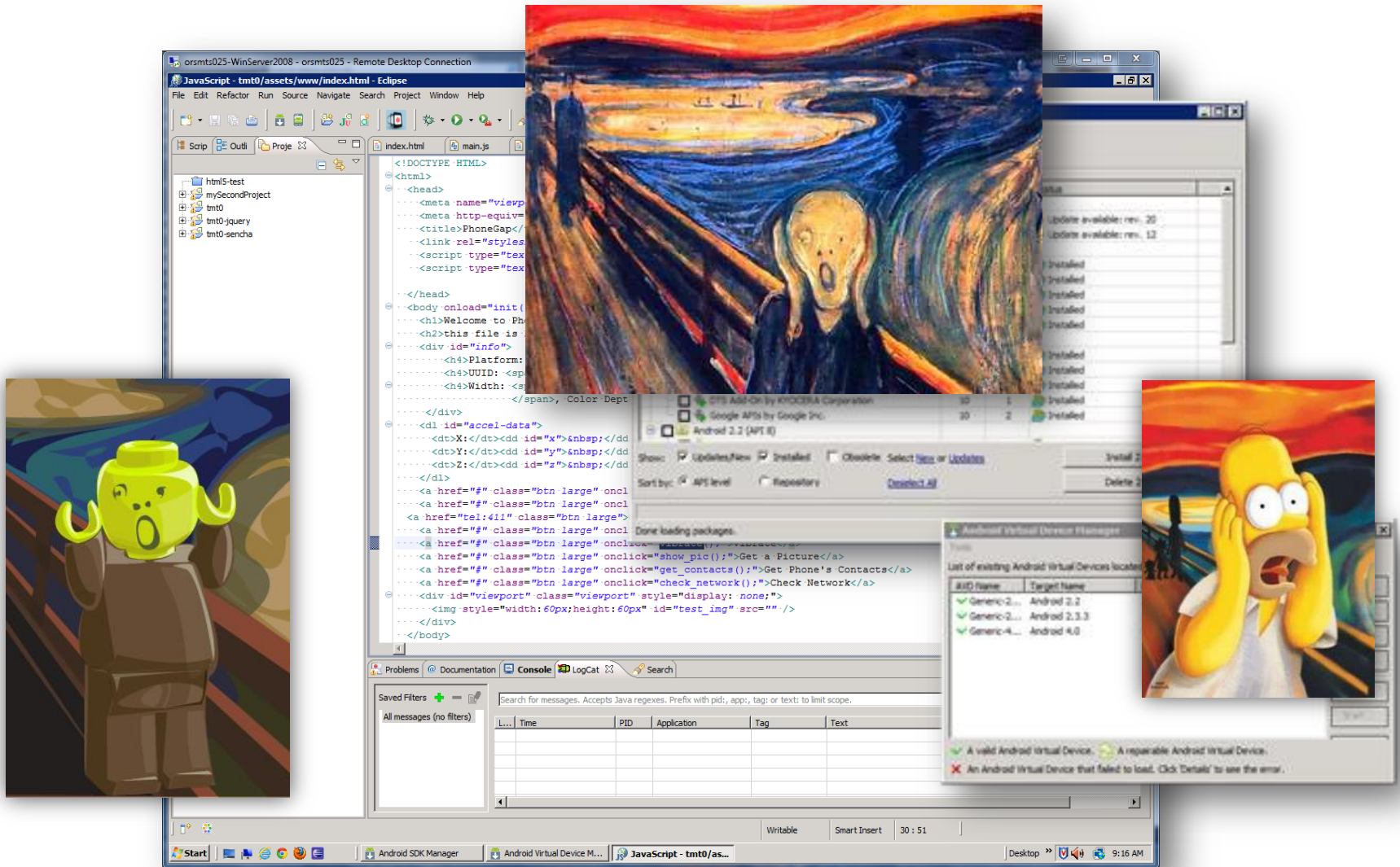


Native WebView

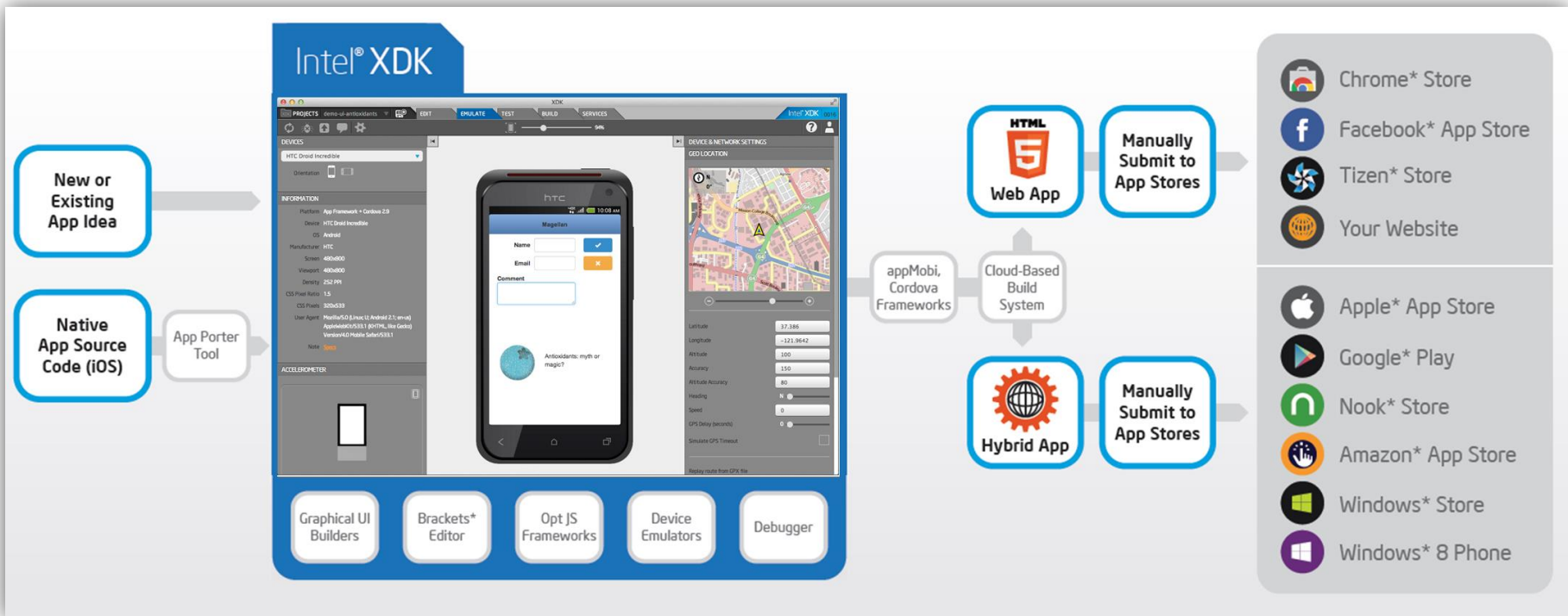
Recurring Nightmares...



With Cordova do I have to learn to use Android, Xcode and Visual Studio SDKs!?



Intel® XDK Handles that Cordova Stuff!



The Intel XDK tools facilitate the creation of **hybrid HTML5 applications** for deployment on iOS, Android, Windows 8, Tizen and other mobile devices.

Visit the Intel Developer Zone → software.intel.com/html5

Just think of hybrid as a tasty “Black and Tan”



(if you don't like beer, think of it as an “Arnold Palmer”)

No More Nightmares...



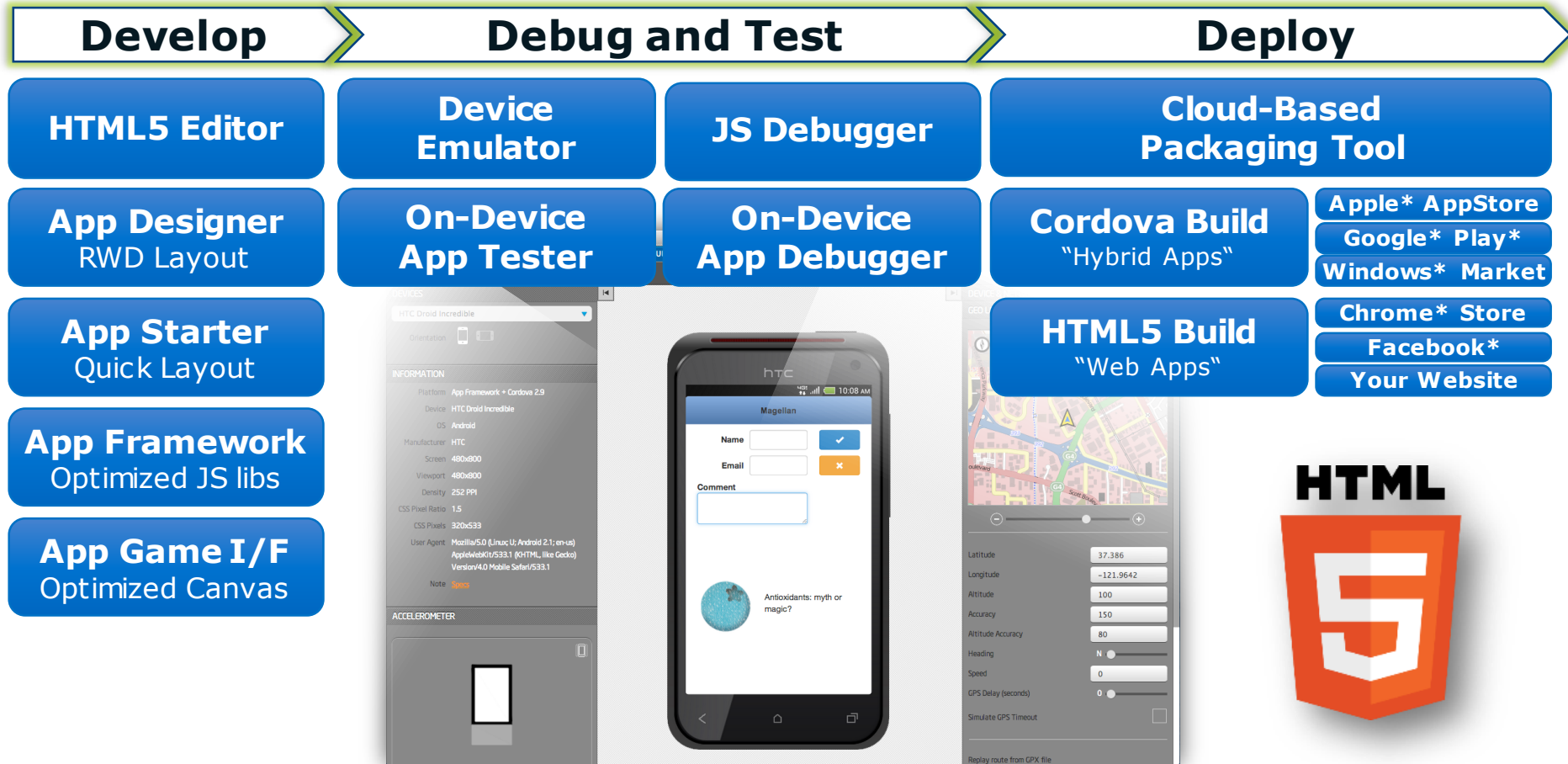
www.tehcute.com/full/sleeping-baby-hedgehog.htm

...Really, No More Nightmares...



attackofthecute.com/on/?i=4302

Intel® XDK – Tools for Hybrid HTML5 App Development

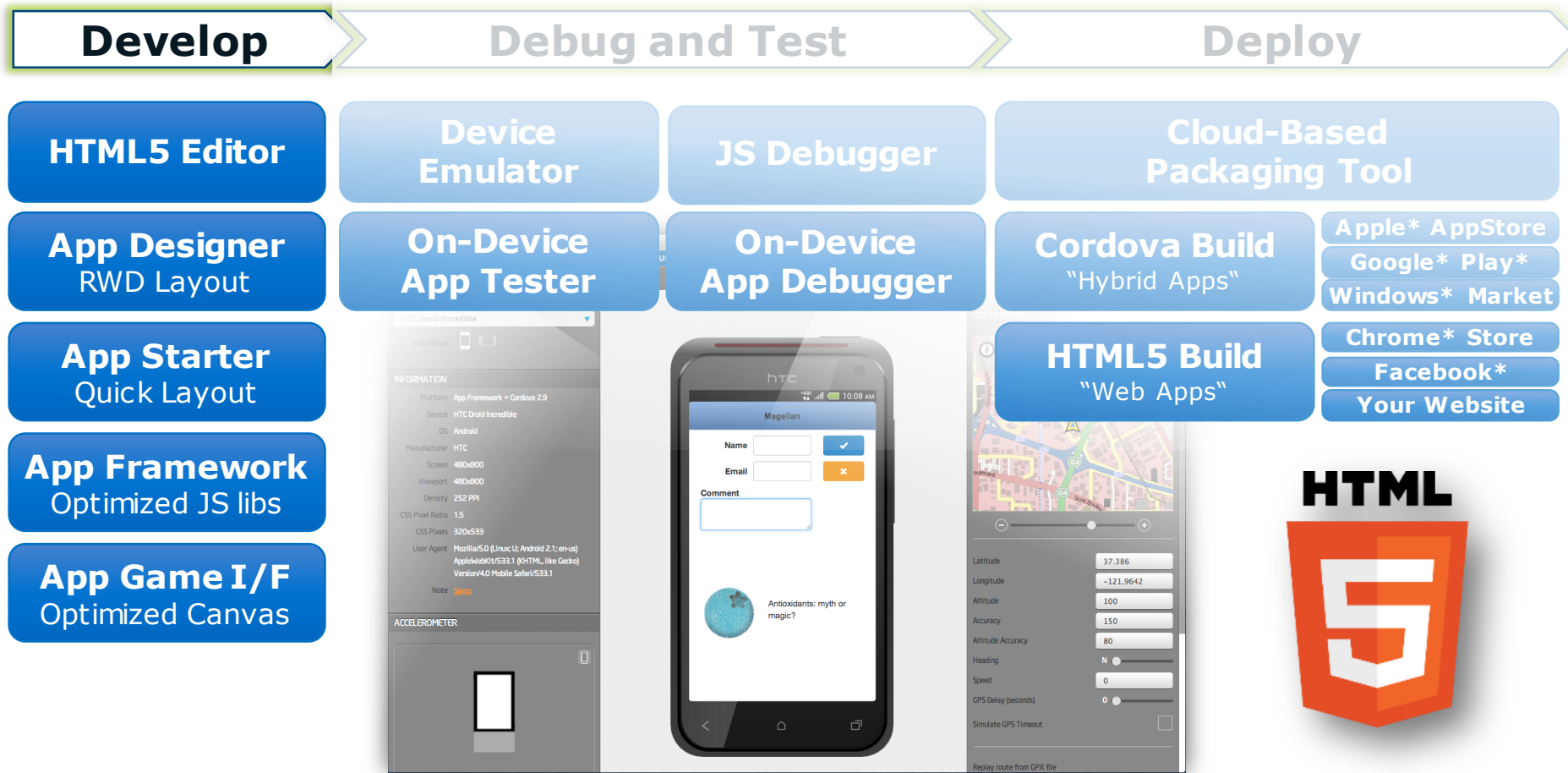


Build cross-platform HTML5 hybrid applications.

*HTML5 logo is the property of World Wide Web Consortium (W3C)

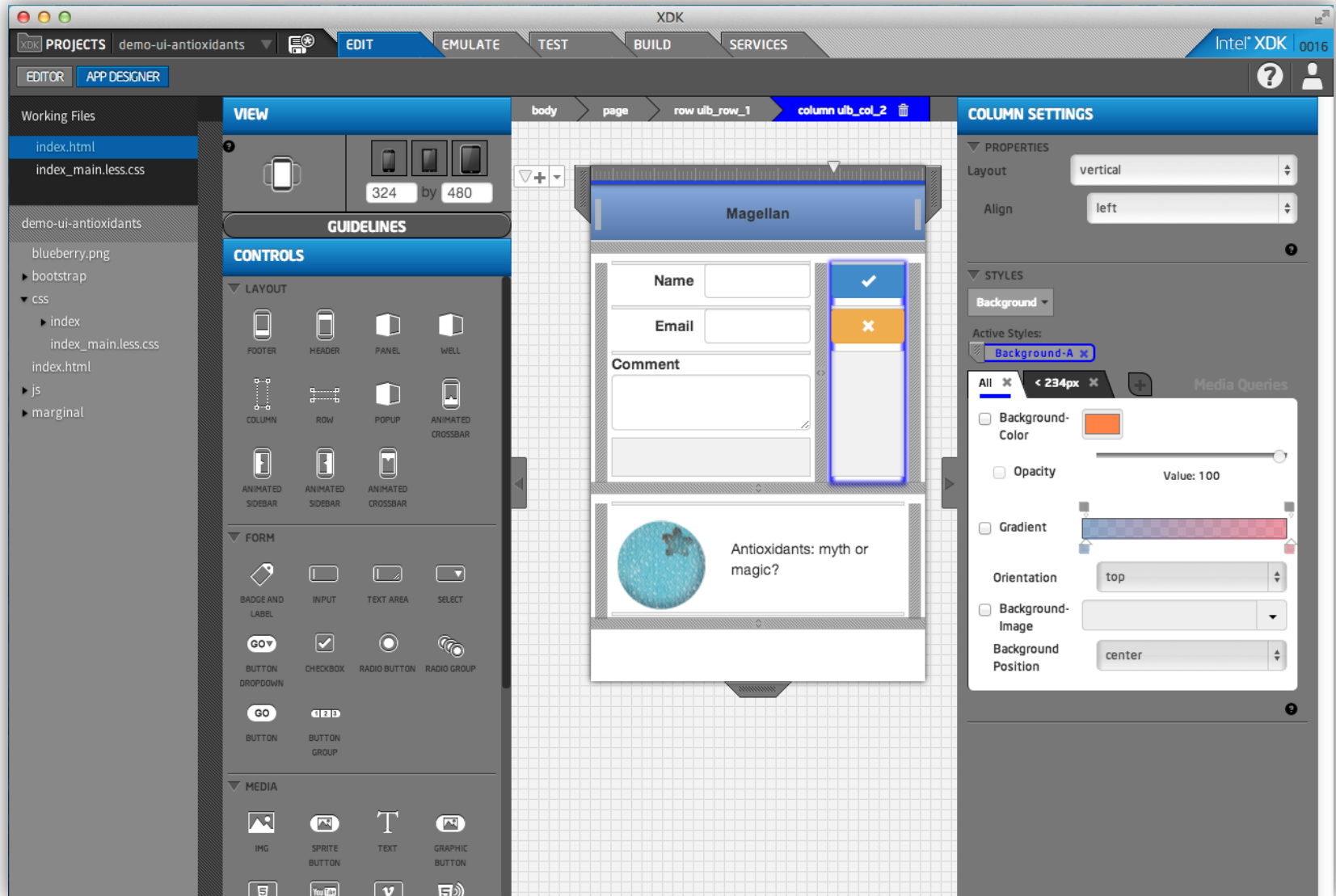
LAYOUT AND DESIGN

Develop: Mobile App Design Tools



Build cross-platform HTML5 hybrid applications.

Demo: Mobile App Design Tools



Summary: Mobile App Design Tools

HTML5 Built-in Editor

- Based on Brackets* --or-- use your favorite editor

App Designer

- Drag-n-drop UI components
- Configure media query switch [wrap] points
- Compatible with multiple UI frameworks

App Framework (and App Starter)

- jQuery* compatible UI framework
- Optimized for mobile device web views
- Android*, iOS*, Blackberry* and Windows 8* themes
- app-framework-software.intel.com/style.php

App Game Interface

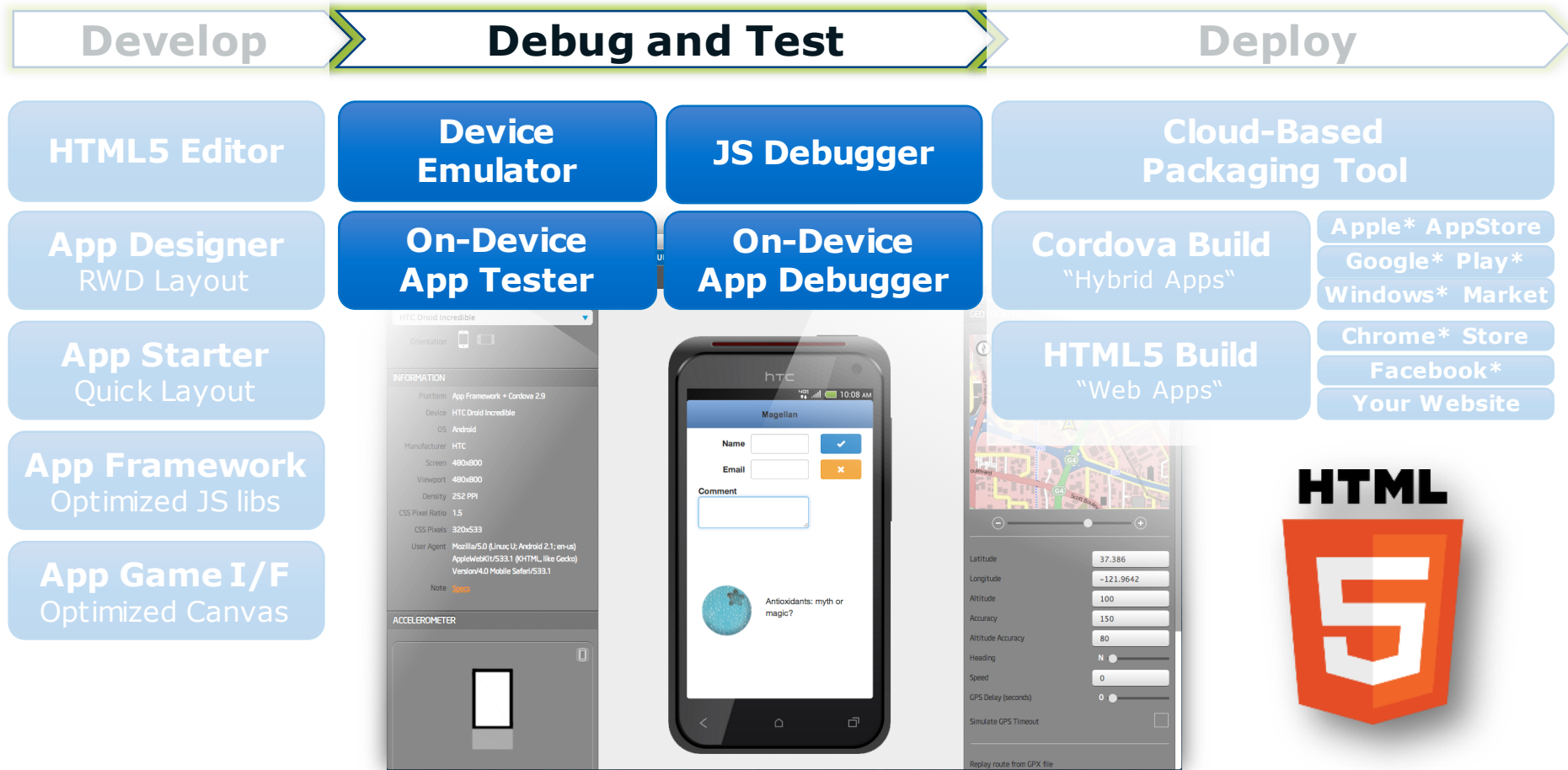
- Accelerated canvas for Android* and iOS*
- Multi-channel audio and Box2D* physics engine support

Common Platform Bugs Fixed by the App Framework Library

iOS	<ul style="list-style-type: none">▪ 300ms click delay▪ Prevent page from bouncing with native scrolling▪ Hide address bar
Android	<ul style="list-style-type: none">▪ <code>translate3d()</code> and form elements▪ Improve scrolling performance▪ UI animations
Windows 8	<ul style="list-style-type: none">▪ <code>addEventListener()</code> event dispatch bug▪ “touch” events supported

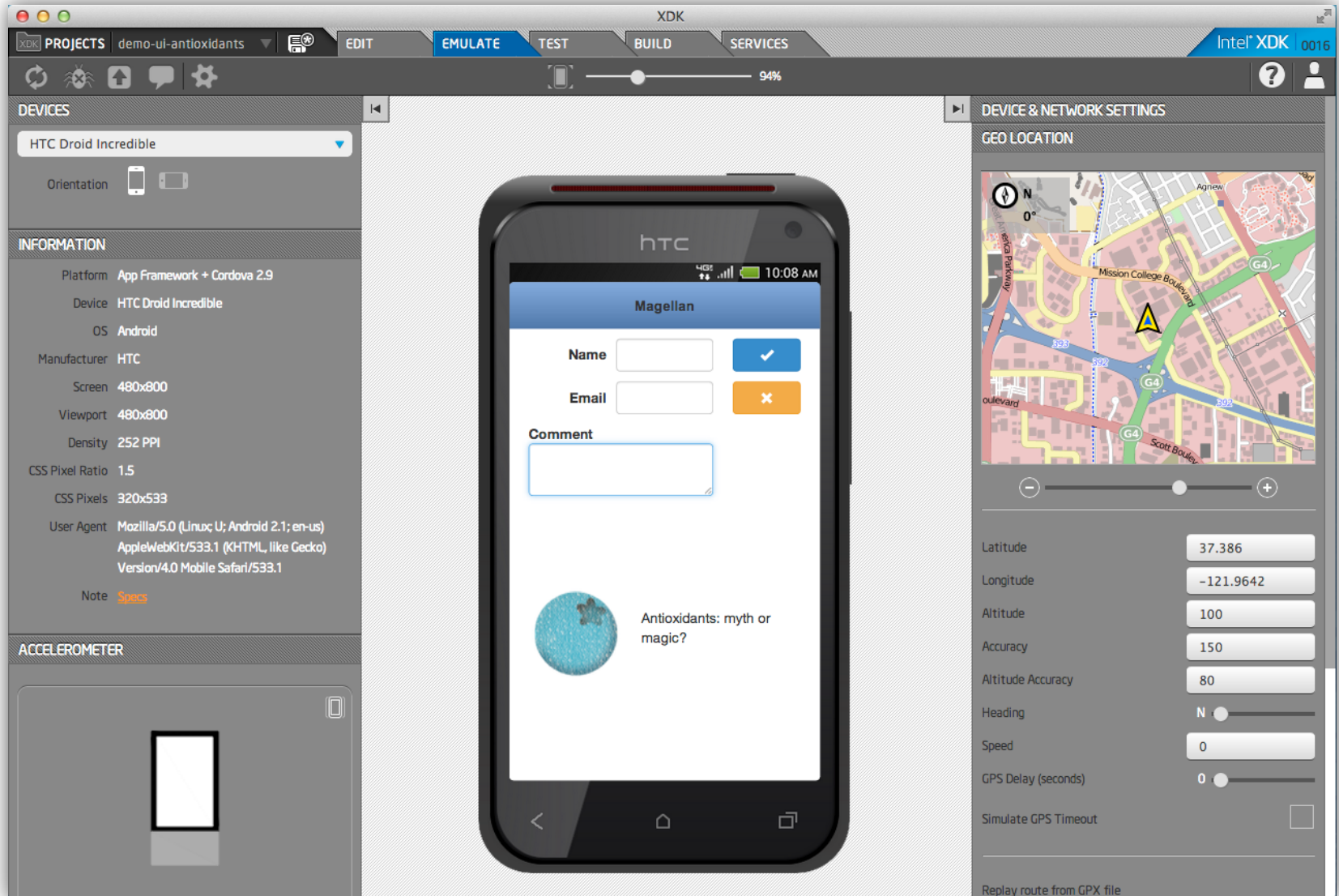
TEST AND DEBUG

Test: Emulate and On-Device Debug



Build cross-platform HTML5 hybrid applications.

Demo: Emulate and On-Device Debug



Summary: Emulate and On-Device Debug

Intel® XDK Emulator

- Preview in various phone and tablet formats
 - iPhone*, iPad*, Android* devices, Windows* 8 tablet...
- Simulate device-specific features
 - accelerometer, compass, GPS, vibrate, orientation...
- Debug using standard Chrome DevTools (CDT)
- Simulation of intel.xdk and cordova APIs
 - Intel XDK 4.0.0 and Cordova 2.9.0 API levels

App Preview → On-Device Previewer

- Quickly load and run projects directly on real devices
- Access to intel.xdk and cordova device APIs

App Debugger → On-Device Remote Debug

- Remote access to device JavaScript console (aka CDT)

Remote Download of Notifiers Test App

Scan this

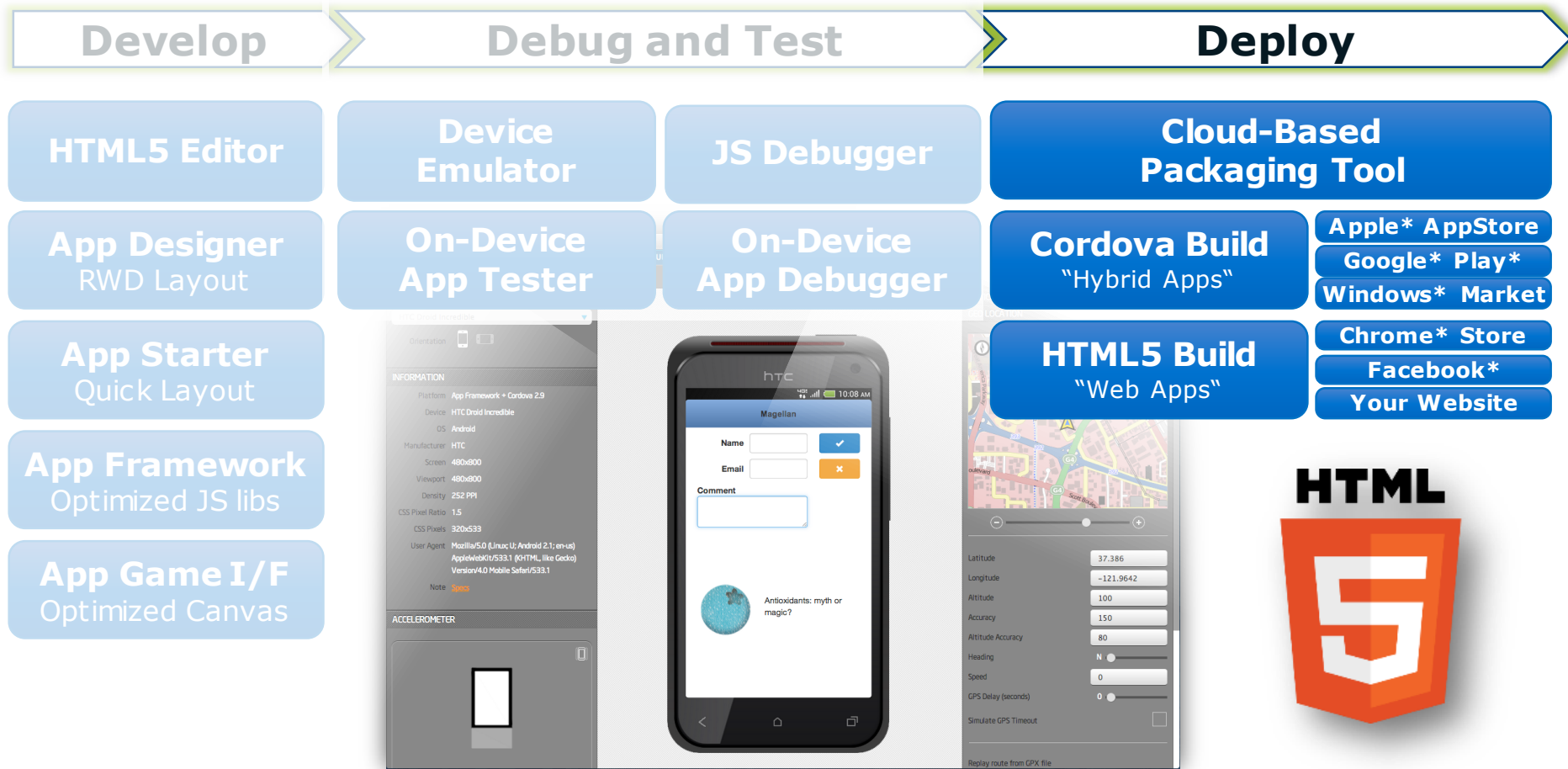
<http://intel.ly/H7qM4o>

Fingers crossed,
hoping the network
doesn't overload!!



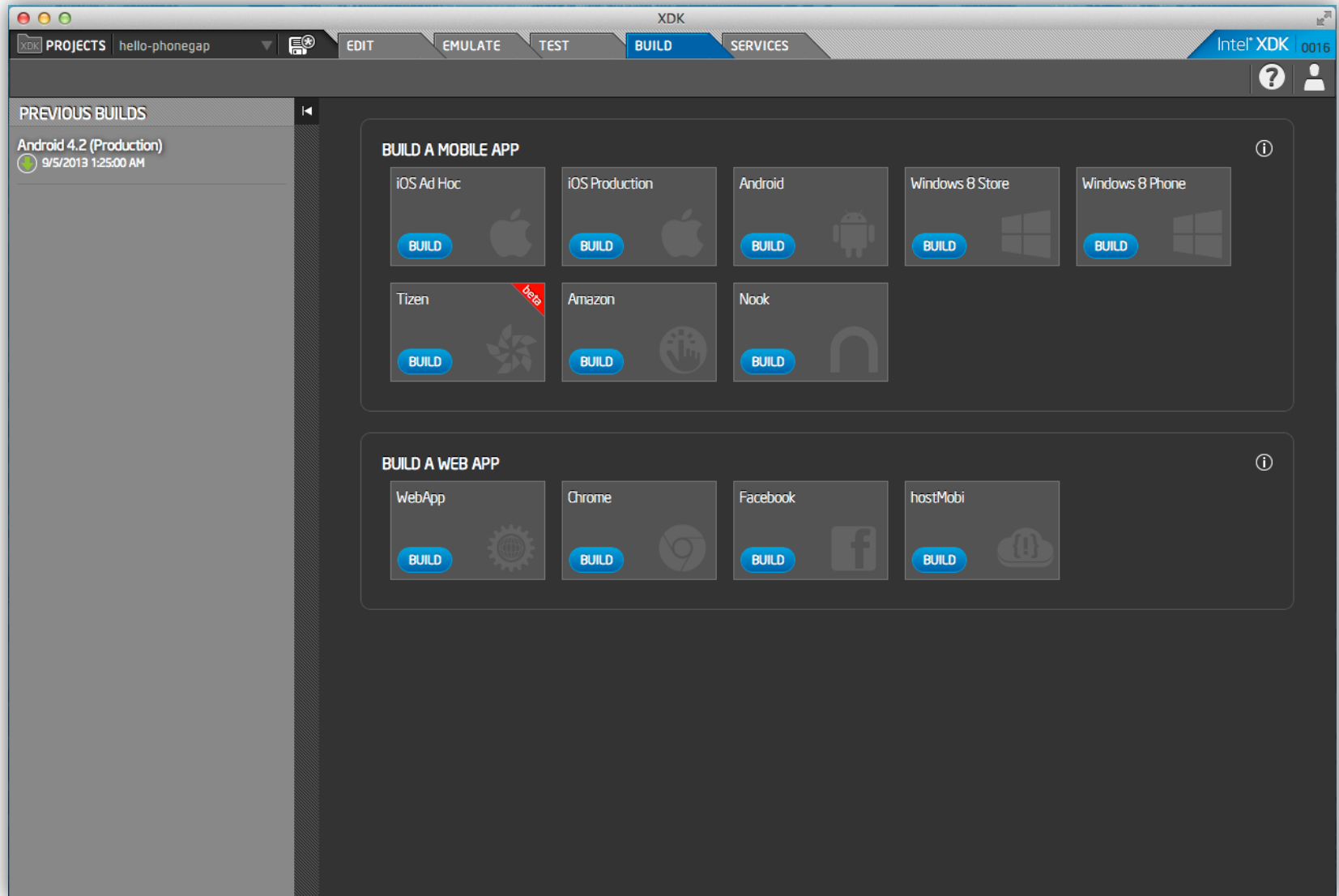
PACKAGE AND BUILD

Deploy: Package and Build



Build cross-platform HTML5 hybrid applications.

Demo: Package and Build

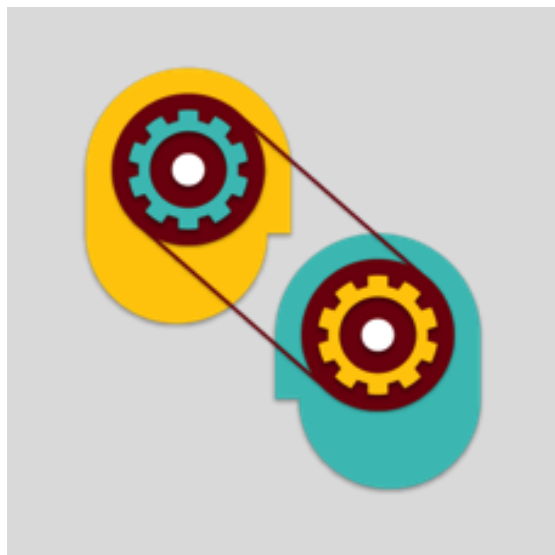


Alternate Build Service Offerings

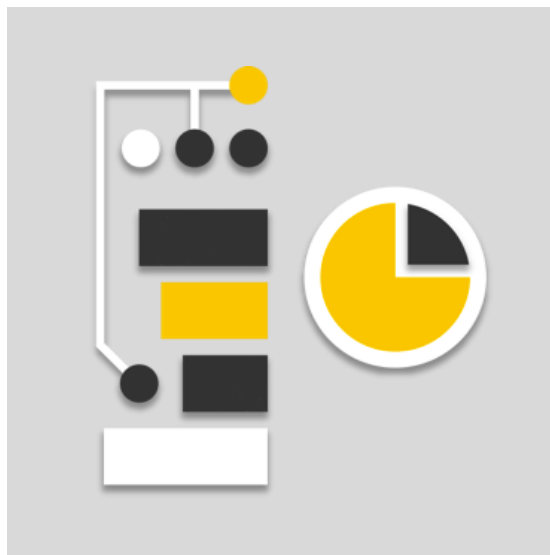
	Intel® XDK [†]	Adobe* PhoneGap* Build*	Other Options (typical)
iOS*	X	X	X
Android*	X	X	X
Windows* 8	X		
Blackberry*		X	
Tizen*	X		
Amazon* Kindle*	X		
Barnes & Noble* Nook*	X		
Firefox* OS			
Chrome* OS	X		
Web App	X		
Facebook*	X		
WebOS*		X	
Bada*		X	

RELATED TOOLS AND SERVICES

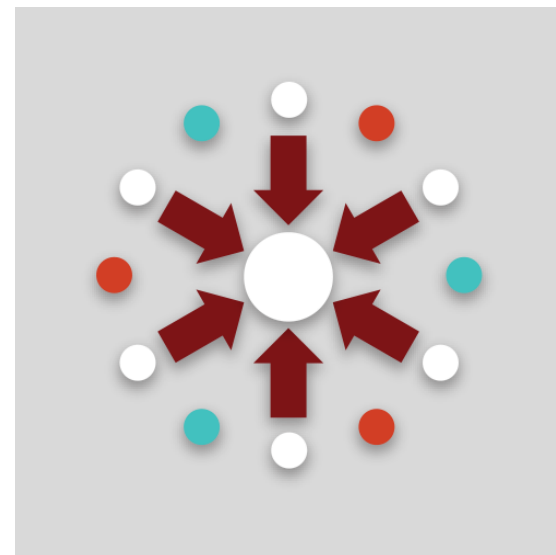
Mashery Web API Services



Manage API Access



Manage API Products



Manage API Traffic

APIs offer a fast and secure way to share data and have become the standard conduit for the flow of information in this mobile age.

developer.mashery.com/apis

Intel® HTML5 App Porter Tool - BETA

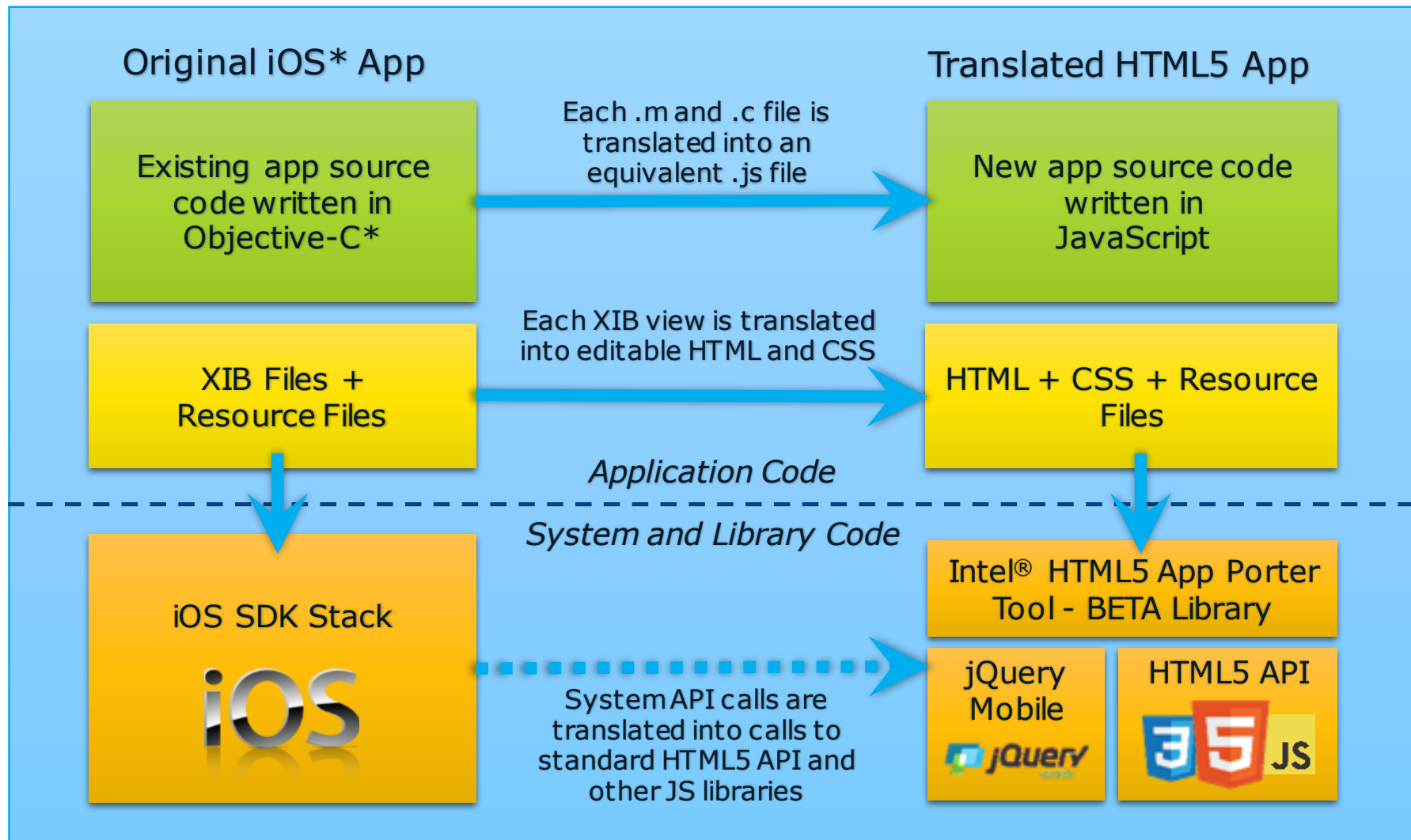


**You Have Deployed
an iOS* App...**

...but you want to broaden
your market reach...

...translate your application
from Objective C to HTML5

iOS* to HTML5 Translation Process



Questions & Answers

Additional Sources of Information

software.intel.com/html5

html5dev-software.intel.com

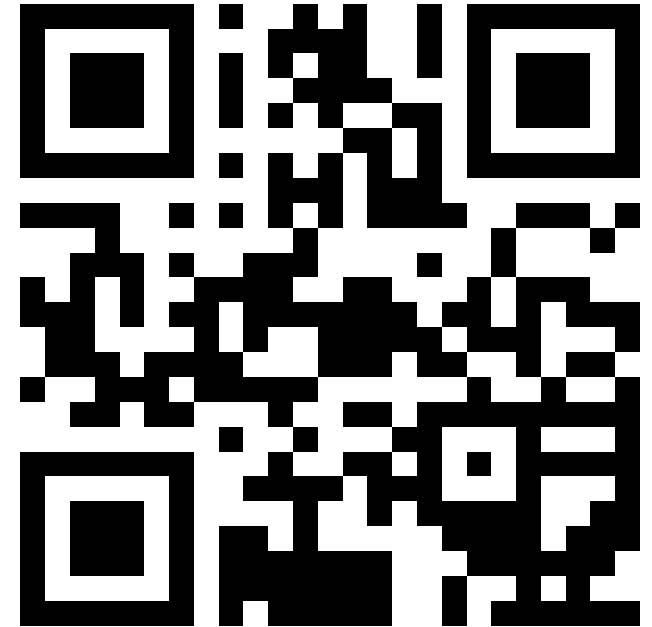
developer.mashery.com/apis

cordova.apache.org

app-framework-software.intel.com

github.com/01org/appframework

app-framework-software.intel.com/style.php



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