

DESENVOLVIMENTO APPS HÍBRIDOS PARA DISPOSITIVOS MÓVEIS COM



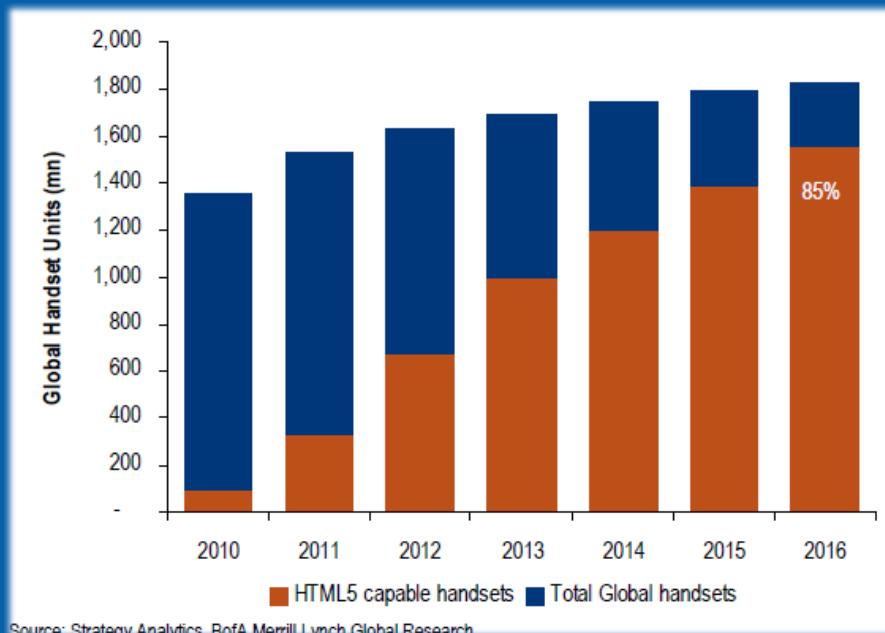
Jomar Silva - Community Manager

Eduardo Carrara - Analista de Software

AGENDA

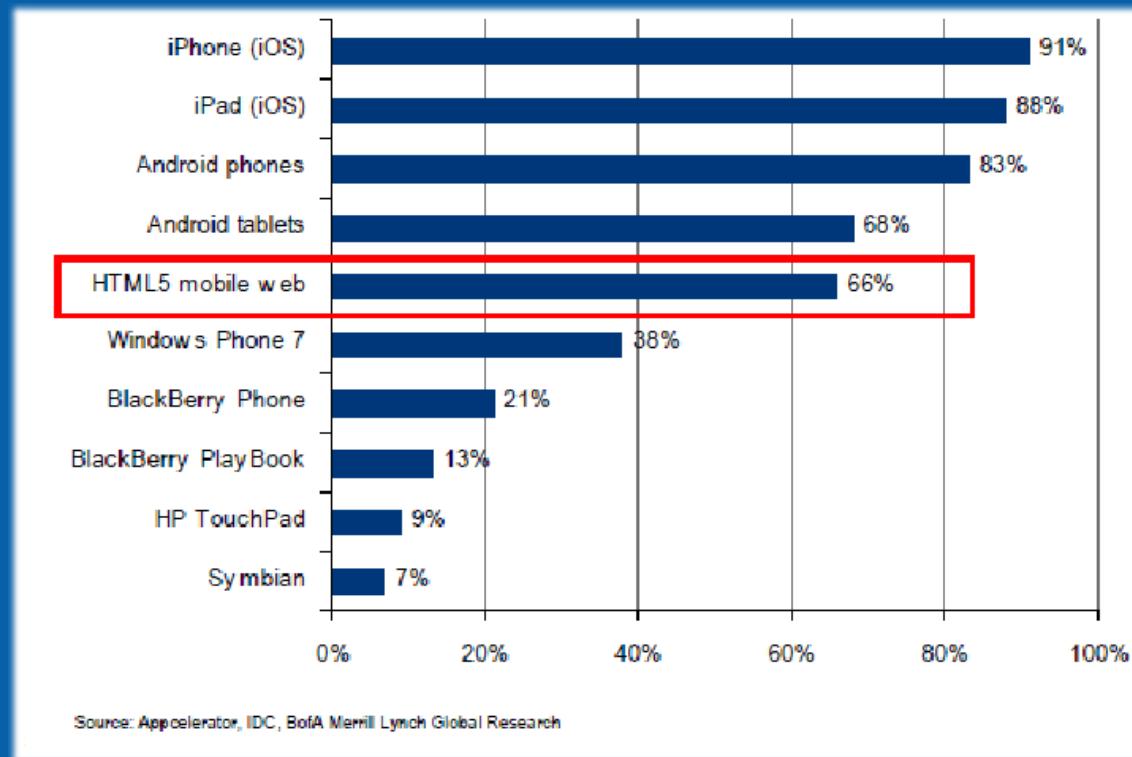
- Alguns números sobre o HTML5
- Limitações de aplicativos Web HTML5
- O que é PhoneGap\Cordova ?
- API e Build Service do PhoneGap
- Contribuições da Intel ao Cordova
- O que é o Intel[®] HTML5 Development Environment
- Dicas importantes
- Ferramentas adicionais
- Demos de Apps híbridos em HTML5
- A Intel e o HTML5

NAVEGADORES COMPATÍVEIS COM HTML5 EM HANDSETS



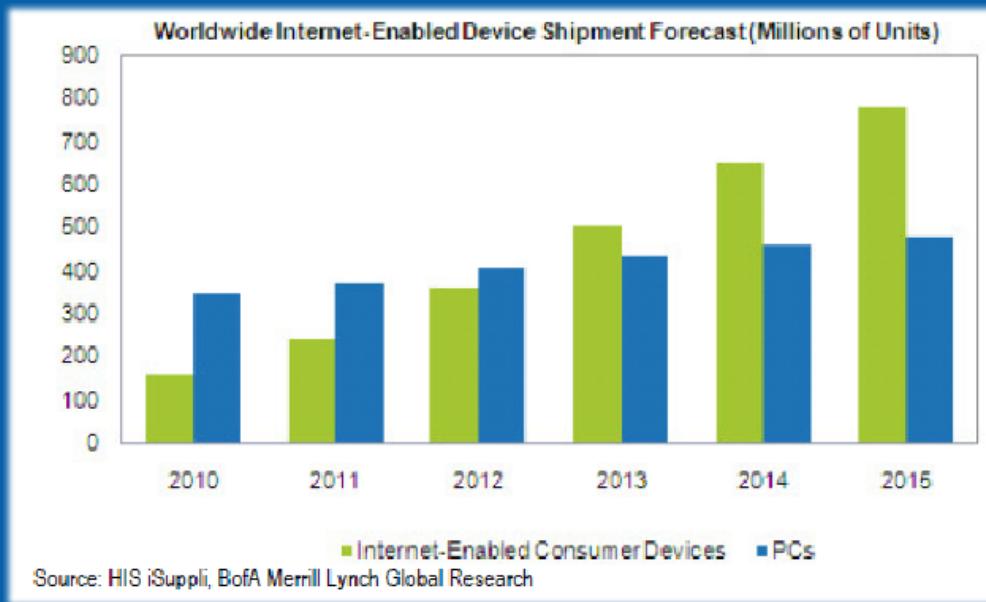
ESPERA-SE QUE HANDSETS COM NAVEGADORES COMPATÍVEIS COM HTML5 ALCANCEM 85% EM 2016

INTERESSES DOS DESENVOLVEDORES EM HTML5



UMA PESQUISA JUNTO A DESENVOLVEDORES MOSTRA QUE 2/3 ESTÃO INTERESSADOS EM CRIAR WEB APPS EM HTML5

EQUIPAMENTOS COM ACESSO À INTERNET VS. PCS



EQUIPAMENTOS COM ACESSO À INTERNET IRÃO ULTRAPASSAR OS
PCS EM 2013

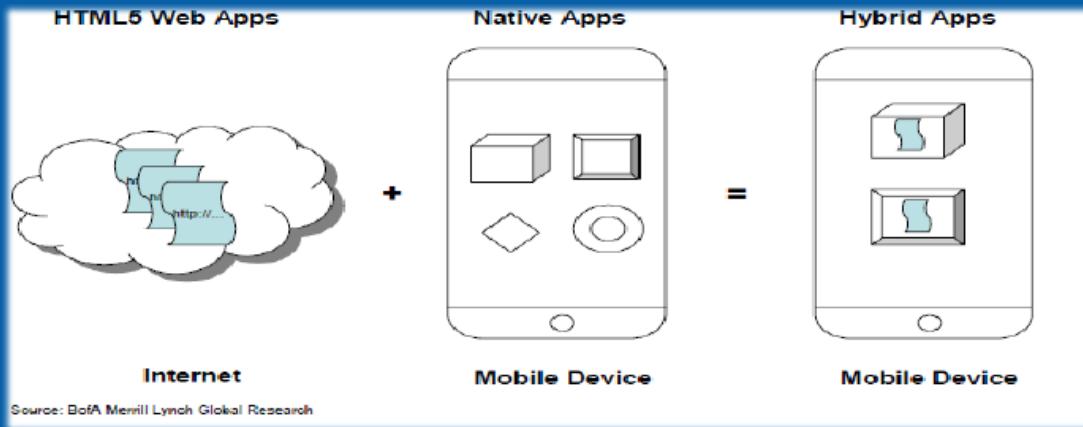
LIMITAÇÕES DE APLICAÇÕES WEB EM HTML5

Aplicações Web em HTML5 possuem algumas limitações:

- Não tem acesso completo ao hardware via API HTML5
- Não podem acessar diretamente o SO
- Problemas na implementação entre os navegadores

APLICAÇÕES WEB EM HTML5 POSSUEM LACUNAS

HTML5 WEB + NATIVE = HYBRID



Apps Web permitem ao desenvolvedor escrever uma vez e implantar em todos os lugares, mas não têm acesso a recursos nativos dos dispositivos

Apps nativos têm acesso aos recursos nativos do dispositivo, mas exigem que os desenvolvedores mantenham bases de código distintas para diferentes plataformas

APPS HÍBRIDOS PREENCHEM A LACUNA DAS APLICAÇÕES HTML5

O QUE É PHONEGAP(CORDOVA)



Framework para desenvolvimento móvel open-source, multiplataforma de apps híbridos.

- UI com HTML5 & CSS3
- Lógica com JavaScript
- PhoneGap para interagir com recursos do dispositivo
- Distribua para múltiplas plataformas

PHONEGAP É UMA PONTE ENTRE APLICAÇÕES WEB E DISPOSITIVOS MÓVEIS.

O QUE É PHONEGAP(CORDOVA)



UMA ÚNICA BASE DE CÓDIGO SUPORTA MÚLTIPHAS PLATAFORMAS E DISPOSITIVOS.

HISTÓRIA DO PHONEGAP

- PhoneGap é um projeto 100% open source.
- Foi desenvolvido pela Nitobi.
- Nitobi foi comprada pela Adobe.
- PhoneGap foi doado para a Apache Software Foundation pela Adobe e foi chamado de Apache Callback.
- Apache Callback era muito genérico, por isso foi renomeado para Cordova.
- A marca PhoneGap continua propriedade da Adobe.
- PhoneGap é uma distribuição do Cordova.

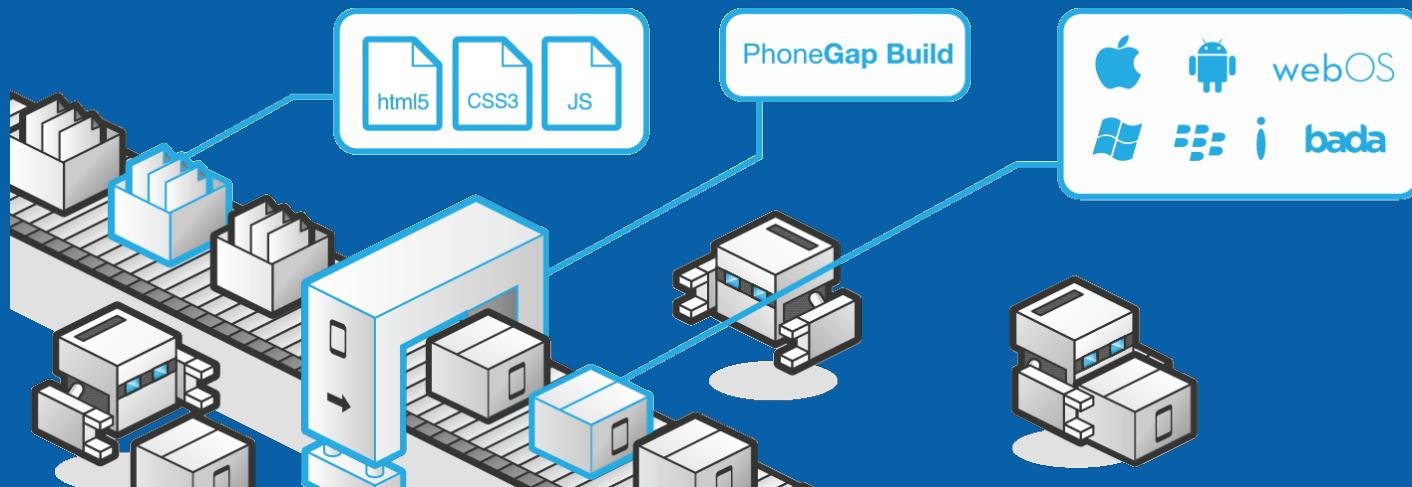
PHONEGAP É AGORA CHAMADO APACHE CORDOVA

PHONEGAP (CORDOVA) API

	iOS iPhone / iPhone 3G	iOS iPhone 3GS and newer	Android	OS 4.6-4.7	OS 5.x	OS 6.0+	WebOS	WP7	Symbian	Bada
ACCELEROMETER	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
CAMERA	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
COMPASS	✗	✓	✓	✗	✗	✗	✗	✓	✗	✓
CONTACTS	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓
FILE	✓	✓	✓	✗	✓	✓	✗	✓	✗	✗
GEOLOCATION	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MEDIA	✓	✓	✓	✗	✗	✗	✗	✓	✗	✗
NETWORK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (ALERT)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (SOUND)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NOTIFICATION (VIBRATION)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
STORAGE	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗

ATUALMENTE, PHONEGAP SUPORTA 7 SOS E PROVÊ ACESSO A 10 RECURSOS NATIVOS DE DISPOSITIVOS MÓVEIS.

PHONEGAP BUILD SERVICE



- O Phone Gap Build service é um serviço pago da Adobe.
- Cria o app uma única vez usando HTML, CSS or JavaScript*
- Compile remotamente usando o PhoneGap Build service
- Obtenha Apps prontos para as App-stores para Apple* iOS, Google Android*, Palm*, Symbian, BlackBerry* e mais

CONTRIBUIÇÕES DA INTEL AO CORDOVA

- A Intel está contribuindo para suporte ao Tizen* pela PhoneGap API
- A Intel está trabalhando com a Adobe para prover suporte ao Tizen* no PhoneGap Build

INTEL® HTML5 DEVELOPMENT ENVIRONMENT

Framework para desenvolvimento móvel open-source,
multiplataforma de apps híbridos.

- App Dev Center - Comece a criar seus aplicativos html & PhoneGap na nuvem
- Intel® XDK - Kit de desenvolvimento em plataforma cruzada

INTEL® XDK - KIT DE DESENVOLVIMENTO EM PLATAFORMA CRUZADA

- iOS, Android, Windows 8, Google Play Store, Amazon App Store, Mozilla App Store, Facebook App Center e para a loja do Google Chrome.
- App Framework (anteriormente conhecido como jqMobi)
 - A biblioteca JS definitiva para o desenvolvimento de aplicativos em HTML5
- App Game Interfaces - Física e Canvas acelerados e som multi-canais.
- App Starter - Um assistente para início rápido do trabalho.

HTTP://SOFTWARE.INTEL.COM/PT-BR/HTML5

The screenshot shows the Intel Software developer portal's HTML5 section. At the top, there's a navigation bar with links for Intel Software, Desenvolvimento de aplicativos, Intel® Platform Development, Tecnologias Intel®, Recursos de negócios, and a search bar. A user profile for 'Jomar Silva (Intel)' is visible. Below the navigation, a breadcrumb trail shows 'Home > HTML5'. The main content area features a large banner with the text 'Aprender, criar e publicar' and 'Desenvolver aplicativos realmente de plataforma cruzada'. It includes a 'Primeiros passos' button and tabs for 'VISÃO GERAL' (selected), 'FERRAMENTAS', 'DOCUMENTAÇÃO', 'BLOGS', 'VÍDEOS', and 'FÓRUMS'. To the right, there's a 'App Dev Center' interface showing an 'XDK' application and a hand holding a smartphone displaying a game. A sidebar for the 'HTML5 DEV ENVIRONMENT' provides a brief overview and a 'Comece já!' button.

Introducing the new Intel® HTML5 Development Environment

If you've used the development tools for HTML5 on appMobi in the past, you're already familiar with our new tools. We're introducing this new set of HTML5 tools on a cross-platform basis to help you develop even easier and faster HTML5 apps for all your devices.

You'll find:

- A new environment for developing HTML5 applications on a cross-platform basis.
- HTML5 Dev Tools for creating and testing HTML5 applications.
- HTML5 documentation for learning about the latest HTML5 features.
- HTML5 forums for discussing HTML5 development with other developers.
- HTML5 blogs for staying up-to-date with the latest news and trends in HTML5 development.
- HTML5 videos for watching tutorials and demonstrations of HTML5 development.

Start now!

APPDEV CENTER

App Dev Center | [Logout](#)

Control Center | Dev Tools | Account | Help

MY APPS + Start a new app

jomarsilvaintelcom.acelbasicoxdk

NO ICON SUPPLIED 3.4.0

[UPGRADE QR](#) [PROMOTE](#) [DOWNLOAD](#) [EMULATE](#) [DEVICE TEST](#) [SHARE](#) [DEBUG](#) [CREDENTIALS](#)

▼ BUILD AS A MOBILE APP

iOS <small>NO AD HOC DISTRIBUTION</small>	Android	Amazon	Nook	Windows 8 Store <small>BETA</small>	Windows 8 Phone <small>BETA</small>
FIX ISSUES	BUILD TEST	BUILD TEST	BUILD TEST	FIX ISSUES	FIX ISSUES

▲ BUILD AS A WEB APP

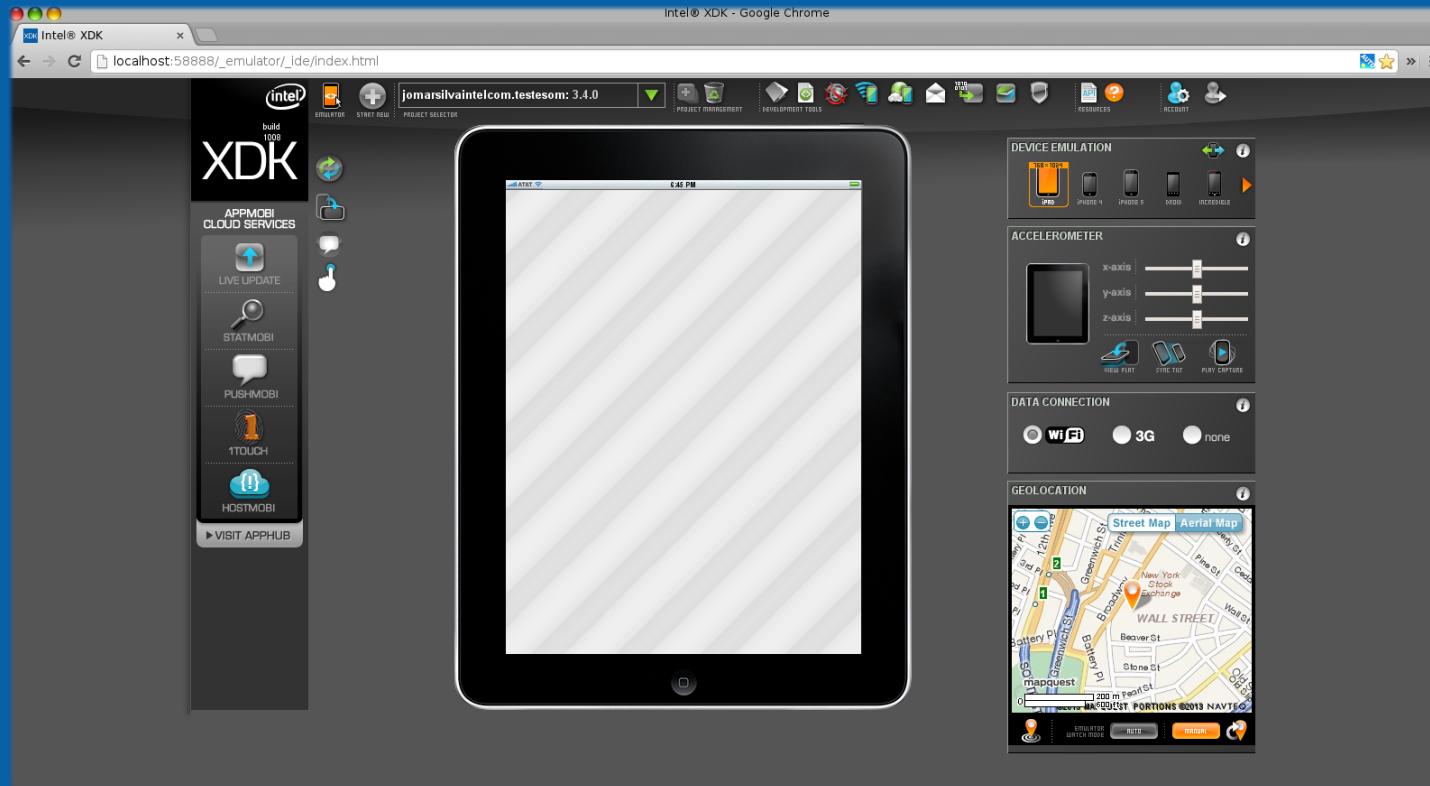
Facebook	Chrome	hostMobi	WebApp
FIX ISSUES	FIX ISSUES	FIX ISSUES	FIX ISSUES

Enable appMobi Cloud Services for this app.

Push Messaging Usage Analytics In-App Purchasing Cross Promotion Gamification Cloud Hosting Live Updates

GET STARTED

INTEL® XDK



DICAS SOBRE O PHONEGAP E APPMOBI

Função de inicialização "padrão":

```
onDeviceReady
```

appMobi:

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

PhoneGap:

```
document.addEventListener("deviceready", onDeviceReady, false)
```

DICA SOBRE O INTEL XDK

- Acesso ao XDK:
 - http://localhost:58888/_emulator/_ide/index.html

O CAMINHO DAS PEDRAS

Can I use - <http://caniuse.com/>

The screenshot shows the CanIUse.com search results for 'websql'. There is one result found: '# Web SQL Database - unoff'. The page includes a legend: green = Supported, red = Not supported, yellow = Partially supported, and grey = Support unknown. A 'Show options' button is present. The 'Global' usage stat shows 50.47% support. The browser compatibility matrix table is as follows:

	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser
8.0	19.0					3.2	2.3	2.1	2.2
9.0	20.0	25.0		5.1		4.0-4.1	3.0	4.2-4.3	4.0
Current	10.0	21.0	26.0	6.0	12.1	6.0	5.0-7.0	4.2	7.0
Near future	11.0	22.0	27.0						
Farther future	23.0	28.0							

Notes: Known issues (0) Resources (3) Feedback Edit on GitHub

The Web SQL Database specification is no longer being maintained and support may be dropped in future versions.

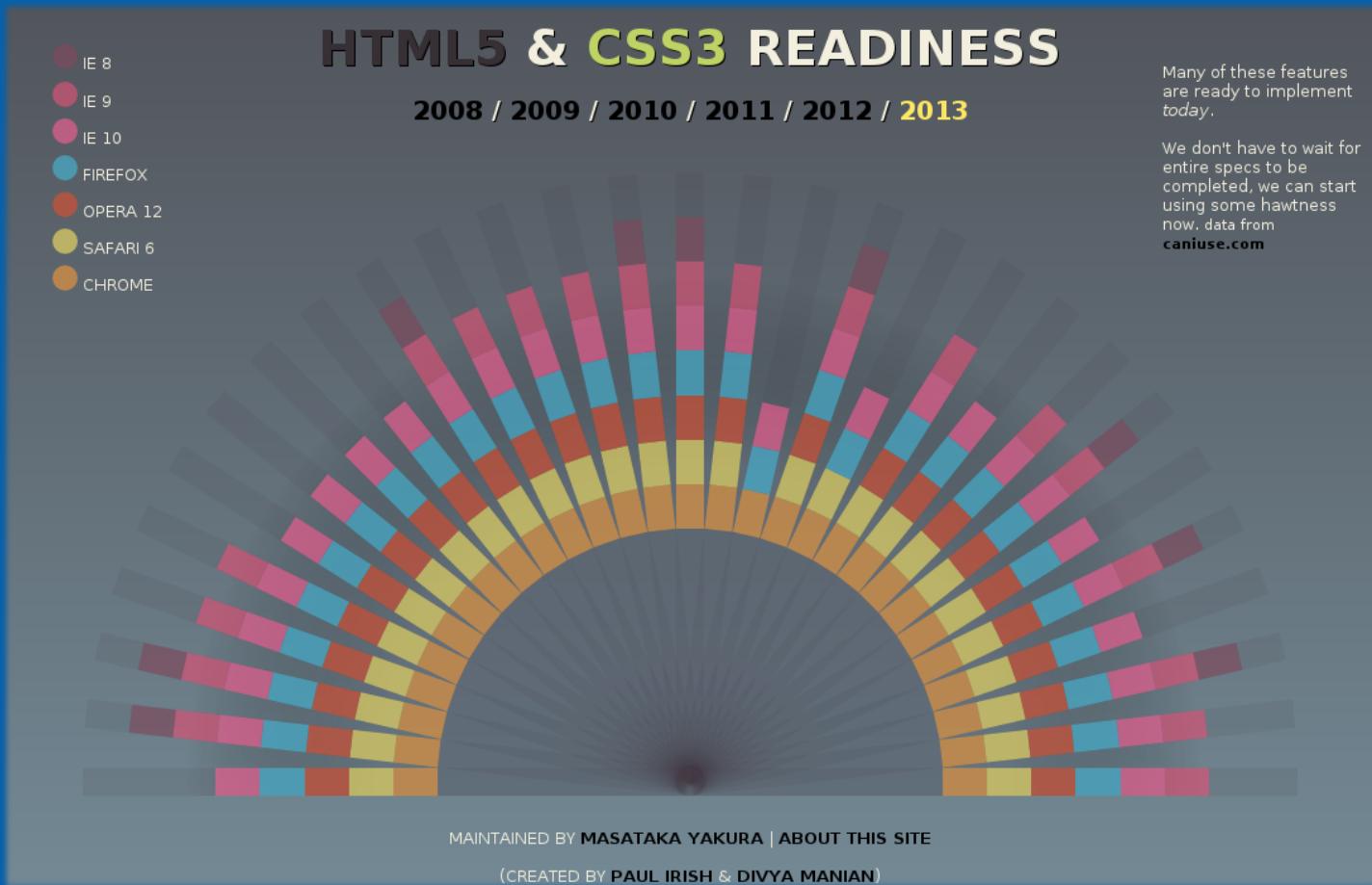
O CAMINHO DAS PEDRAS

Mobile HTML5 - <http://mobilehtml5.org/>

Feature	Safari on iOS	Android Browser	Google Chrome	Amazon Silk	BlackBerry Browser		Nokia Browser		Internet Explorer		Opera Mobile	Opera mini	Firefox	webOS Browser	
Platform	iPhone, iPad	Phones & Tablet	Android 4.0+	Kindle Fire	Phones	Tablet	MeeGo - N9	Symbian	Windows Phone 7.5	Windows 8	Android & Symbian	Java, iOS, Android	Android, MeeGo	HP Phones	HP TouchPad
Versions tested	3.2 to 6.1	1.5 to 4.2	18 to 25b	1.0 to 2.0	5.0 to 7.1	BB10	1.0 to 2.1	1.2	^3 to Belle FP2	9	10 (metro)	11 to 12.1	5 to 7	6 to 18	1.4 to 2.0
Application Cache <small>W3C API Offline package installation.</small>	✓ 2.1+	✓ 2.1+	✓ 2.1+	✓ 2.1+	✓ 6.0+	✓ 6.0+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	
Web storage <small>W3C API Persistent and session storage.</small>	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 6.0+	✓ 6.0+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	
Web SQL storage <small>W3C API (no active) Persistent SQLite storage.</small>	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 6.0+	✓ 6.0+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	✓ Belle FP2+	
Geolocation <small>W3C API Geolocation & tracking using GPS, cells or Wi-Fi.</small>	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 2.0+	✓ 6.0+	✓ 6.0+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	
Multimedia <small>W3C API Video & Audio Players</small>	✓ 2.3+	✓ 2.3+	✓ 2.3+	✓ 2.3+	✓ 7.0+	✓ 7.0+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	✓ Belle+	
Server-Sent Events <small>W3C API EventSource pattern to maintain the connection to the server open</small>	✓ 4.1+		✓ 2.0+	✓ 2.0+		✓ 2.0+	✓ 2.0+	✓ 2.0+			✓ 2.0+	✓ 2.0+	✓ 2.0+		

O CAMINHO DAS PEDRAS

HTML5 & CSS3 READINESS - <http://html5readiness.com/>



HTML5 PLAYGROUND

<http://toolbox-software.intel.com/>

HTML5 Playground Beta

About the Tool Contact Us

Library

Enter a keyword ...

HTML5

Audio Tag
Example of a HTML5 Audio Tag

Canvas Tag
Example of a HTML5 Canvas ...

HTML5 Doctype
HTML5 simplifies the DOCTYPE

HTML5 Form
Demo of HTML5 forms elem...

HTML5 Local Storage
Demo of HTML5 key-value loc...

WorkSpace | Notes

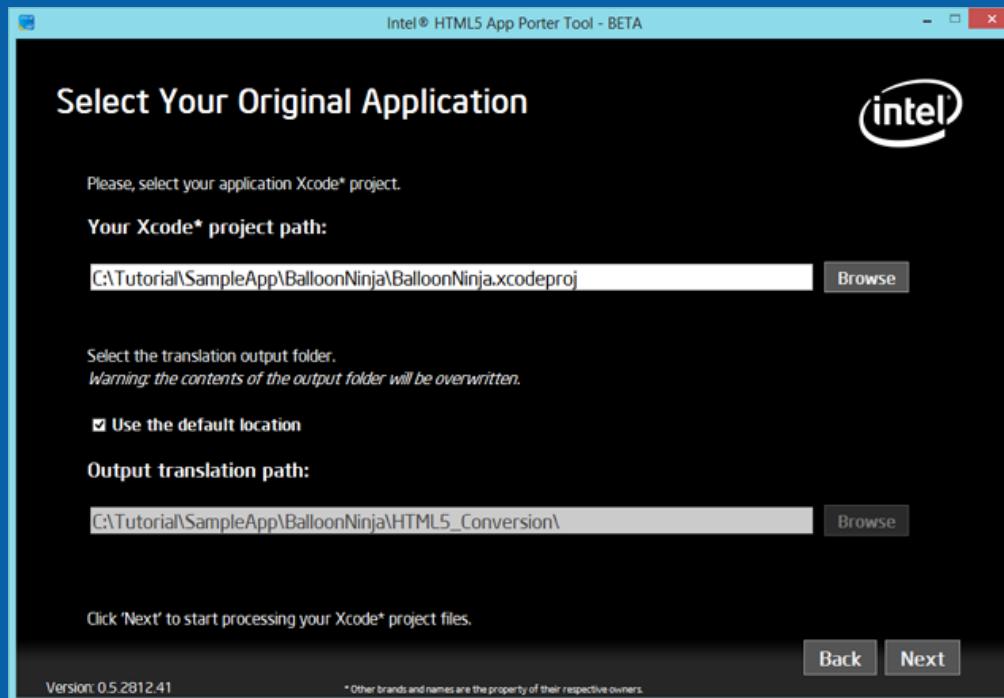
Download Share

```
<html>
  <head>
    <style>
      .beta-text {
        font-family: Georgia, "Times New Roman", Times, serif;
        font-size: 32px;
        color: darkgrey;
        text-shadow: rgba(0, 0, 0, 0.5) -1px 0, rgba(0, 0, 0, 0.3) 0 -1px, rgba(255, 2
      }
    </style>
  </head>
  <body>
    <span id="b1" class="beta-text">Welcome to the HTML</span>
    
    <span id="b2" class="beta-text">Playground</span>
    <span id="b3" class="beta-text">Beta</span>
  </body>
</html>
```

Welcome to the HTML  Playground Beta

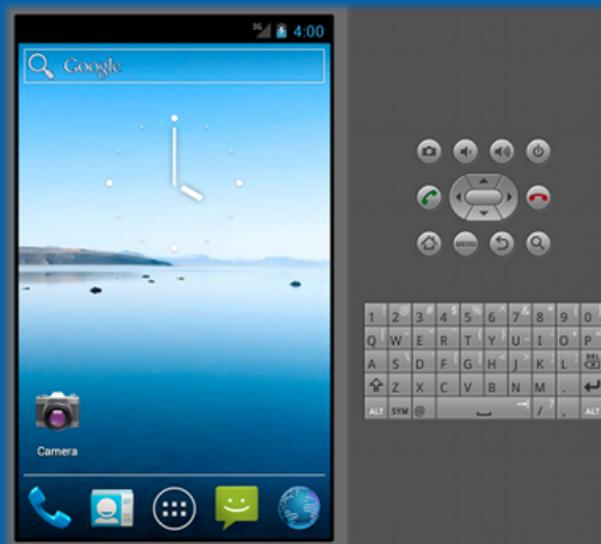
APP PORTER TOOL BETA (WINDOWS 8*)

<http://software.intel.com/pt-br/html5/>



ANDROID HAXM

Hardware Accelerated eXecution Manager



BEACON MOUNTAIN

Beacon Mountain

Intel Tools:

- Intel® Hardware Accelerated Execution Manager
- Intel® Graphics Performance Analyzers System Analyzer
- Intel® Integrated Performance Primitives Preview
- Intel® Threaded Building Blocks
- Intel® Software Manager

Third-Party Tools:

- Google Android SDK (ADT Bundle)
- Android NDK
- Eclipse Integrated Development Environment
- Android Design
- Cygwin* (for Windows operating systems)

TALK IS CHEAP, SHOW ME THE CODE !

EXEMPLO: HTML5 WEB STORAGE

O HTML5 possui dois novos objetos para o armazenamento de dados no lado do cliente:

- localStorage – conteúdo persistente
- sessionStorage – conteúdo temporário
- A estrutura básica é um par de chave/valor (strings)

Mais fácil de usar do que cookies

- Cookies são ótimos com café, mas terríveis de se gerenciar em uma aplicação web !

EXEMPLO: HTML5 WEB STORAGE

Pergunta comum que milhares de brasileiros se fazem cada vez que entram em um posto de gasolina:

“Completo com Gasolina ou Etanol?”

A resposta depende do:

- Consumo do seu carro com gasolina e etanol
- O preço “do dia” da gasolina e do etanol

MAS O HTML5 PODE ME AJUDAR COM ISSO ???

EXEMPLO: HTML5 WEB STORAGE

The diagram illustrates the use of HTML5 Web Storage across two platforms: a Desktop Browser and an Android App.

Desktop Browser: Shows a "CALCULADORA FLEX" interface with input fields for fuel consumption and prices. A button labeled "Gasolina ou Etanol?" is highlighted. Three blue arrows point from this button to three callout boxes: "Dados de consumo armazenados localmente" (Consumption data stored locally), "Preços atualizados a cada parada no posto" (Prices updated at each gas station stop), and "A mágica acontece quando você clica aqui!" (The magic happens when you click here!).

Android App: Shows a similar "CALCULADORA FLEX" interface with updated consumption and price values (KM/L 12, KM/L 8, R\$ 2.31, R\$ 1.65). A button labeled "Gasolina ou Etanol?" is also present.

MENOS DE 50 LINHAS DE CÓDIGO PARA IMPLEMENTAR !

EXEMPLO: HTML5 WEB STORAGE

Copyright © 2012 Intel Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice (including the next paragraph) shall be included in all copies or substantial portions of the Software.

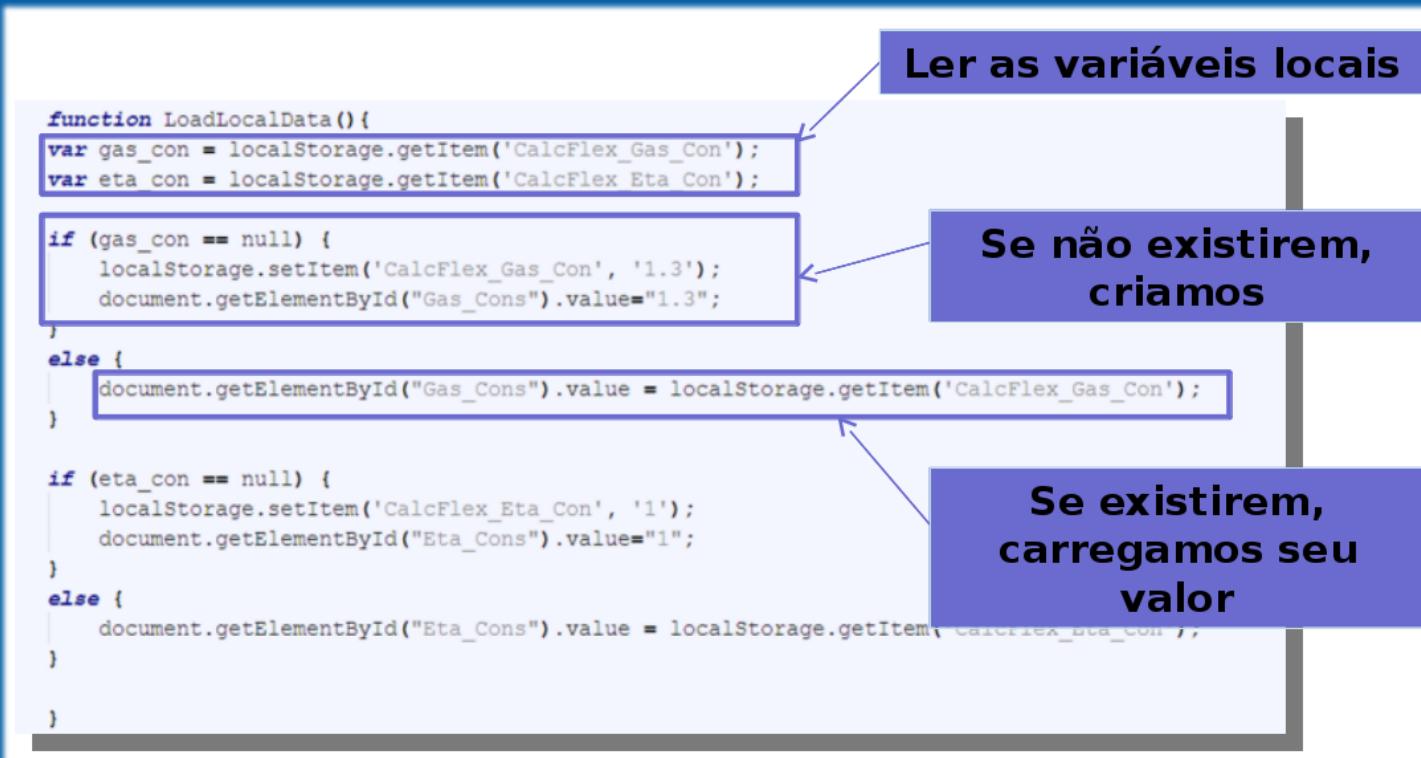
THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Authors:

Jomar Silva <jomar.silva@intel.com>
Eugeni Dodonov <eugeni.dodonov@intel.com>

**Sim, você pode
se divertir com
nossa código de
exemplo !**

EXEMPLO: HTML5 WEB STORAGE



EXEMPLO: HTML5 WEB STORAGE

A diagram illustrating the use of HTML5 Web Storage. A purple callout box on the right contains the text "Ler as variáveis locais" (Read local variables). An arrow points from this box to a section of the code where two variables are retrieved from localStorage. Another purple callout box on the right contains the text "É aqui que a mágica acontece !" (This is where the magic happens), with an arrow pointing to the conditional logic that compares the calculated efficiency difference with the price difference.

```
function CalcFlex(){
    var gas_con = localStorage.getItem('CalcFlex_Gas_Con');
    var eta_con = localStorage.getItem('CalcFlex_Eta_Con');
    var gas_price = document.getElementById("Gas_Price").value;
    var eta_price = document.getElementById("Eta_Price").value;

    effic_dif = gas_con / eta_con;
    price_dif = gas_price / eta_price;

    if (effic_dif > price_dif){
        alert('Use Gas');
    }
    else {
        alert('Use Ethanol');
    }
}
```

EXEMPLO: HTML5 WEB STORAGE

**Implementação da funcionalidade de auto-save
(armazena os valores de consumo)**

```
document.querySelector('#Gas_Cons').addEventListener('keyup',function(){
localStorage.setItem('CalcFlex_Gas_Con', this.value);}, false);

document.querySelector('#Eta_Cons').addEventListener('keyup',function(){
localStorage.setItem('CalcFlex_Eta_Con', this.value);}, false);
```

O ACELERÔMETRO NO PHONEGAP

- Captura a movimentação do dispositivo nos eixos x, y, e z.
- É um sensor de movimento que detecta a alteração (o delta) de movimento relativo a orientação atual do dispositivo.
- Nos fornece quatro informações:
 - **x**: Aceleração no eixo X (m/s^2) (Número)
 - **y**: Aceleração no eixo Y (m/s^2) (Número)
 - **z**: Aceleração no eixo Z (m/s^2) (Número)
 - **timestamp**: timestamp de criação (ms) (DOMTimeStamp)

COM O DISPOSITIVO EM UMA MESA, COM A TELA PARA CIMA, A LEITURA DEVE SER PRÓXIMA A X=0, Y=0, Z=9.8

ACELERÔMETRO NO PHONEGAP: O BÁSICO

```
// Aguardar o carregamento do cordova
//
document.addEventListener("deviceready", onDeviceReady, false);

// Cordova está OK
//
function onDeviceReady() {
    var opt = {};
    opt.frequency = 100;
    timer = navigator.accelerometer.watchAcceleration(onSuccess, onError, opt);
}

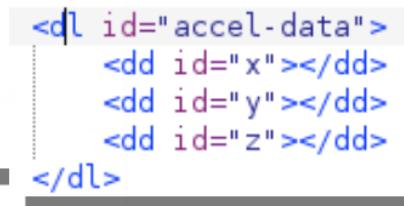
var opt = {};
opt.frequency = 200;
timer = AppMobi.accelerometer.watchAcceleration(onSuccess, opt);
```

ACELERÔMETRO NO PHONEGAP: O BÁSICO

```
// onSuccess: Get a snapshot of the current acceleration
//
function onSuccess(accel) {
document.getElementById('x').innerHTML = "X: " + roundNumber(accel.x,1);
document.getElementById('y').innerHTML = "Y: " + roundNumber(accel.y,1);
document.getElementById('z').innerHTML = "Z: " + roundNumber(accel.z,1);
}

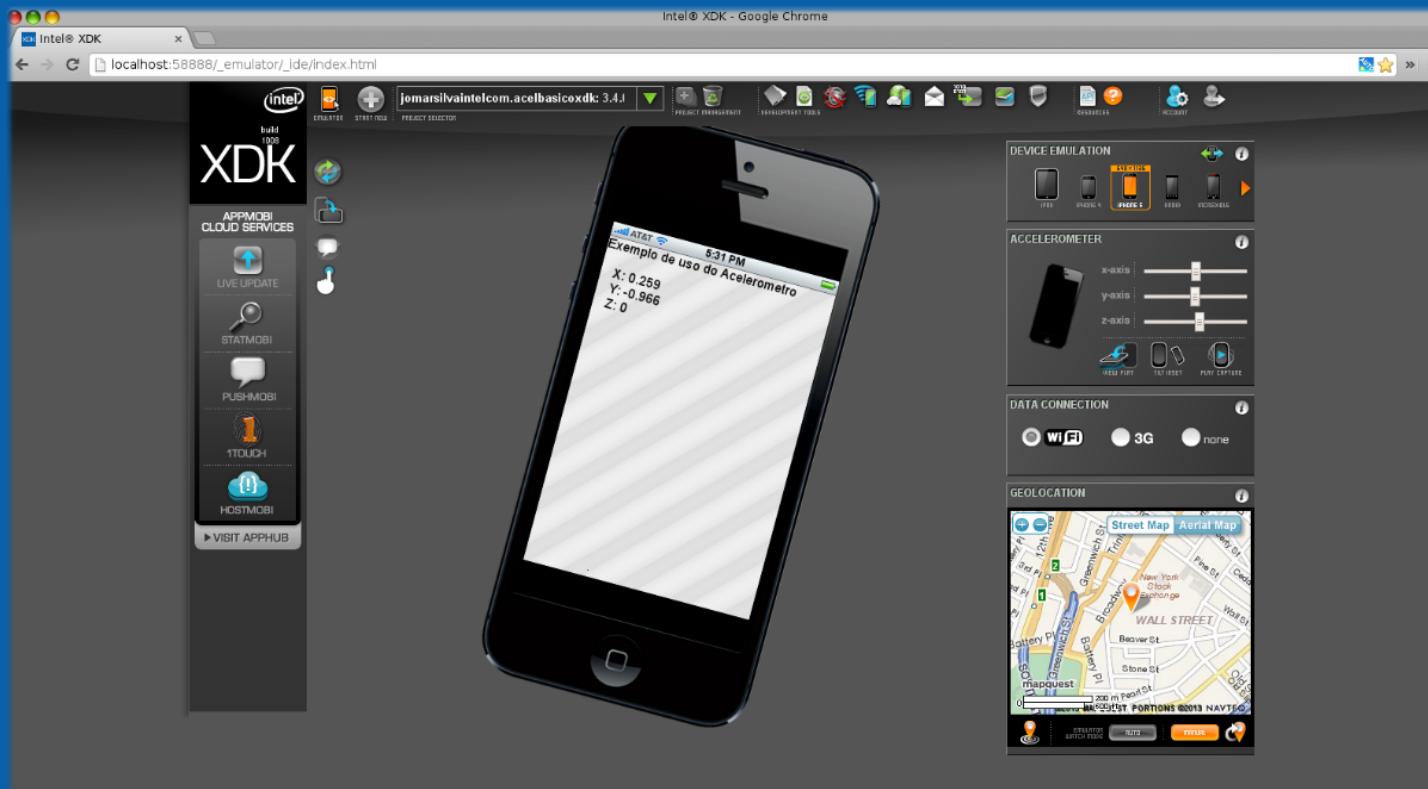
// onError: Failed to get the acceleration
//
function onError() {
    alert('Error!');
}

var roundNumber = function (num, dec){
    var result = Math.round(num * Math.pow(10, dec)) / Math.pow(10, dec);
    return result;
}
```



```
<dl id="accel-data">
<dd id="x"></dd>
<dd id="y"></dd>
<dd id="z"></dd>
</dl>
```

ACELERÔMETRO NO PHONEGAP: O BÁSICO



ACELERÔMETRO NO PHONEGAP: O PSICODÉLICO

```
<body>
  <canvas id="psicoCanvas" width="1280" height="752">
</body>

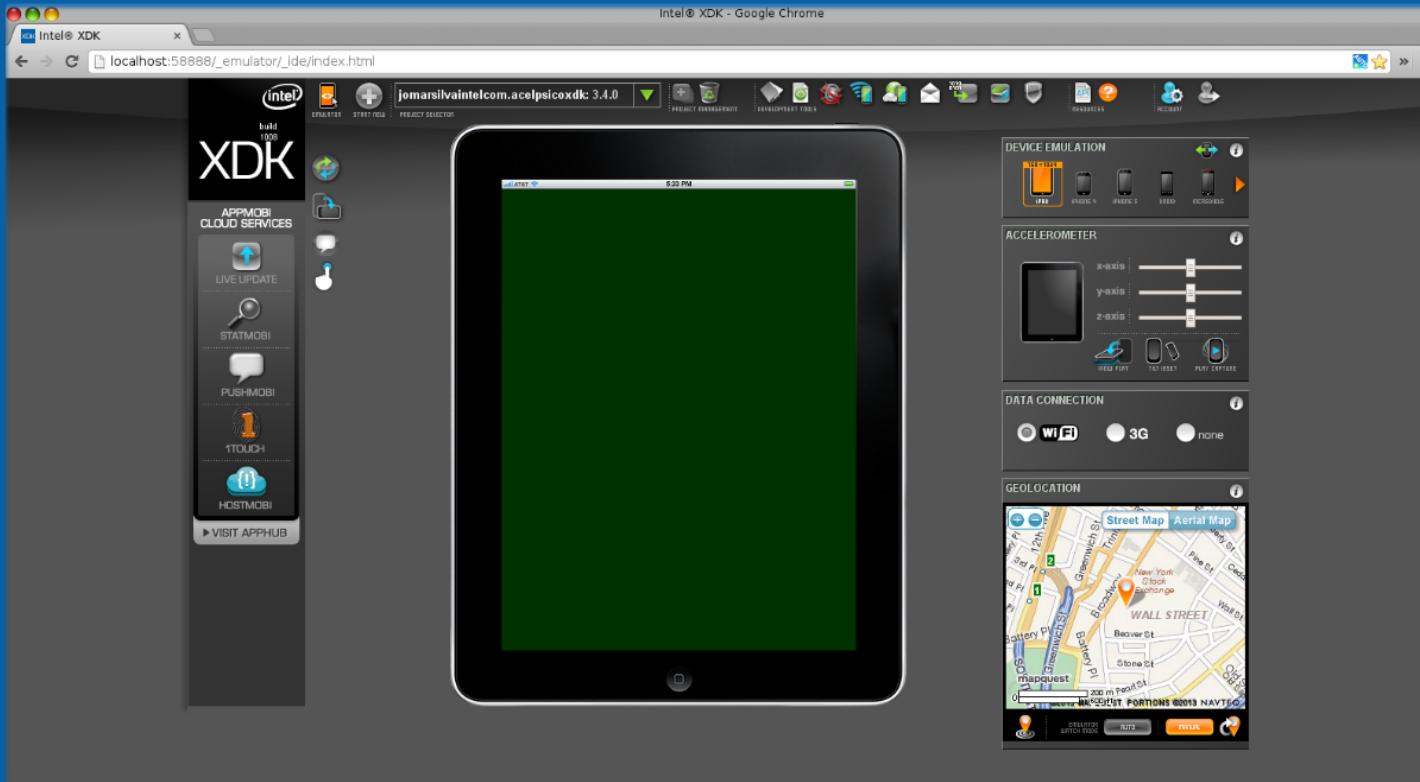
// onSuccess: Ler a aceleração atual
//
function onSuccess(acel) {

  var myCanvas = document.getElementById('psicoCanvas');
  var ctx = myCanvas.getContext("2d");
  ctx.fillStyle = "rgb(" + genAbs(acel.z) + "," + genAbs(acel.y) + "," + genAbs(acel.x) + ")";
  ctx.fillRect (0, 0, 1280, 752);

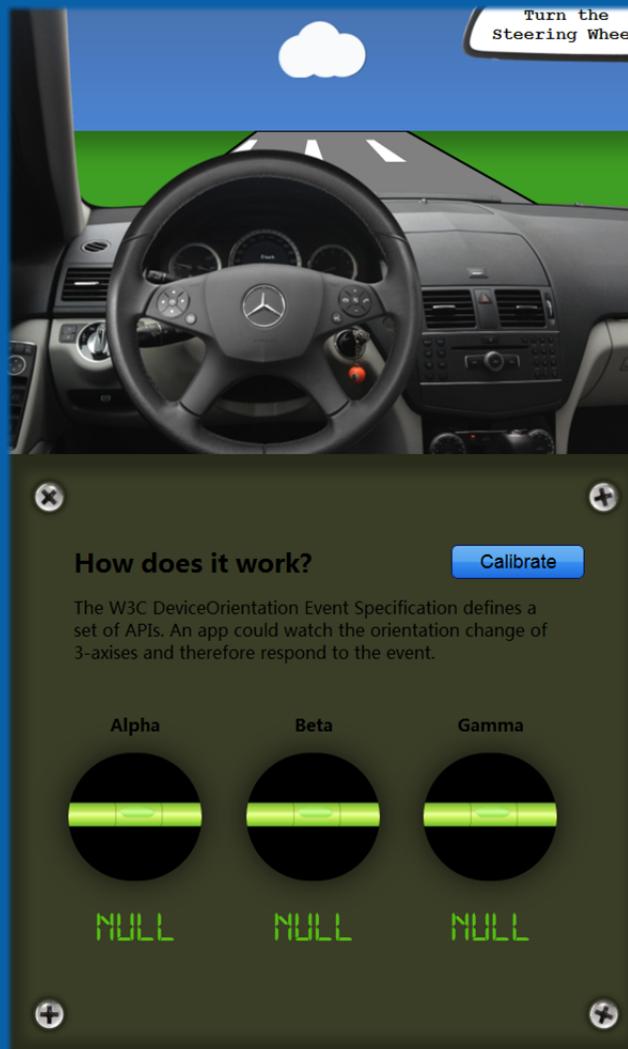
}

var genAbs = function (num){
  var result = 25 * Math.abs(Math.round(num));
  return result;
}
```

ACELERÔMETRO NO PHONEGAP: O PSICODÉLICO



ACELERÔMETRO NO PHONEGAP: O SENSACIONAL !



**COMO ANDA A TABELA
DO BRASILEIRÃO 2013**

???
..

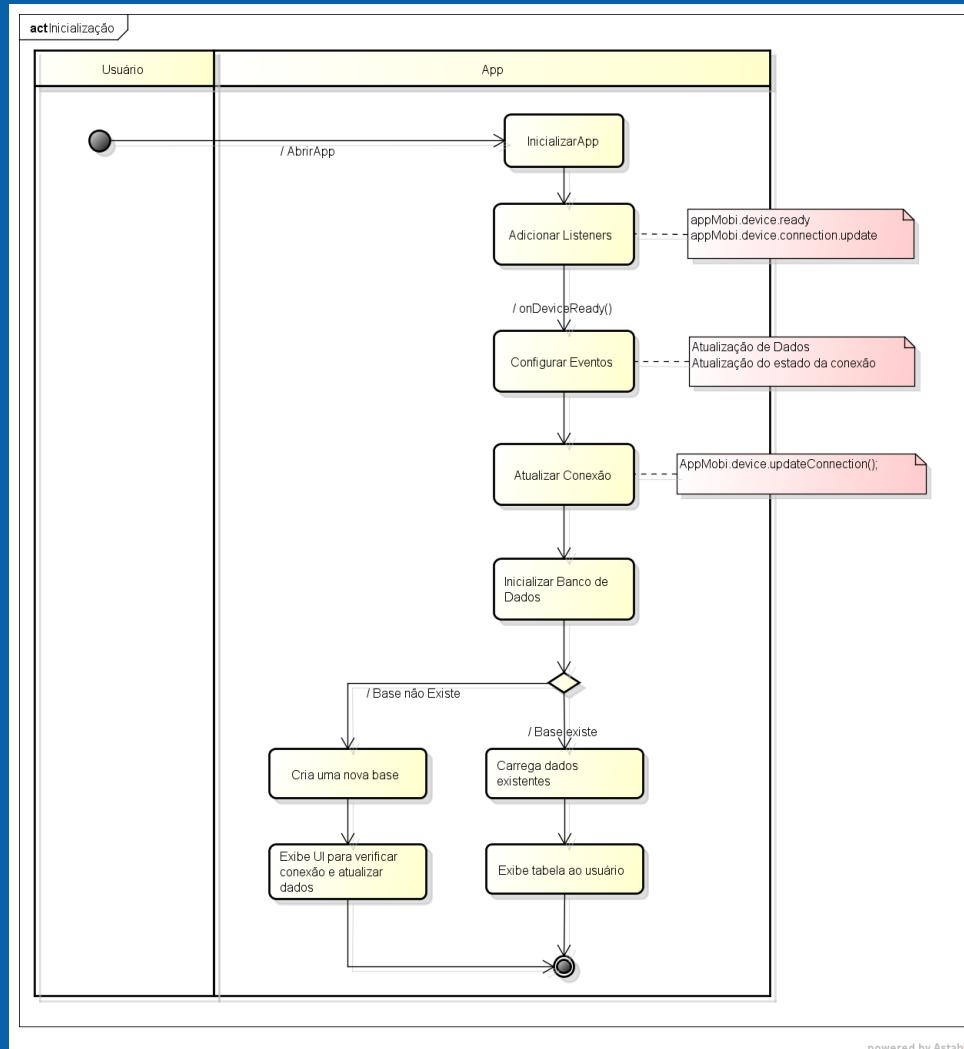
COMO IMPLEMENTAR

- Dados remotos via JSON:
 - JSON (JavaScript Object Notation): um formato leve para troca de dados

```
{ "Classificacao" : [  
    { "clube": "Time A", "dados": [ 11, 5, 22] },  
    { "clube": "Time B", "dados": [ 11, 5, 21] },  
    { "clube": "Time C", "dados": [ 11, -5, 19] }  
]
```

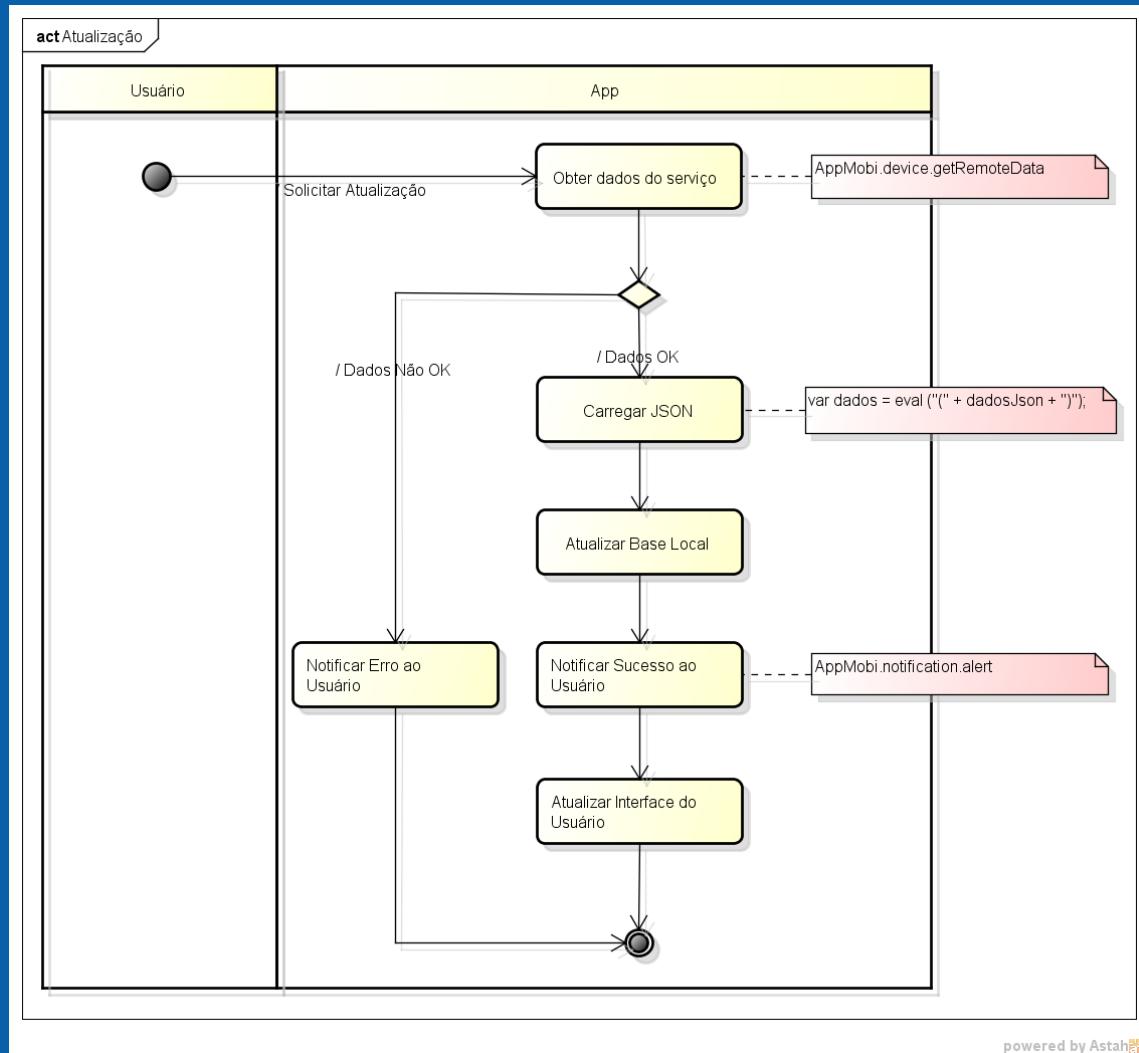
- Base de dados local usando WebSQL.
- Interface gráfica usando HTML5 e CSS.
- APIs da Intel em HTML5 para acesso a informações de conexão.

INICIALIZAÇÃO DO APP



powered by Astah

ATUALIZAÇÃO DE DADOS



powered by Astah

VAMOS VER AO VIVO ?

A INTEL® E O HTML5



AJUDANDO OS DESENVOLVEDORES DE SOFTWARE A CRIAR E DISTRIBUIR EXPERIÊNCIAS INCRÍVEIS CROSS-PLATFORM, A ALCANÇAR MAIS CONSUMIDORES E A OTIMIZAR CUSTOS E TIME-TO-MARKET

A INTEL® E O HTML5

Advancing Open Innovation— For Over Two Decades

Catalyst for innovation,
making next-gen
technologies easily
accessible, e.g. Parallel
JavaScript

Technology
Innovator

Project
Contributor

Top contributor to Linux*,
WebKit* and many other
open-source projects

INTEL IN
OPEN SOURCE

'Upstream first' philosophy,
coupled with downstream
collaboration

Ecosystem
Builder

Investor

Strategic investments in
commercial ventures &
academia help advance
open innovation



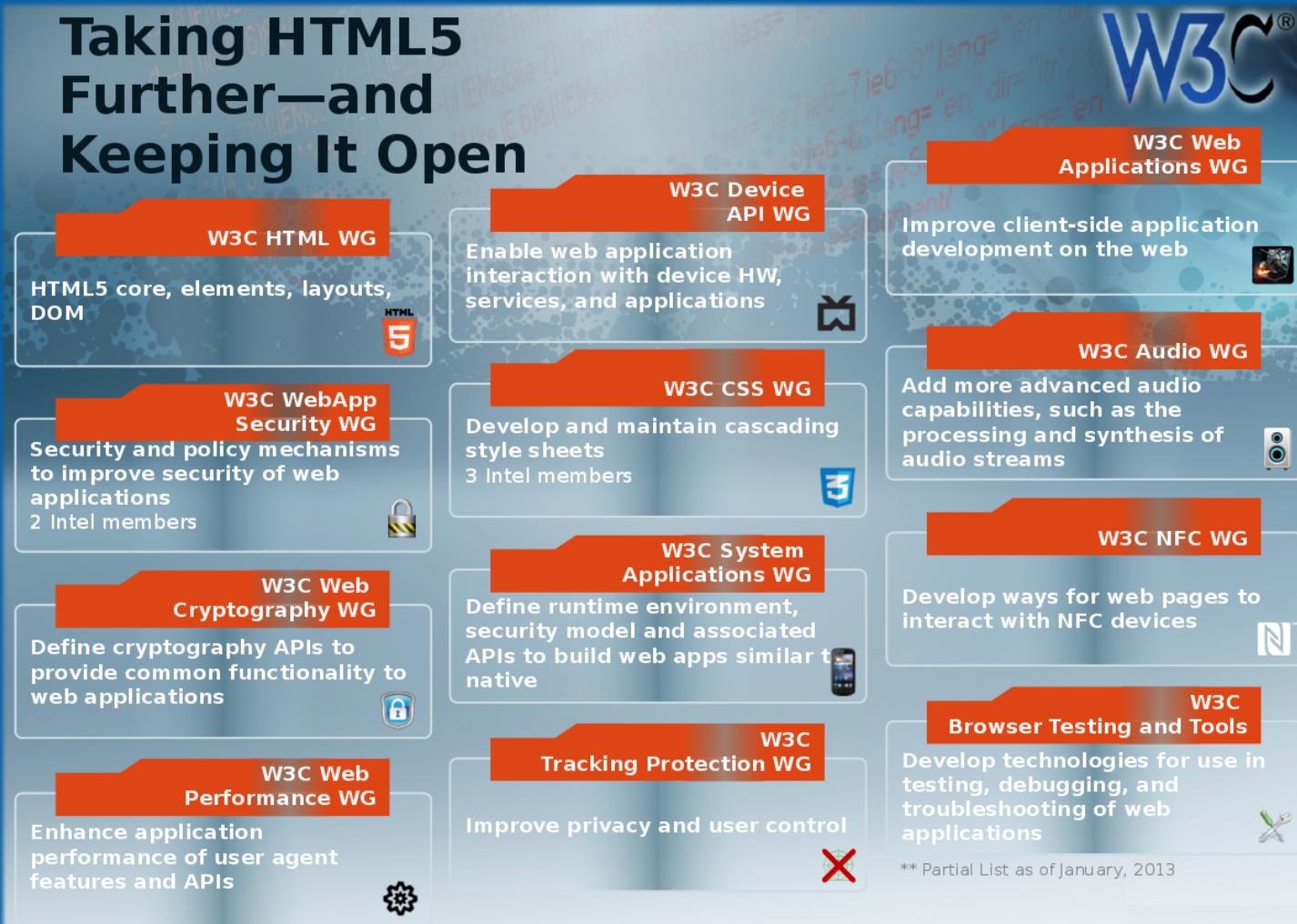
BlueZ



WebPlatform.org

A INTEL® E O HTML5

Taking HTML5 Further—and Keeping It Open



ESPAÇO DO DESENVOLVEDOR INTEL®



Um programa global que conecta os desenvolvedores com a Intel em tudo que se relaciona com a área de software - do desenvolvimento à distribuição:

- Recursos para o desenvolvedor
- Recursos para a empresa
- Comunidade envolvida

[HTTP://SOFTWARE.INTEL.COM/PT-BR](http://SOFTWARE.INTEL.COM/PT-BR)

OBRIGADO !

SOFTWARE.INTEL.COM/PT-BR/HTML5

JOMAR - TWITTER / FACEBOOK - HOMEMBIT

CARRARA - TWITTER / FACEBOOK - DUCARRARA

INTEL SOFTWARE BRASIL - FACEBOOK - INTELSWBRASIL

LEGAL DISCLAIMER 1/2

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

- A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, AMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.
- Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.
- The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

LEGAL DISCLAIMER 2/2

- Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Go to:
http://www.intel.com/products/processor_number.
- Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.
- Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or go to:
<http://www.intel.com/design/literature.htm>
- Intel, Sponsors of Tomorrow and the Intel logo are trademarks of Intel Corporation in the United States and other countries.

*Other names and brands may be claimed as the property of others.

Copyright ©2012 Intel Corporation.

RISK FACTORS 1/2

The above statements and any others in this document that refer to plans and expectations for the second quarter, the year and the future are forward-looking statements that involve a number of risks and uncertainties. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "may," "will," "should" and their variations identify forward-looking statements. Statements that refer to or are based on projections, uncertain events or assumptions also identify forward-looking statements. Many factors could affect Intel's actual results, and variances from Intel's current expectations regarding such factors could cause actual results to differ materially from those expressed in these forward-looking statements. Intel presently considers the following to be the important factors that could cause actual results to differ materially from the company's expectations. Demand could be different from Intel's expectations due to factors including changes in business and economic conditions, including supply constraints and other disruptions affecting customers; customer acceptance of Intel's and competitors' products; changes in customer order patterns including order cancellations; and changes in the level of inventory at customers. Uncertainty in global economic and financial conditions poses a risk that consumers and businesses may defer purchases in response to negative financial events, which could negatively affect product demand and other related matters. Intel operates in intensely competitive industries that are characterized by a high percentage of costs that are fixed or difficult to reduce in the short term and product demand that is highly variable and difficult to forecast. Revenue and the gross margin percentage are affected by the timing of Intel product introductions and the demand for and market acceptance of Intel's products; actions taken by Intel's competitors, including product offerings and introductions, marketing programs and pricing pressures and Intel's response to such actions; and Intel's ability to respond quickly to technological developments and to incorporate new features into its products. Intel is in the process of transitioning to its next generation of products on 22nm process technology, and there could be execution and timing issues associated with these changes, including products defects and errata and lower than anticipated manufacturing yields.

RISK FACTORS 2/2

The gross margin percentage could vary significantly from expectations based on capacity utilization; variations in inventory valuation, including variations related to the timing of qualifying products for sale; changes in revenue levels; segment product mix; the timing and execution of the manufacturing ramp and associated costs; start-up costs; excess or obsolete inventory; changes in unit costs; defects or disruptions in the supply of materials or resources; product manufacturing quality/yields; and impairments of long-lived assets, including manufacturing, assembly/test and intangible assets. The majority of Intel's non-marketable equity investment portfolio balance is concentrated in companies in the flash memory market segment, and declines in this market segment or changes in management's plans with respect to Intel's investments in this market segment could result in significant impairment charges, impacting restructuring charges as well as gains/losses on equity investments and interest and other. Intel's results could be affected by adverse economic, social, political and physical/infrastructure conditions in countries where Intel, its customers or its suppliers operate, including military conflict and other security risks, natural disasters, infrastructure disruptions, health concerns and fluctuations in currency exchange rates. Expenses, particularly certain marketing and compensation expenses, as well as restructuring and asset impairment charges, vary depending on the level of demand for Intel's products and the level of revenue and profits. Intel's results could be affected by the timing of closing of acquisitions and divestitures. Intel's results could be affected by adverse effects associated with product defects and errata (deviations from published specifications), and by litigation or regulatory matters involving intellectual property, stockholder, consumer, antitrust, disclosure and other issues, such as the litigation and regulatory matters described in Intel's SEC reports. An unfavorable ruling could include monetary damages or an injunction prohibiting Intel from manufacturing or selling one or more products, precluding particular business practices, impacting Intel's ability to design its products, or requiring other remedies such as compulsory licensing of intellectual property. A detailed discussion of these and other factors that could affect Intel's results is included in Intel's SEC filings, including the report on Form 10-K for the year ended Dec. 31, 2011.