



Empower mobile web developers with JavaScript & WebAPI

Frédéric Harper

Sr. Technical Evangelist @ Mozilla

@fharper | outofcomfortzone.net

Prague JS

Prague, Czech Republic

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Omlouváme se,
nemluvíme česky

Thanks Google translate...



38 billion devices connected in 2020

ABI Research - 2013-05-09 - <http://j.mp/38billion>

You should start with the web...





HTML

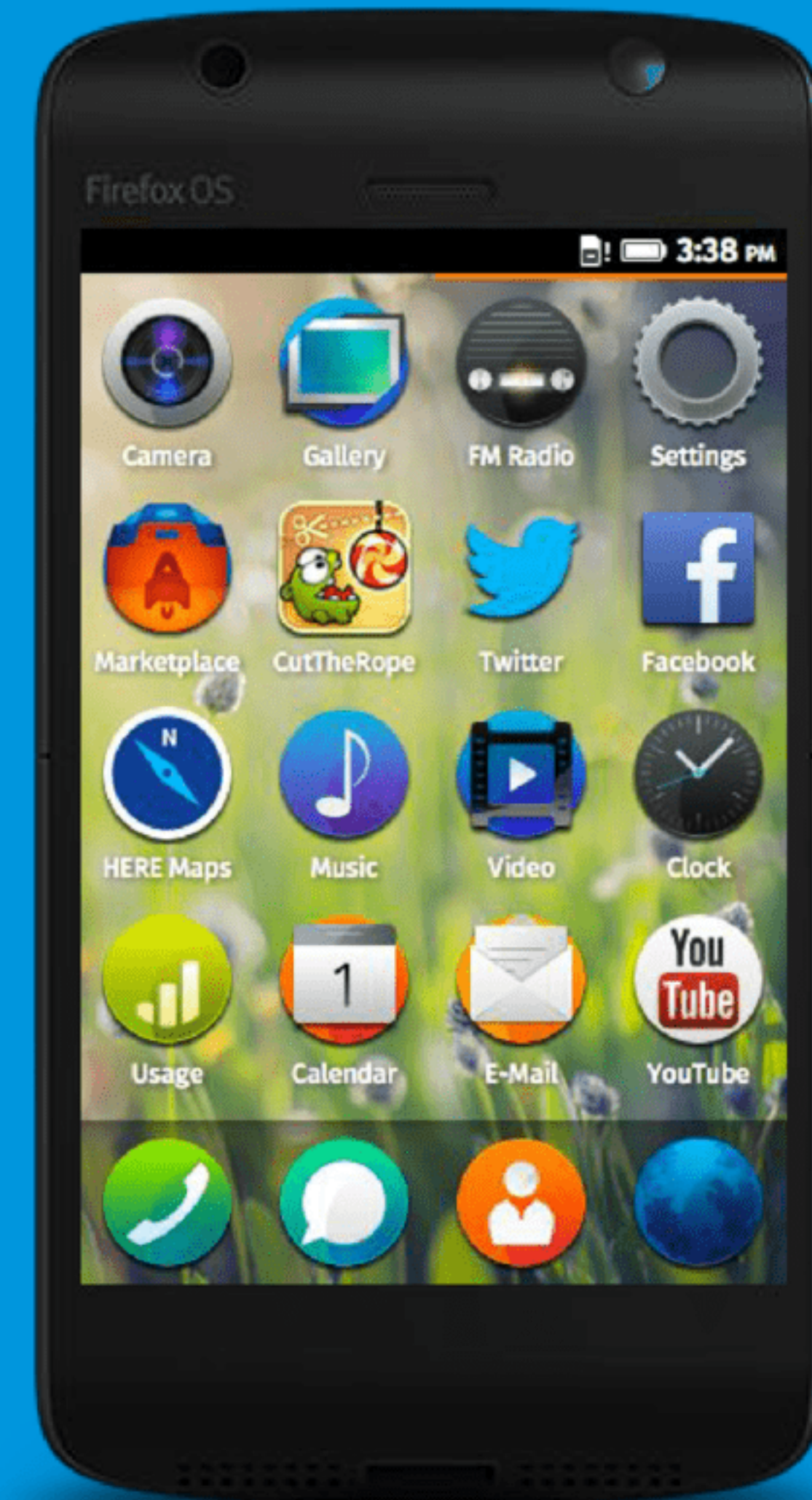


What you deserve



Built with the Web

Using HTML5, CSS3 and JavaScript
with a number of APIs
to build apps.





Adaptive App Search



Type a word or subject you're interested in



Find exactly what you want — and more



Get instant access or save apps to your phone



Discover more apps on the Firefox Marketplace

It's open source



Gecko:
Web runtime with
open Web APIs

Gonk:
Open Linux kernel
and drivers



Architecture

Benefits of HTML5

- ✓ In-built distribution – the Web
- ✓ Simple technologies used by a lot of developers
- ✓ Evolution of existing practices
- ✓ Open, independent, and standardized

Some facts

- 7 mobile operator & 4 hardware partners
- ZTE Open, Alcatel One Touch Fire, Geeksphone Keon, Geeksphone Peak, LG FireWeb...
- More to come: Huawei Y300, ZTE Open C, Alcatel One Touche Fire C & E & S...
- Aimed at emerging markets/low end market



[Back to Store](#) | Listed as ZTE Open - Orange (Unlocked) Smartphone in category: [Cell Phones & Accessories](#) > [Cell Phones & Smartphones](#)

\$ EXTRA 5% OFF WHEN YOU BUY 2 OR MORE [See all eligible items](#) ▶



Mouse over image to zoom

ZTE Open powered by Firefox OS - 3G unlocked smartphone orange - eBay exclusive!

Get 5% off when you buy 2 or more!

Item condition: **New**

Quantity:

Limited quantity available / **1,724 sold**

List price: ~~US \$99.99~~ ⓘ

You save: **\$25.00 (25%)**

Price: **US \$74.99**

Buy It Now

Add to cart

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1312 watchers

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★ Add to collection

Limited quantity remaining

Over 50% Sold

104 Inquiries

Shipping: **\$15.00** Standard Int'l Shipping | [See details](#)

International items may be subject to customs processing and additional charges. ⓘ

Item location: **United States**

Ships to: **Worldwide** [See exclusions](#)

Delivery: **Estimated between Fri. Jan. 17 and Thu. Jan. 23**

Seller ships within 1 day after [receiving cleared payment](#). ⓘ

Please allow additional time if international delivery is subject to customs processing.

Payments: **PayPal** | [See details](#)

Returns: **14 days money back, buyer pays return shipping** | [Read details](#)






| Add

Seller information

zte_us (4046 ★)

99.5% Positive feedback

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\$ Have one to sell? [Sell it yourself](#)

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★★★★★



ROTOGAMESq
Free
★★★★★



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★★★★★



Contactzilla
Free
★★★★★



Firetext
Free
★★★★★



VTCS 13
Free
★★★★★



Evernav
Free
★★★★★

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Pasjans/Sol...
Free
★★★★★



SoundCloud
Free
★★★★★



Loqui IM
Free
★★★★★



Wikipedia
Free
★★★★★



ConnectA2
Free
★★★★★



Wassap
Free
★★★★★

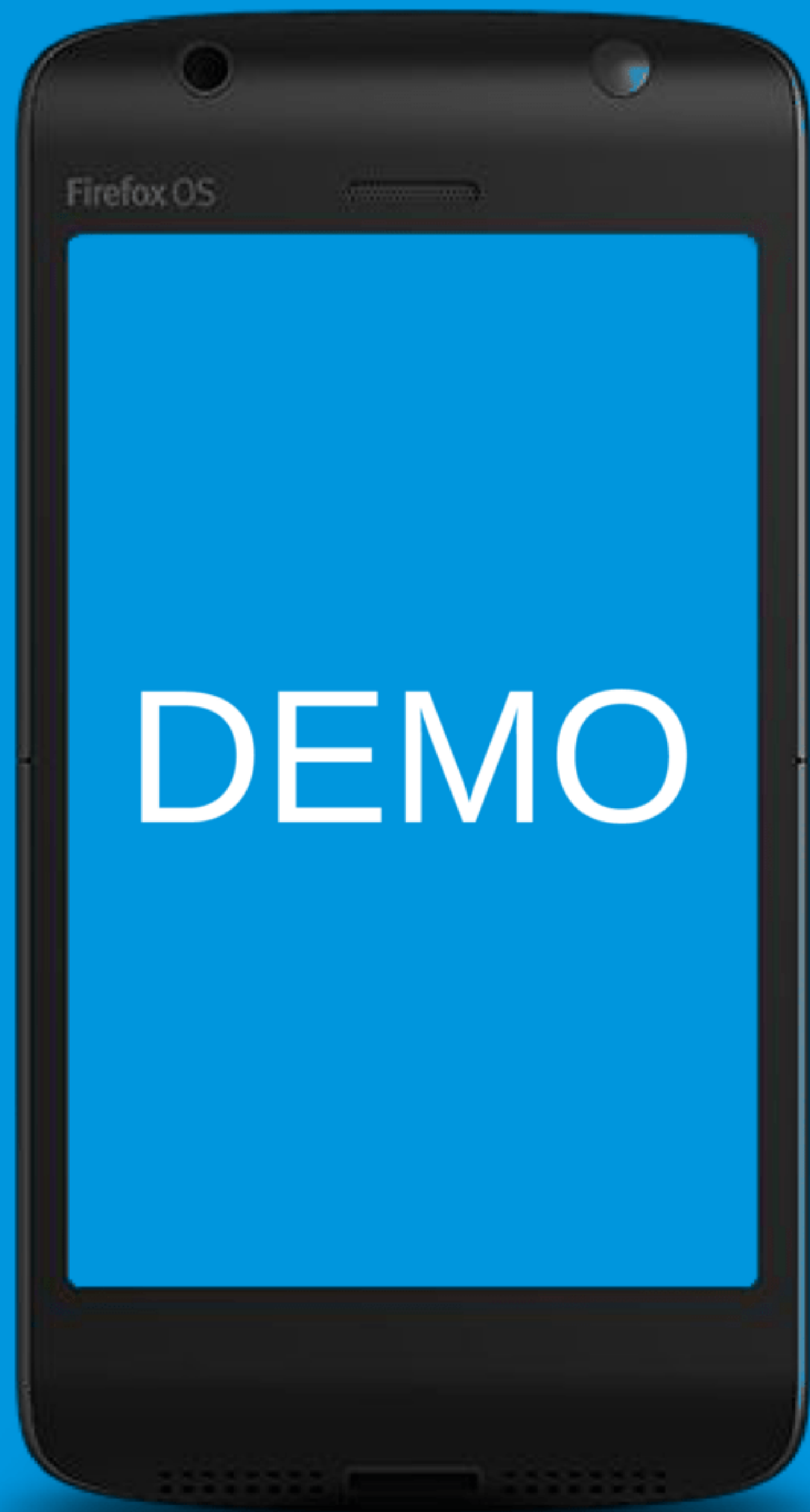


A Firefox OS app?

- Creating a hosted or packaged app
- Using
 - Vanilla HTML5
 - Libraries...
 - Regular API
 - Privileged API
 - *Certified API*

HTML5 + manifest (JSON) = Firefox OS app

```
{
  "version": "42",
  "name": "My amazing app",
  "launch_path": "/index.html",
  "description": "My super amazing app do super amazing things",
  "icons": {
    "16": "/images/logo16.png",
  },
  "developer": {
    "name": "Frédéric Harper",
    "url": "http://outofcomfortzone.net",
  },
  "default_locale": "en",
  "permissions": {
    "geolocation": {
      "description": "Get the long/lat of the user"
    }
  }
}
```



Emberjs todomvc

Web APIs

Web APIs – Regular

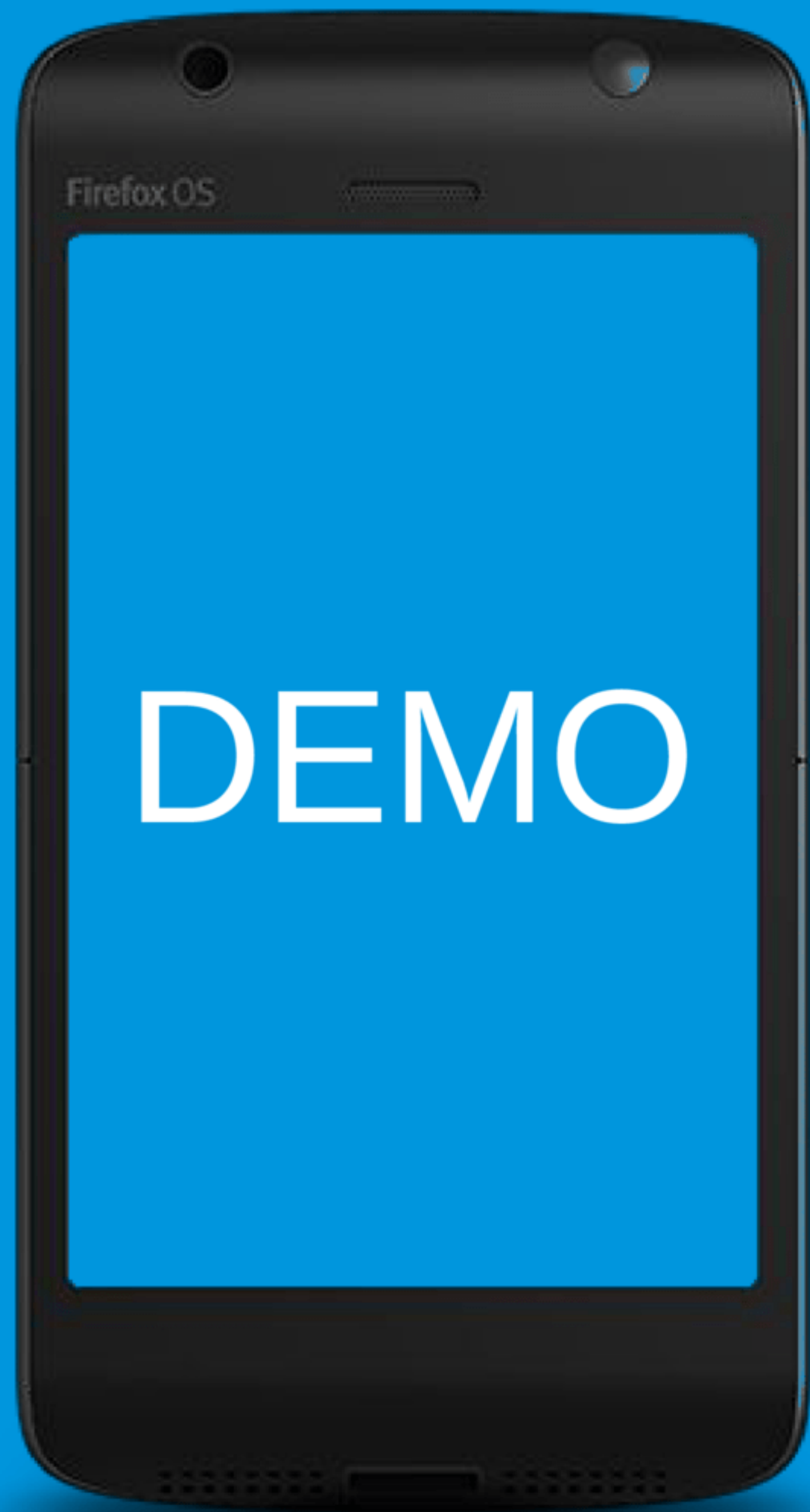
- Alarm API
- Ambient light sensor
- Archive API
- Battery Status API
- Geolocation API
- IndexedDB
- Network Information API
- Notifications API
- Open WebApps
- Proximity sensor
- Push API
- Screen Orientation
- Vibration API
- Web Activities
- WebFM API
- WebPayment



Ambient Light Sensor

Ambient Light Sensor

```
window.addEventListener("devicelight", function (event) {  
  
    // The level of the ambient light in lux  
    // The lux values for "dim" typically begin below 50,  
    // and the values for "bright" begin above 10000  
    console.log(event.value);  
});
```



Boilerplate – Ambient Light Sensor

Battery Status

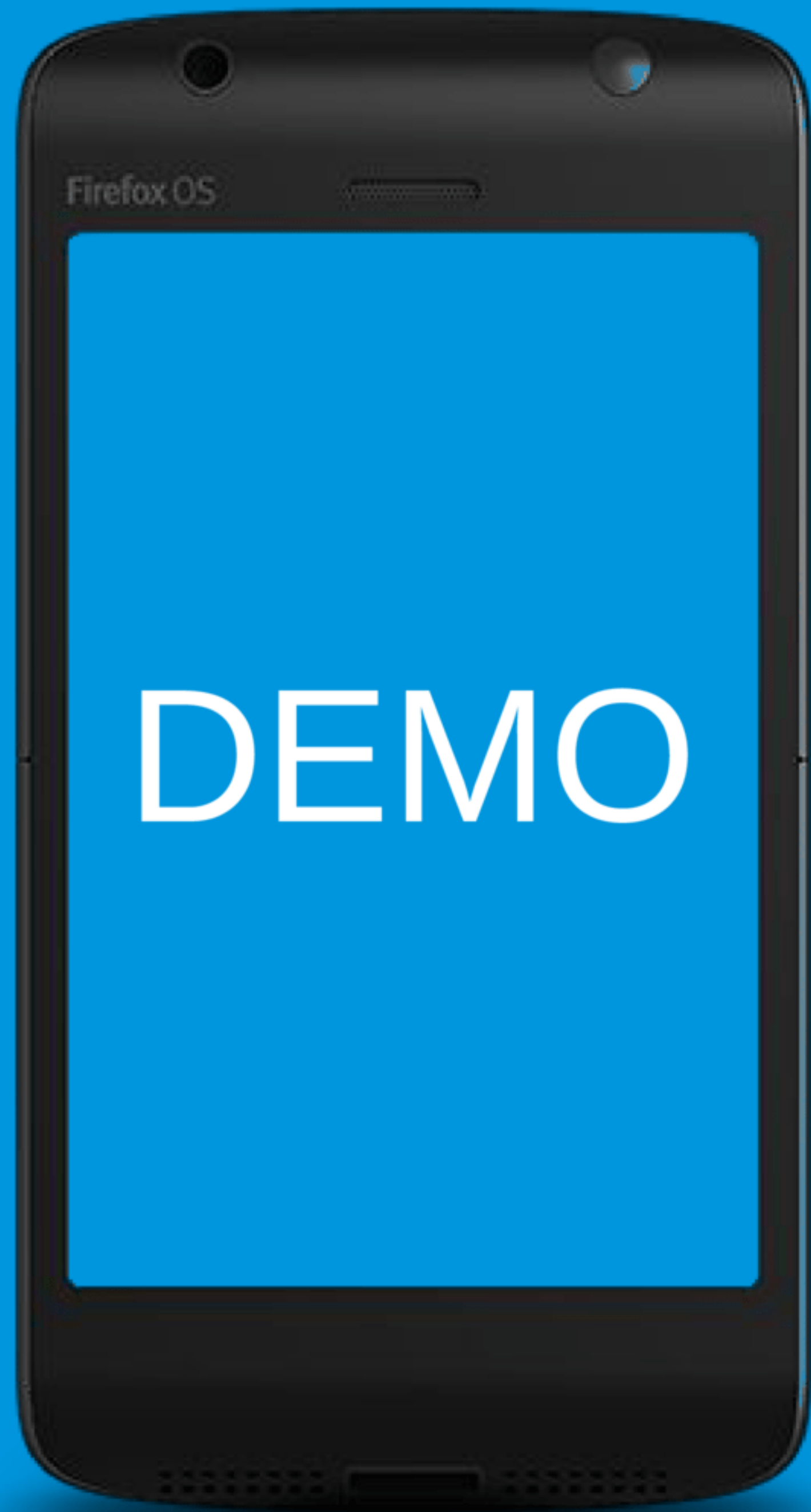
Battery Status

```
var battery = navigator.battery;

if (battery) {
    var batteryLevel = Math.round(battery.level * 100) + "%",

    charging = (battery.charging)? "yes" : "no",
    chargingTime = parseInt(battery.chargingTime / 60, 10),
    dischargingTime = parseInt(battery.dischargingTime / 60, 10);

    battery.addEventListener("levelchange", setStatus, false);
    battery.addEventListener("chargingchange", setStatus, false);
    battery.addEventListener("chargingtimechange", setStatus, false);
}
```



Boilerplate – Battery status

Web APIs – Privileged

- Browser API
- Contacts API
- Device Storage API
- systemXHR
- TCP Socket API



Browser

Browser

```
<div>
  <span id='location-bar'></span>
  <button onclick='go_button_clicked()'>Go</button>
</div>
<div id='load-status'></div>
<div id='security-status'></div>
<img id='favicon'>
<div id='title'></div>
<iframe mozbrowser src='yoursite.com' id='browser'></iframe>
```

Browser

```
addEventListener('mozbrowserloadstart', function(e) {  
    //Do stuff  
});
```

```
/*
```

Possible values:

"mozbrowserloadstart"

"mozbrowserlocationchange"

"mozbrowsericonchange"

"mozbrowsercontextmenu"

"mozbrowserkeyevent"

"mozbrowseropenwindow"

"mozbrowserloadend"

"mozbrowsertitlechange"

"mozbrowsersecuritychange"

"mozbrowsererror"

"mozbrowsershowmodalprompt"

"mozbrowserclose"

```
*/
```

Contacts

Contacts

```
var contact = new mozContact();  
contact.init({name: "Tom"});  
  
var request = navigator.mozContacts.save(contact);  
request.onsuccess = function() {  
    console.log("Success");  
};  
  
request.onerror = function() {  
    console.log("Error")  
};
```

Web APIs – Certified

- Camera API
- Idle API
- Mobile Connection API
- Network Stats API
- Permissions API
- Power Management API
- Settings API
- Time/Clock API
- Voicemail
- WebBluetooth
- WebSMS
- WebTelephony
- WiFi Information API



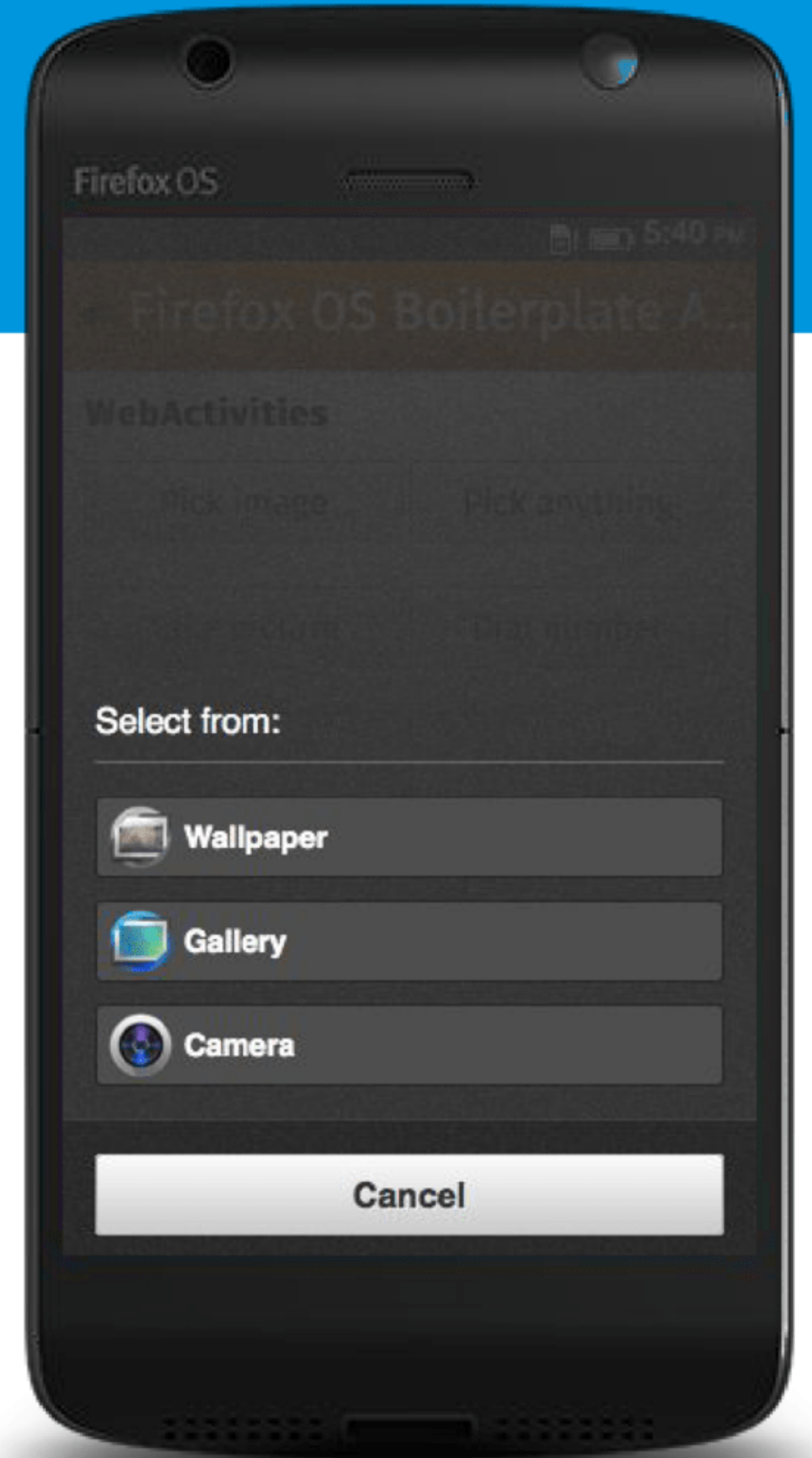
Web Activities

Web Activities

- browse
- configure
- costcontrol
- dial
- open
- pick
- record
- save-bookmark
- share
- view
- update
- new
 - mail
 - websms/sms
 - webcontacts/contact

Pick

```
var activity = new MozActivity({  
  name: "pick",  
  //Provide the data required  
  //by the filter of the activity  
  data: {  
    type: "image/jpeg"  
  }  
});
```

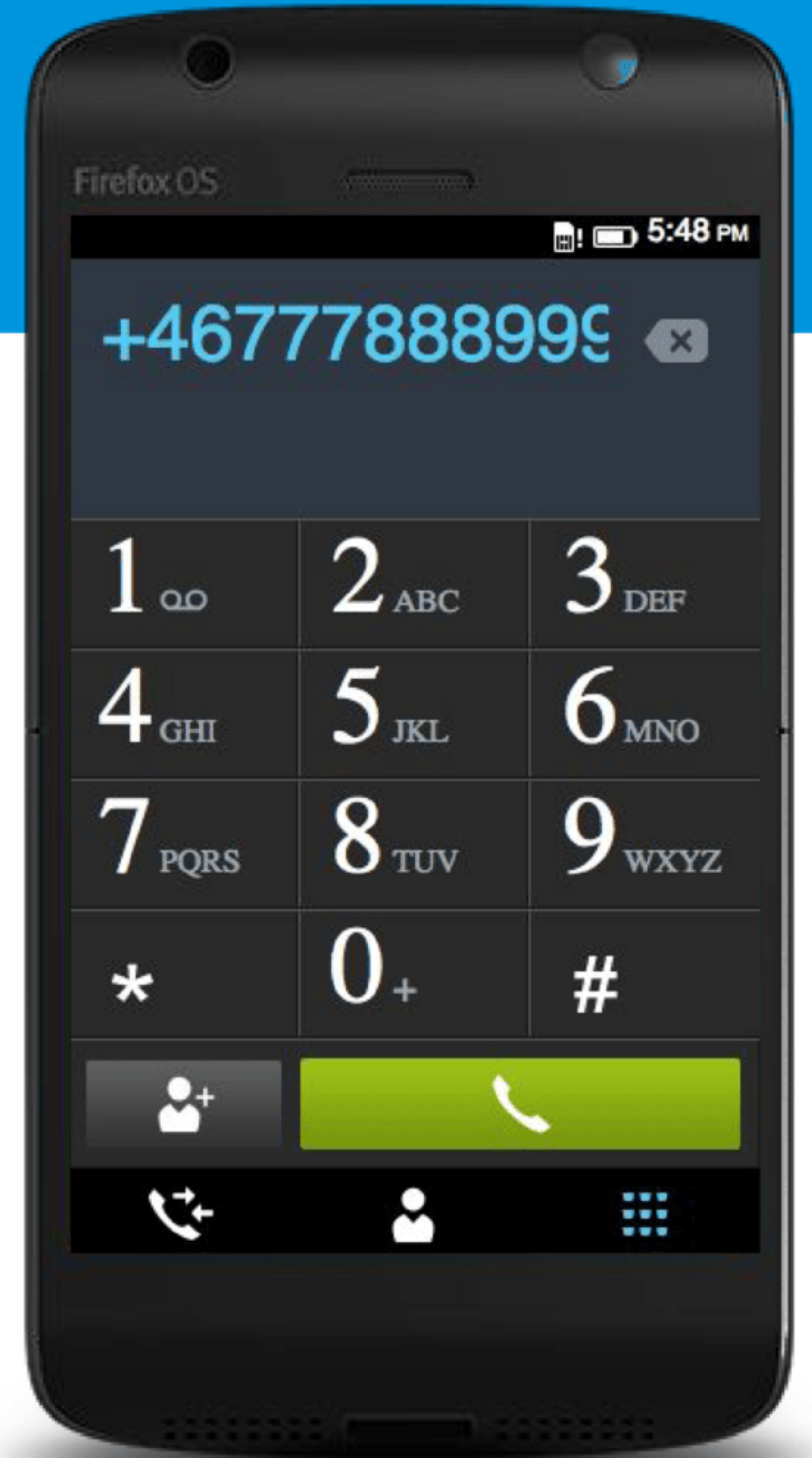


Pick

```
activity.onsuccess = function () {  
    var img = document.createElement("img");  
  
    if (this.result.blob.type.indexOf("image") !== -1) {  
        img.src = window.URL.createObjectURL(this.result.blob);  
    }  
};  
  
activity.onerror = function () {  
    //error  
};
```

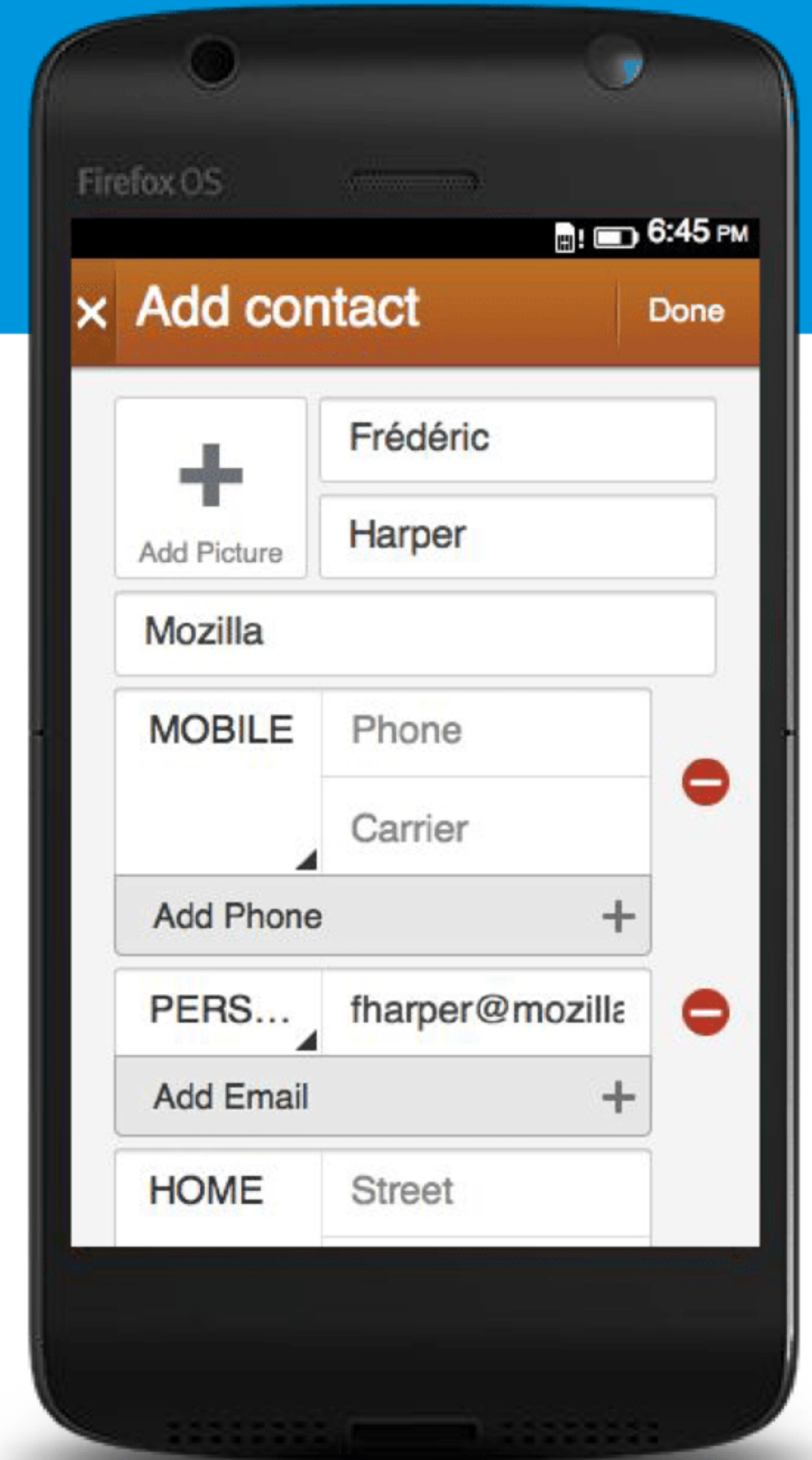
Dial

```
var call = new MozActivity({  
  name: "dial",  
  data: {  
    number: "+46777888999"  
  }  
});
```



new webcontacts/contact

```
var newContact = new MozActivity({  
  name: "new",  
  data: {  
    type: "webcontacts/contact",  
    params: {  
      givenName: "Frédéric",  
      lastName: "Harper",  
      email: "fharper@mozilla.com",  
      company: "Mozilla"  
    }  
  }  
});
```



Web Activity Received Handler

```
"activities": {  
  "pick": {  
    "filters": {  
      "type": ["image/jpeg", "image/png"]  
    },  
    "disposition": "inline",  
    "returnValue": true,  
    "href": "/index.html#pick"  
  }  
}
```

Don't forget to handle it!

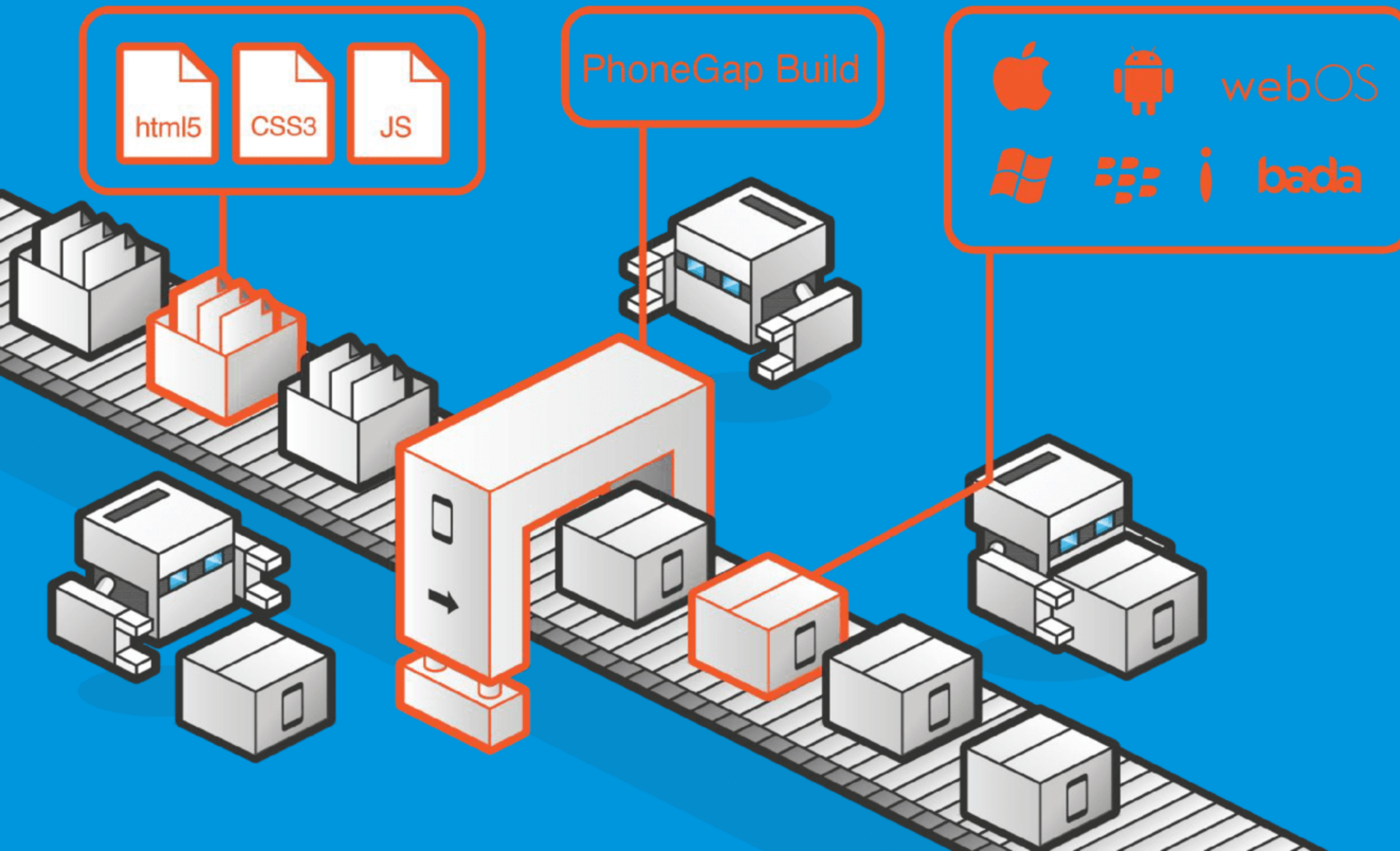
```
navigator.mozSetMessageHandler('activity', function(activityRequest) {  
    var option = activityRequest.source;  
  
    if (activityRequest.source.name === "pick") {  
  
        // Do something to handle the activity  
        if (picture) {  
            activityRequest.postMessage(picture);  
        }  
        else {  
            activityRequest.postMessage("Unable to provide a picture");  
        }  
    }  
});
```



How to start



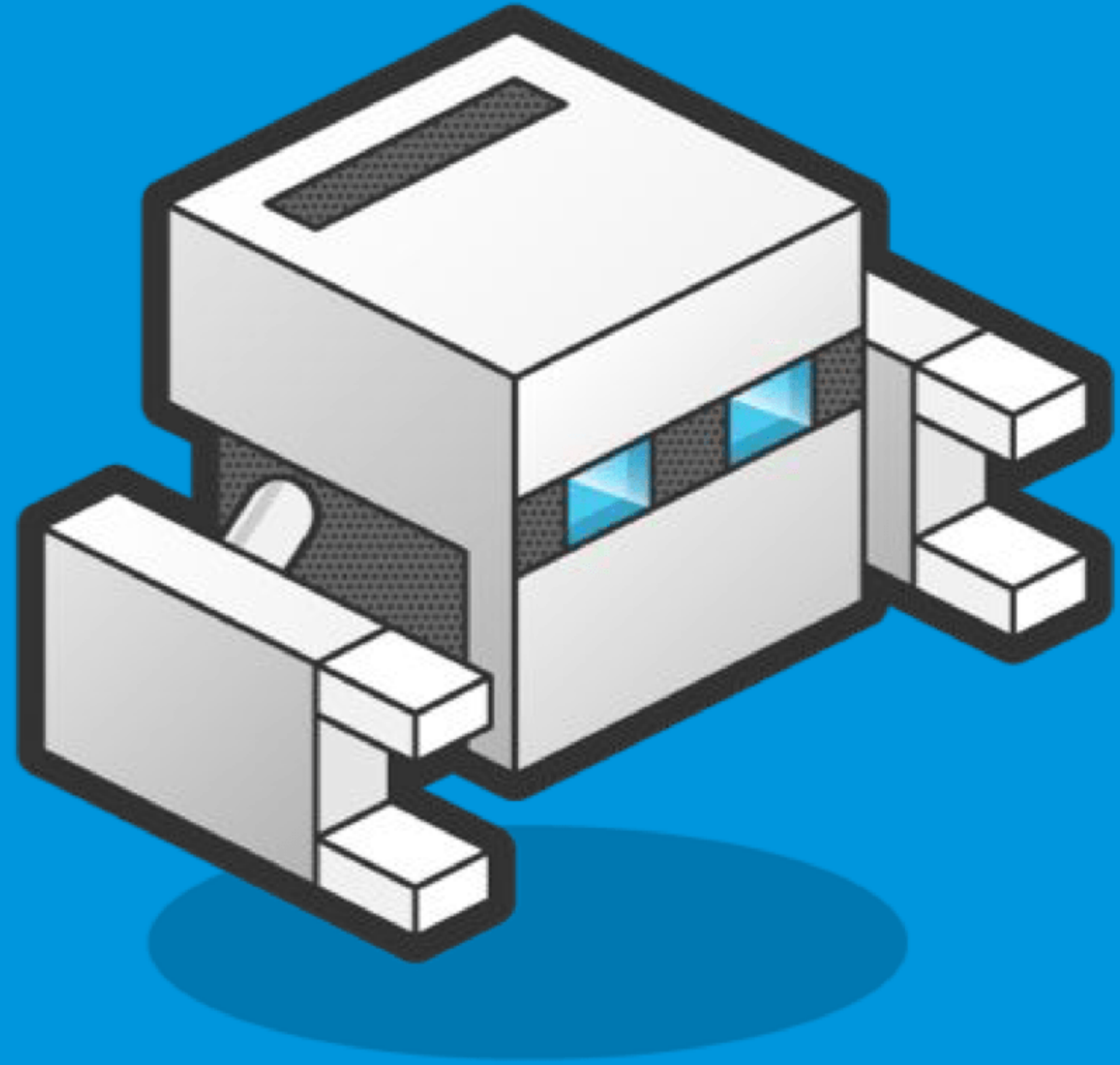
Cordova & Phonegap



Firefox OS

API implementations

- Camera
- Contacts
- Device
- Device-motion
- Geolocation
- Orientation
- Vibration



Get ready!

```
$ sudo npm install -g cordova
```

```
$ cordova create hello com.example.hello HelloWorld
```

```
$ cd hello
```

```
$ cordova platform add firefozos
```

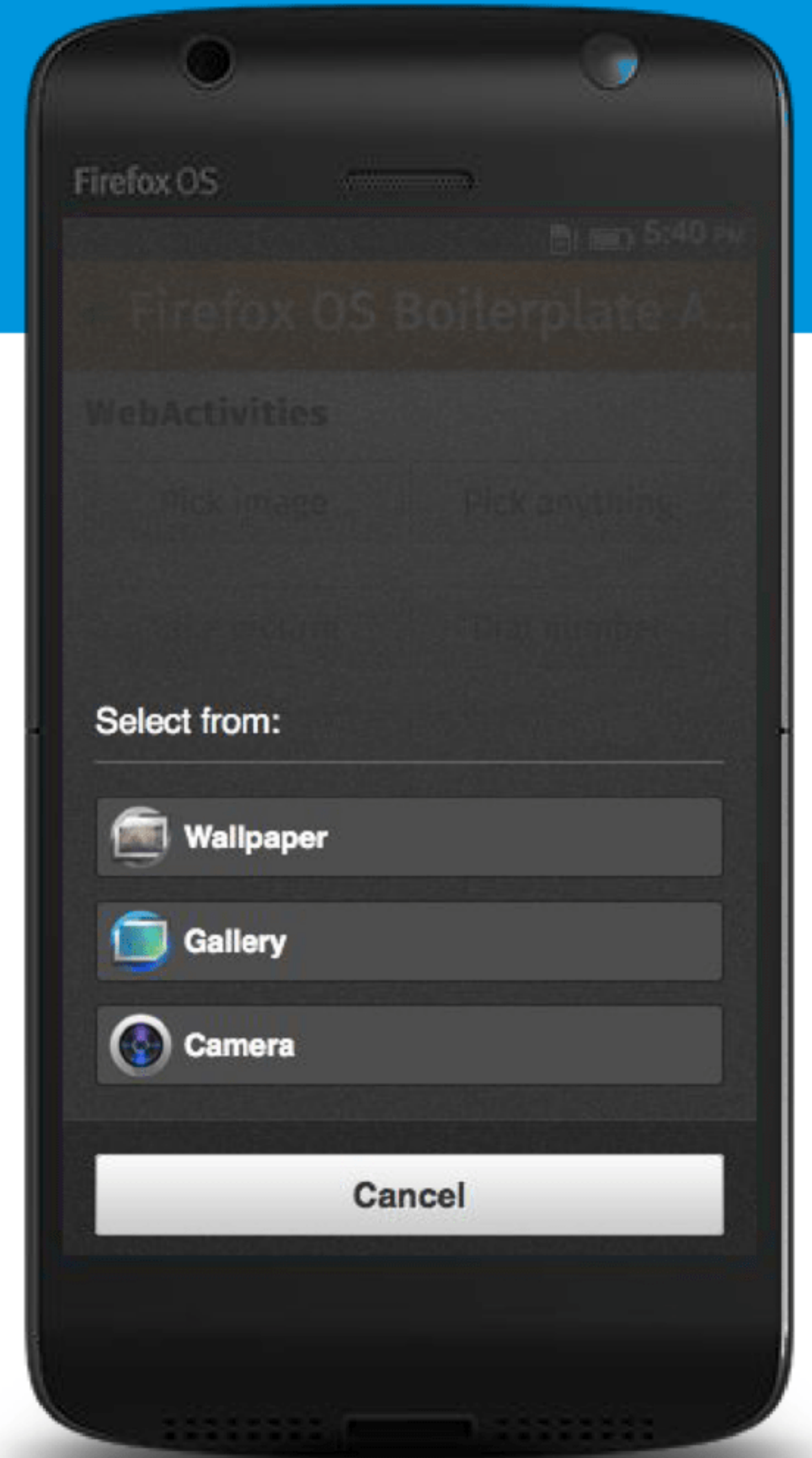
```
$ cordova prepare firefozos
```

Camera API

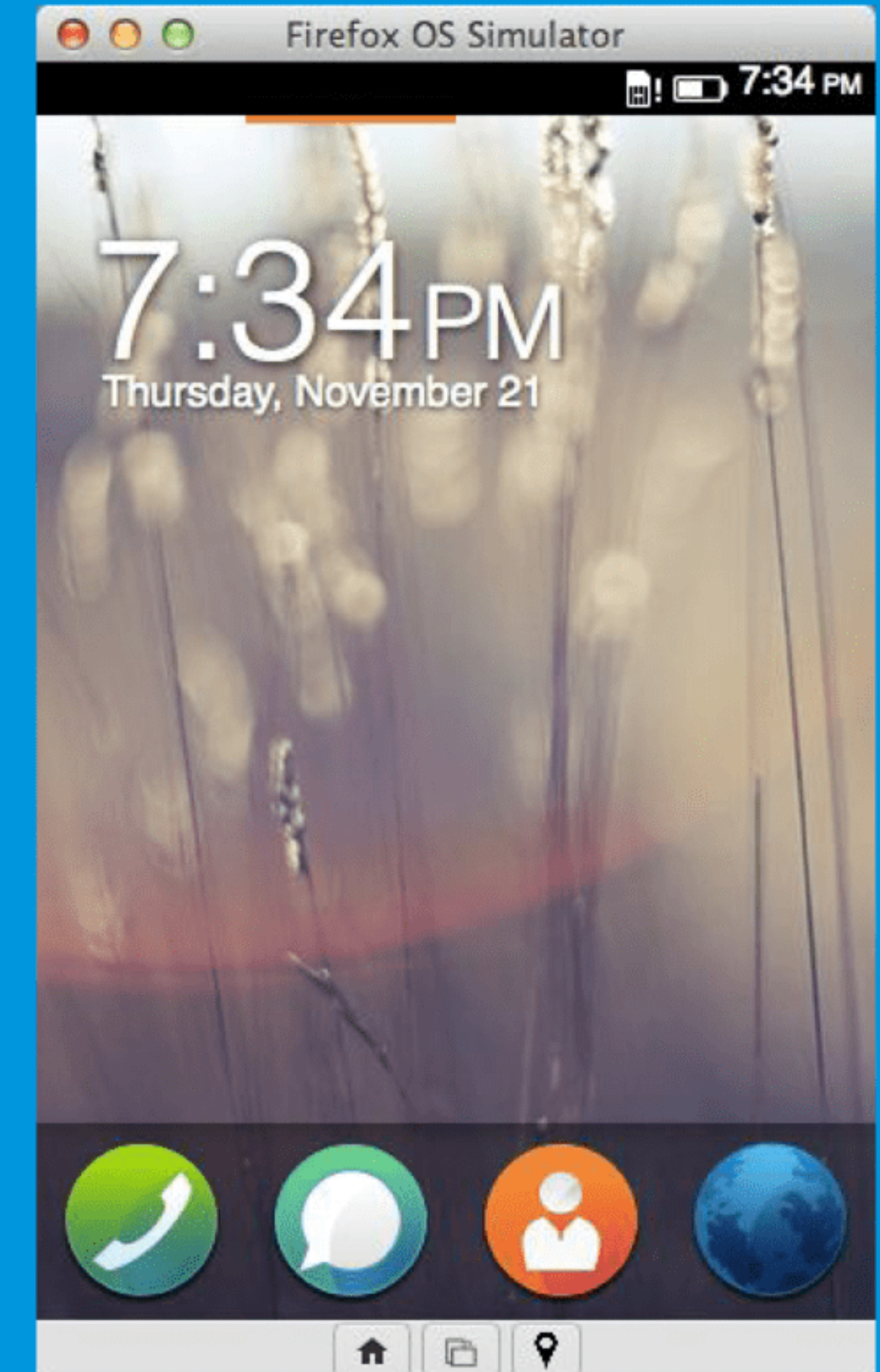
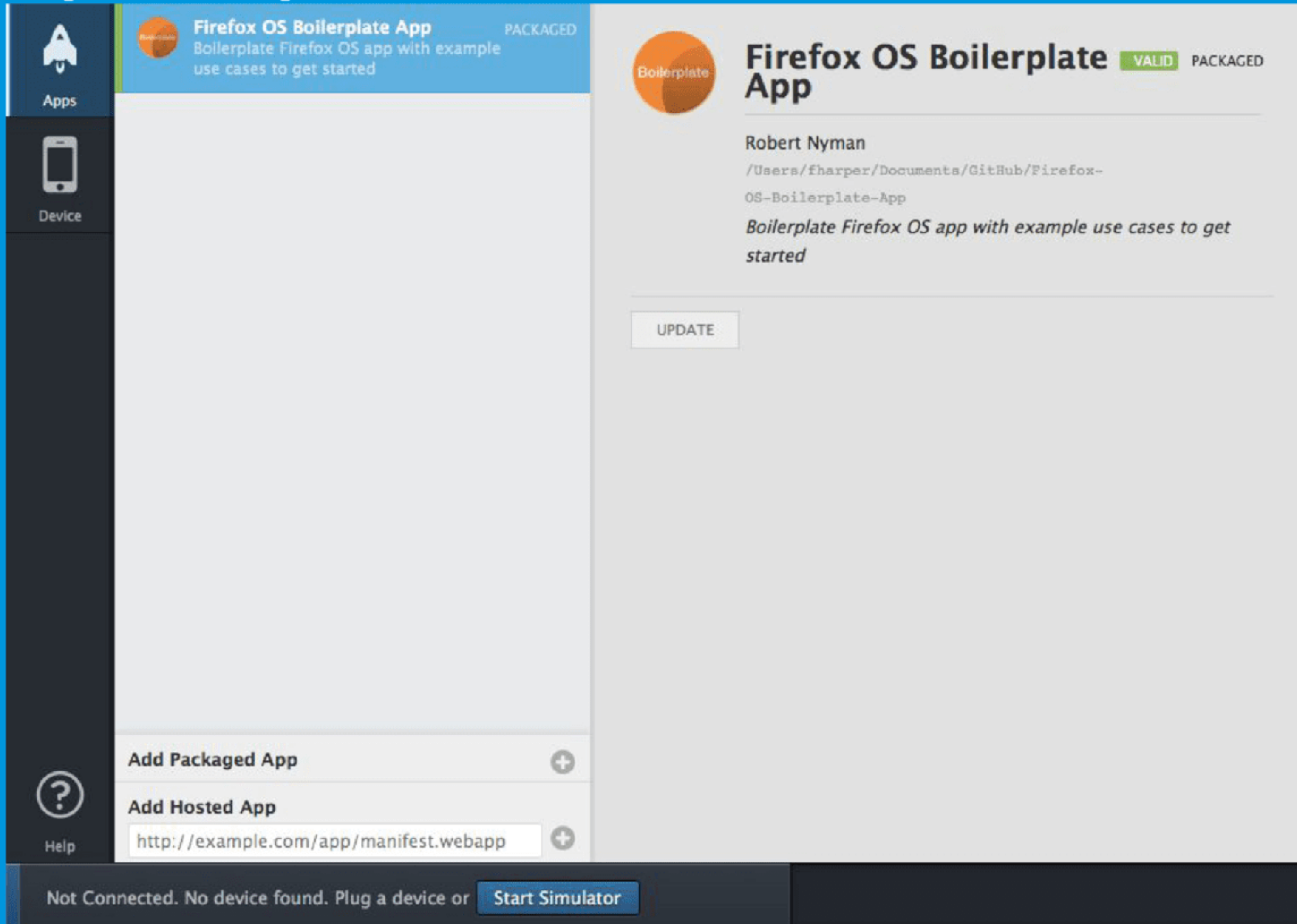
```
$ cordova plugin add org.apache.cordova.camera
```

```
//Cordova code
```

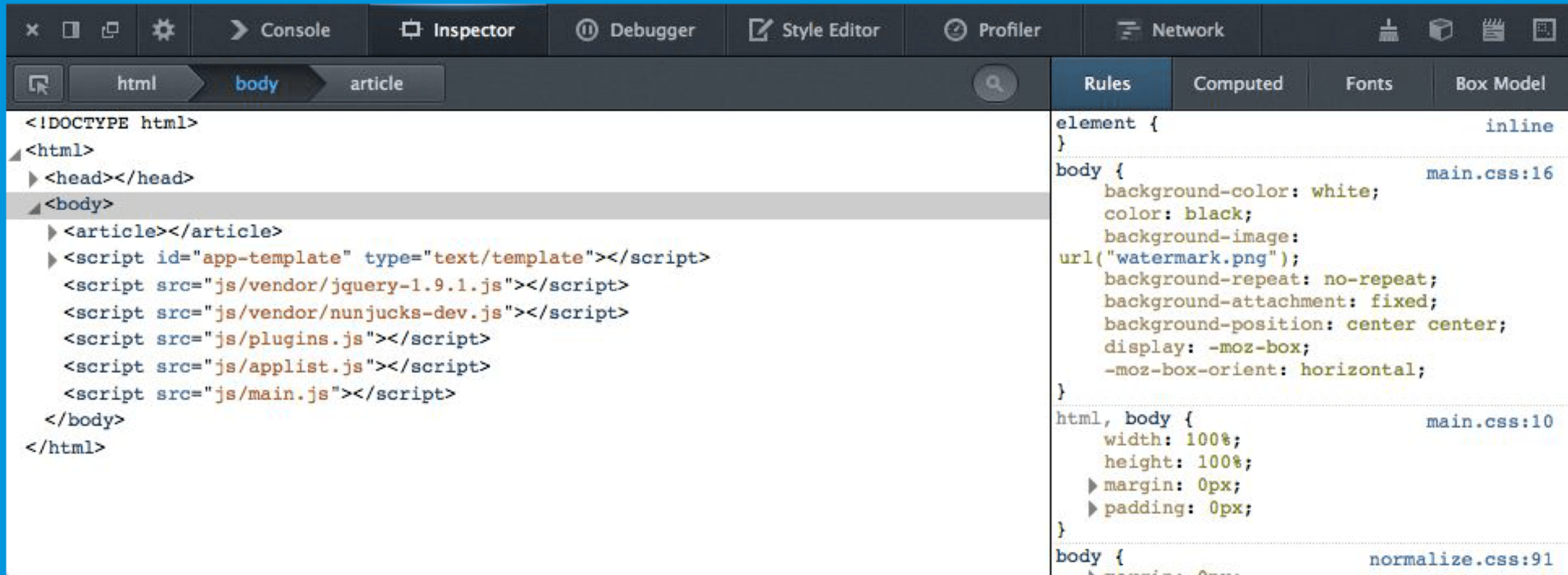
```
navigator.camera.getPicture(function (src) {  
    var img = document.createElement('img');  
    img.id = 'slide';  
    img.src = src;  
    }, function () {}, {  
        destinationType: 1  
    });
```



Firefox OS App Manager + Simulator (1.2+)



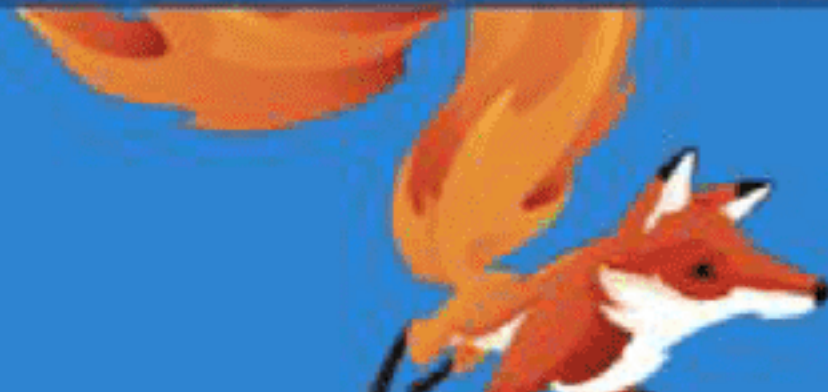
Firefox Web Developer Tools





How to debug a Firefox OS app

Shared knowledge for the Open Web

 **WEB
PLATFORM**[Web APIs & DOM](#)[HTML](#)[CSS](#)[JavaScript](#)[more...](#) **ZONES**[App Center](#)[Firefox](#)[Firefox OS](#)[Persona](#) **DEVELOPER
TOOLS**[Firefox OS Simulator](#)[Page Inspector](#)[JavaScript Debugger](#)[Web Console](#)[more...](#) **MDN
BETA**[Welcome to the MDN Beta.](#)[Learn how you can help!](#)
Create
Web Apps →
Develop
Firefox for Android →
Build
Firefox OS →



Mozilla Hacks is one of the key resources for people developing for the Open Web, talking about news and in-depth descriptions of technologies and features. [Learn more...](#)

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Launching developer Q&A on Stack Overflow

November 19, 2013 • by Robert Nyman [Editor] • Apps, Firefox OS, HTML5 • 18 comments

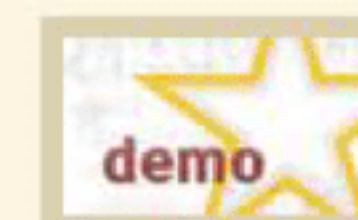
Introducing the Whiteboard Drum – WebRTC and Web Audio API magic

November 14, 2013 • by Tatsuya Shinyagaito and Robert Nyman [Editor] • Audio, WebRTC • 2 comments

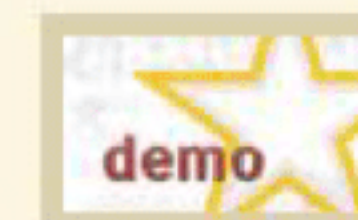
Firefox Developer Tools: Episode 27 – Edit as HTML, Codemirror & more

November 6, 2013 • by Paul Rouget and Robert Nyman [Editor] • Developer Tools, Firefox Aurora • 50 comments

FEATURED DEMOS [More »](#)



The making of a hack – Media Query Mario



BrowserQuest – a massively multiplayer HTML5 (WebSocket + Canvas) game experiment



Creating thumbnails with drag and drop and HTML5 canvas



Questions

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info

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active

unanswered

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- [App Center](#)
- [Firefox OS on the Mozilla Developer Network \(MDN\)](#)
- [Dev Tools on the Mozilla Developer Network \(MDN\)](#)



Firefox OS is an open source HTML5 based operating system developed for mobile devices by the Mozilla Corporation. Firefox OS is designed to run apps that are implemented in HTML, JavaScript, and CSS

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0

votes

0

answers

6 views

Rendering issue while scrolling in a Firefox OS app

I have a Firefox OS app that displays images and text of different sizes (Titles and content). The app used to work fine in both simulator and device, but today it started to render oddly every time I ...

javascript

jquery

scrolling

rendering

firefox-os

asked 1 hour ago



Mavi

5 • 2

0

votes

1

answer

21 views

What are the system fonts of Firefox OS?

Fira Sans seems to be the default font, but I'm wondering what other fonts are on the device that can be used by apps via CSS.

firefox-os

asked 15 hours ago

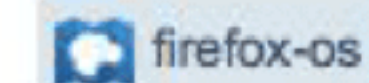


Christoph Ono

56 • 2

150

questions tagged



firefox-os

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Some candies



This repository ▾

Search or type a command

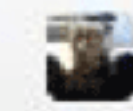


Explore

Gist

Blog

Help



fharper



PUBLIC



robnyman / Firefox-OS-Boilerplate-App

Unwatch ▾

71

Unstar

507

Fork

180

Creating Firefox OS apps

163 commits

5 branches

0 releases

12 contributors



branch: gh-pages ▾

Firefox-OS-Boilerplate-App / +

Removed button for the Alarm API (more intended for scheduling app ta... ⋮



robnyman authored 8 days ago

latest commit 27d7e6be3b 📄

📁 .tx	re-configure transifex integration	2 months ago
📁 css	Adding example of getting contacts	a month ago
📁 fonts	Adding/changing font looks	10 months ago
📁 images	Adding 120*120 logo	a month ago
📁 js	Updated Notification code, via Mte90 on GitHub	20 days ago
📁 locales	Update locales.ini with new locales ar, fr, el, id, ja and nl.	14 days ago
📄 .htaccess	Added .htaccess for GitHub pages test	10 months ago
📄 README.md	Changing heading levels	21 days ago
📄 fallback.html	Remove trailing spaces	3 months ago
📄 index.html	Removed button for the Alarm API (more intended for scheduling app ta...	8 days ago

Code

Issues

1

Pull Requests

0

Wiki

Pulse

Graphs

Network

HTTPS clone URL

https://github.com/ 📄

You can clone with [HTTPS](#), [SSH](#), or [Subversion](#). ⓘ

Clone in Desktop

Download ZIP

Prototyping with JSFiddle



- Append `/webapp.manifest` to install the app in the Firefox OS simulator
- Append `/fxos.html` to get an install page like a Firefox OS hosted app.

Building Firefox OS

Start creating your own apps



Follow @openwebdevice

4,396 followers



Tweet

959



Building Blocks

Reusable component set with markup and usage examples.



CSS Transitions

Ready to use animations and transitions for your apps.



Downloads

Get all Firefox OS goodies! Design stencils, icons, fonts...



What is Brick?

Brick is a bundle of reusable UI components created to enable **rapid development** of cross-browser and mobile-friendly HTML5 web applications.

Neat. How?

Brick components are **custom HTML tags** created using [X-Tag](#) — a library that makes developing Web Components easier.

Um, Web Components?

[Web Components](#) is a series of emerging **W3C standards** that allow developers to define custom HTML elements, and interact with them using the native DOM.

I'm the front
face.

Brick in Action

Toggle flip

Markup

```
<x-flipbox>
  <div>I'm the front face.</div>
  <div>And I'm the back face.</div>
</x-flipbox>
```

JavaScript

```
// assume that toggleButton and flipBox are already
// defined as their respective DOM elements
toggleButton.addEventListener("click", function(){
  flipBox.toggle();
});
```

What's next

Search by name or tag...

form starter data math

numbers input fun photo

Show all tags

Alternating Gate

Audio Player

Average Number

Button

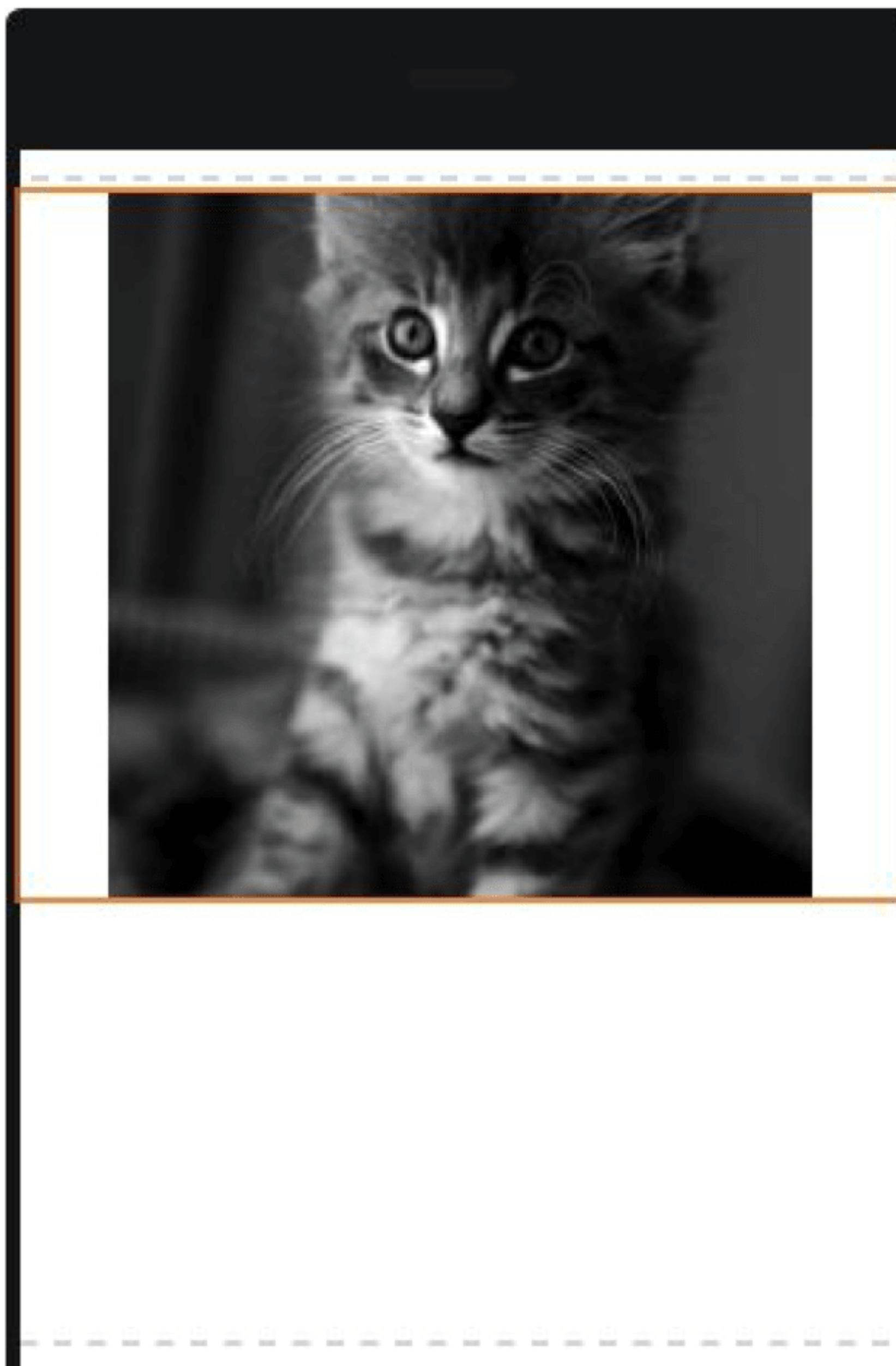
Chat Window

Component Template

Counter

Fireworks

Flickr



Randomcat

Customize

View Source

Photo Style

Cat Width

More Web APIs & features

- Calendar API
- FileHandle API Sync API
- Keyboard/IME API WebRTC
- HTTP-cache API
- Peer to Peer API
- Spellcheck API LogAPI
- Resource lock API
- UDP Datagram Socket API
- WebNFC
- WebUSB



To infinity, and
beyond...

When you'll build your next app

Why not think about the web first...

Resources

Firefox OS Simulator

<http://j.mp/fxosSimulator>

Firefox OS App Manager

<http://j.mp/fxosAppManager>

Mozilla Developer Network

<https://developer.mozilla.org>

StackOverflow forum

<http://j.mp/fxosStackOverflow>

Firefox OS Boilerplate

<http://j.mp/fxosBoilerplate>

Firefox OS UI Component

<http://buildingfirefoxos.com/>

Mozilla Brick

<http://j.mp/mozBrick>

Mozilla Appmaker

<https://appmaker.mozillalabs.com/>

Join us for an epic workshop

<http://moz hacks.wufoo.com/forms/firefox-os-app-workshop-prague>



Planning to port
or build a
Firefox OS app?

Please let me know!

A photograph of Frédéric Harper, a bald man with glasses, wearing a black t-shirt and a blue lanyard. He is looking directly at the camera. In the background, there is a large banner with the word "HACK" in large white letters. Below it, there is a red banner with the text "R 2011" and "WE".

Frédéric
Harper

fharper@mozilla.com

@fharper

<http://hacks.mozilla.com>

<http://outofcomfortzone.net>