

ВЕБ-ПРИЛОЖЕНИЯ
« БУДУЩЕГО »

Илья Пухальский

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« БУДУЩЕГО »

Илья Пухальский



Илья Пухальский,

EPAM Mobile Competency Center



[@witchfinderx](#)

Правда действительности

- Мобильный веб существует
- HTMLx не будет готов никогда



<http://play.freeciv.org>



Roll It

Bring the boardwalk to the browser using Chrome and your phone's accelerometer to recreate an arcade classic across two screens.

Launch Experiment

All Experiments Tags

1-18 of 645



Ironbane MMO

Ironbane Team



Roll It

Google



Racer

Google



Here Comes The Sun

Ian Butterworth



Pearl Boy

Goo Technologies



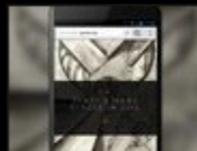
Connection

Jen Simmons



Multiplayer Playground

Tangible Interaction



The Last Website

Brothers Chapman & Opoloo



Cubes.io

bigblueboo



epic CITADEL

This browser is currently unsupported. Please download [Firefox 23 \(Nightly\)](#) for an optimal experience or [try anyway](#).

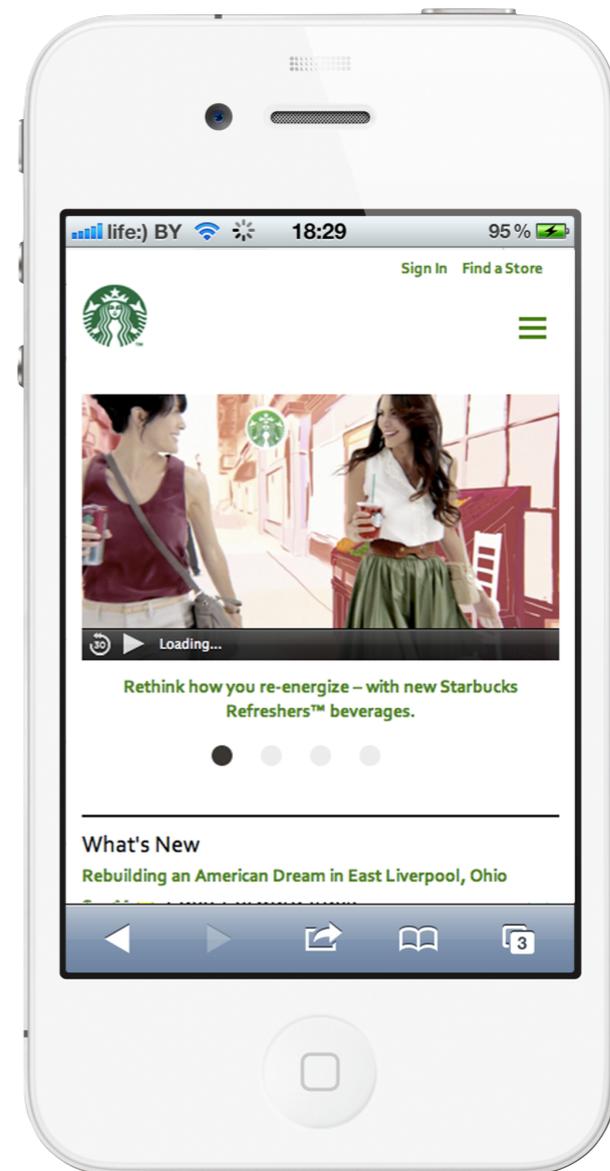
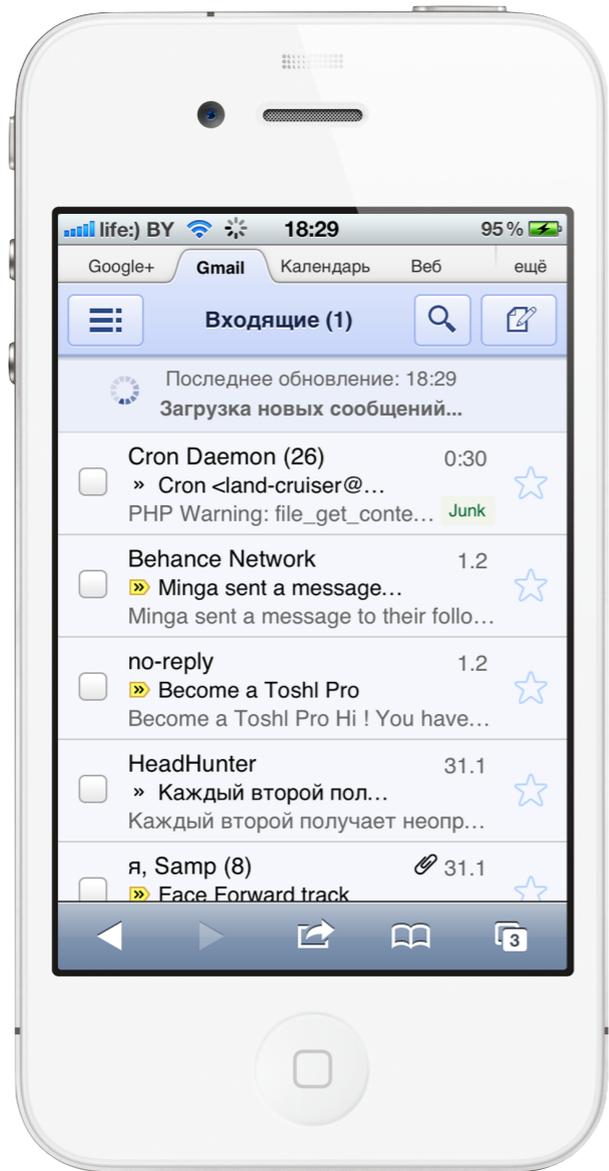
[FAQ](#)



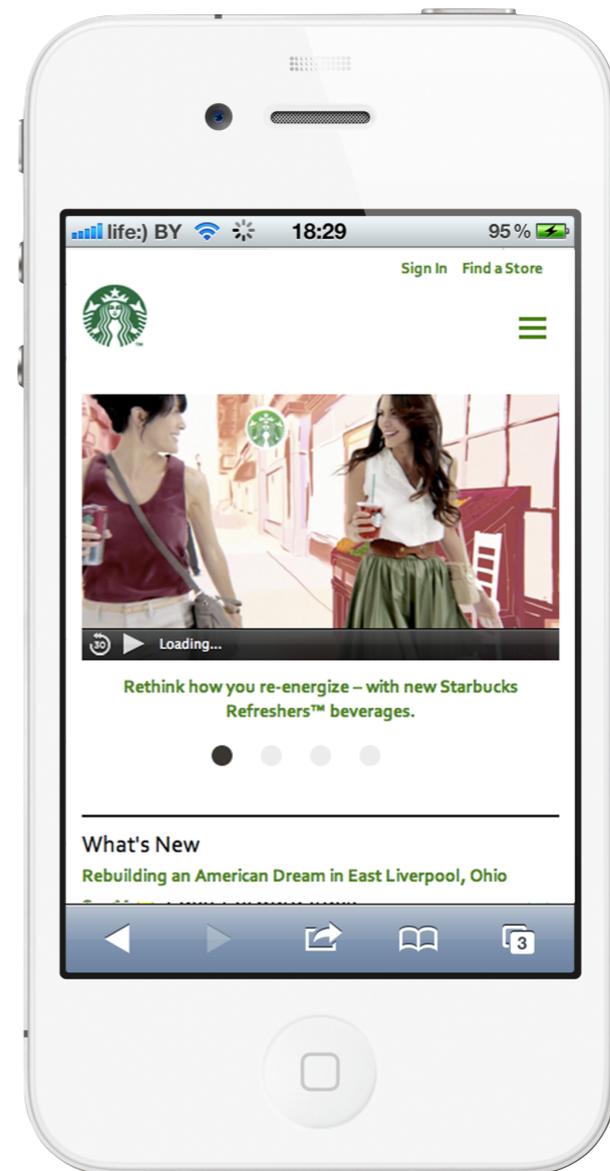
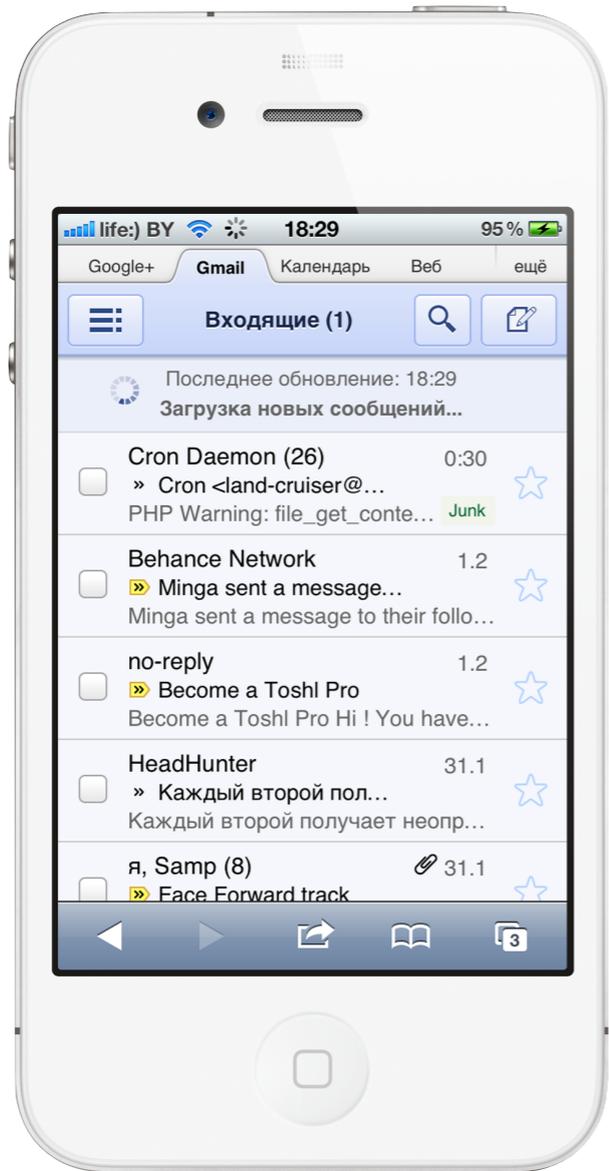
mozilla

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Веб-приложения



"...a Web page (XHTML or a variant thereof + CSS) or collection of Web pages delivered over HTTP which use server-side or client-side processing (e.g. JavaScript) to provide an "application-like" experience within a Web browser."

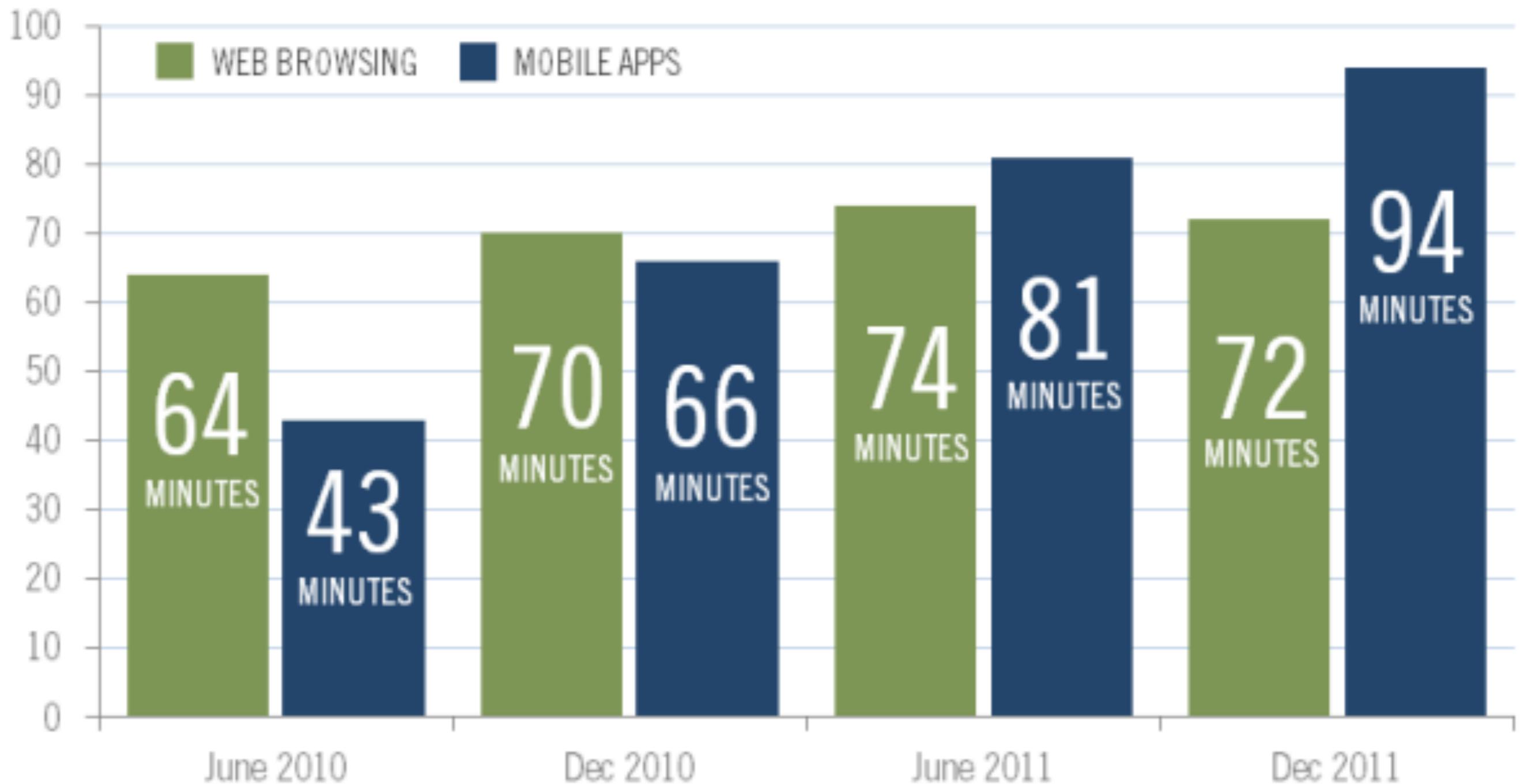


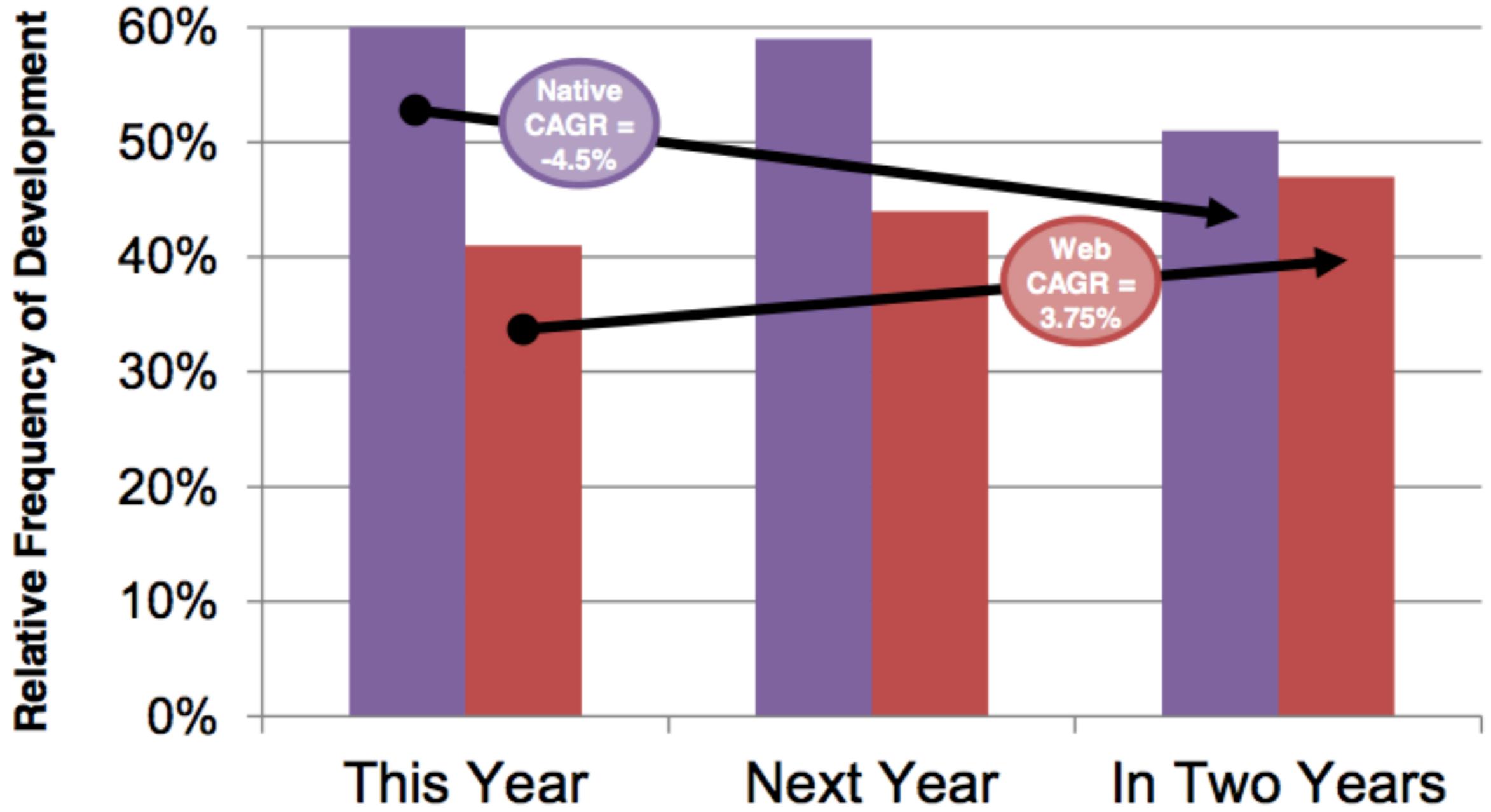
Ориентировано на
задачи

Ориентирован на
КОНТЕНТ

Может это вообще не нужно?

U.S. Mobile Apps vs. Web Consumption, Minutes per Day





■ Native
■ Web



WWW

\$

\$\$\$

Angry Birds

Angry Birds on Chrome

Kindle

Kindle Cloud

Vudu

Vudu

Playboy

Как так вышло?



DHTML

1997

AJAX

1999

JSONP

2005



amazon
web services™

2005



2006



2007





2007



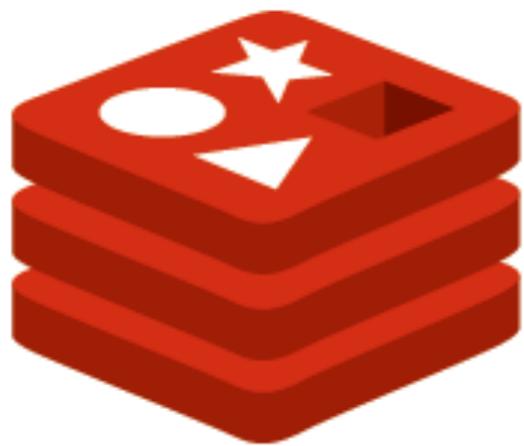
2008



2008



mongoDB



redis

2009



PhoneGap

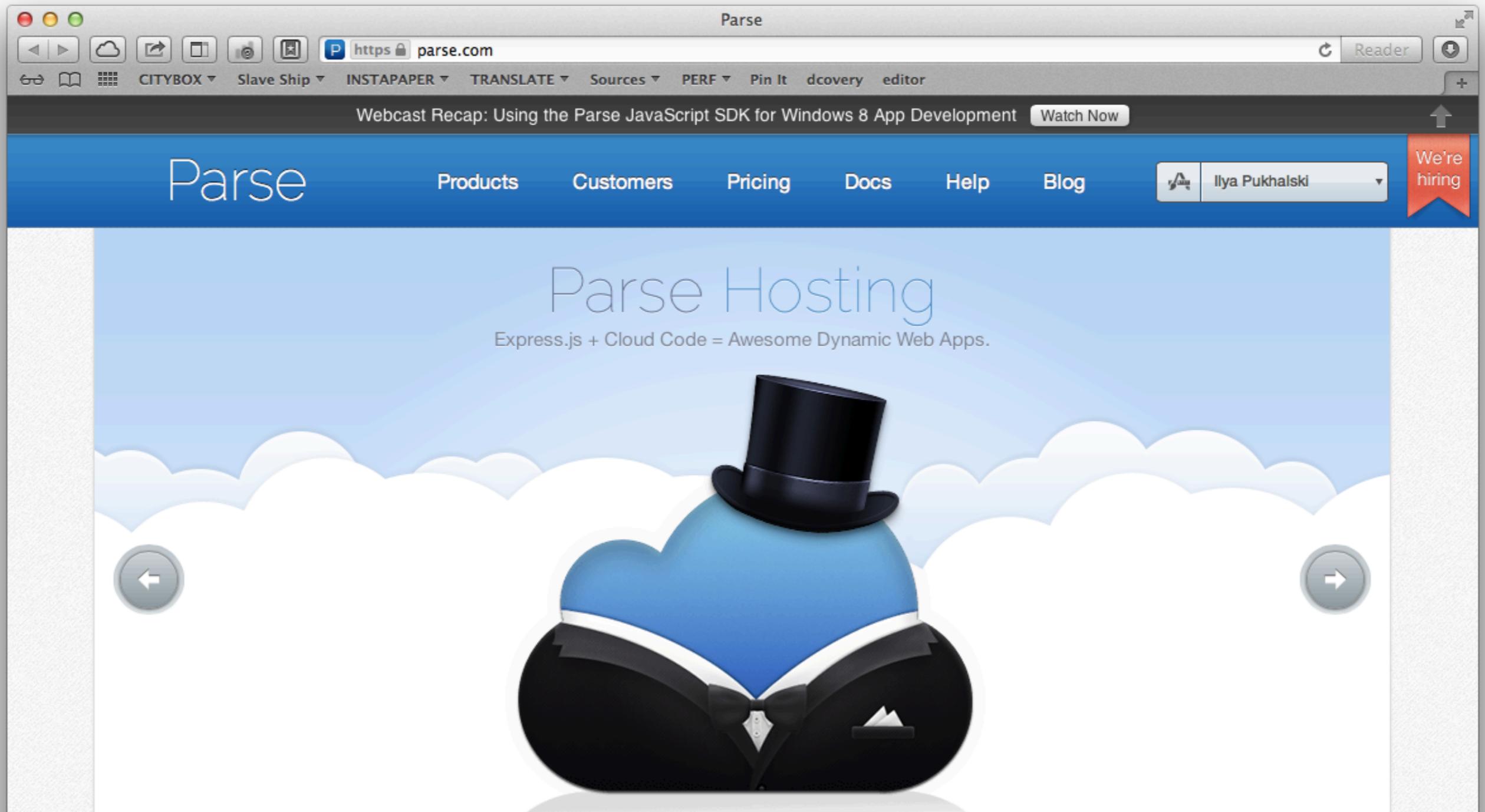
2009



available in the
chrome web store

2010

Look ma, no backend!



mozilla

HOME > MOZILLA RESEARCH >

Mozilla Research Projects

[Rust](#)[Servo](#)[Shumway](#)[Emscripten](#)[sweet.js](#)[LLJS](#)[broadway.js](#)[Parallel JavaScript](#)[asm.js](#)

Rust

- [Rust website](#)
- [Rust on GitHub](#)

Rust is a new programming language for developing reliable and efficient systems. It's designed to support concurrency and parallelism in building platforms that take full advantage of modern hardware. Its static type system is safe and expressive and it provides strong guarantees about isolation, concurrency execution and memory safety.

Rust combines powerful and flexible modern programming constructs with a clear performance model to make program efficiency predictable and manageable. One important way it achieves this is by allowing fine-grained control over memory allocation through contiguous records and stack allocation. This control is balanced with the absolute requirement of safety: Rust's type system and runtime guarantee the absence of data races, buffer overflow, stack overflow or access to uninitialized or deallocated memory.

Servo

- [Servo on GitHub](#)

Servo is an experimental project to build a Web browser engine for a new generation of hardware: mobile devices, multi-core processors and high-performance GPUs. With Servo, we are rethinking the browser at every level of the technology stack — from input parsing to page layout to graphics rendering — to optimize for power efficiency and maximum parallelism.

Servo builds on top of Rust to provide a secure and reliable foundation. Memory safety at the core of the platform ensures a high degree of assurance in the browser's trusted computing base. Rust's lightweight task mechanism also promises to allow fine-grained isolation between browser components, such as tabs and extensions, without the need for expensive runtime protection schemes, like operating system process isolation.



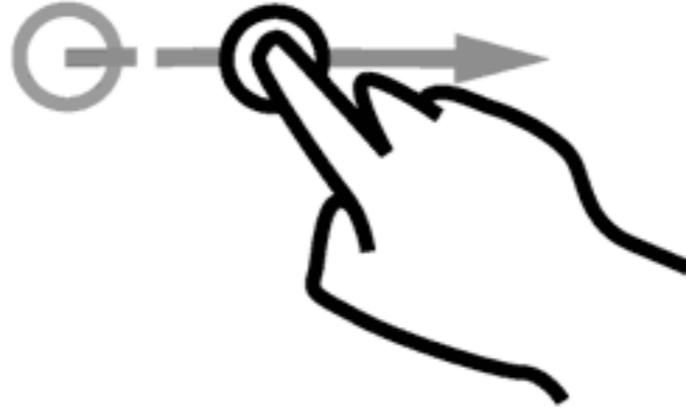
HTML

RISES AGAIN

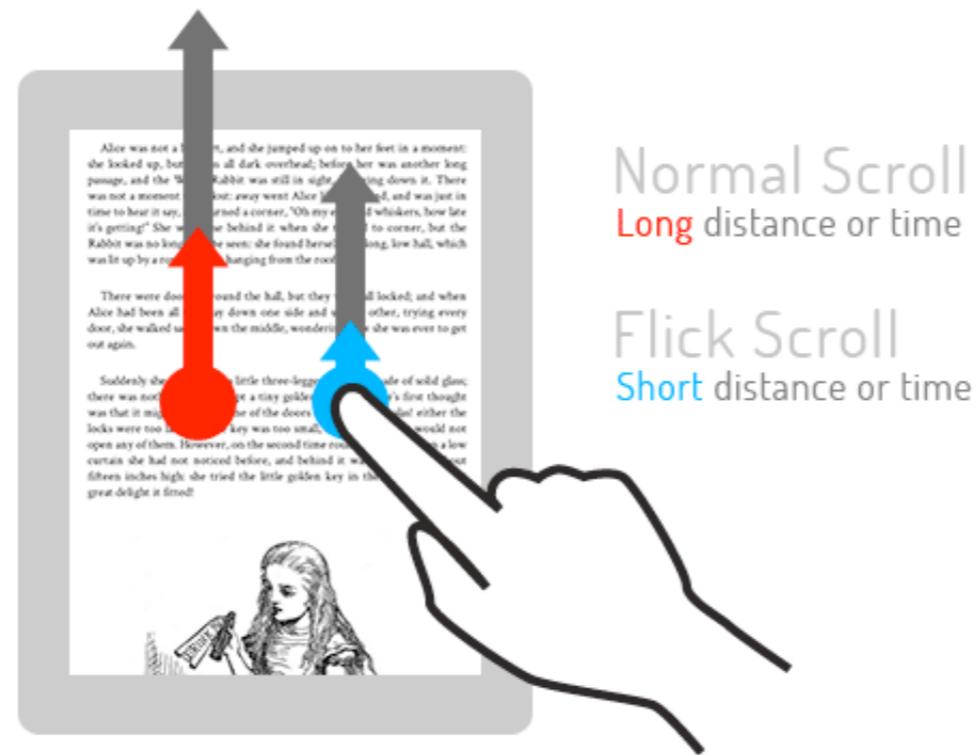
Проблемы

Доступ к возможностям устройства

Сложная архитектура приложения

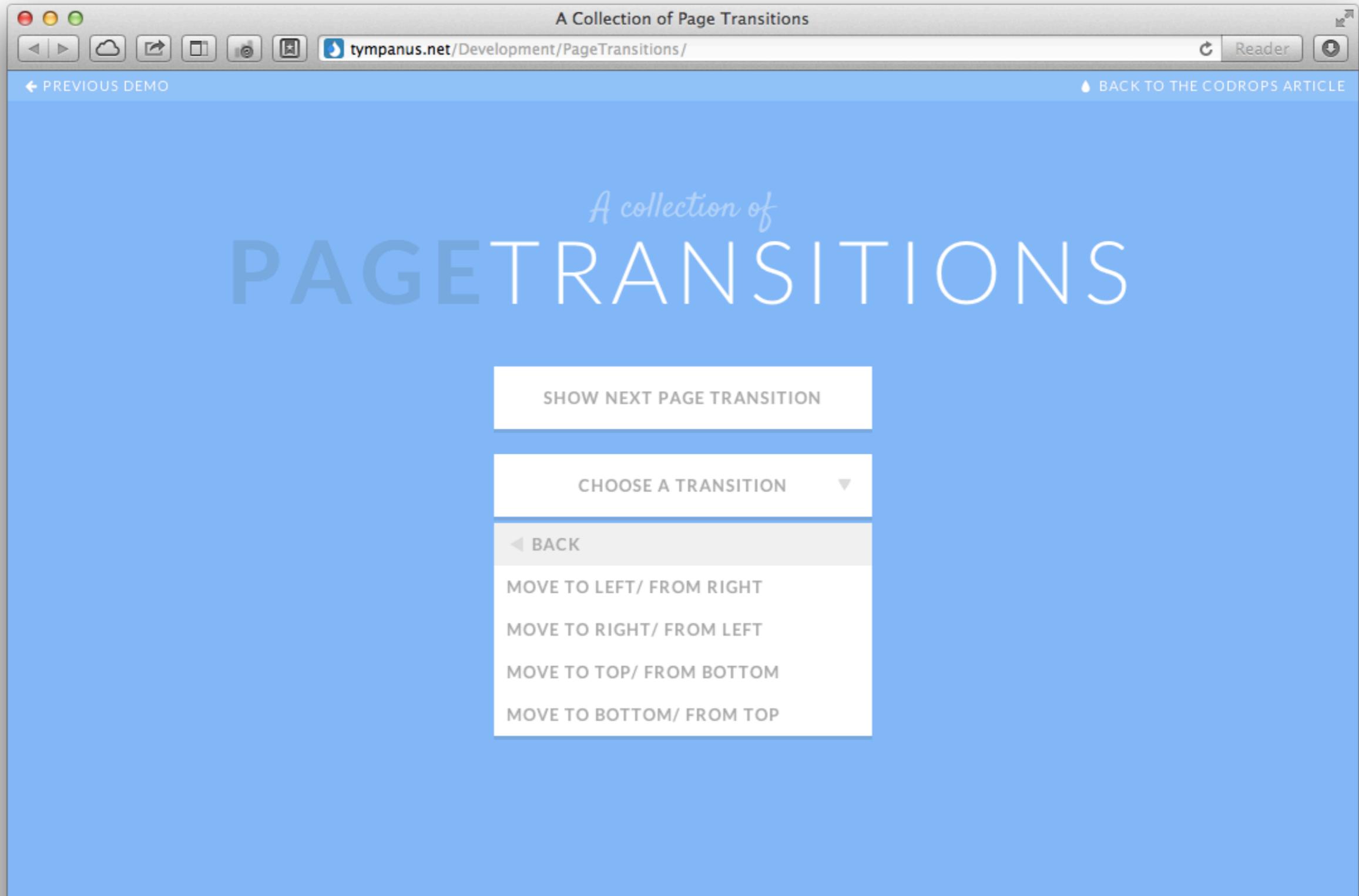


Тач-события и жесты совместно с другими устройствами ввода



Скроллинг и sticky-элементы

Анимации



Дополнительные элементы интерфейса

Form elements - jQuery Mobile Demos

view.jquerymobile.com/1.3.1/dist/demos/widgets/forms/ Reader

Sliders

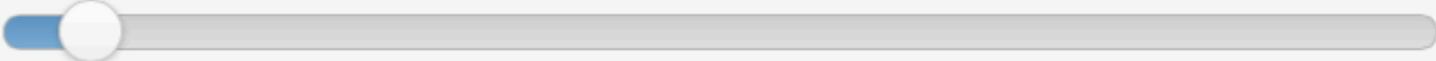
Sliders are used to enter numeric values along a numeric continuum by dragging a handle or entering in a value. Learn more about [sliders](#).

Slider:

50 

[View Source](#)

Slider with fill and step of 50:

60 

[View Source](#)

Slider with fill, mini, track theme:

Эмуляция внешнего вида и поведения native-приложений



Home / Products

Sencha Touch

Build Mobile Web Apps with HTML5



Kendo UI

THE WAY OF HTML5

Mobile with HTML5

Build apps that work on WinPhone8, iOS, and tablet platforms with JavaScript.

Launch Demo



Overview Widgets What's New Roadmap

Native UI on every

Build apps and sites for mobile devices that offer native-like experience with any extra coding. Currently supporting: (NEW!) WinPhone8, iOS, Android. Adapting UI in the [Kendo UI Mobile demos](#).



Demos API

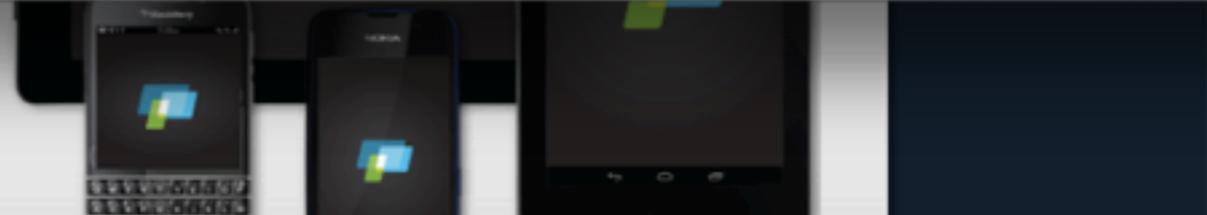
JQUERY MOBILE 1.3.1 RELEASED!

jQuery Mobile: Touch-Optimized Web Framework for Smartphones & Tablets

A unified, HTML5-based user interface system for all popular mobile device platforms, built on the rock-solid jQuery and jQuery UI foundation. Its lightweight code is built with progressive enhancement, and has a flexible, easily themeable design.

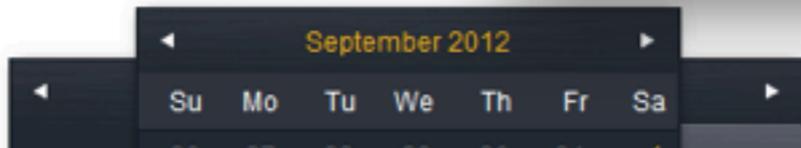
Latest stable version - 1.3.1

Legacy versions: 1.2.1 - 1.1.2 - 1.0.1



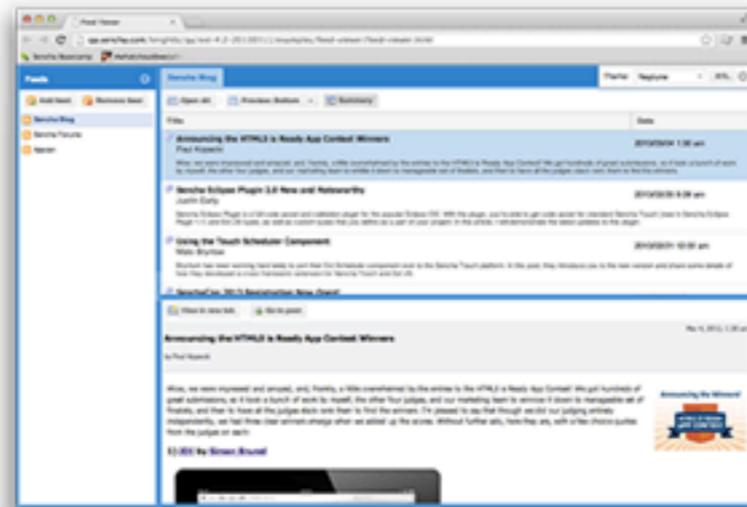


Overview **Widgets** What's New



Home / Products / Sencha Ext JS

Sencha Ext JS JavaScript Framework for Rich Desktop Apps



Ext JS includes over 100 right out of the box.

View some of our favorites below.

[View Ext JS 4.2 Examples](#)

Overview Features **Samples & Demos** Testimonials Road Map

Combination Examples

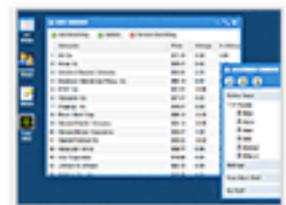
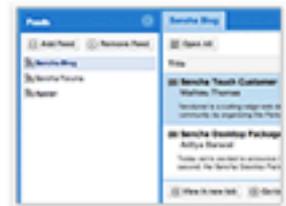
- Combination Examples
- Enterprise
- Accessibility
- Grids
- Charts
- Tabs
- Windows
- Trees
- Layout Managers
- Drawing
- Drag and Drop



Kitchen Sink
Showcase of Ext JS components using a preview release of the new Neptune theme



Ext JS Calendar
Example Calendar application. Demonstrates the new Day, Week and Month views and how to combine them.



Calendar

**Нет быстрых и простых
решений**

Только «обходные пути»

Будущее

Диалоги

<http://wiki.whatwg.org/wiki/Dialogs>

```
<dialog></dialog>
```

```
<dialog open></dialog>
```

```
<form method=dialog>
```

```
dialog.showModal([anchor]);
```

```
dialog.show([anchor]);
```

```
dialog.close([returnValue]);
```

```
dialog.onclose
```

```
dialog.returnValue
```

Navigator

navigator.battery
navigator.connection
navigator.onLine

File API

```
function handleFileSelect(evt) {  
    var files = evt.target.files; //  
    FileList object  
  
    for (var i = 0, f; f = files[i]; i++)  
    {  
        console.log(f.size,  
            f.lastModifiedDate);  
    }  
}
```

```
document.getElementById('files')  
    .addEventListener('change',  
        handleFileSelect, false);
```

Drag and Drop

```
<div draggable="true" id="id"></div>
```

```
document.getElementById('id').addEventListener('drag',  
function (e) {  
    e.dataTransfer.setData("Text", e.target.id);  
});
```

```
document.getElementById('id').addEventListener('drop',  
function (e) {  
    e.preventDefault();  
    var data = e.dataTransfer.getData("Text");  
  
    e.target.appendChild(document.getElementById(data))  
    ;  
});
```

Fullscreen API

```
document.getElementById("id").request  
Fullscreen();
```

```
document.getElementById("id").cancelF  
ullscreen();
```

Progress Events

```
<progress id="p" value="0" max="100" />
```

```
var progressBar = document.getElementById("p"),  
    client = new XMLHttpRequest();
```

```
client.open("GET", "magical-unicorns");
```

```
client.onprogress = function(pe) {  
    if(pe.lengthComputable) {  
        progressBar.max = pe.total  
        progressBar.value = pe.loaded  
    }  
};
```

```
client.onloadend = function(pe) {  
    progressBar.value = pe.loaded  
};
```

```
client.send();
```

Forms

```
<input type="color" />
```

```
<input type="date" />
```

```
<input type="datetime" />
```

```
<input type="datetime-local" />
```

```
<input type="email" />
```

```
<input type="month" />
```

```
<input type="number" />  
<input type="range" />  
<input type="search" />  
<input type="tel" />  
<input type="time" />  
<input type="url" />  
<input type="week" />
```

```
<input type="file" />
```

Web Notifications

Webkit

```
if (window.webkitNotifications) {  
    if (window.webkitNotifications.checkPermission() == 0)  
    {  
        window.webkitNotifications.createNotification(  
            'icon.png', 'Title', 'Content...'  
        );  
    }else{  
        window.webkitNotifications.requestPermission();  
    }  
}
```

W3C / WHATWG

```
if (typeof Notification === 'function') {  
    if (Notification.permission === 'granted') {  
        var notification = new Notification(  
            'Title', {  
                icon: 'icon.png',  
                body: 'Content...'  
            })  
    };  
} else {  
    Notification.requestPermission(callback);  
}  
}
```

Web Speech API

Web Speech API

```
if (!( 'webkitSpeechRecognition' in window)) {  
  upgrade();  
} else {  
  var recognition = new webkitSpeechRecognition();  
  recognition.continuous = true;  
  recognition.interimResults = true;  
  
  recognition.onstart = function() { ... }  
  recognition.onresult = function(event) { ... }  
  recognition.onerror = function(event) { ... }  
  recognition.onend = function() { ... }  
}
```

Web Speech API Demonstration

Click on the microphone icon and begin speaking for as long as you like.

A large, empty rectangular box intended for the user's speech. A small microphone icon is located in the top right corner of this box.

Русский ▾

WebRTC

WebRTC

 Search this site[Home](#)[General Overview](#)[WebRTC Native Code Package](#)[License & Rights](#)[FAQ](#)[WebRTC Native APIs](#)[iLBC Freeware](#)[Blog](#)[Demo](#)[Chrome](#)[Firefox](#)[Interop Notes](#)

Demo

AppRTC

apprtc.appspot.com is a webrtc demo application hosted on App Engine. Developed by Google and Mozilla, it enables both browsers to "talk" to each other using the WebRTC API.



To try this yourself, you'll need [Chrome 25 Beta](#) and [Firefox Nightly for Desktop](#).

The source code can be found here: <https://code.google.com/p/webrtc-samples/source/browse/trunk/apprtc/>

EcmaScript 6

Модули

Определение

```
module UniverseTest {};  
module Universe { module MilkyWay {} };  
module MilkyWay = 'Universe/MilkyWay';  
module SolarSystem =  
    Universe.MilkyWay.SolarSystem;  
module MySystem = SolarSystem;
```

Экспорт

```
module Car {  
  // приватные  
  var licensePlateNo = '556-343';  
  
  // публичные  
  export function drive(speed, direction) {  
    console.log('details:', speed, direction);  
  }  
  export module engine{  
    export function check() { }  
  }  
  export var miles = 5000;  
  export var color = 'silver';  
};
```

Импорт

```
import drive from Car;
```

```
import {drive, miles} from Car;
```

Загрузчик модулей

```
// load(moduleURL, callback, errorCallback)  
Loader.load('car.js', function(car) {  
    console.log(car.drive(500, 'north'));  
}, function(err) {  
    console.log('Error: ' + err);  
});
```

Классы

Пример использования

```
module widgets {  
  // ...  
  class DropDownButton extends Widget {  
    constructor(attributes) {  
      super(attributes);  
      this.buildUI();  
    }  
    buildUI() {  
      this.domNode.onclick = function(){  
        // ...  
      };  
    }  
  }  
}
```

class == function

```
var widgets = (function(global) {
  // ...
  function DropDownButton(attributes) {
    Widget.call(this, attributes);
    this.buildUI();
  }
  DropDownButton.prototype =
    Object.create(Widget.prototype, {
      constructor: { value: DropDownButton },
      buildUI: {
        value: function(e) {
          this.domNode.onclick = function(e) {
            // ...
          }
        }
      }
    });
})(this);
```

Экосистема

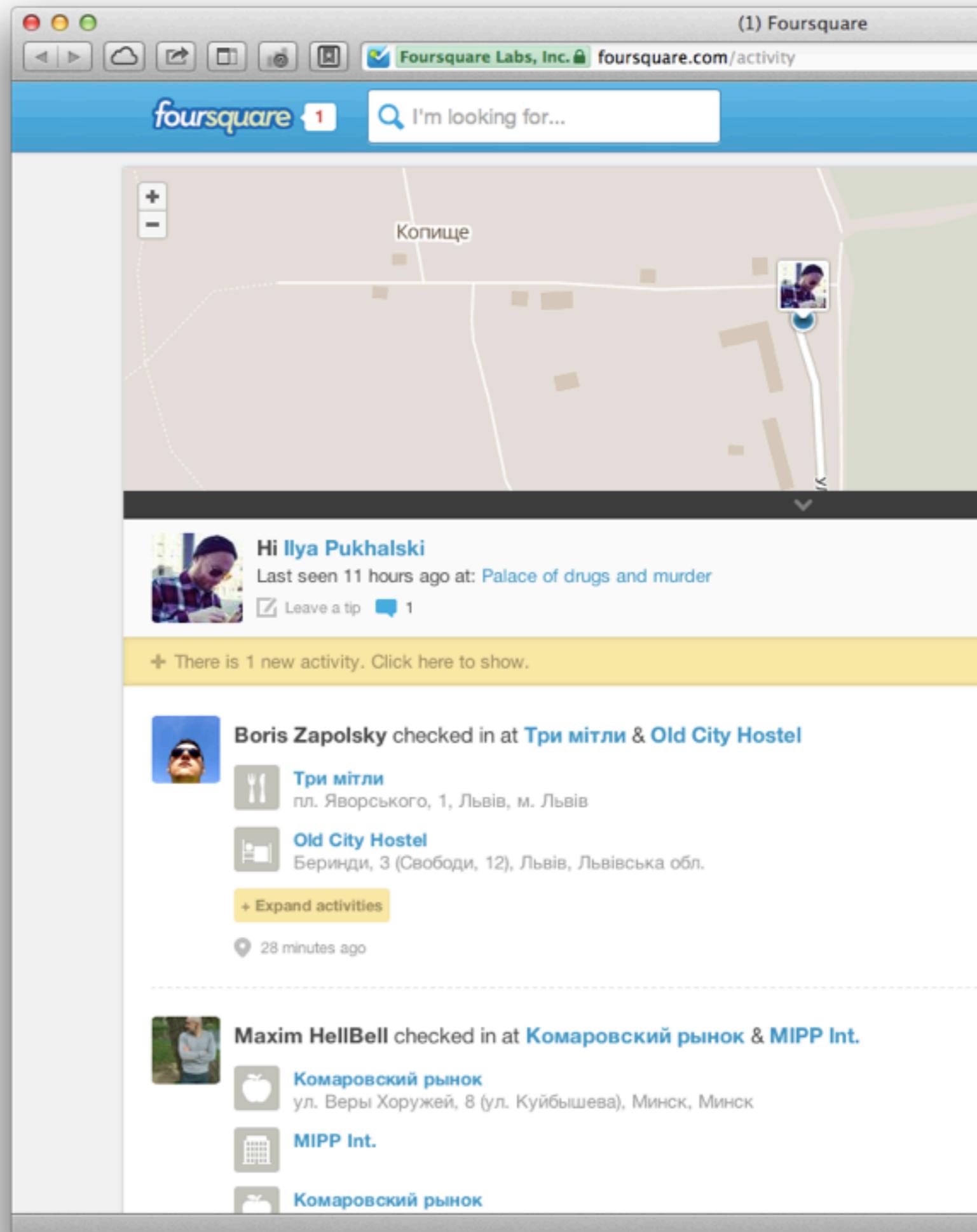
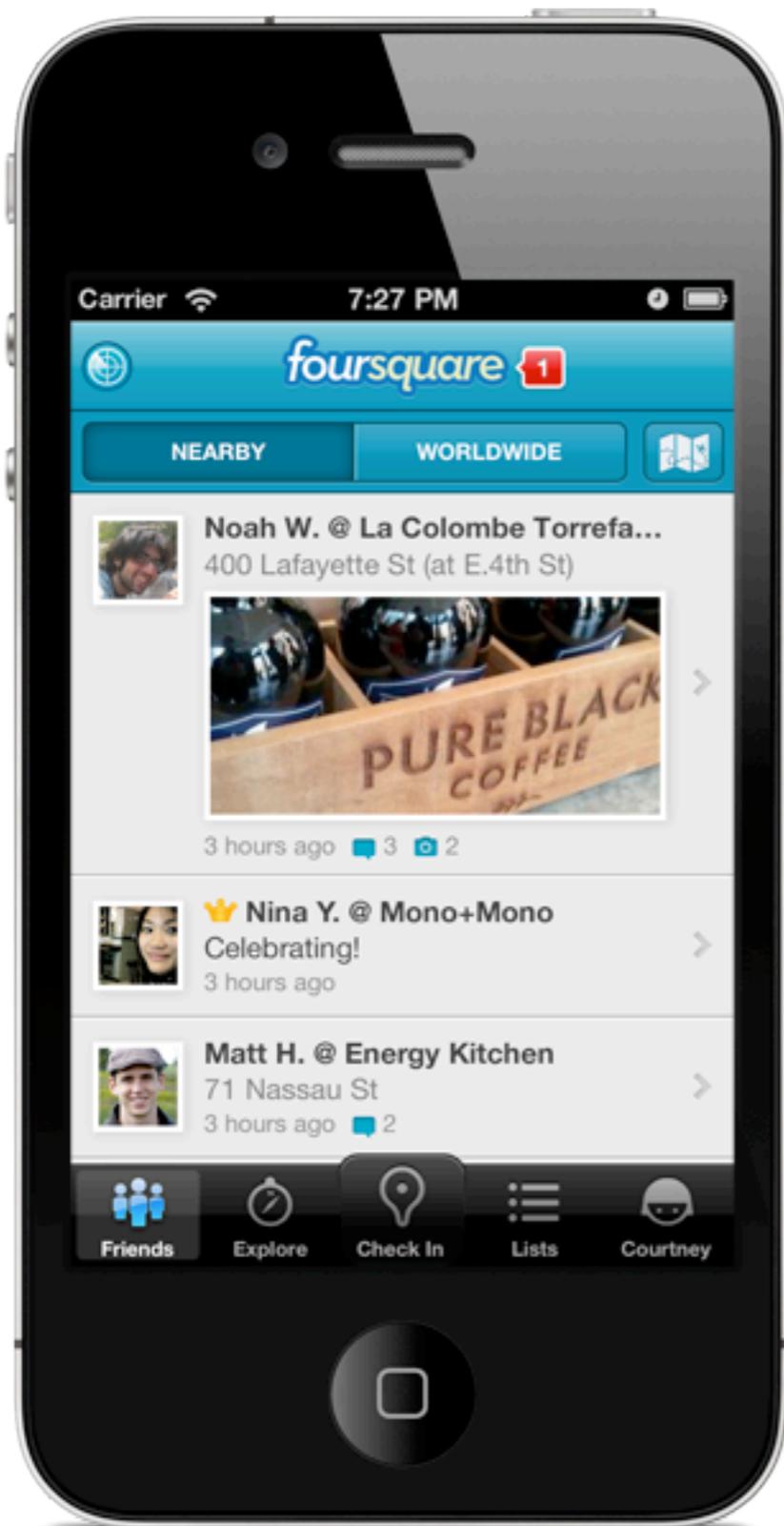
Native vs Web?

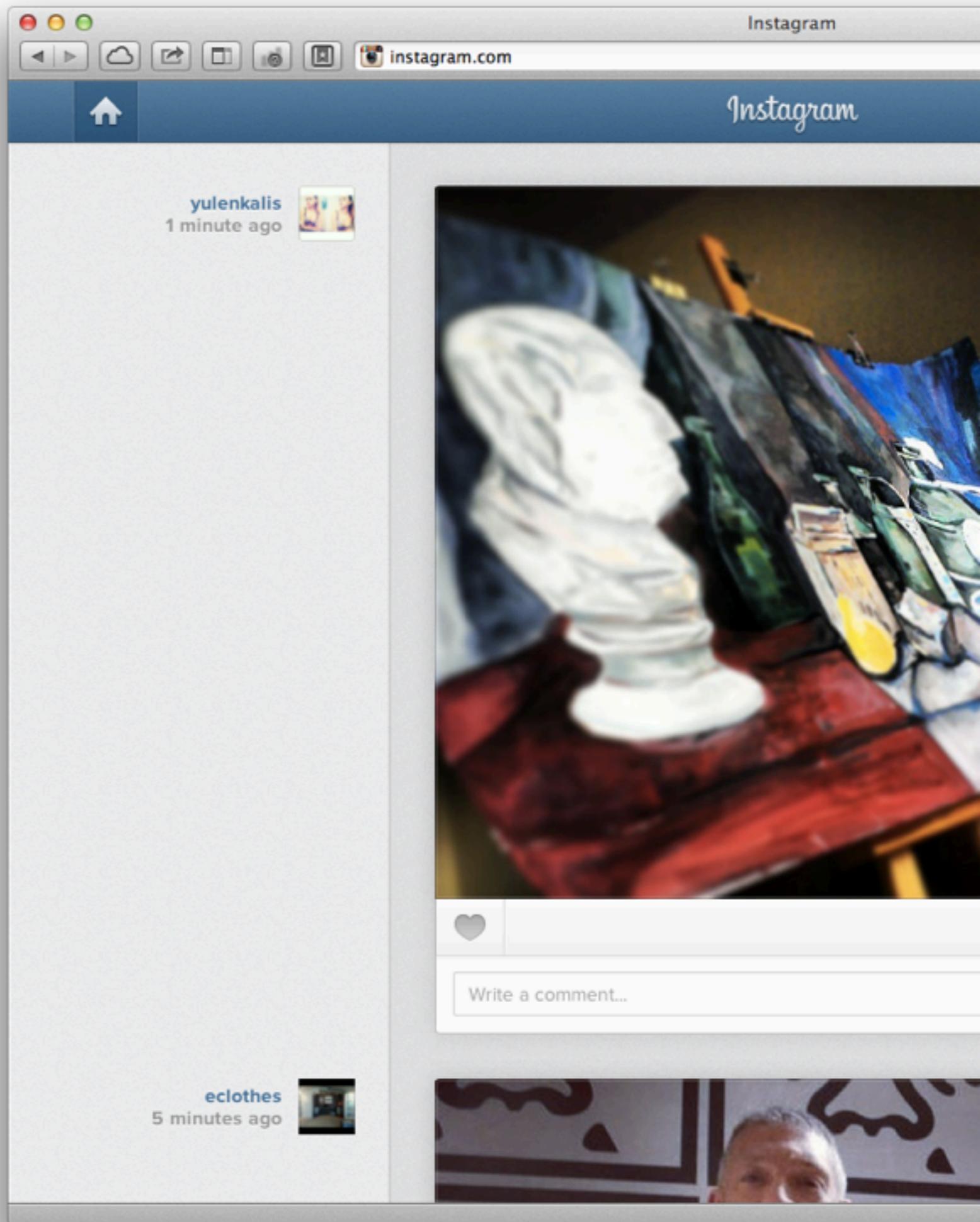
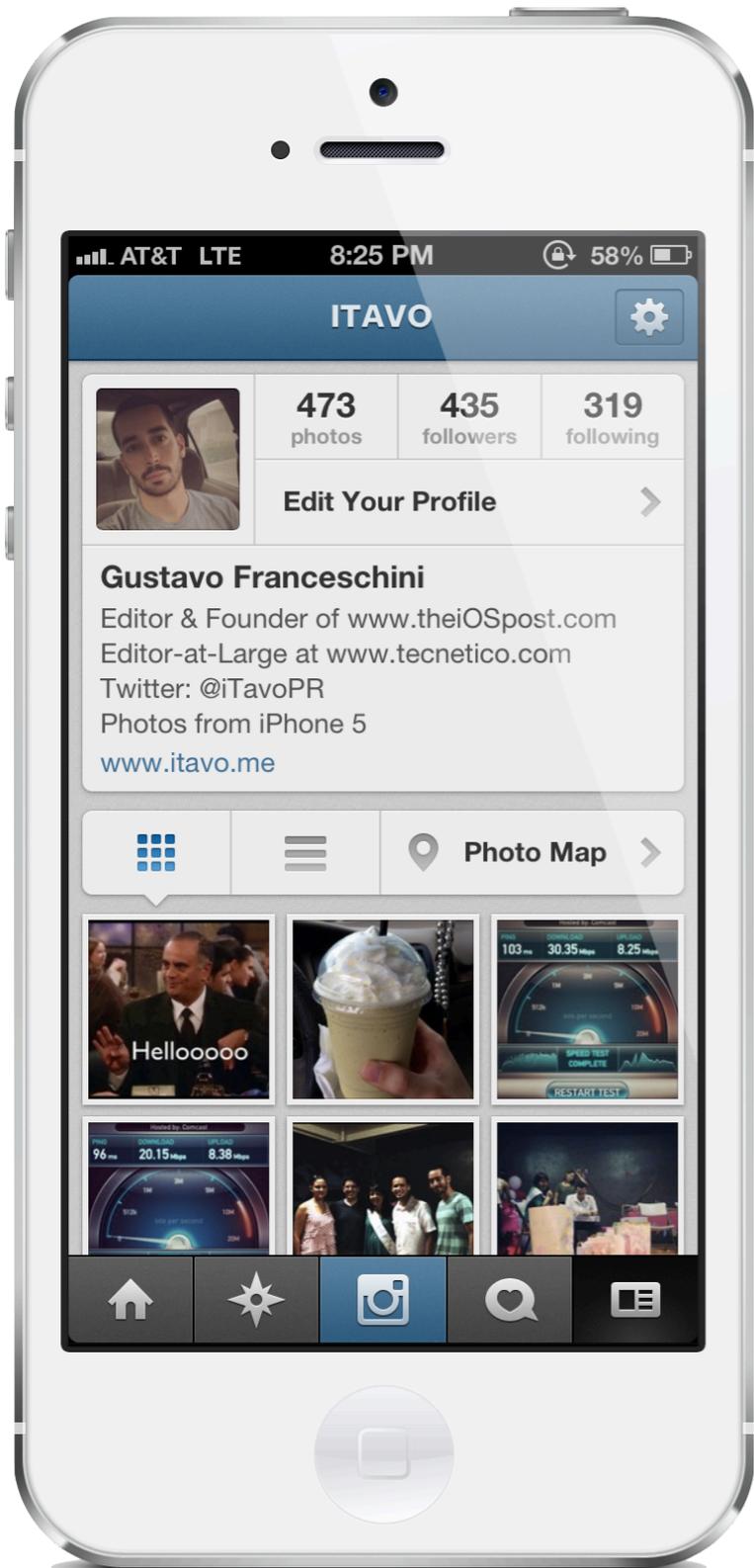


ERROR

Could not connect to the game server. Please try again later.

Retry





Native + Web = ❤️

FINANCIAL TIMES



A new Middle East
Israel is being left behind,
says Philip Stephens



Red alert
Hardliners revive Mao's
musings and memory

United Kingdom iPad edition

10:30 PM Thursday

Libya bet \$1bn on SocGen shares



The Libyan Investment Authority entered into the transaction in early March 2008, but lost 72 per cent of its value by the middle of last year

10:30 PM Thursday

Care home watchdog has staff shortfall

The 300 job vacancies will add to fears about the Care Quality Commission's ability to police the industry at a time of crisis

2:47 AM Friday

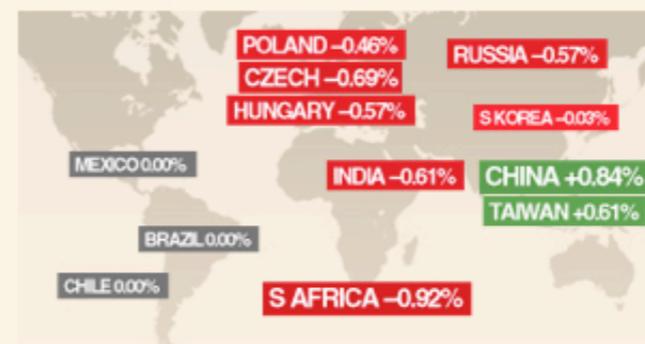
Groupon files for IPO of up to \$750m

Groupon, one of the fastest growing and most closely watched internet companies, revealed plans for an initial public offering that could raise \$750m

Last updated
11:58

Refresh

Global market map



Delayed by at least 20 minutes

FTfm – comment,
analysis, insight

Now daily on FT.com ▶



Веб как платформа?



Браузер = ограничение

**Браузер — переходное
состояние**



Firefox OS

OVERVIEW

FOR OPERATORS & MANUFACTURERS



The Web is the platform

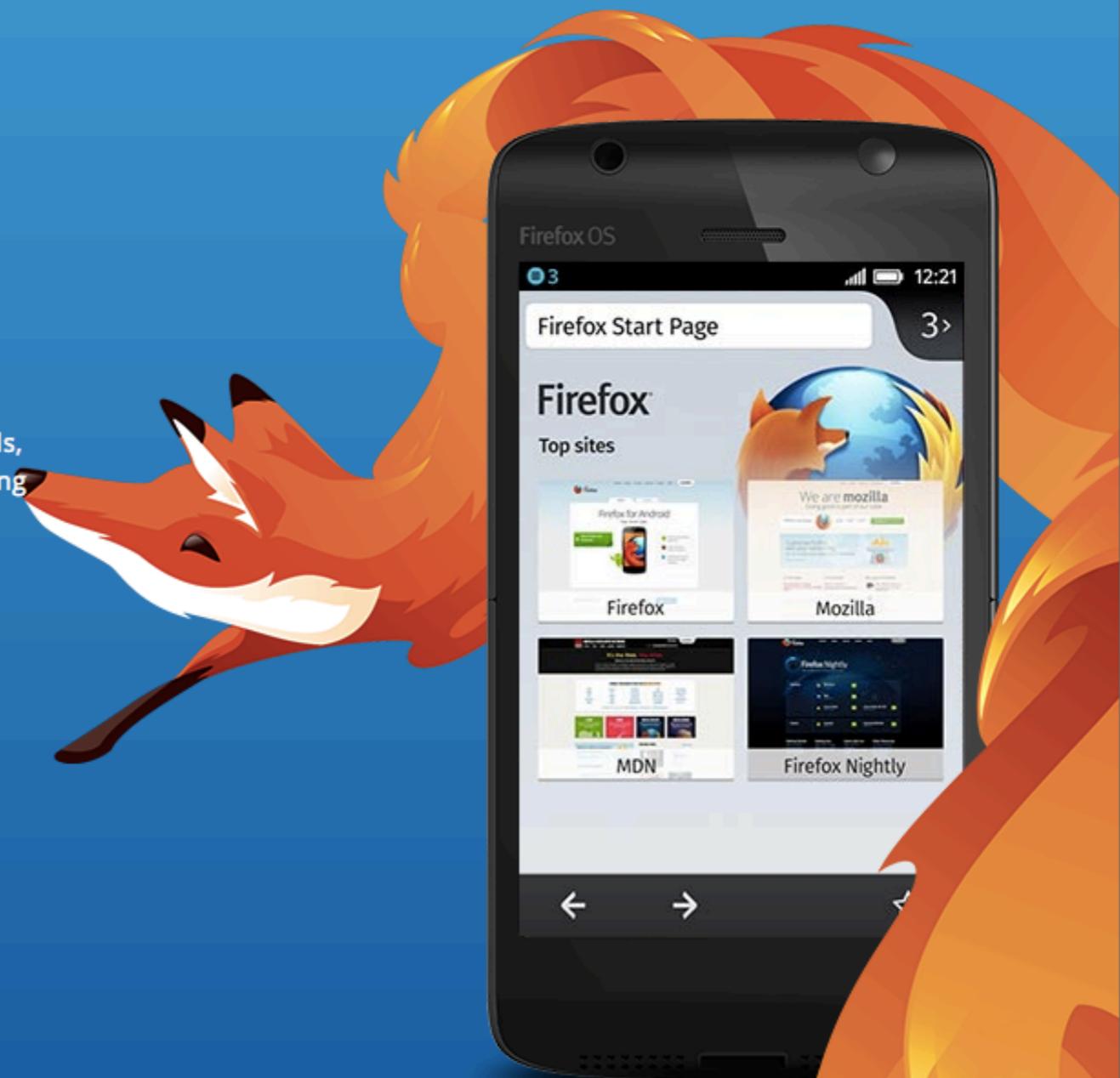
Backed by some of the biggest names in the industry, Firefox OS is an open platform that fosters greater participation in the value chain. [See how you can get involved.](#)

Made of the Web

Built entirely using HTML5 and other open Web standards, Firefox OS is free from the rules and restrictions of existing proprietary platforms.

Made by Firefox

For the past 15 years, we've been instrumental in innovating and shaping the Web to keep it open and accessible to all. As a result of our efforts, one fifth of all Web activity today happens through Firefox products.



Google Chrome OS

The image shows a desktop environment with a sunset background. On the left, a white file explorer window is open, displaying a search bar and several application icons: Chromium, Chrome Web Store, Files, Gmail Offline, Google Drive, and Wallpaper Pic. On the right, a web browser window is open, displaying the Wikipedia main page. The browser's address bar shows the URL `en.wikipedia.org/wiki/Main_Page`. The Wikipedia page features the globe logo, navigation tabs (Main Page, Talk, Read, View source, View history), a search bar, and a welcome message: "Welcome to Wikipedia, the free encyclopedia that anyone can edit. 4,049,860 articles in English". Below this, there are sections for "Today's featured article" (highlighting *Daspletosaurus*) and "In the news" (listing recent events like the Chess Olympiad and earthquakes). The system tray at the bottom shows icons for Chromium, Google Drive, Wikipedia, and a system clock displaying 2:29.

Эволюция приложений

Native
только



Mixed

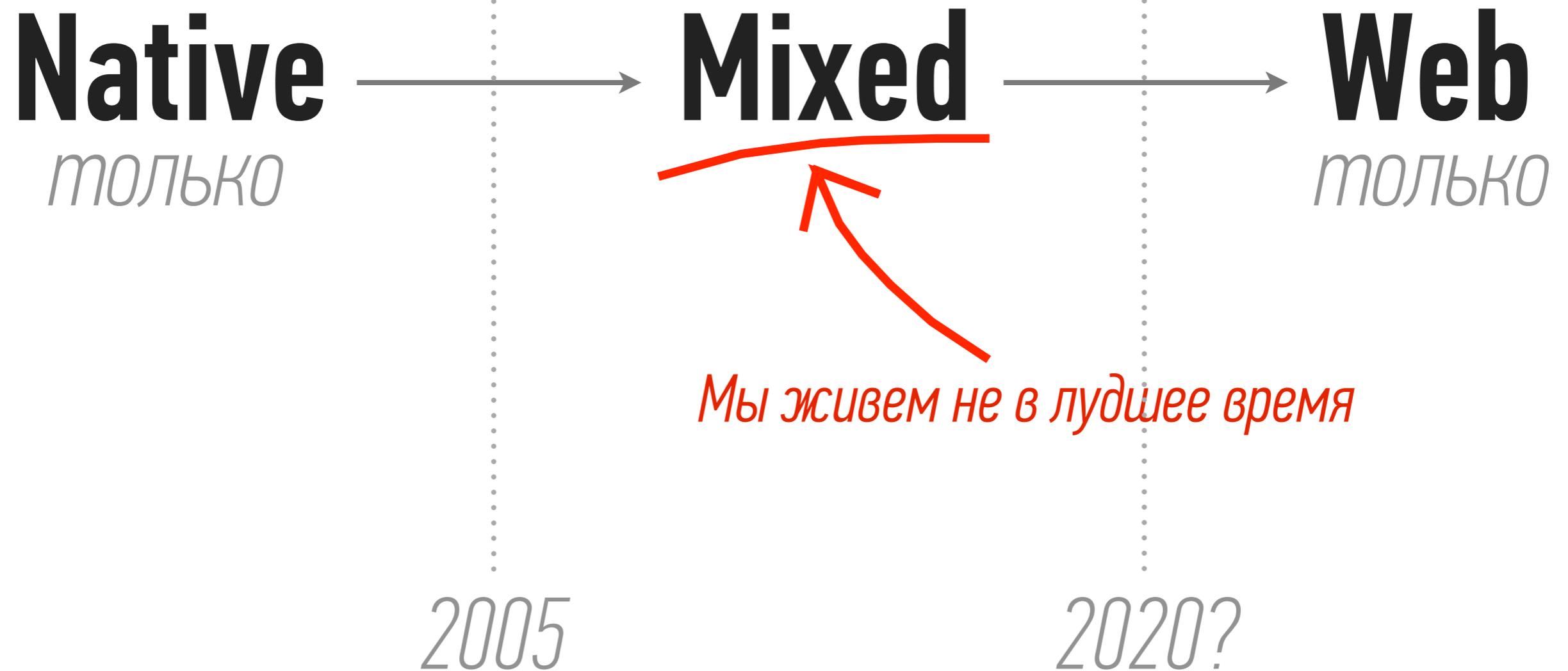


Web
только

2005

2020?

Эволюция приложений



Веб и есть платформа,

но это уже другая история...



Adobe® Creative Cloud

**Может, эта битва и проиграна,
но война еще нет**



@witchfinderx



@witchfinderx