

# CONTEXTS

Software Architecture in the Real World

Sam Nabi

[samnabi.github.io/contexts](http://samnabi.github.io/contexts)



**USER ENVIRONMENTS**

**USER IMPACTS**

**BUSINESS MODELS**

**OTHER SOFTWARE**

## CONTEXT 1

# USER ENVIRONMENTS

# YOU HAVE NO CONTROL OVER THE NETWORK

Anticipate connectivity issues



# hood.ie

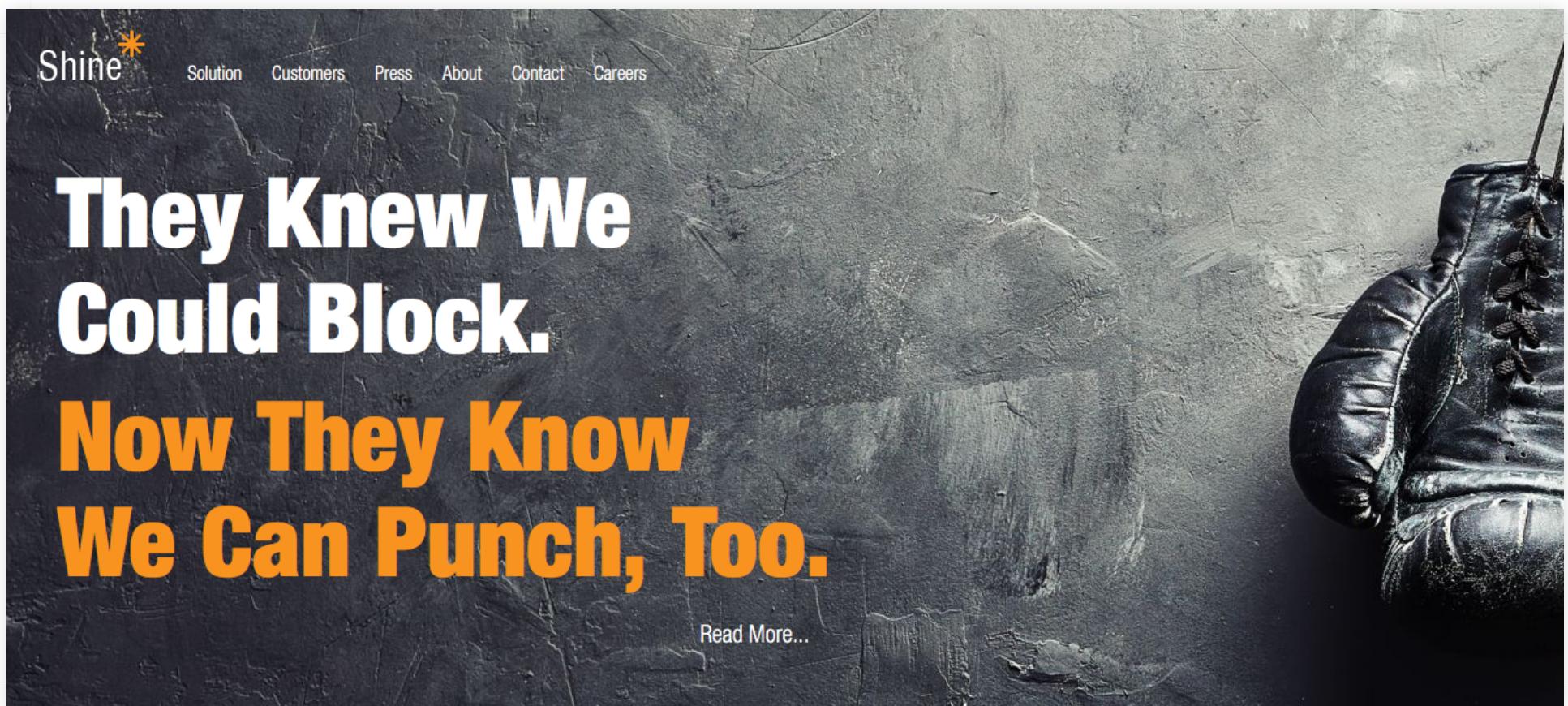
[INTRO](#) [CONTRIBUTE](#) [GET HELP](#) [ABOUT](#) [COMMUNITY](#) [ANIMALS](#) [CONTACT](#)[BLOG](#) [DOCS](#) [FAQ](#)[OFFLINE FIRST](#) [NOBACKEND](#) [NON-CODING PEOPLE](#) [DREAMCODE](#) [TOOLS](#)

## OFFLINE FIRST

"The real skill of creating a compelling and engaging view of the future lies not in designing the gloss, but in seeing beyond the gloss to the truths behind it."  
— Nick Foster"

We live in a disconnected and battery powered world, but our technology and best practices are a leftover from the always connected & steadily powered past. We can't keep building apps with the desktop mindset of permanent, fast connectivity in mind, where a temporary disconnection or slow service is regarded as a problem and communicated to the user as an error. Instead, we need to embrace being offline as a recurring state and offer UI, UX and architecture solutions that are built with this mindset.

getshine.com



Shine\*

Solution Customers Press About Contact Careers

# They Knew We Could Block. Now They Know We Can Punch, Too.

Read More...

# YOU HAVE NO CONTROL OVER THE DEVICE



312 x 390



3840 x 2160



2160 x 1200

# INTERNET OF THINGS



## Can't sign in to Google calendar on my Samsung refrigerator

door Kris Spencer 20-11-14

I have a Samsung RF4289HARS refrigerator. The Google calendar app on it has been working perfectly. However, with the latest changes in Google Calendar API, I can no longer sign in to my calendar. I received an error message "Sorry, we're having trouble connecting to your calendar. Please try again later or visit the Google Calendar website". I can sign in fine on my home PC and have no problem seeing the calendar on my phone. I would try here first. Has anyone else experienced this problem and what was the solution?



20/11/2014

bickerdyke said:

Sounds like your fridge needs a software update to use the new API version.

# IN-APP BROWSERS



## DEVICE FRAGMENTATION



August 2014

August 2015

# PROGRESSIVE ENHANCEMENT



# ABILITY

Users may manipulate your software at the OS or browser level (zoom, colour, font)

Colour-blindness    8% Men

0.5% Women

\* Of Northern European ancestry.  
[USA National Institutes of Health](#)

---

Dyslexia                  2-3%

[StatCan Publication No. 89-628-X](#)

# CONTEXT 1: USER ENVIRONMENTS

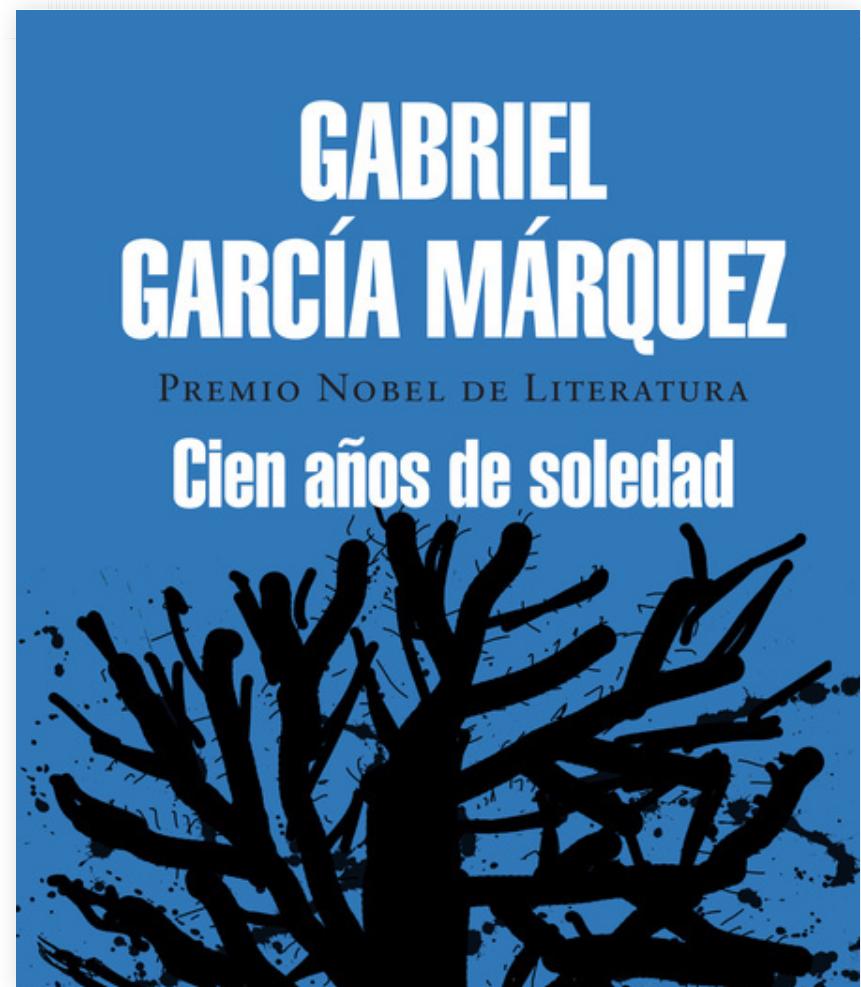
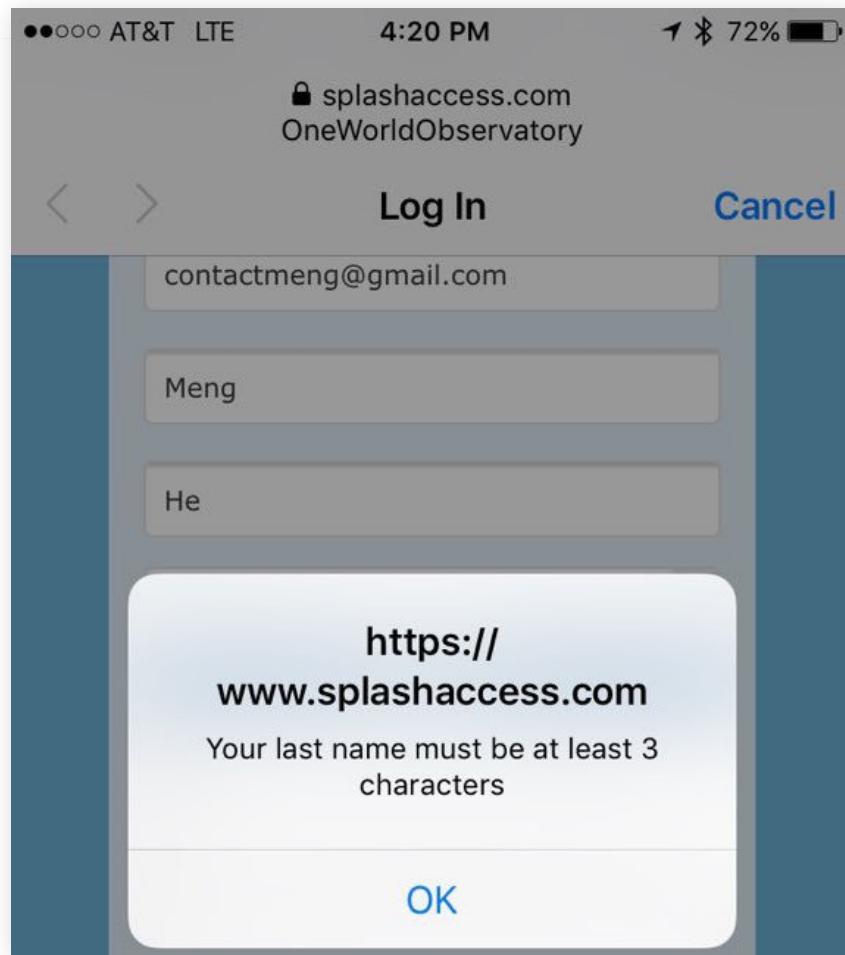
Questions?

## CONTEXT 2

# USER IMPACTS

# "PEOPLE AREN'T EDGE CASES"

– Carina C. Zona, *Schemas for the real world*





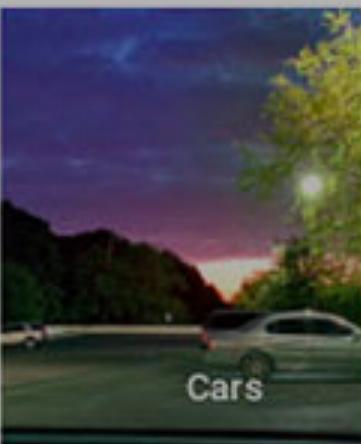
Google Photos, y'all f---d up. My friend's not a gorilla.



Skyscrapers



Airplanes



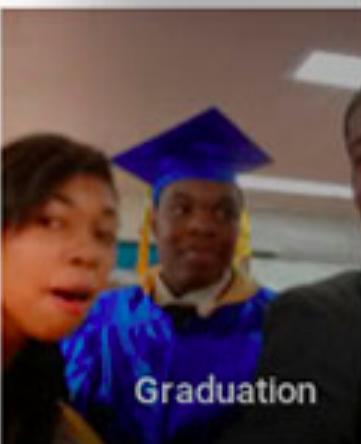
Cars



Bikes



Gorillas



Graduation

RETWEETS

FAVORITES



"Artificial intelligence expert Vivienne Ming said machine-learning systems often reflect biases in the real world. Some systems struggle to recognize non-white people because **they were trained on Internet images which are overwhelmingly white**, she explained."

<http://blogs.wsj.com/digits/2015/07/01/google-mistakenly-tags-black-people-as-gorillas-showing-limits-of-algorithms/>

# SOCIAL TOOLS, SOCIAL RESPONSIBILITY

The Verge logo at the top left. Top right shows '53 NEW ARTICLES' and '91 COMMENTS'. Below the header, the main title is 'Twitter CEO: 'We suck at dealing with abuse''. A subtitle reads 'Dick Costolo says trolls are costing Twitter users'. Below that, it says 'By Natasha Tiku and Casey Newton on February 4, 2015 09:25 pm'. A large photo of Dick Costolo in a suit and glasses is centered. At the bottom, there is a caption '(Michael Kovac/Getty Images)'.

A screenshot of a Stack Exchange post on the 'META' site. The question is 'Why does my reputation decrease if I downvote another post?'. It has 19 upvotes and 1 downvote. The asker is 'Alec Smart' with 197 reputation. The post was asked on Aug 25 '09 at 6:00. A note at the bottom says it's a duplicate of another question. There are buttons for 'share' and 'improve this question'.

Cornell University Library logo at the top left. To its right, the text 'Cornell University Library'. Below that, a red bar with 'arXiv.org > cs > arXiv:1405.1429'. To the right of the bar is a search bar. Below the bar, the text 'Computer Science > Social and Information Networks'. A large title 'How Community Feedback Shapes User Behavior' is centered. Below it, the authors' names 'Justin Cheng, Cristian Danescu-Niculescu-Mizil, Jure Leskovec'. At the bottom, the text '(Submitted on 6 May 2014)'.

# INCLUSIVE SPACES

## BLOCKING, MUTING, REPORTING, CONTENT CONTROL, ACCESSIBILITY

"Blocking functionality must be part of any social network's minimum viable product. Because without a block button, social networks are essentially unusable—not viable—for many marginalized people." — [Eva Gantz](#)

# REAL-LIFE CONSEQUENCES

**ashe**

@asheddryden

Follow

Was forced to leave people I love to move across the country because of threats, harassment, and doxxing. I don't answer my door, go outside

RETWEET

1

LIKE

1



12:37 PM - 12 Feb 2015



...

# EVEN ALGORITHMS CAN HARASS PEOPLE



Zoë “Shitpost” Quinn

@UnburntWitch

Follow

I post a vine of my kitten playing fetch on my friends-only facebook. This is what my friends see under it.

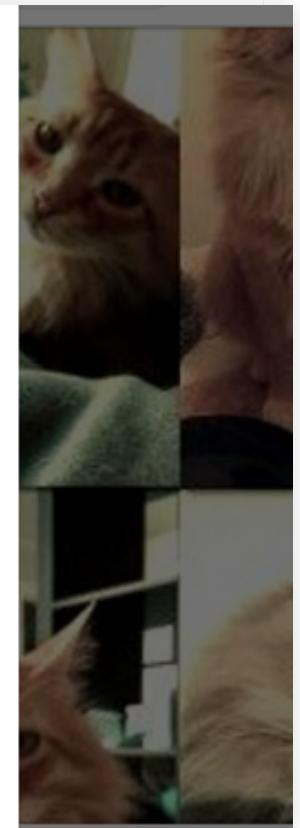
RELATED



Blowey Zoë Quinn Gets Blasted by Infectious Disease PhD Over Blood Donation Lies  
Zoe Quinn is back in the news, this time for endangering the nation's blood supply.

302 SHARES

Share Save



# CONTEXT 2: USER IMPACTS

Questions?

# CONTEXT 3

# BUSINESS MODELS

# via R A D I O on Dribbble



**GROWTH**

**ACQUISITION**

**ABANDONMENT**

[ourincrediblejourney.tumblr.com/](http://ourincrediblejourney.tumblr.com/)



Goodbye ... for now.

Rdio is being acquired, and the service is shutting down worldwide on December 22. We're excited to bring great music experiences to even more listeners in the future as part of the Pandora team.

ourincrediblejourney.tumblr.com/

The image shows a side-by-side comparison of the Mailbox logo from 2013 and 2015. On the left, under the heading "To Grow Even Faster, Mailbox is Joining Dropbox", is a blue icon of a mountain peak inside a triangular frame. Below it is the year "2013". On the right, under the "MAILBOX" header, is a more complex version of the same icon, featuring a colorful sunset or sunrise over mountains, with the year "2015" below it. The 2015 version is described by the text "We're all done."

To Grow Even Faster, Mailbox is  
Joining Dropbox

The Mailbox Team | March 15, 2013

MAILBOX

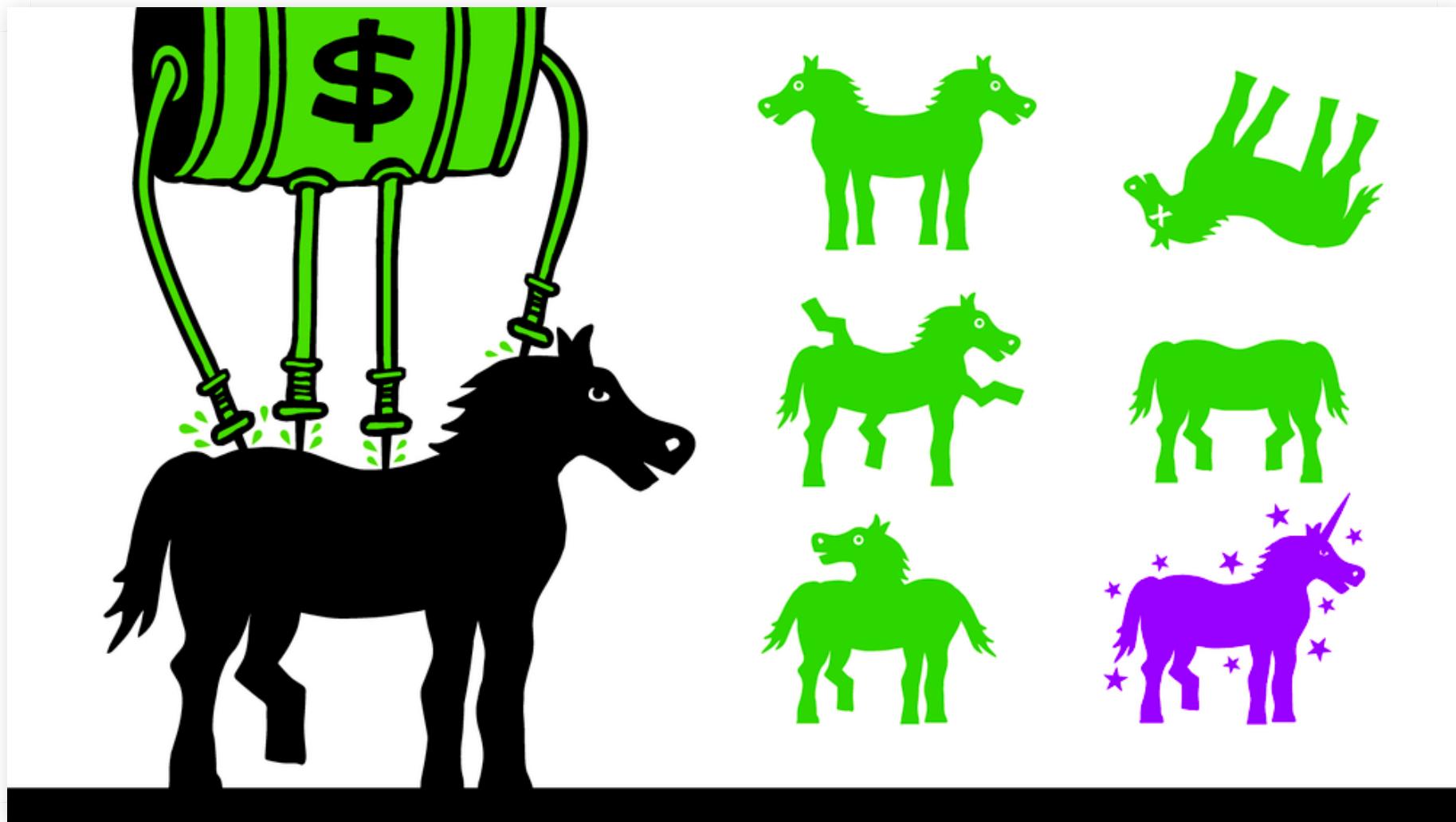
BLOG FAQ HELP PRESS

2013

2015

We're all done.





# vimbly.com



## The A-List (Stand-Up Comedy)

Eastville Comedy Club's, "The A-List," features some of the city's (and country's) hottest stand-up comedians -- you may even recognize a few from television! Founded by native New Yorkers experienced in the comedy business, EastVille Comedy Club features some of the funniest and most experienced comedians in

Fri, Jan 8, 7:00pm – 8:45pm

More Dates (33)

\$20  
**FREE**



## Manhattan Mayhem Room 1

It's a bird! It's a plane! No, it's.....a monkey?! That's right, New York City is being terrorized by monkeys who have escaped from the zoo. Do you and your rescue team have what it takes to save the city in time to get to your next mission? The people of Manhattan are counting on you! In this immersive experience, you and

Fri, Jan 8, 12:00pm – 1:00pm

More Dates (1138)

**\$29**



## Trapped in a Room with A Zombie

So you think you're smarter than a brain-dead zombie? Well, here's your ultimate chance to prove it. You'll enjoy this Room Escape Adventure, a live interactive theater production/team building activity, that places you right in the center of all the action. Trapped inside a room with a team of 12, you must rely

Fri, Jan 8, 8:30pm – 9:30pm

More Dates (59)

\$29  
**\$22**

# WHAT'S YOUR BUSINESS STACK?

Cloud services

APIs

App store requirements

# CONTEXT 3: BUSINESS MODELS

Questions?

## CONTEXT 4

# OTHER SOFTWARE

DIGITAL TRENDS

Home > Gaming > Flight Control, Real Racing, and other iOS...

## FLIGHT CONTROL, REAL RACING, AND OTHER IOS CLASSICS DISAPPEAR FROM APP STORE

By Danny Cowan — September 14, 2015

1 11 88

AIRCRAFT LANDED: 0003 HI SCORE: 00037

The article discusses EA's decision to remove two dozen apps from the iOS 9 App Store, including Flight Control, Real Racing, and other iOS classics. The screenshot shows a flight control game interface.

EA removes two dozen apps just before iOS 9 launch

ars technica

MAIN MENU MY STORIES: 6 FORUMS SUBSCRIBE JOBS

## TECHNOLOGY LAB / INFORMATION TECHNOLOGY

### The App-ocalypse: Can Web standards make mobile apps obsolete?

Many big tech companies—absent Apple—are throwing weight behind a browser-based world.

by Larry Seltzer - Dec 28, 2015 7:00am EST

Share Tweet Email 320

19:38 18 %

Messages FaceTime Friday 16 Calendar Weather

Clock Maps Alibaba.com

It's the apps. The iPhone and Android conquered the world because of the apps. More specifically, what keeps Android and iOS dominant is the utter lack of those apps on competing platforms. But today, the mobile landscape is significantly different from a year or two ago (let alone five). Today, apps aren't really necessary. In fact, it's easy to envision an excellent, software-rich mobile device that uses

## HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

SITUATION:  
THERE ARE  
14 COMPETING  
STANDARDS.

14?! RIDICULOUS!  
WE NEED TO DEVELOP  
ONE UNIVERSAL STANDARD  
THAT COVERS EVERYONE'S  
USE CASES.



YEAH!

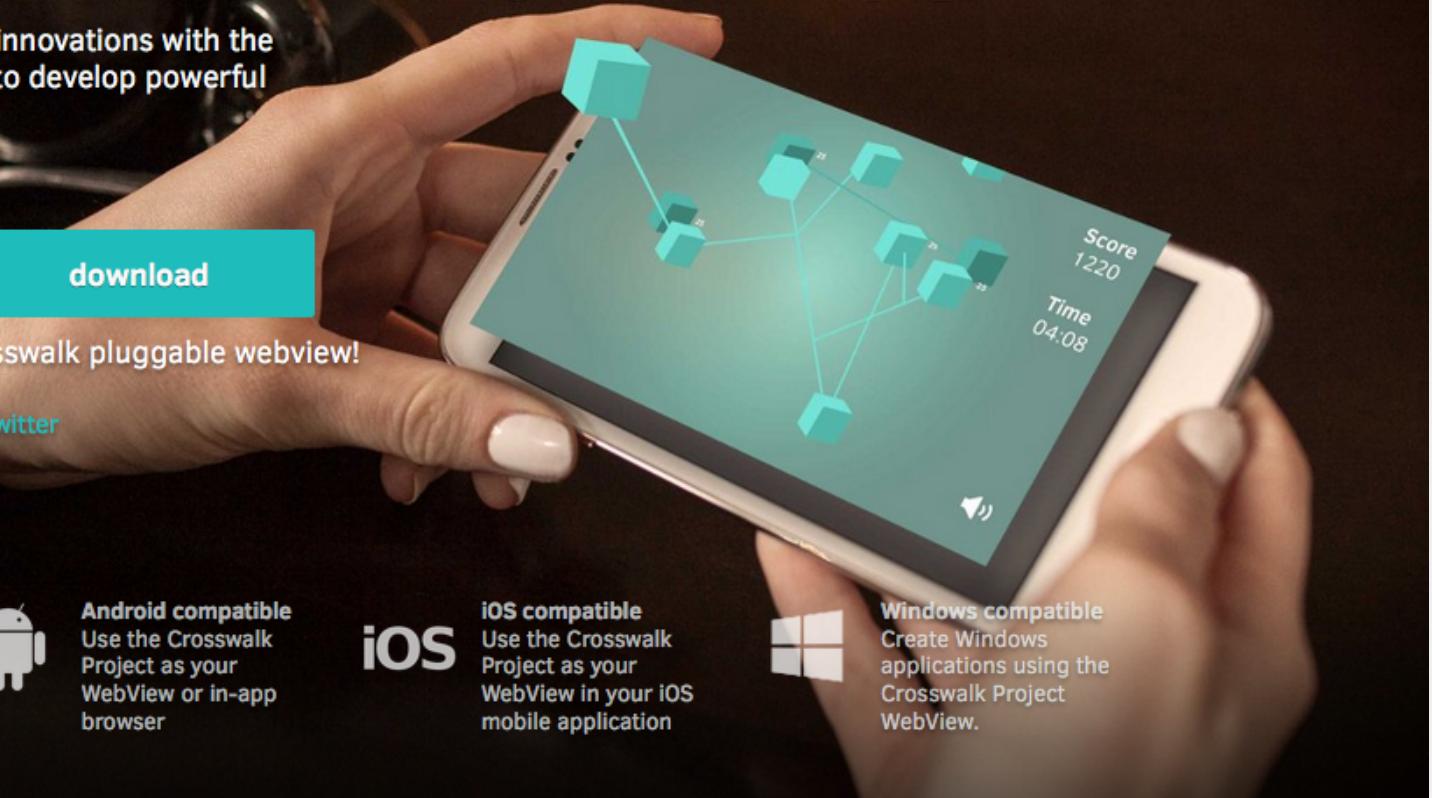
SOON:

SITUATION:  
THERE ARE  
15 COMPETING  
STANDARDS.

# Windows Universal Apps



# crosswalk-project.org



The Crosswalk Project logo is in the top left corner, featuring a red triangle above a teal triangle.

The top navigation bar includes links: Documentation, Blog, Contribute, Wiki, FAQ, and a prominent "get started" button.

# build world class hybrid apps

Enable the most advanced web innovations with the Crosswalk Project web runtime to develop powerful Android and Cordova apps.

[get started](#) [download](#)

Cordova 4.0 now supports Crosswalk pluggable webview!

 Follow the Crosswalk Project on Twitter

 **Apache Cordova compatible**  
Easily add the Crosswalk pluggable webview in your Cordova app

 **Android compatible**  
Use the Crosswalk Project as your WebView or in-app browser

 **iOS compatible**  
Use the Crosswalk Project as your WebView in your iOS mobile application

 **Windows compatible**  
Create Windows applications using the Crosswalk Project WebView.

electron.atom.io / photonkit.com



# ELECTRON

Build cross platform desktop apps with web technologies

Formerly known as Atom Shell. Made with ❤ by [GitHub](#).



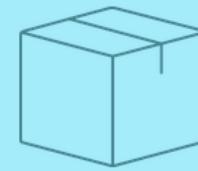
## Web Tech

Use HTML, CSS, and JavaScript with Chromium and Node.js to build your app.



## Open Source

Electron is open source; maintained by GitHub and an active community.



## Cross Platform

Electron apps build and run on Mac, Windows, and Linux.

# GOOGLE READER ALTERNATIVES

## IF YOU ENJOY READING OFFLINE

You can use Minimal Reader with these great apps



# TERRIBLE CLOUD OVERKILL



Maciej Ceglowski - The Website Obesity Crisis

# TWITTER STILL SUPPORTS SMS



## Twitter via SMS FAQs

### How do I use Twitter on my phone?

If you already have a Twitter account, you can access it from your phone [using SMS](#) or Twitter's mobile website, [mobile.twitter.com](http://mobile.twitter.com). You can also [create a new Twitter account via SMS](#) by sending the word **START** to your Twitter shortcode.

### Does it cost money? Will fees be added to my phone bill?



# CONTEXT 4: OTHER SOFTWARE

Questions?

# THANKS

Email [sam@samnabi.com](mailto:sam@samnabi.com)

---

Twitter [@samnabi](https://twitter.com/samnabi)

---

Github [samnabi](https://github.com/samnabi)

---

Website [samnabi.com](https://samnabi.com)