

YOU DON'T NEED
ANOTHER HERO
APP.

YOU NEED ONE THAT
SURVIVES THE
THUNDERDOME



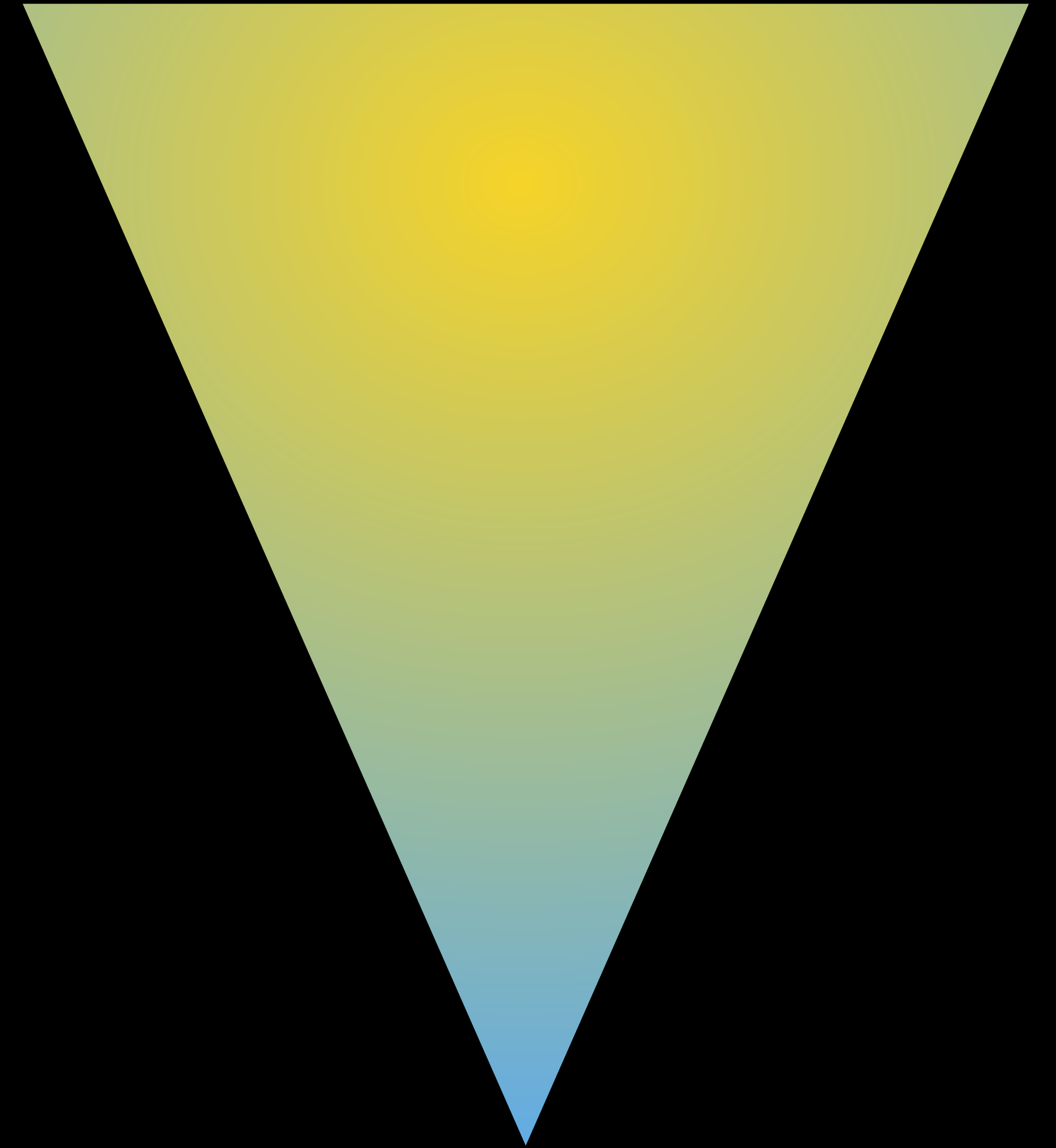
**KEEP
CALM
AND
TRUST
HTML5**

Chris Heilmann
@codepo8



ICY, SLUSHY WILDERNESS

CURIOUS FACT ABOUT
STOCKHOLM:



T-BANA

ASKING FOR DIRECTIONS
CAN BE FUN...



09.15-10.30

Room A1

Jfokus Main Keynote: You don't need another hero app - you need one that survives the Thunderdome
Christian Heilmann, Mozilla

Room A2

IoT Keynote: The Future of IoT
Zach Shelby, ARM

10.30-11.00

Coffee break

11.00-11.50

Room A1

Pragmatic
Functional
Refactoring with
Java 8

Room A2

Lessons Learned
from Real-World
Deployments of
Java EE 7

Room A4

Probably,
Definitely, Maybe
*James McGivern,
Rockshore Ltd*

Room C1

Vaadin X and
Web Components
*Joonas Lehtinen,
Vaadin*

Room C4

A Field Guide to
DSL Design in
Scala
Tomer Gabel, Wix

Room C3

Building a
Connected
Product
Adam Dunkels,

mozilla



Microsoft

Your PC ran into a problem

This problem caused your PC to restart. You can send info to Microsoft about what went wrong to help us improve Windows.

Files that will be sent to Microsoft

C:\Windows\Minidump\081413-33937-01.dmp
C:\Users\menuka\AppData\Local\Temp\WER-57562-0.sysdata.xml
C:\Windows\MEMORY.DMP

For your convenience, here is the text of the privacy statement for the Microsoft Error Reporting Service. To see the latest version, please visit the online version of this privacy statement at <http://go.microsoft.com/fwlink/?LinkId=190175>.

Privacy Statement for the Microsoft Error Reporting Service
Last updated: June 2011

Microsoft is committed to helping protect your privacy. This statement explains how the Microsoft Error Reporting (MER) service collects information and how the information can be used. This statement does not apply to other online or offline Microsoft websites, software, or services.

Why does Microsoft collect information about errors and problems?

The information helps Microsoft and Microsoft partners diagnose problems in the software you use and provide solutions. Not all problems have solutions but when solutions are available, they are offered as updates to install or steps for solving a problem you've reported. To help prevent problems and make software more reliable, some solutions are also included in service packs and future versions of the software.

Send details

Don't send

SERIOUSLY, THOUGH...



LET'S TALK APPS.



OH THE THINGS APPS
CAN DO...



GET GOING!
APPS ARE THE THING!



Christina Cacioppo

@christinacaci



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Google Trends "learn to code" vs "learn to program" vs "make apps"

[↩ Reply](#) [↻ Retweeted](#) [★ Favorite](#) [⋮ More](#)

Topics

[Subscribe](#)



learn to code
Search term

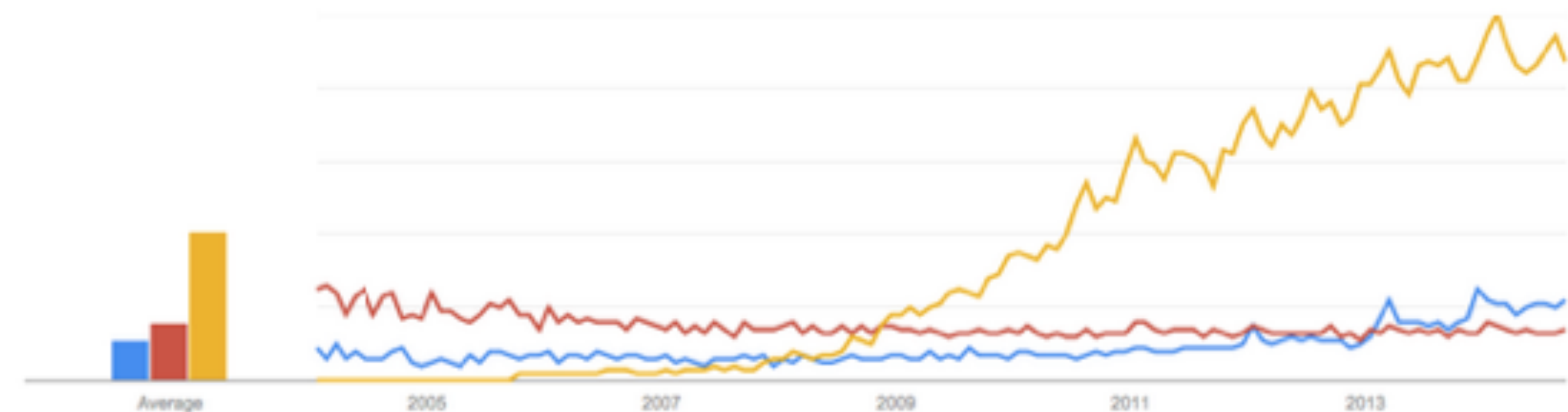
learn to program
Search term

make apps
Search term

[+ Add term](#)

Interest over time [?](#)

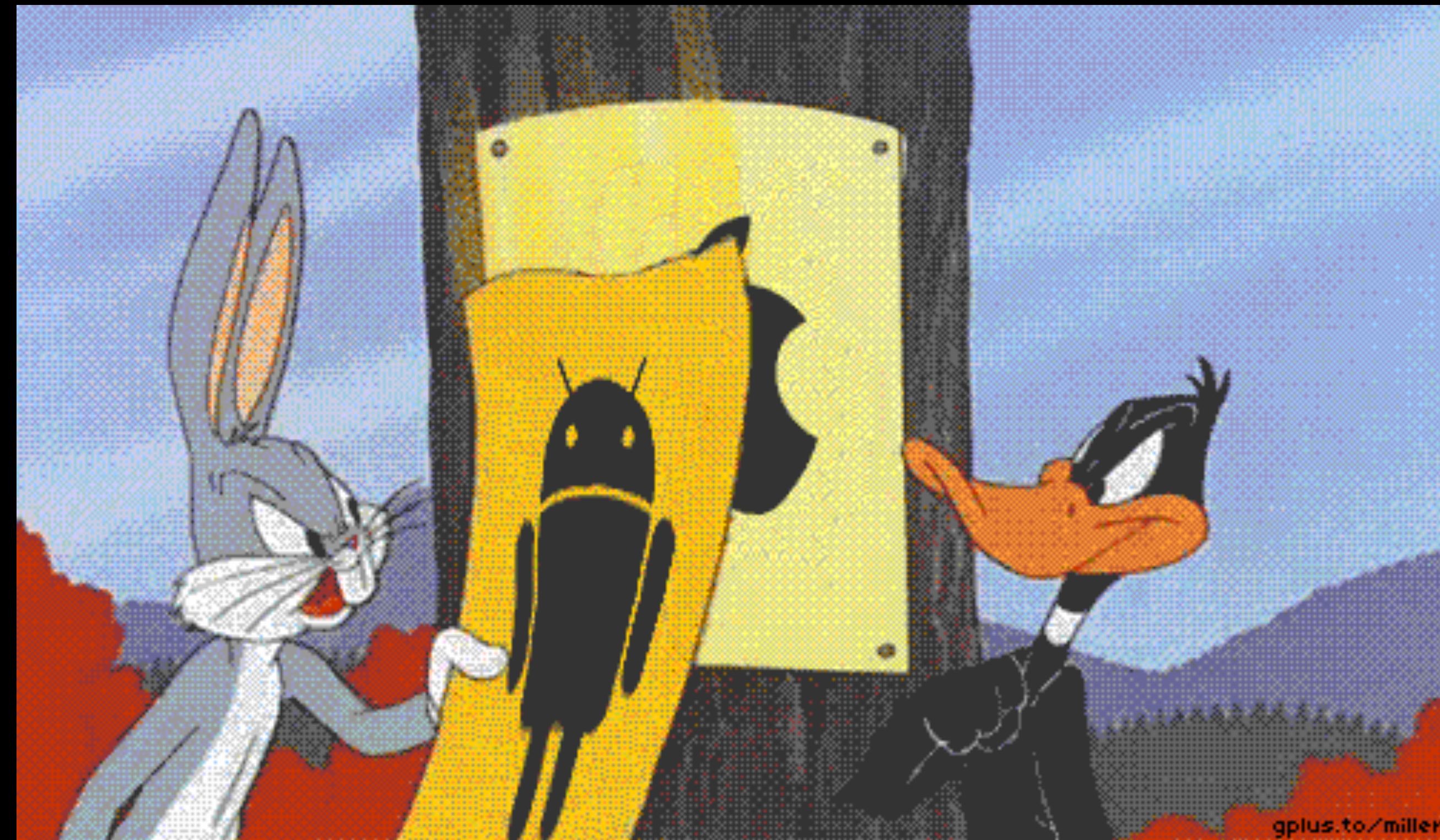
☒ News headlines ☐ Forecast [?](#)



SOME PLATFORM STATS...



- ★ IOS OWNS THE HIGH-END SPACE
- ★ ANDROID IS THE WINNER IN NUMBERS AND WORLD-WIDE REACH.
- ★ DEVELOPERS SHOW INTEREST IN WINDOWS MOBILE.
- ★ OTHER PLATFORMS SHARE A SMALL PERCENTAGE AND LOVE FROM ENTHUSIASTS

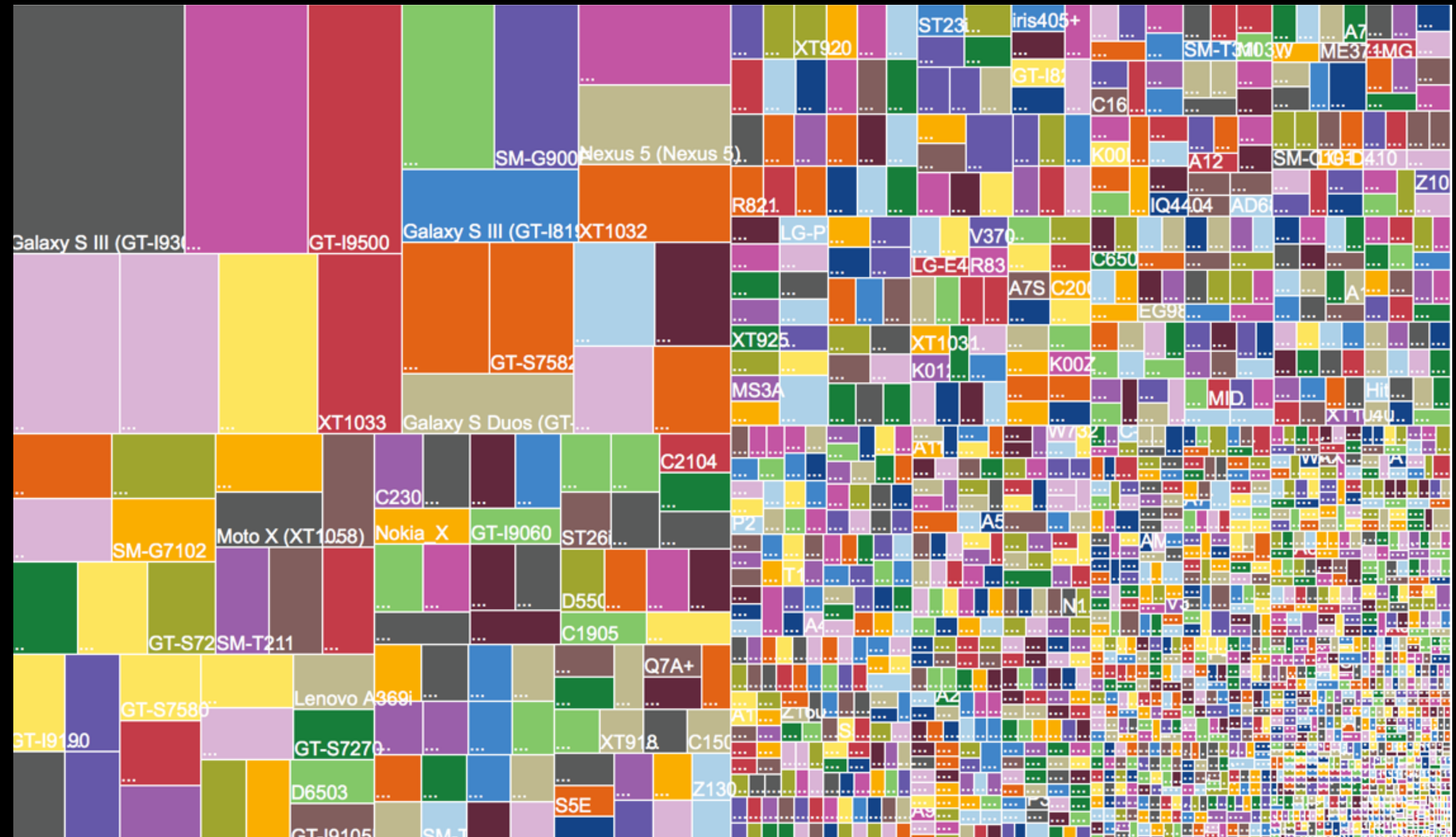


255 MILLION UNITS,
85% OF THE MARKET.



18,796

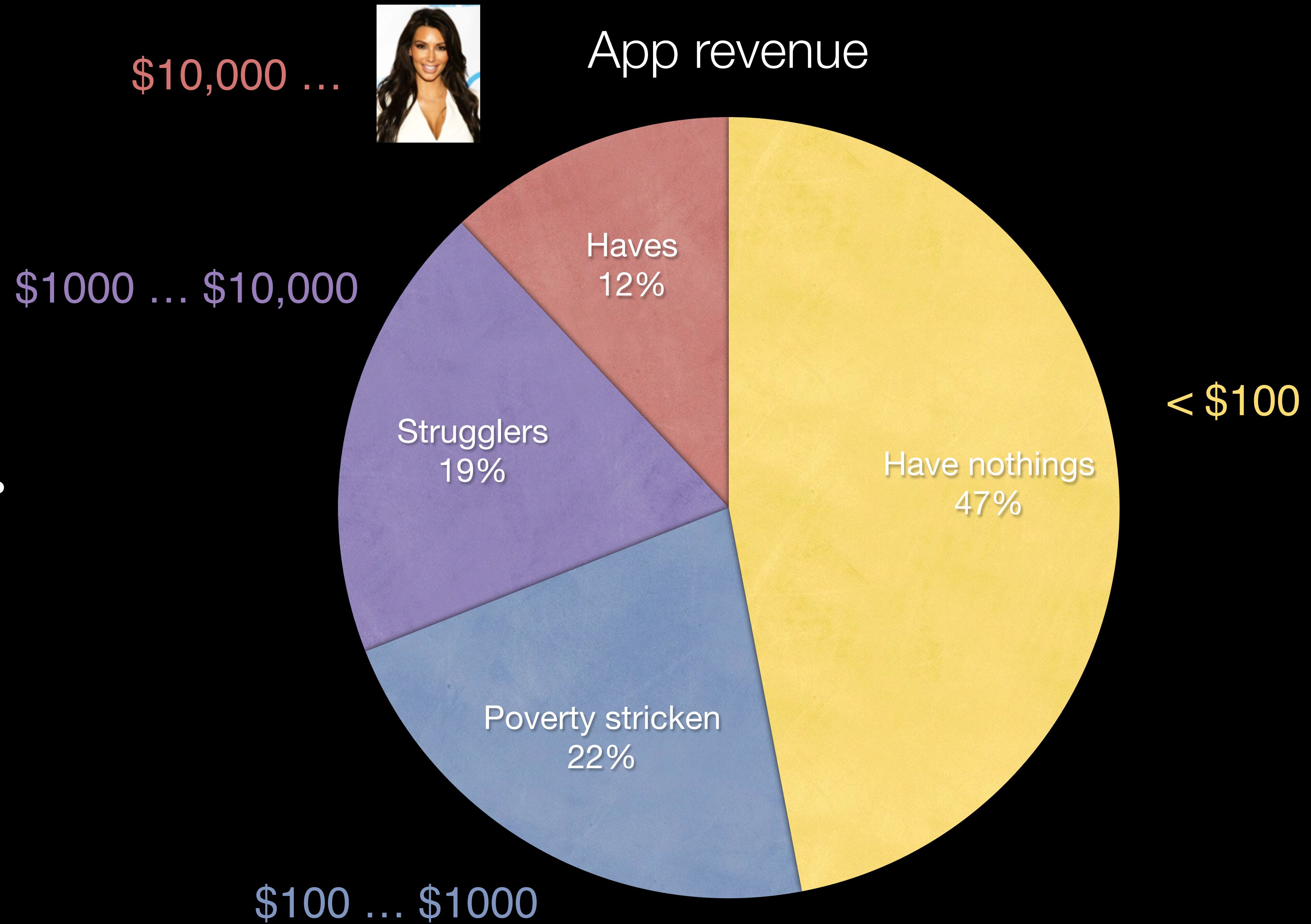
Distinct devices (11,868 the year before)



GET RICH WITH APPS!



APP REVENUES...



MOST APPS ARE NOT
ENOUGH TO SUSTAIN A
BUSINESS.

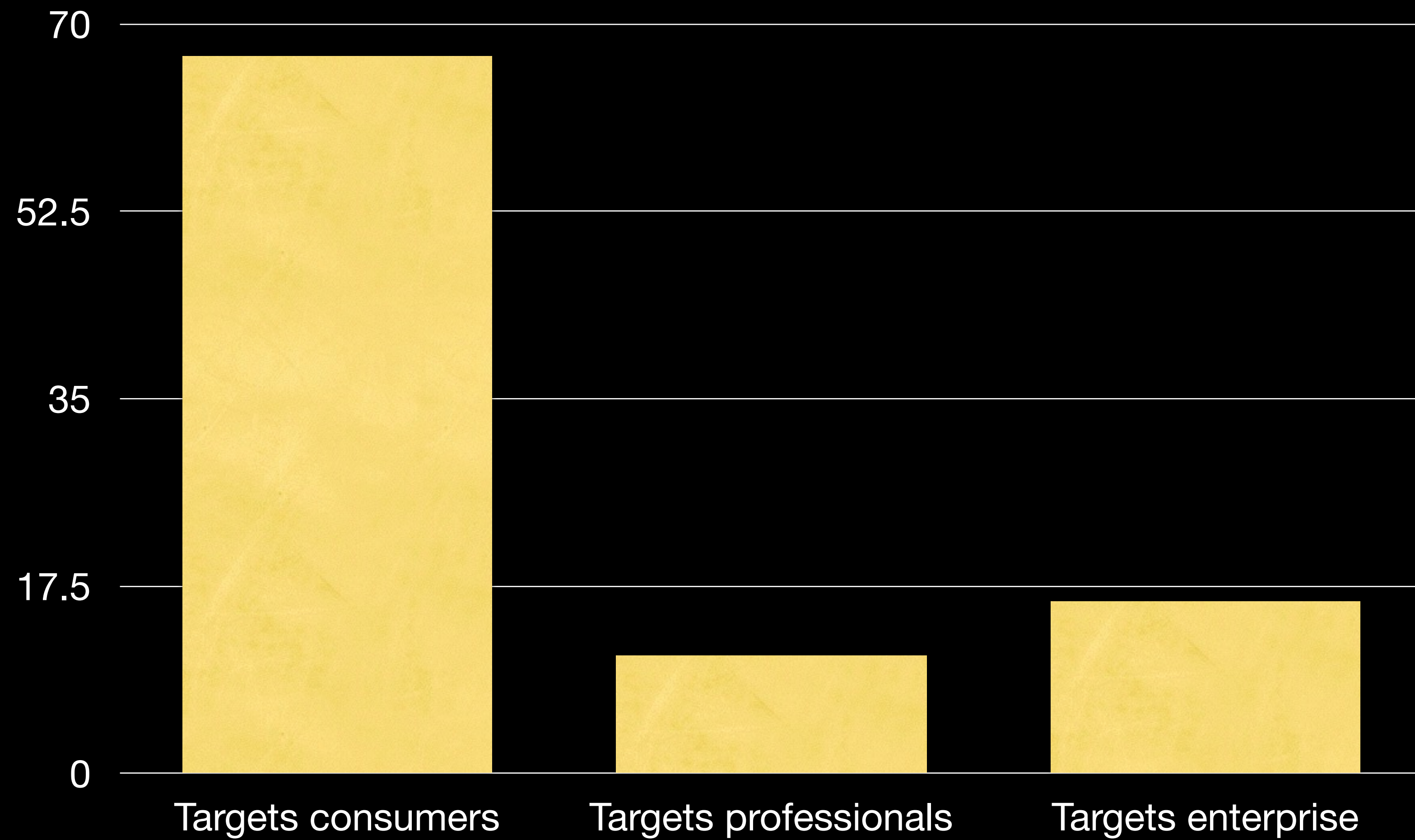
50% OF IOS AND
64% OF ANDROID APPS
< \$500 EACHMONTH

BUT SURELY, GAMES
ARE DIFFERENT?

33% OF DEVELOPERS
CREATE GAMES.

57% MAKE < \$500 EACH
MONTH

TARGET MARKETS



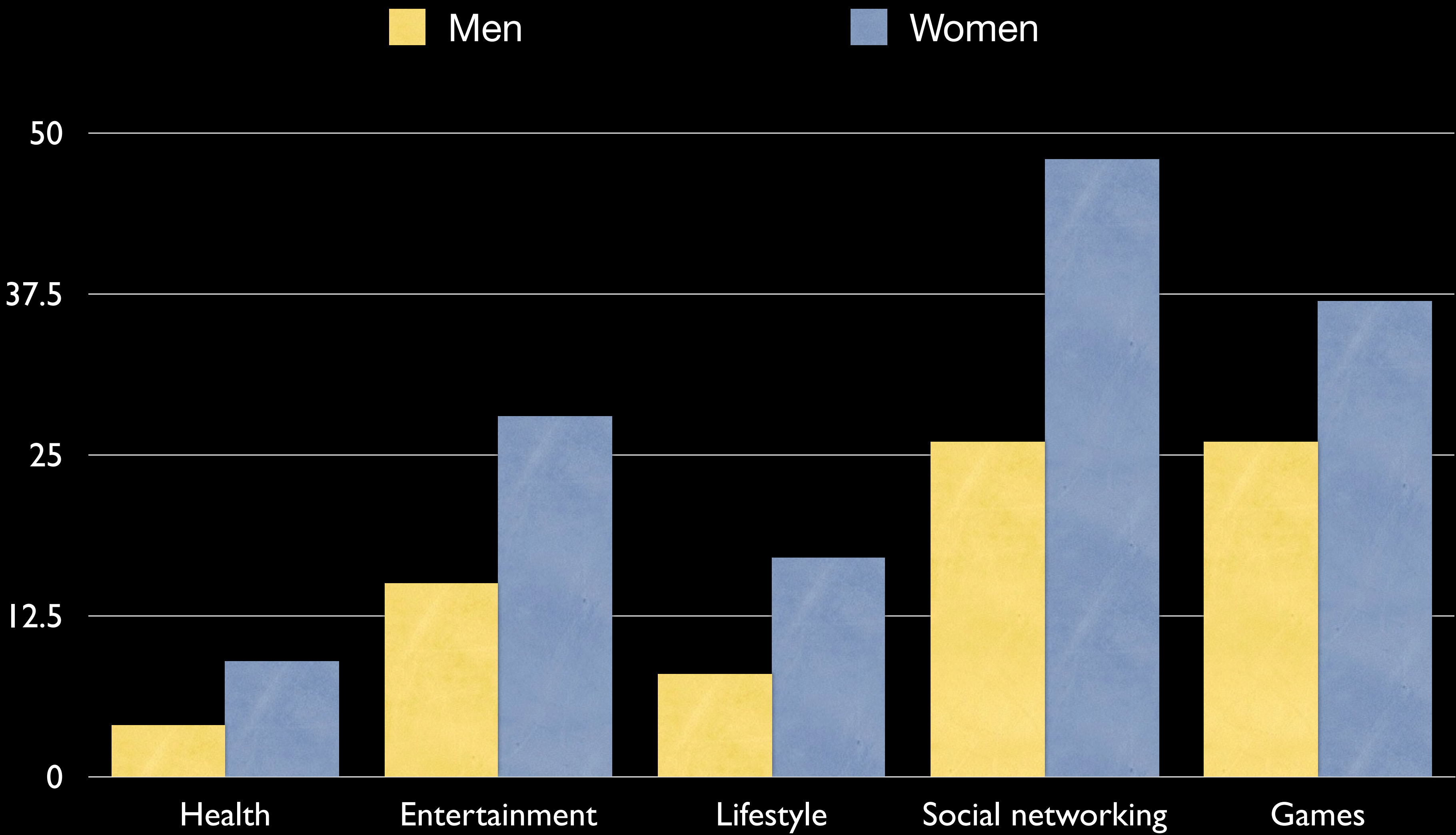
ENTERPRISE:

2× MORE LIKELY TO MAKE
< \$5000/MONTH

3× MORE LIKELY TO MAKE
< \$25000/MONTH

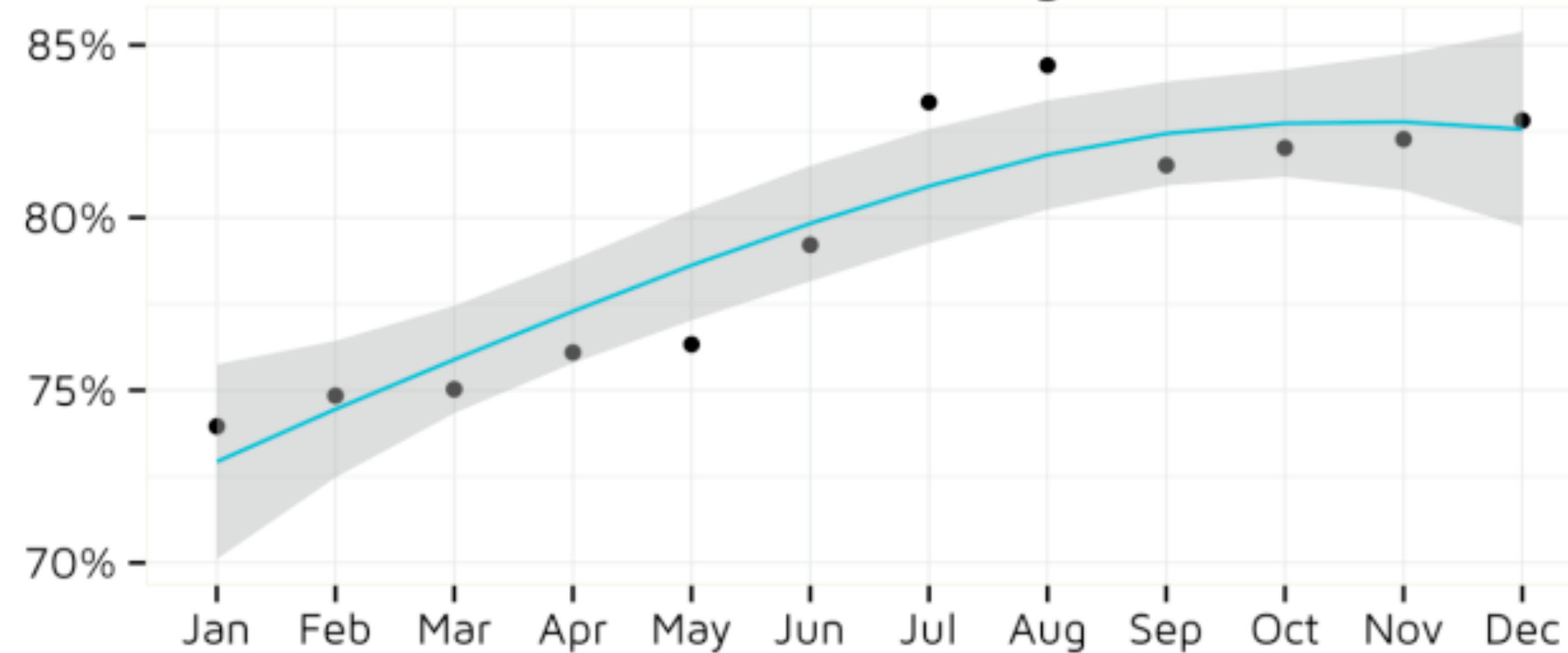


APP TYPES AND USE...



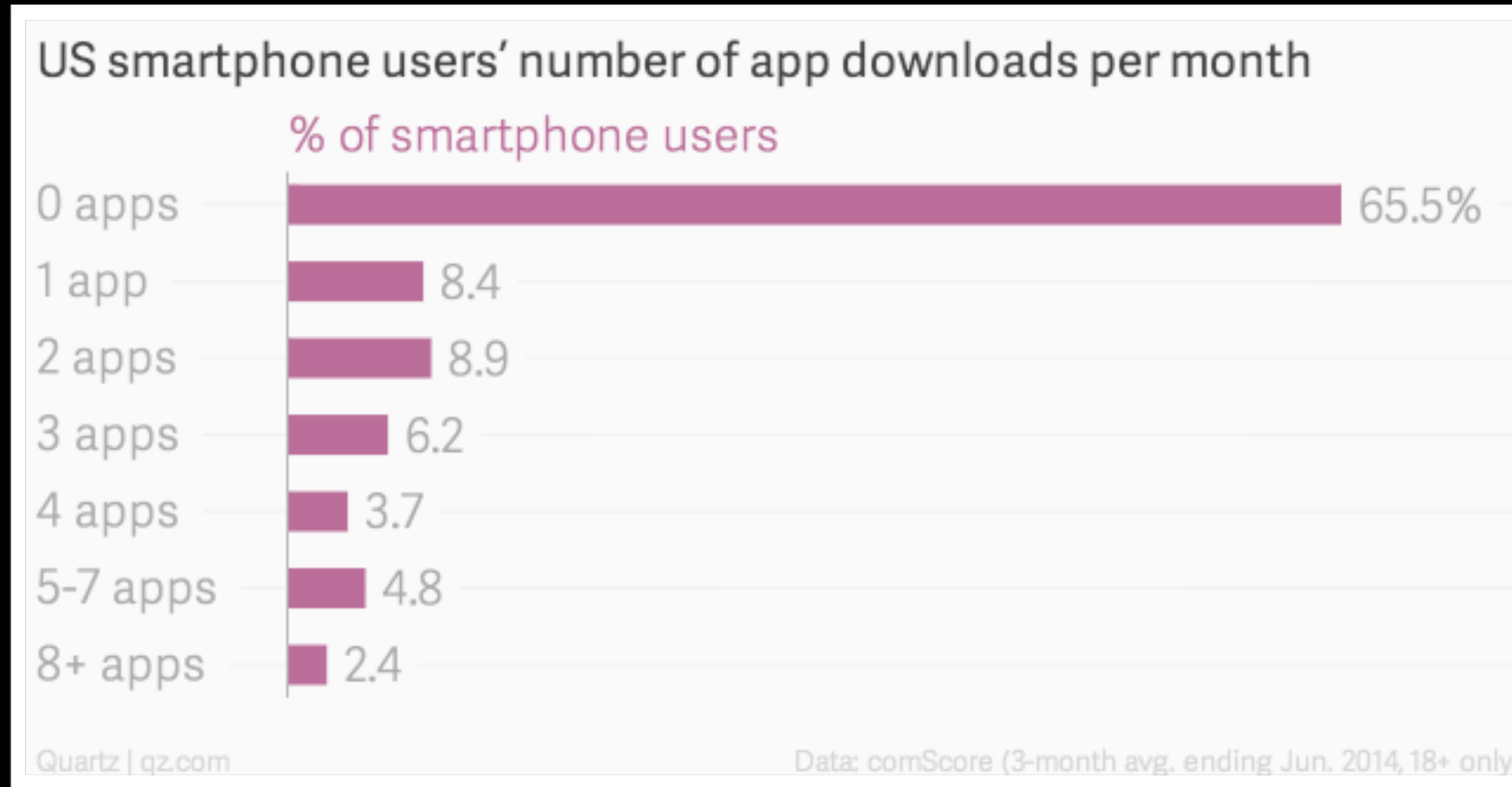
LOST IN THE APP STORE...

Zombie rate (%) through 2014



	# APPS	# ZOMBIES	ZOMBIE %
Jan	889,231	657,778	74.0%
Feb	923,156	690,941	74.8%
Mar	955,221	716,420	75.0%
Apr	995,717	758,281	76.2%
May	1,041,490	796,132	76.4%
Jun	1,085,383	855,283	78.8%
Jul	1,129,256	941,695	83.4%
Aug	1,173,475	991,051	84.5%
Sep	1,240,571	1,011,249	81.5%
Oct	1,279,282	1,049,825	82.1%
Nov	1,325,250	1,090,442	82.3%
Dec	1,372,371	1,136,501	82.8%

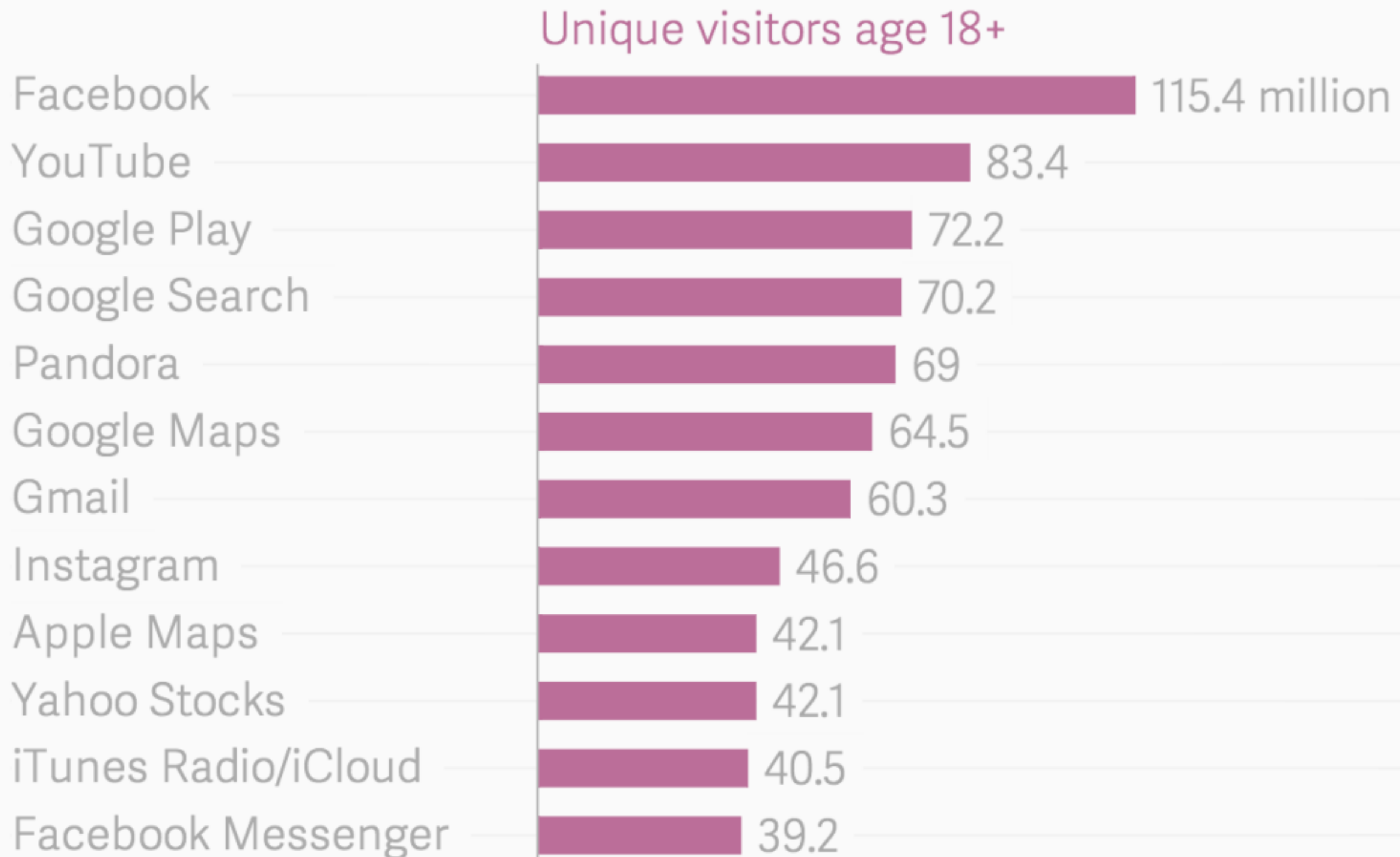
THE RUSH IS OVER...

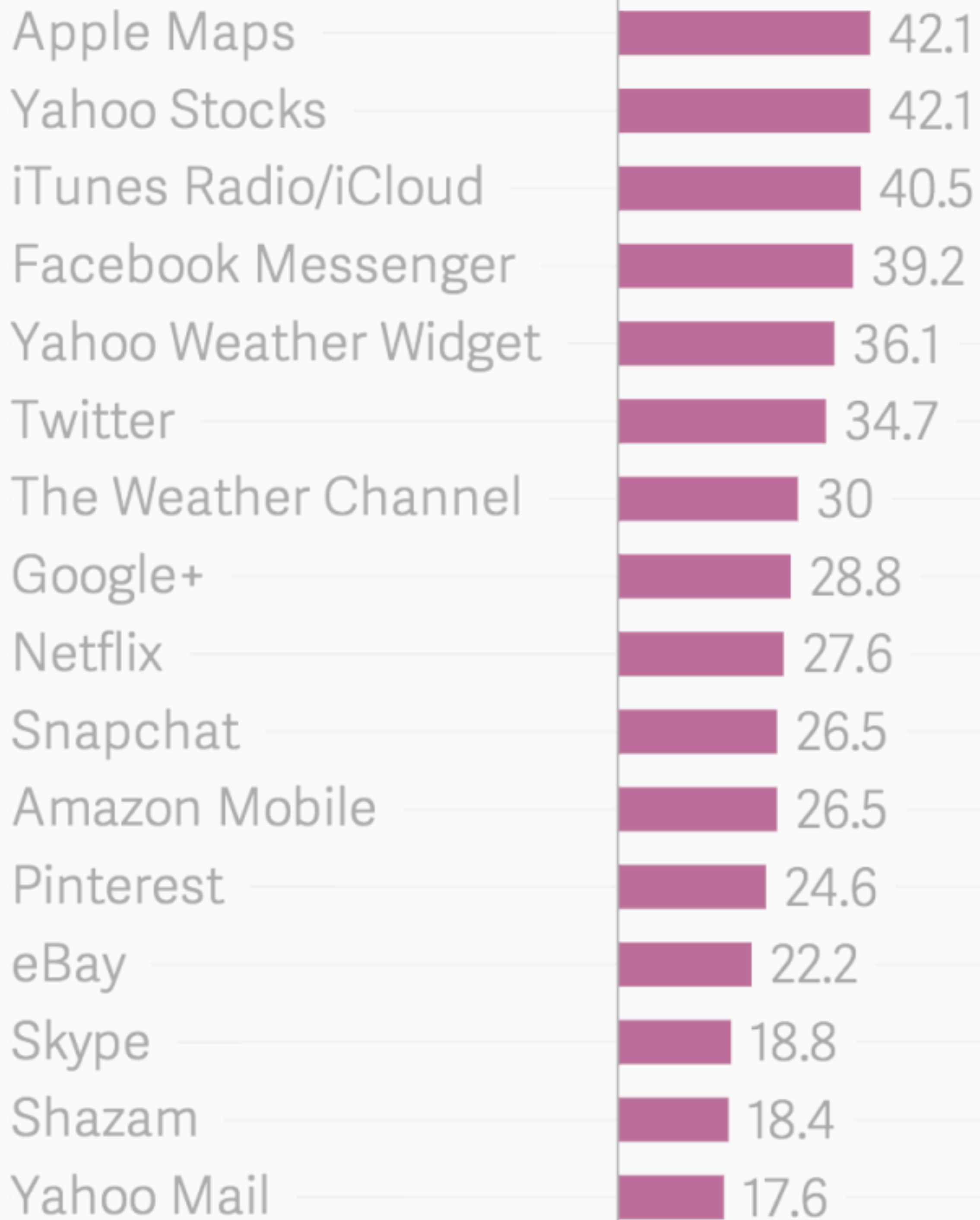


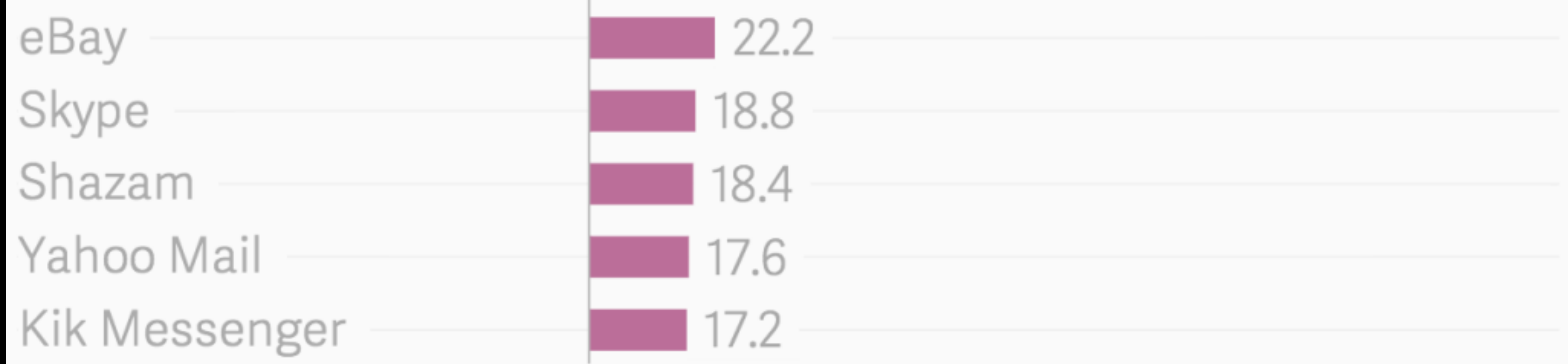
<http://qz.com/253618/most-smartphone-users-download-zero-apps-per-month/>

<https://www.comscore.com/Insights/Press-Releases/2014/8/comScore-s-US-Mobile-App-Report-Available-for-Download>

Top 25 mobile apps by US unique visitors, June 2014







“ **Facebook** is by far the top app, with 115.4 million unique visitors in June. With **160 million total** US app users, that’s **72%** penetration.

“ Google is the top mobile app publisher. Its apps represent nos. 2, 3, 4, 6, 7, and 16.

“ **There are no games in the top 25.** This is not a mistake: ... (games are) closer to 10 million unique visitors—probably because games tend to spike in popularity and then decline.

THE APP BUBBLE IS BURSTING...



<https://www.youtube.com/watch?v=CrcAPan028Y>

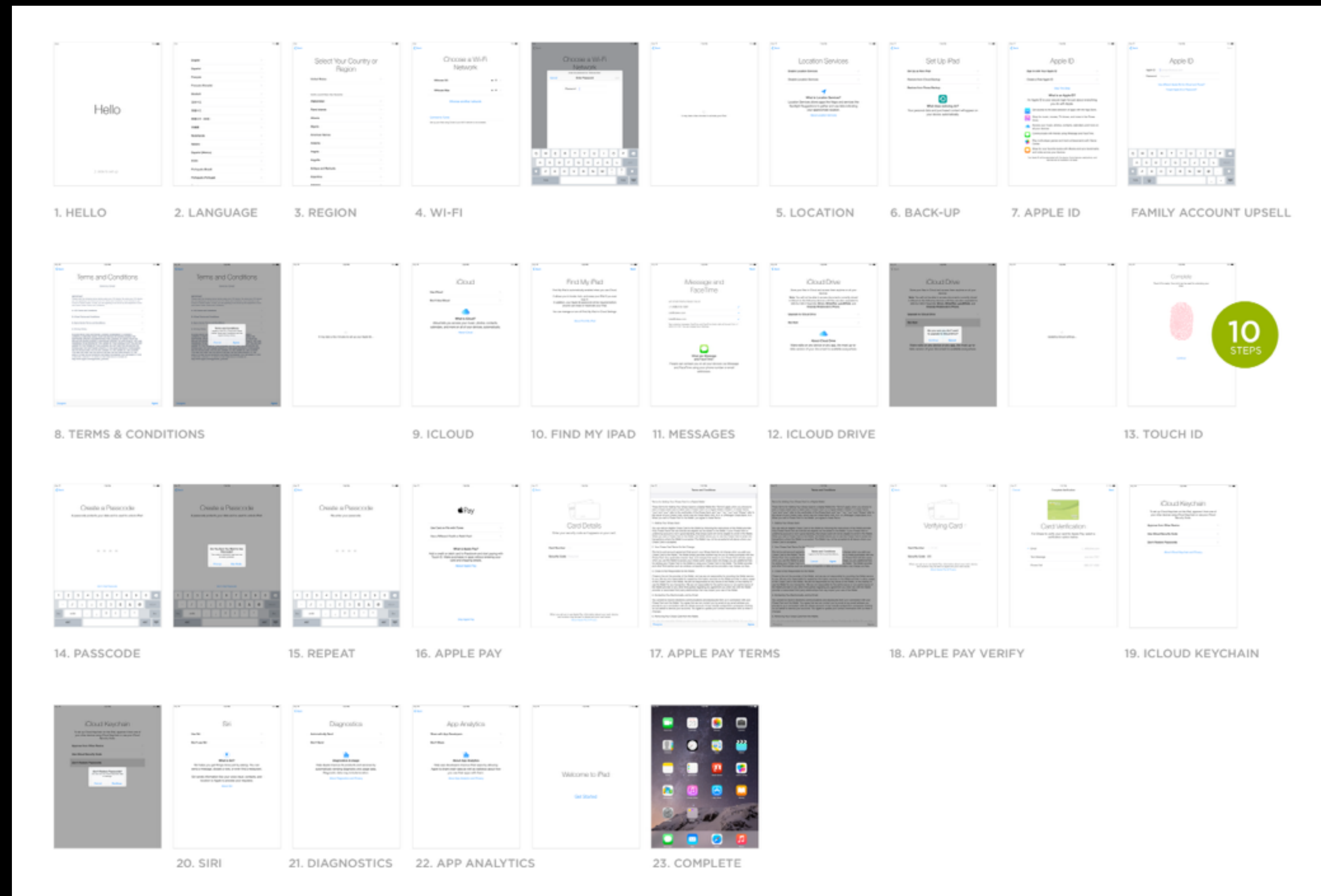
REASONS?



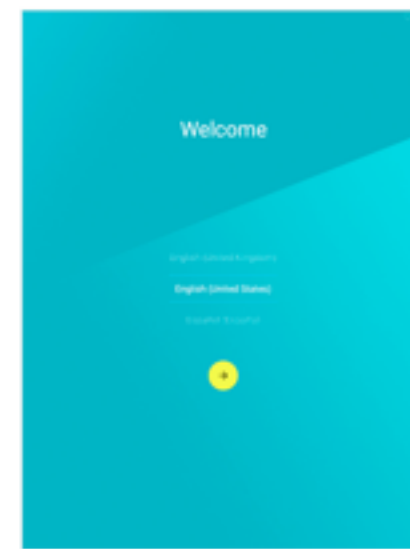
OS COMPLEXITY...



Today's new iPad Air 2 experience consists of **23 or more steps** and no less than **three iCloud services** (iCloud, iCloud Drive, & iCloud Keychain).



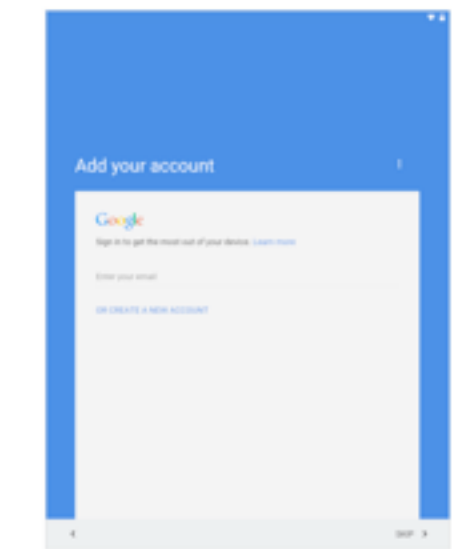
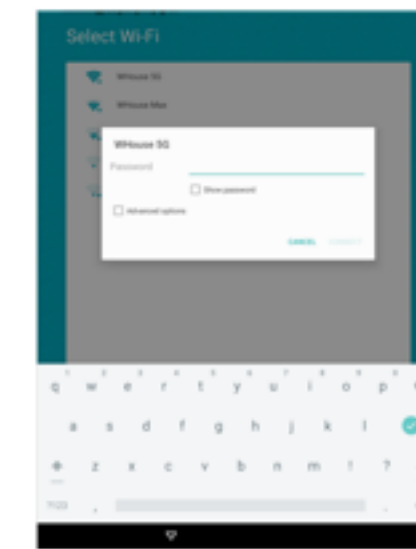
In contrast, today's new Android Nexus experience consists of only 8 steps but with a mandatory 234MB update.



1. WELCOME



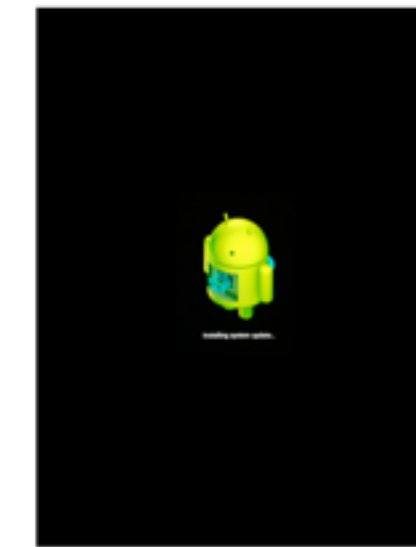
2. WI-FI



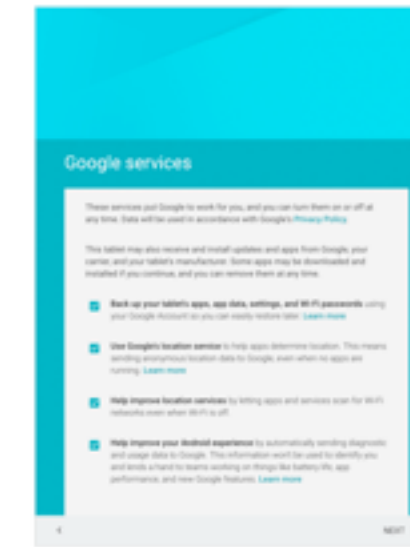
3. ADD GOOGLE ACCOUNT



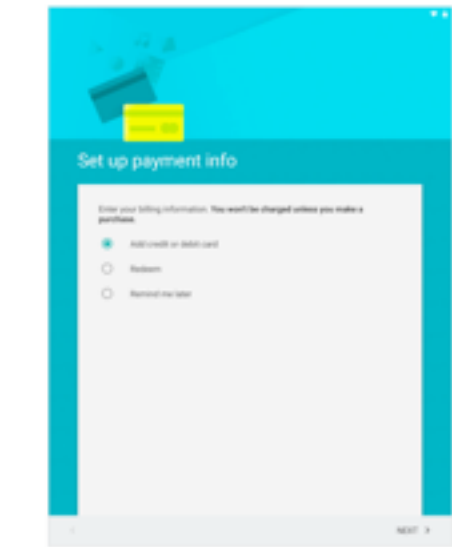
4. UPDATE SOFTWARE



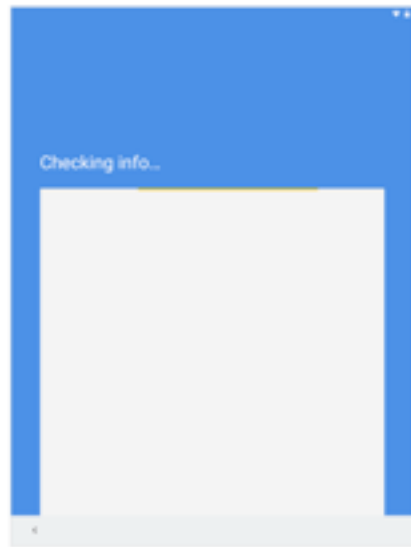
WAIT 20 MIN



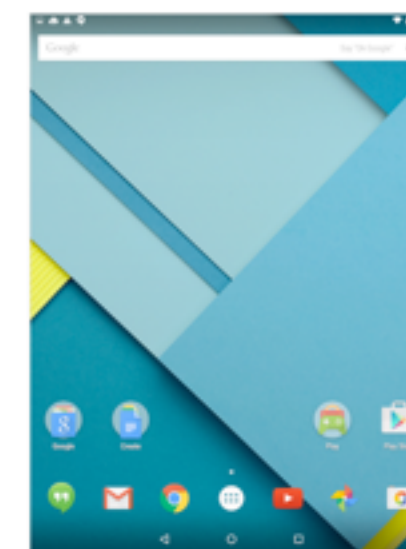
5. GOOGLE SETTINGS



6. PAYMENT INFO

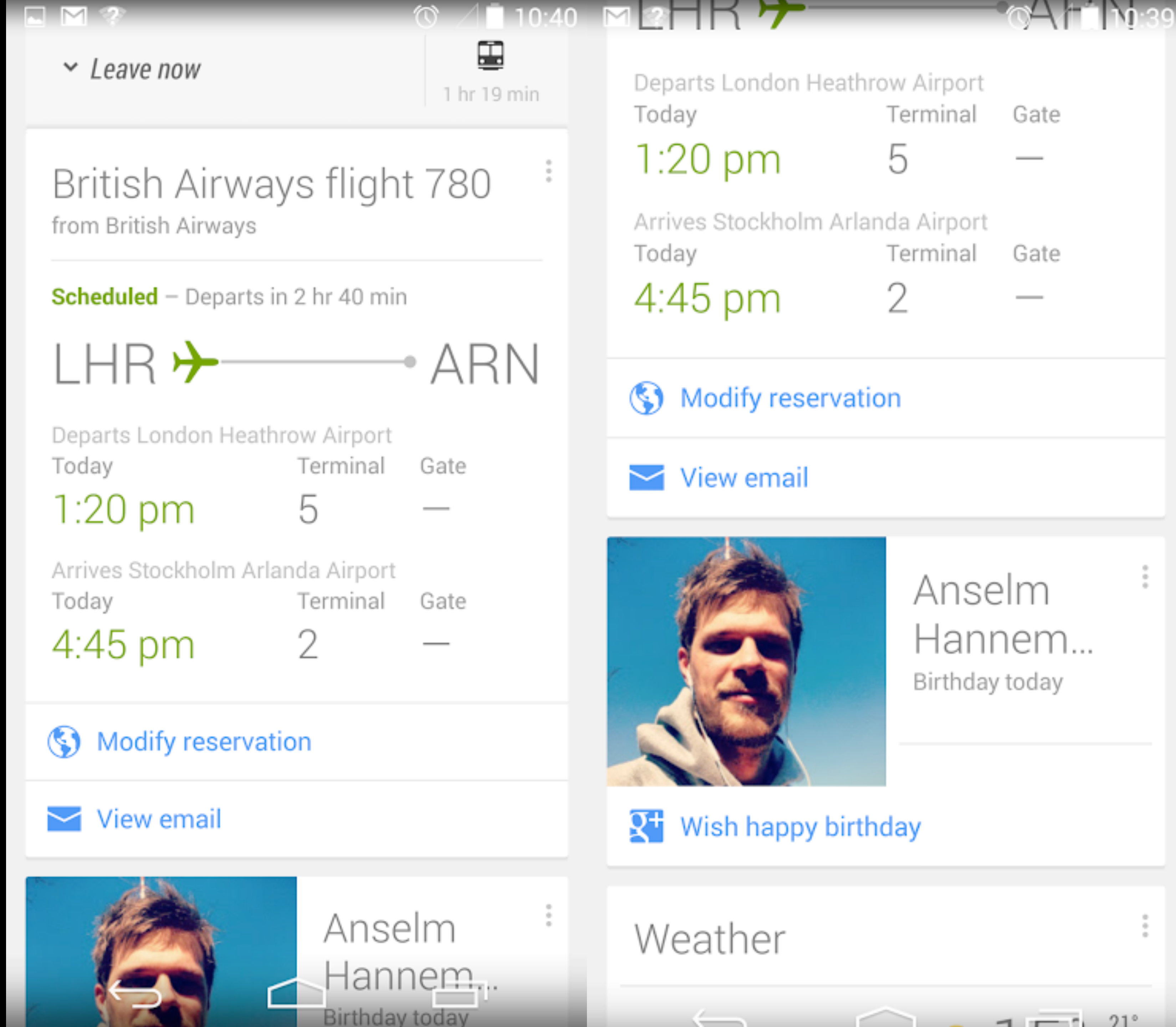


7. TIP



8. COMPLETE

A LOT OF APP
FUNCTIONALITY
IS NOW PART OF
THE OS AND
COVERS MOST
NEEDS.



NEEDY APPS AND
FREEMIUM
ANNOYANCES...



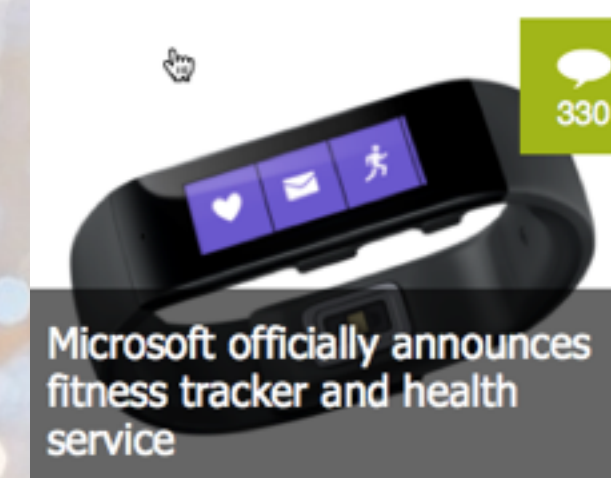
THINGS TO COME...



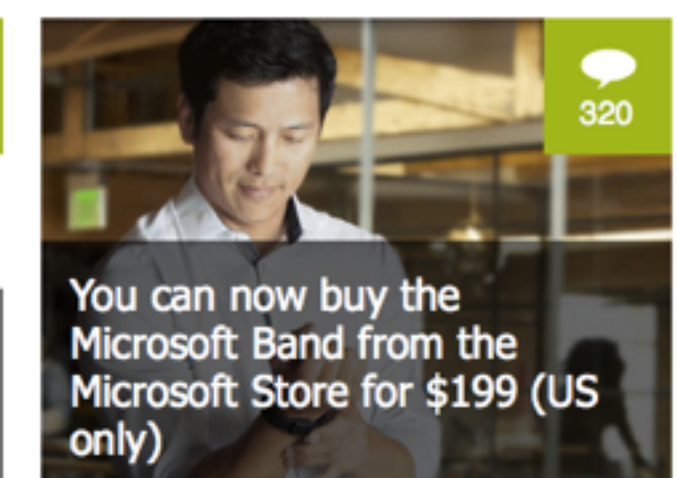
NEW FORM FACTORS SMART * IOT



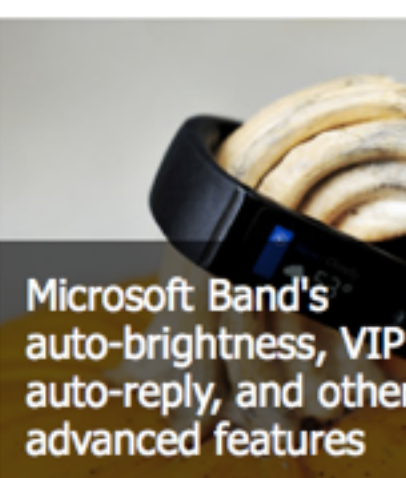
Microsoft Band: Unboxing and hands-on tour of Microsoft's new 'smart' wearable



Microsoft officially announces fitness tracker and health service



You can now buy the Microsoft Band from the Microsoft Store for \$199 (US only)



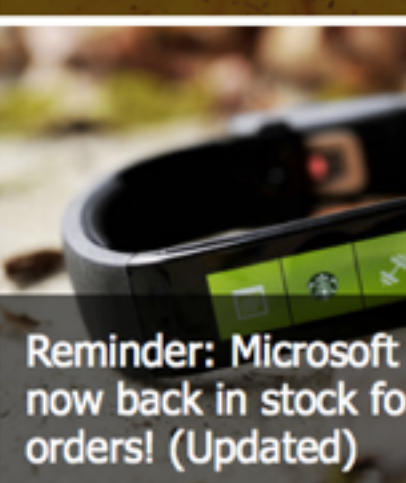
Microsoft Band's auto-brightness, VIP auto-reply, and other advanced features



Microsoft Health available for Windows Phone to sync your Microsoft Band



Microsoft Band inventory depleted online ahead of holiday season



Reminder: Microsoft now back in stock for orders! (Updated)

THERE IS NO SCREEN, ONLY DATA
AND MESSAGES GOING BACK AND FORTH...

GROWTH HAPPENS IN EMERGING MARKETS...

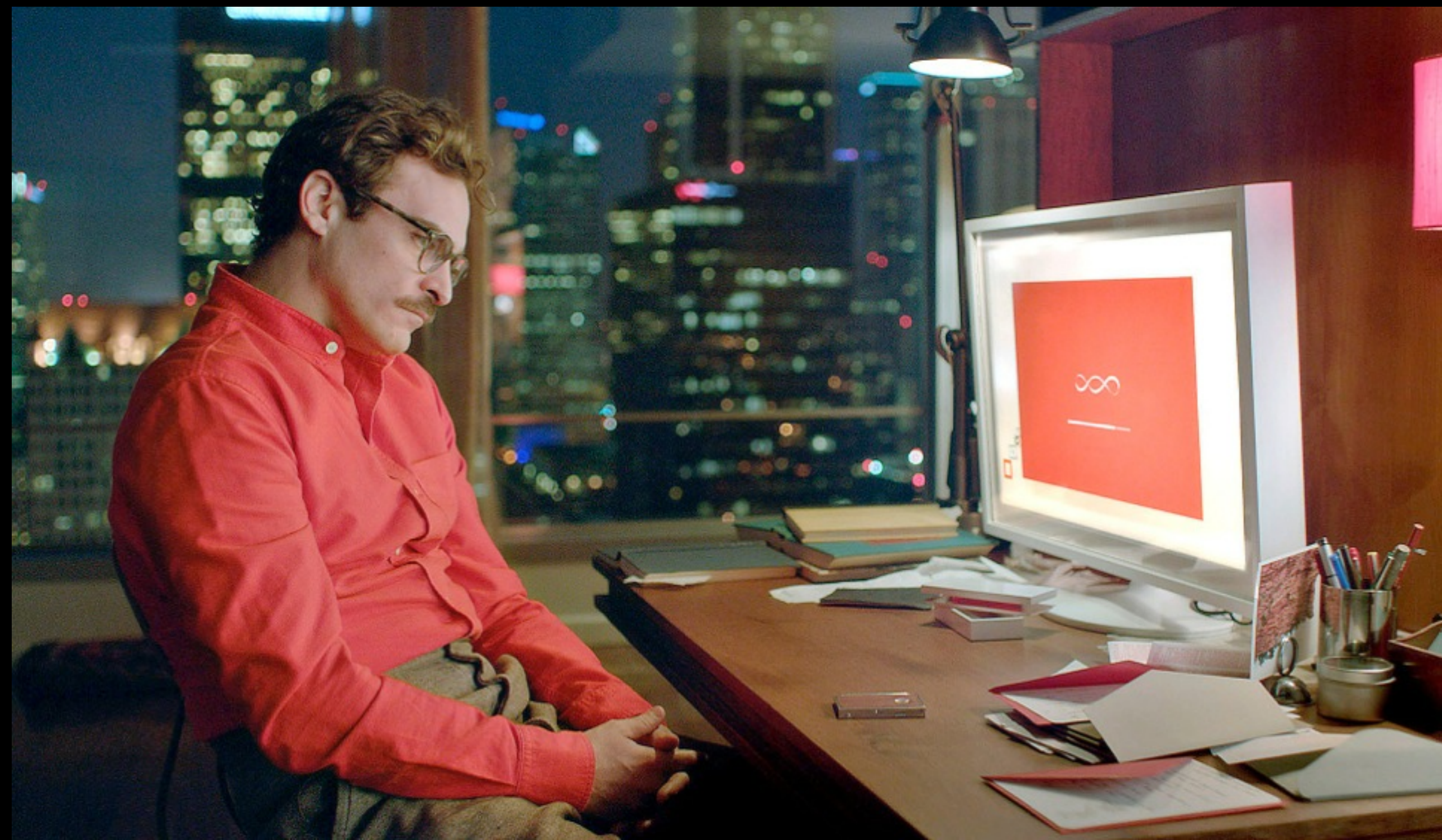
Worldwide Smartphone Forecast by Region, Shipments, Market Share, Growth and 5-Year CAGR (units in millions)

Region	2014* Shipment Volumes	2014* Market Share	2014* YoY Growth	2018* Shipment Volumes	2018* Market Share	2018* YoY Growth	5 year CAGR
Emerging Markets	920.8	73.5%	32.4%	1,462.8	79.5%	8.3%	16.0%
Mature Markets	331.5	26.5%	4.9%	376.3	20.5%	2.7%	3.6%
Total	1,252.3	100.0%	23.8%	1,839.1	100.0%	7.1%	12.7%

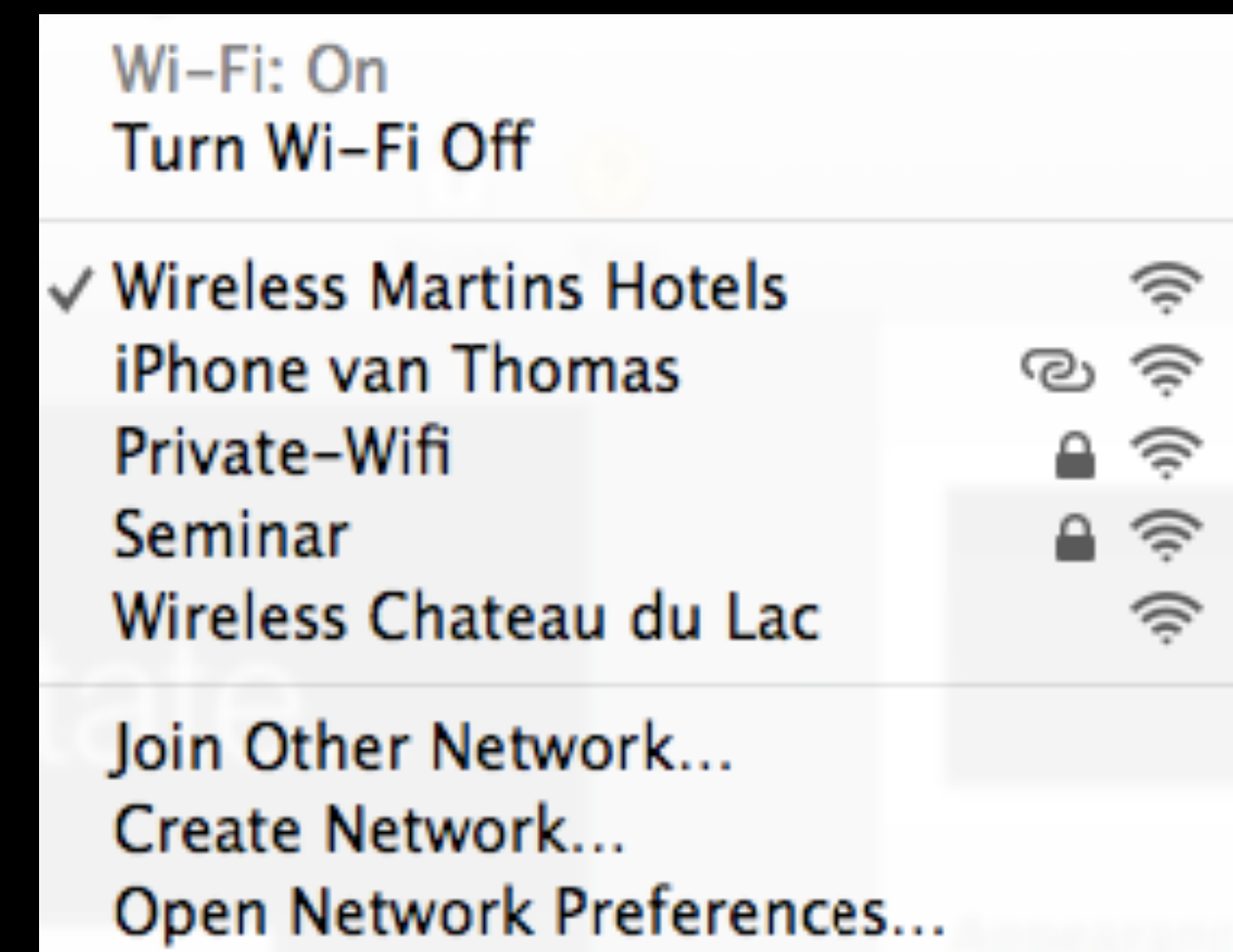
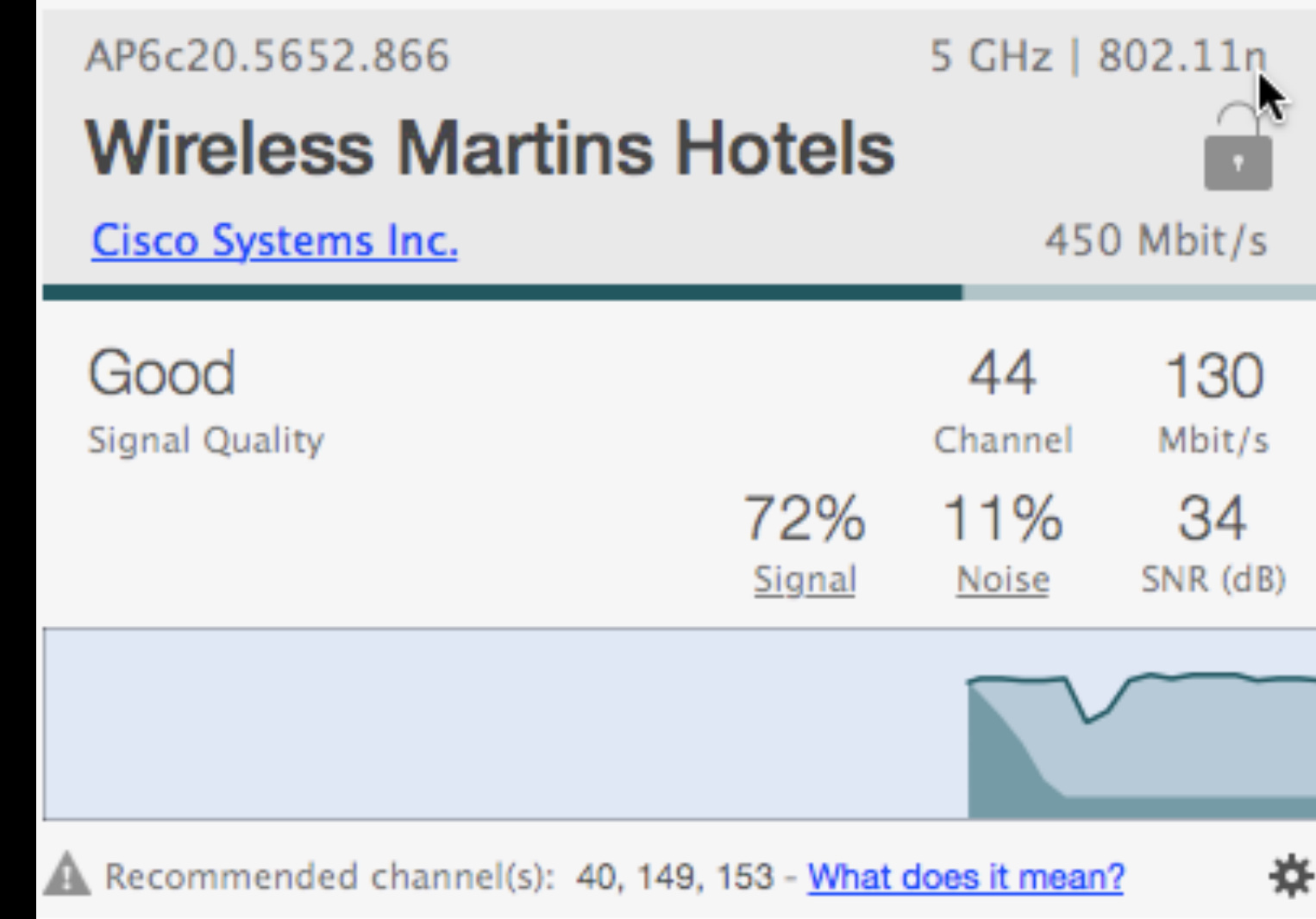
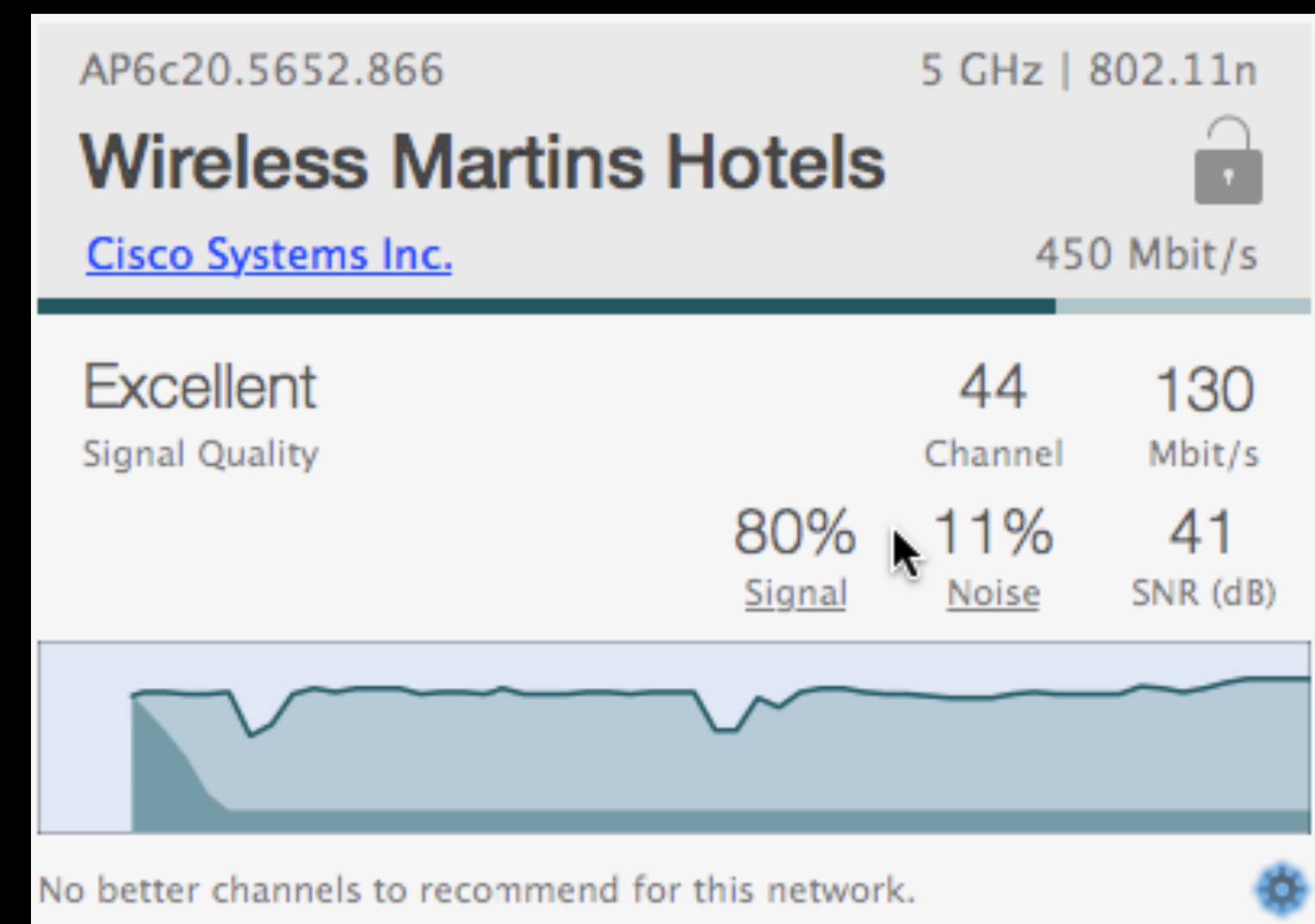
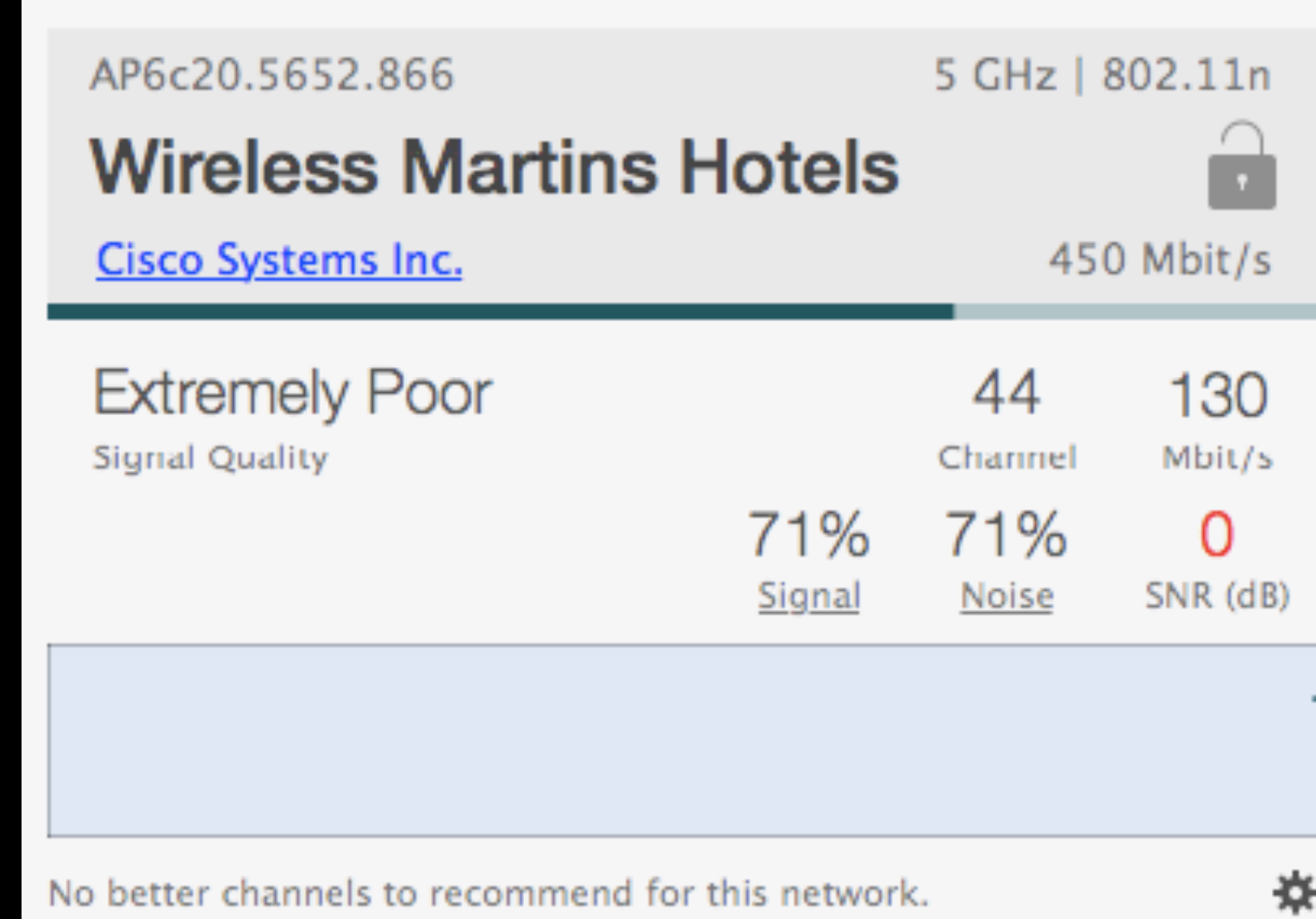
Source: IDC Worldwide Quarterly Mobile Phone Tracker, August 28, 2014.

* forecast data

DAY TO DAY
COMPUTING IS STILL
NOT ABOUT FLYING
CARS...



CONNECTIVITY IS NOT A BINARY STATE...



DEVELOPERS

DEVELOPERS

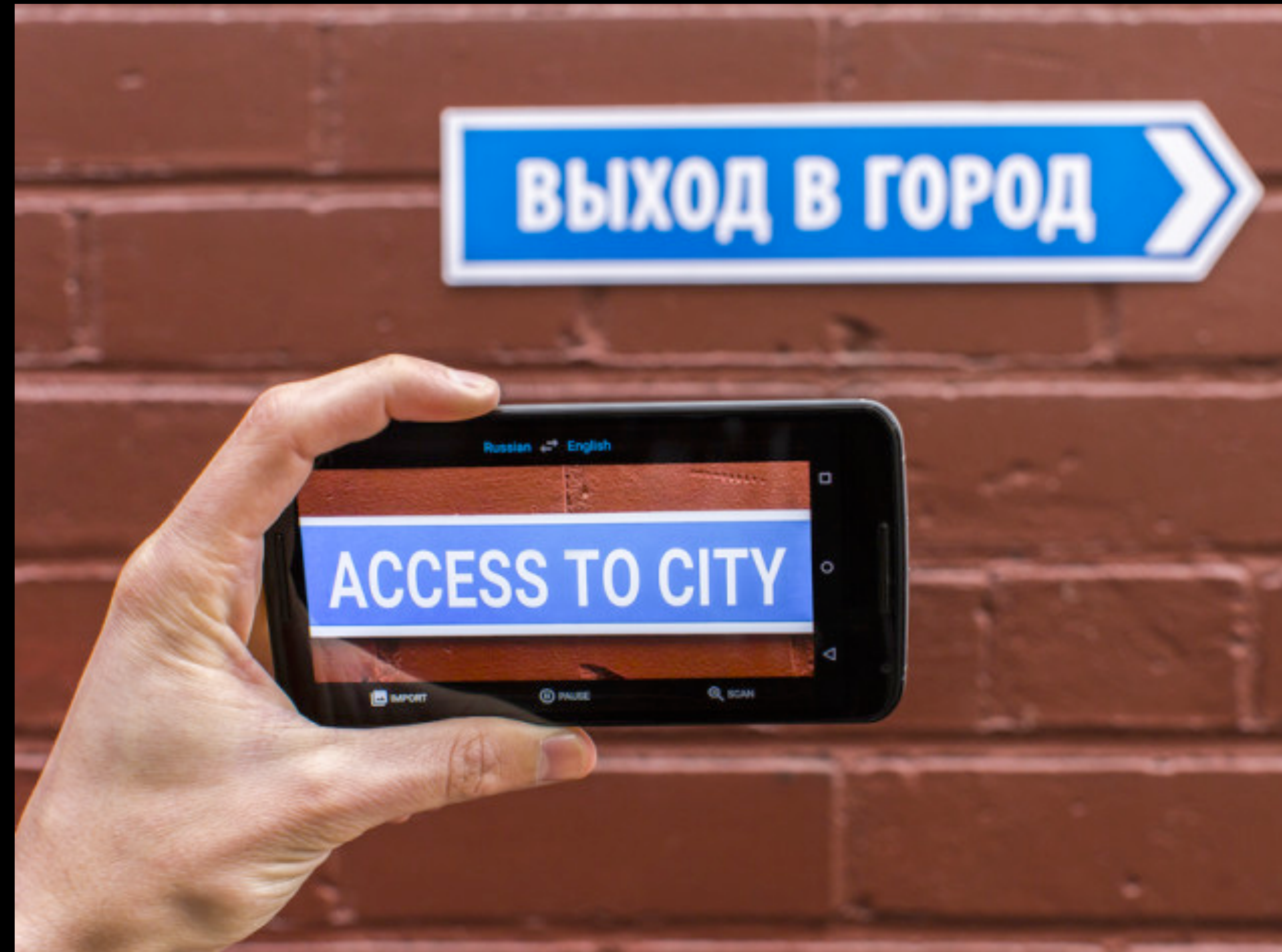
DEVELOPERS



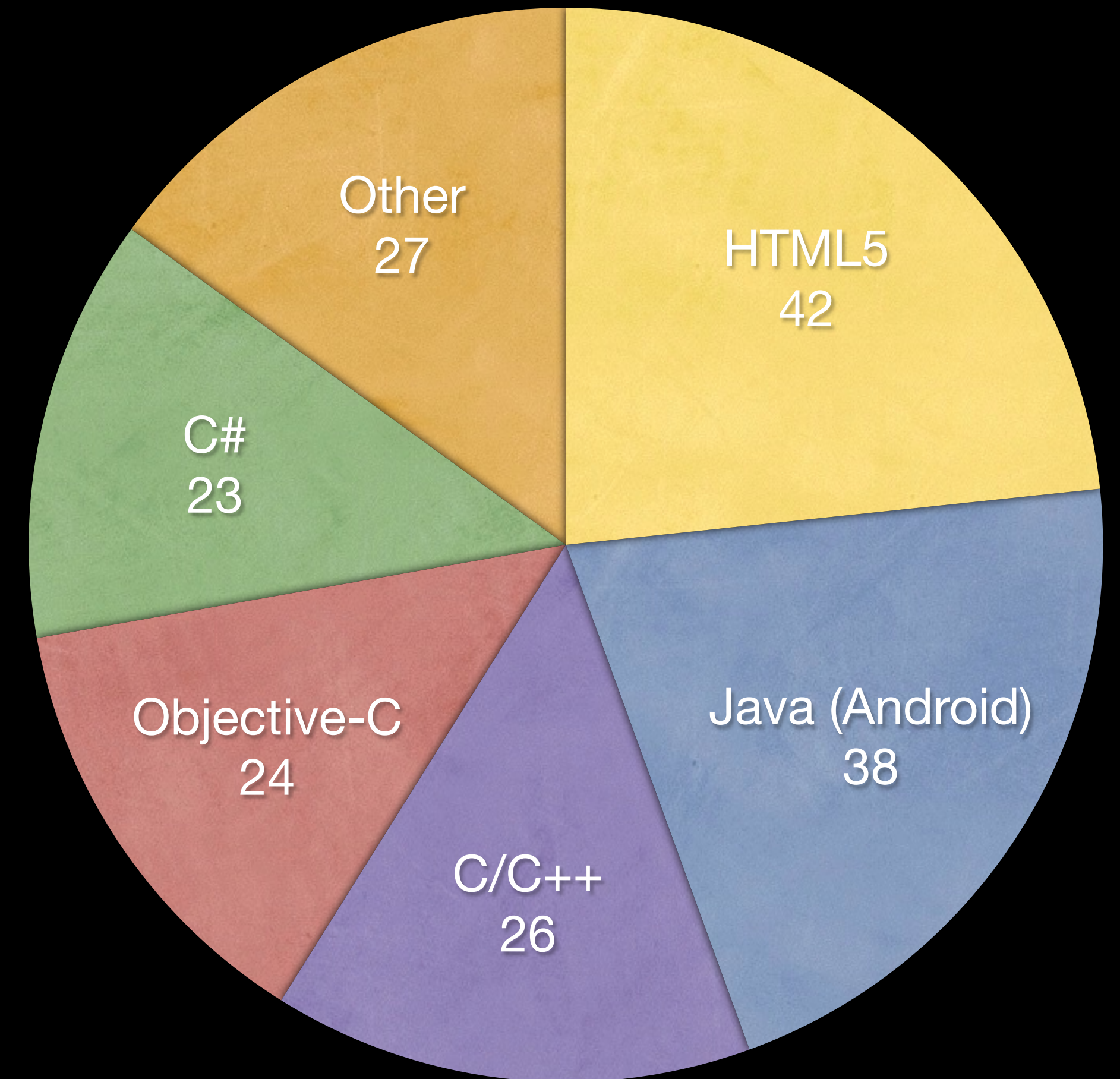
LET'S AIM TO BUILD SOLID
FOUNDATIONS CONSISTING OF
SMALL BITS OF WORKING CODE.



47% OF IOS AND 42% OF
ANDROID DEVELOPERS
DON'T USE THE NATIVE
LANGUAGE OF THE OS



LANGUAGES USED IN MOBILE APPS...



THE SWEET SPOT IS IN
BETWEEN NATIVE AND THE
WEB.

EACH HAS POWERS THE
OTHER DOESN'T.



**KEEP
CALM
AND
BUILD
APPS**

BUILD SOLUTIONS THAT...

- ☒ Do work offline
- ☒ Do interact with the platform (payment, login)
- ☒ Don't ask for more than you need.
- ☒ Do use the technology that delivers the best result (native controls, web views for simple data maintenance)
- ☒ have atomic updates
- ☒ represent a service, not an app for a certain platform or form factor. Things move fast.

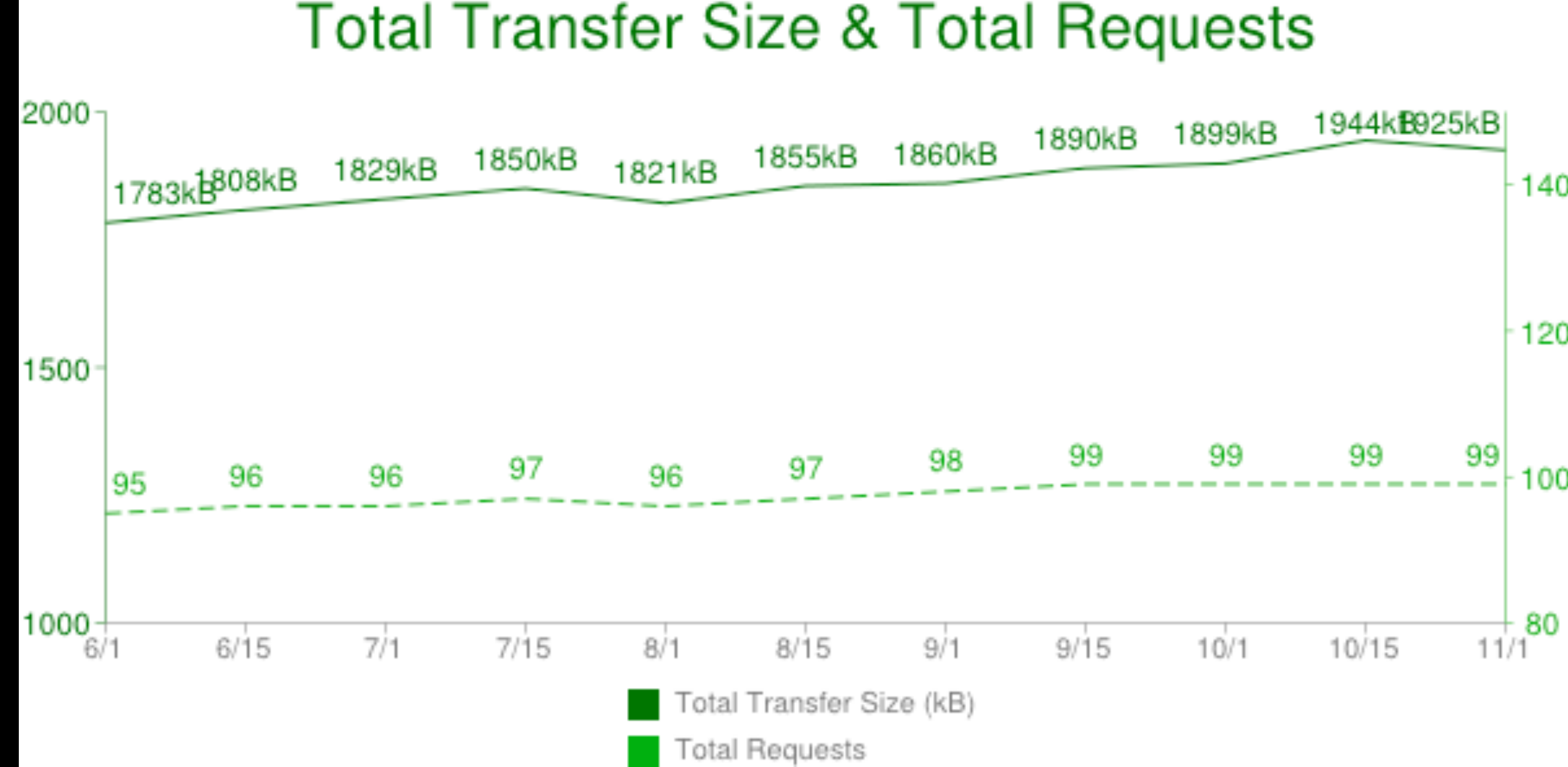
WE HAVE THE TOOLS
EVEN OUTSIDE NATIVE
PLATFORMS



PERFORMANCE



WEBSITE OBESITY IS
NOT UNCOMMON...



perf.fail - do, learn, fail forward.


Menu

LG G Watch site delivers an images-gone-wrong 54MB RWD experience

Posted on November 1st, 2014 at 9:35 am by Sverre Nøkleby

HOW SLOW
ARE WE?

<http://www.webpagetest.org/>

 **WEBPAGETEST**

HOMETEST RESULTTEST HISTORYFORUMSDOCUMENTATIONABOUT

Test a website's performance

Analytical ReviewVisual ComparisonTraceroute

Enter a Website URL

Test LocationDulles, VA USA (IE 8-11, Chrome, Firefox, Android, iOS)Select from Map5 Pending Tests

BrowserFirefox

Advanced Settings ▼

Test SettingsAdvancedChromeAuthScriptBlockSPOFCustom

ConnectionMobile 3G (1.6 Mbps/768 Kbps 300ms RTT)

Number of Tests to Run1Up to 9

Repeat View☒ First View and Repeat View☐ First View Only

Capture Video☒

Keep Test Private☐

Label

START TEST

Run a free website speed test from multiple locations around the globe using real browsers (IE and Chrome) and at real consumer connection speeds. You can run simple tests or perform advanced testing including multi-step transactions, video capture, content blocking and much more. Your results will provide rich diagnostic information including resource loading waterfall charts, Page Speed

www.jfokus.se/



0.0

<http://www.webpagetest.org/>

HOW SLOW ARE WE?

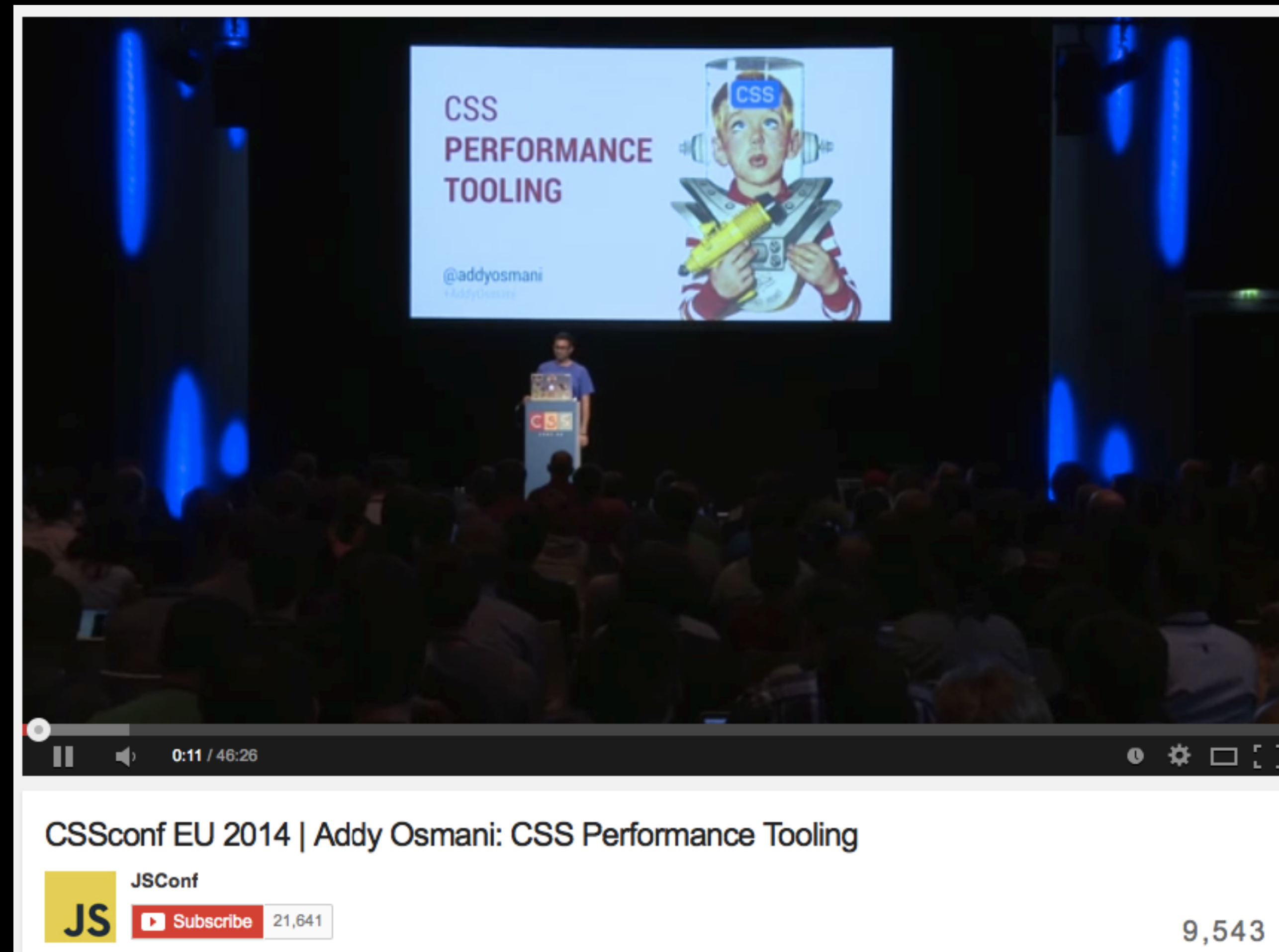
www.jfokus.se/

AH, BUT THERE IS A
MOBILE VESION!

0.0

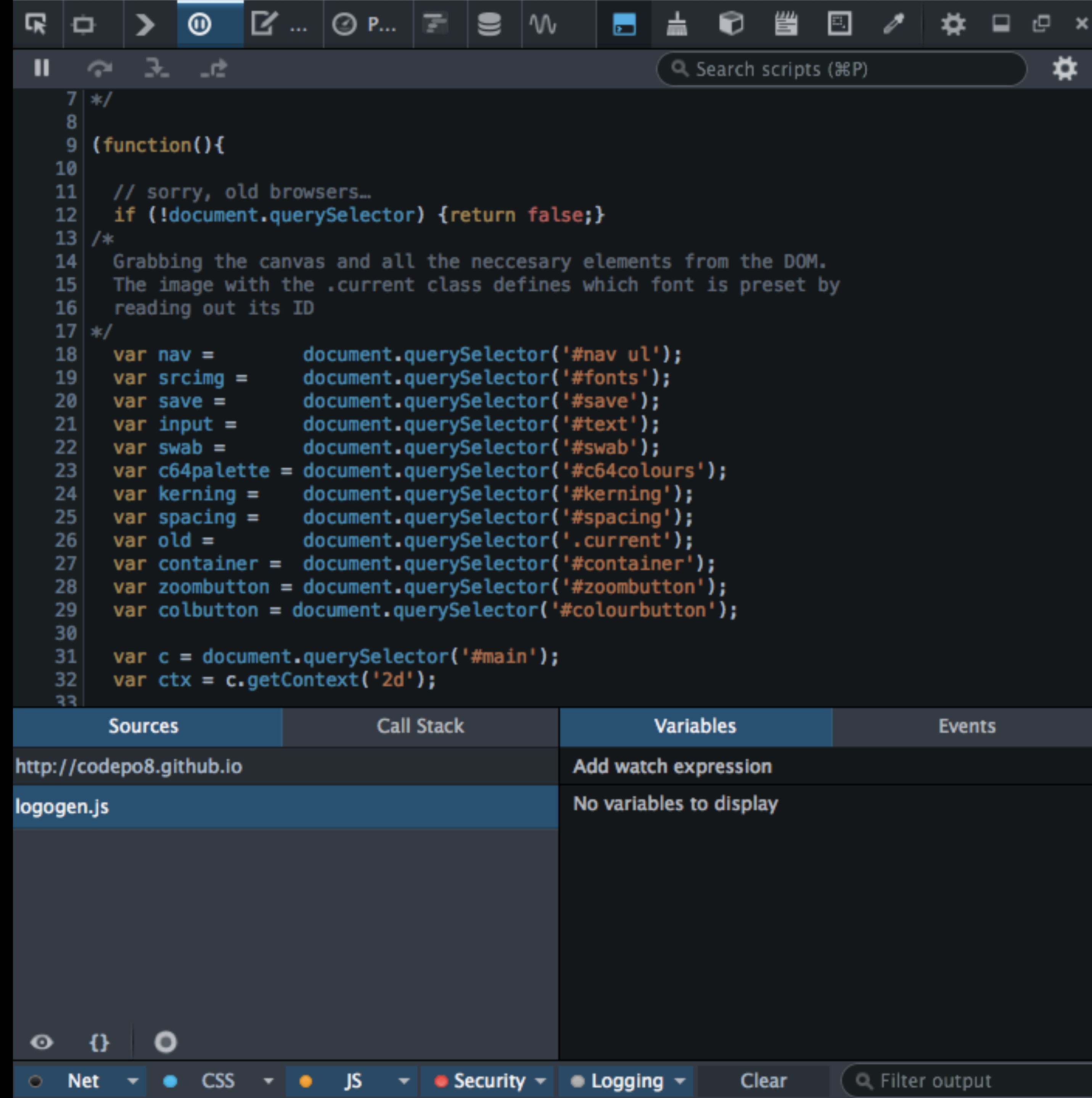
<http://www.webpagetest.org/>

PERFORMANCE TOOLS AND TESTING...



<https://www.youtube.com/watch?v=FEs2jgZBaQA>

BROWSERS ARE CONSUMPTION AND CREATION TOOLS.



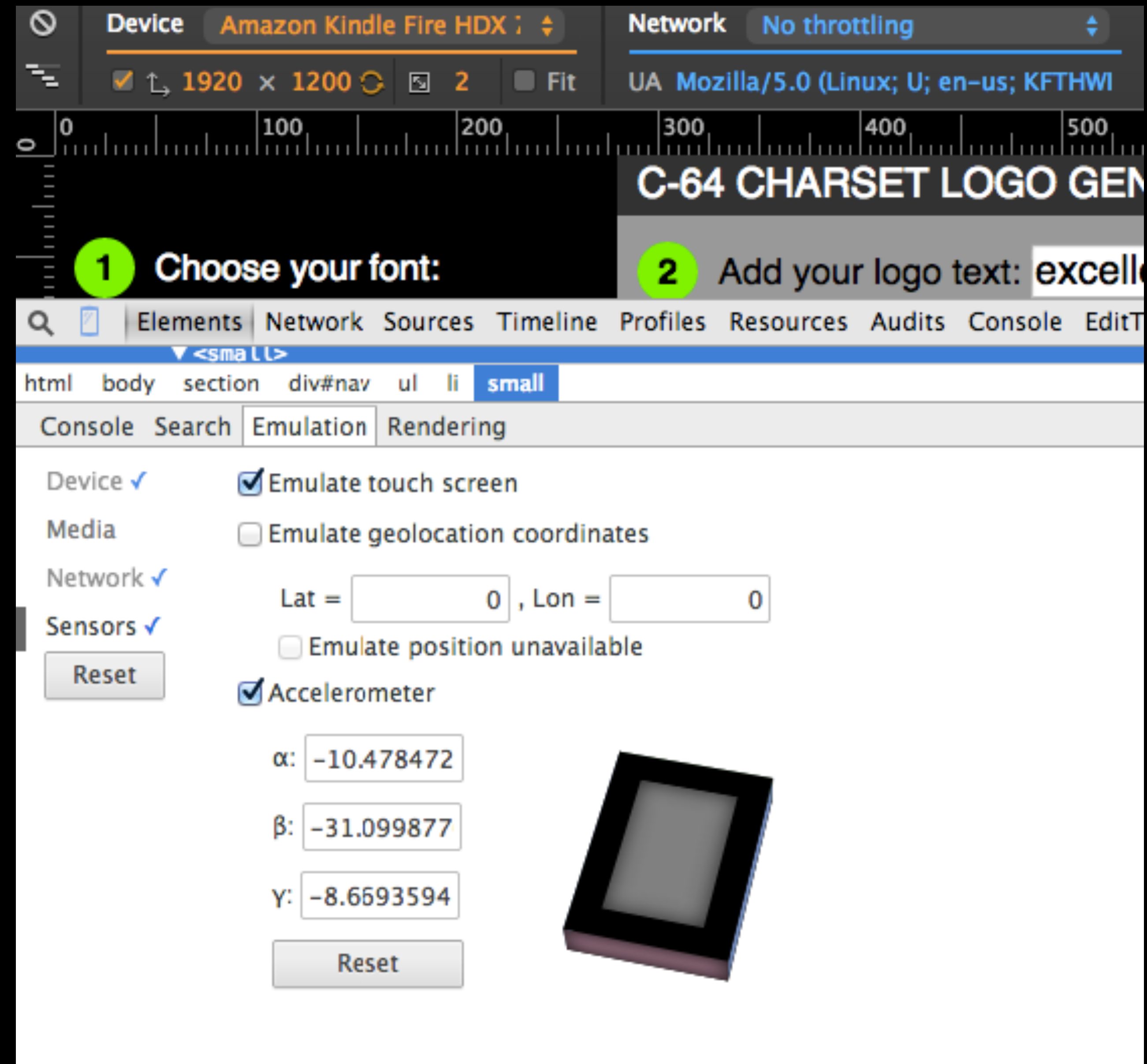
The image shows a web browser's developer console with a dark theme. The top toolbar includes icons for navigation, search, and development tools. The console area displays JavaScript code for a function that initializes DOM elements. Below the code, the 'Sources' panel is open, showing the file path 'http://codepo8.github.io/logogen.js'. The 'Variables' panel is empty, displaying the message 'No variables to display'. The bottom status bar shows tabs for 'Net', 'CSS', 'JS', 'Security', and 'Logging', along with a 'Clear' button and a 'Filter output' search bar.

```
7 */
8
9 (function(){
10
11     // sorry, old browsers...
12     if (!document.querySelector) {return false;}
13 /*
14     Grabbing the canvas and all the necessary elements from the DOM.
15     The image with the .current class defines which font is preset by
16     reading out its ID
17 */
18     var nav = document.querySelector('#nav ul');
19     var srcimg = document.querySelector('#fonts');
20     var save = document.querySelector('#save');
21     var input = document.querySelector('#text');
22     var swab = document.querySelector('#swab');
23     var c64palette = document.querySelector('#c64colours');
24     var kerning = document.querySelector('#kerning');
25     var spacing = document.querySelector('#spacing');
26     var old = document.querySelector('.current');
27     var container = document.querySelector('#container');
28     var zoombutton = document.querySelector('#zoombutton');
29     var colbutton = document.querySelector('#colourbutton');
30
31     var c = document.querySelector('#main');
32     var ctx = c.getContext('2d');
33 }
```

Sources	Call Stack	Variables	Events
http://codepo8.github.io		Add watch expression	
logogen.js		No variables to display	

Net CSS JS Security Logging Clear Filter output

BROWSERS ARE
EMULATORS AND
REMOTE DEBUGGERS
OF CONNECTED
DEVICES.



WEBRTC, WEBGL,
WEB AUDIO AND
MANY MORE
THINGS ARE
POINTING TO A
HIGH FIDELITY
WEB...



TOWARDS AN OFFLINE WEB: SERVICEWORKER

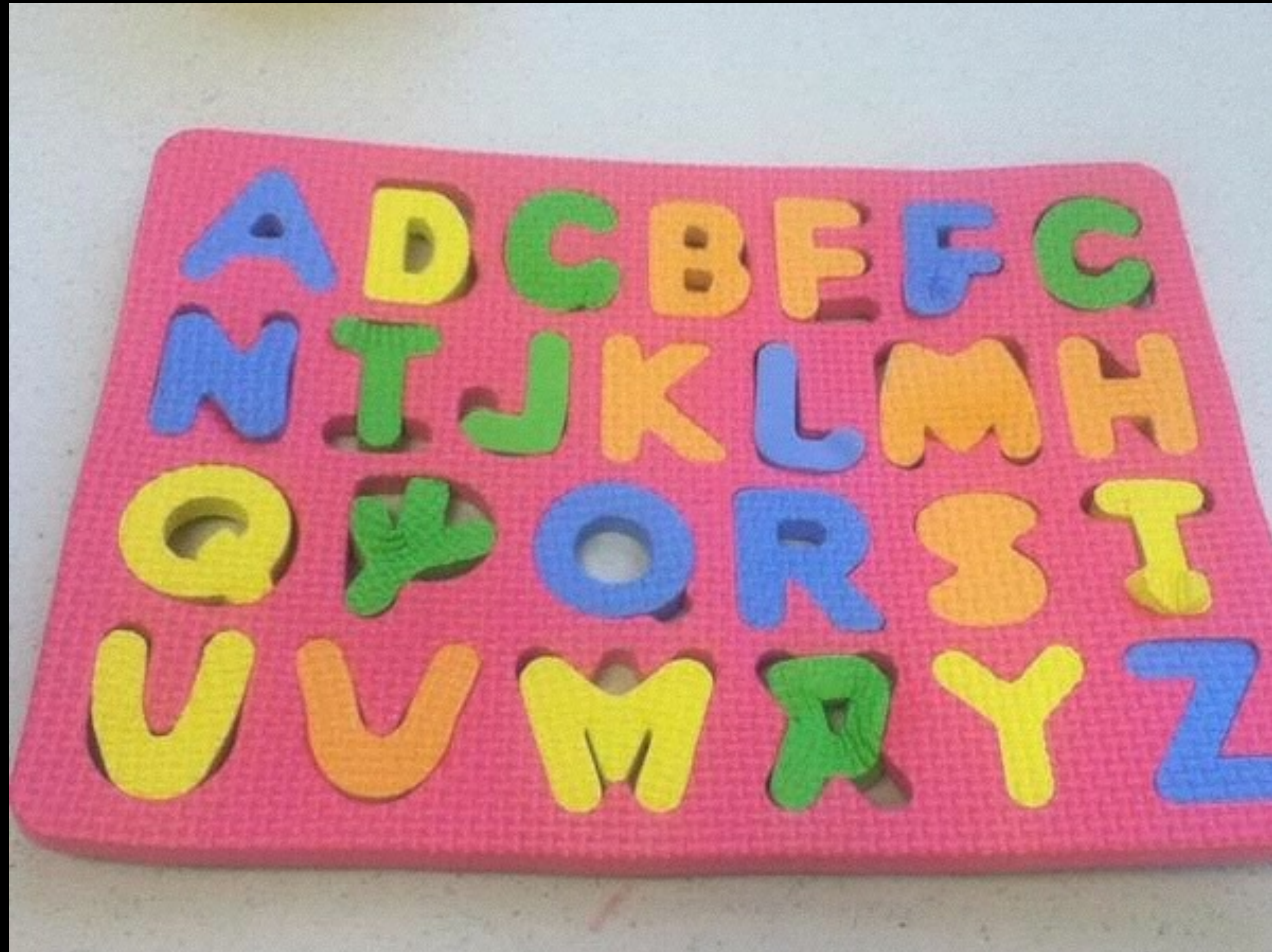


<https://www.youtube.com/watch?v=4uQMI7mFB6g>



<https://www.youtube.com/watch?v=SmZ9XcTpMS4>

WEB COMPONENTS AND SHADOW DOM





The State of the Componentised Web

by [Ian Murphy](#) | August 7, 2014

Introduction

Editor's Note: This incredible piece of work is courtesy of Phil Leggetter, who wrote and coded the whole thing. He's speaking at [Future of Web Apps London, Sept. 29 - Oct. 1](#).



Phil Leggetter

The idea of building applications out of a number of independent components isn't anything new. But with Web Components on the horizon I thought it would be a good time to look at component-based application development, how we benefit from taking this approach, how we can build our applications in this way using existing technologies and how we're likely to be building our front-end web apps in the future.

What are Components?

Software development is a field that suffers from a considerable amount of [semantic overload](#) (terms that can have more than one meaning). "Component" is clearly very generic so it makes sense to qualify what we mean when we talk about them in the context of front-end web apps.

A component within a front-end web app is a piece of software that has generally been designed and built to work within a larger application. A component can be represented within an application in a number of ways. It may have a UI (User Interface) or may be purely

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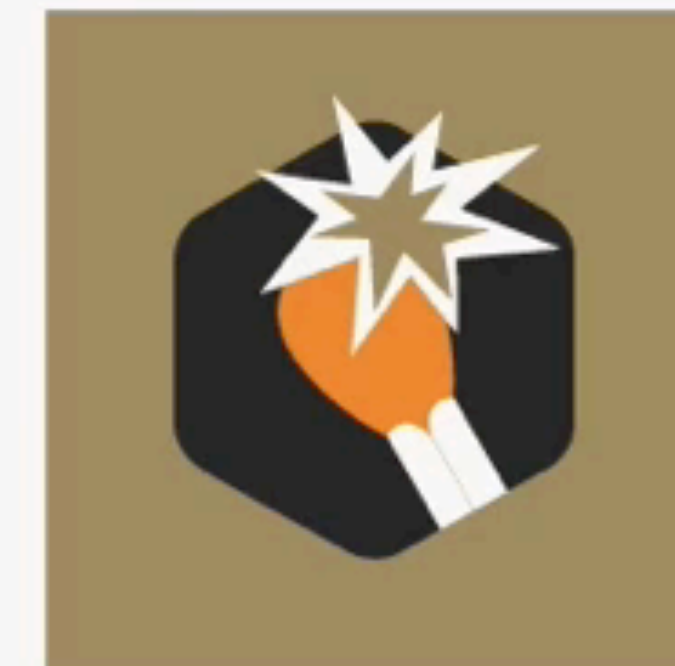
Subscribe

UPCOMING EVENTS



**FUTURE OF
WEB APPS**

29 SEPT - 1 OCT, 2014 - LONDON



**FUTURE OF
WEB APPS**

OCTOBER 27-29, 2014 - BOSTON



TODAY'S TECH ISN'T GOING AWAY...

“ Hating JavaScript is like hating the Internet. **The Internet is a cobweb of different technologies cobbled together with duct tape, string and chewing gum.** It's not elegantly designed in any way, because it's more of a **growing organism** than it is a machine constructed with intent.

Mattias Petter Johansson, Spotify

IT IS BUILT TO LAST!

“ If you build a web app today, it will run in browsers 10 years from now. Good luck trying the same with your favorite mobile OS (excluding Firefox OS).

Paul Bakaus, Google (ex. Zynga)

Thank you!

Chris Heilmann
christianheilmann.com
@codepo8

