

REST

REST

- Representational State Transfer
- by Dr. Roy Fielding at 2000
- Compare to SOAP, XML-RPC

RESTful Web API

- Use uri to represent resource
- Use HTTP method to represent action

URI

`https://api.parse.com/1/classes/todos`

`https://api.parse.com/1/classes/todos/ZBszm2hIpH`

`https://api.parse.com/1/classes/users`

CRUD

create

POST

read

GET

update

PUT

delete

DELETE

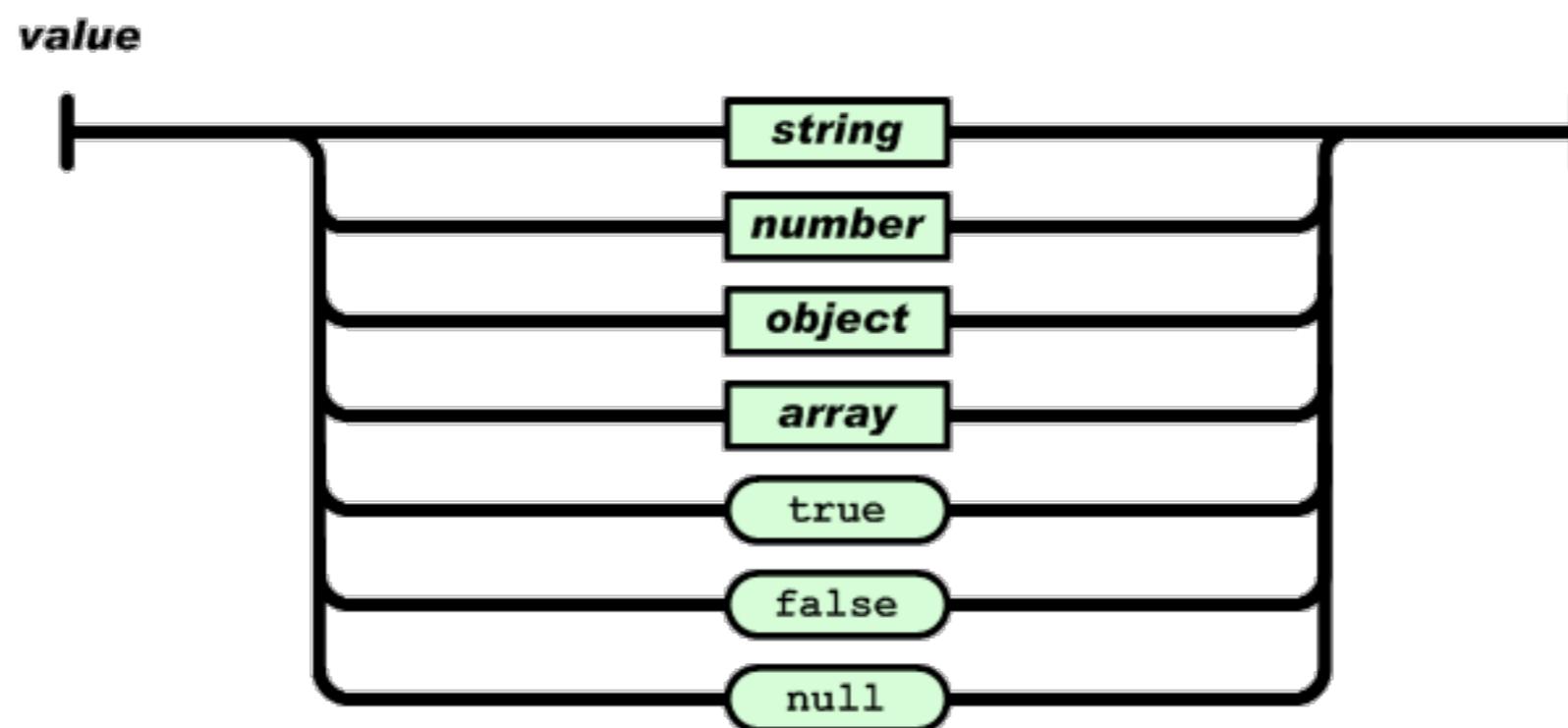
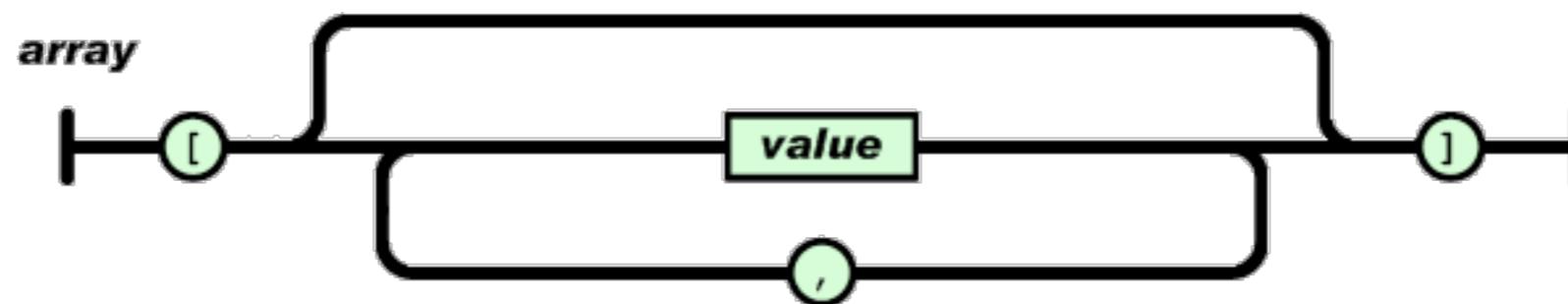
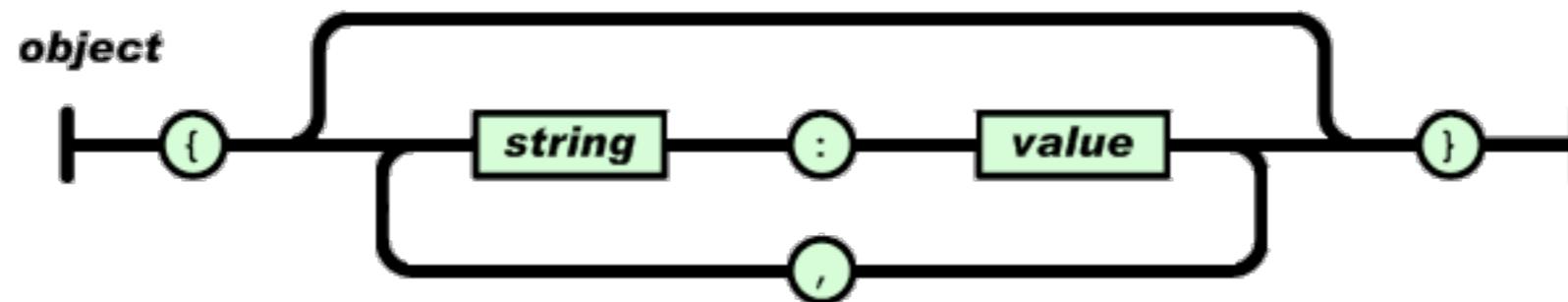
JSON

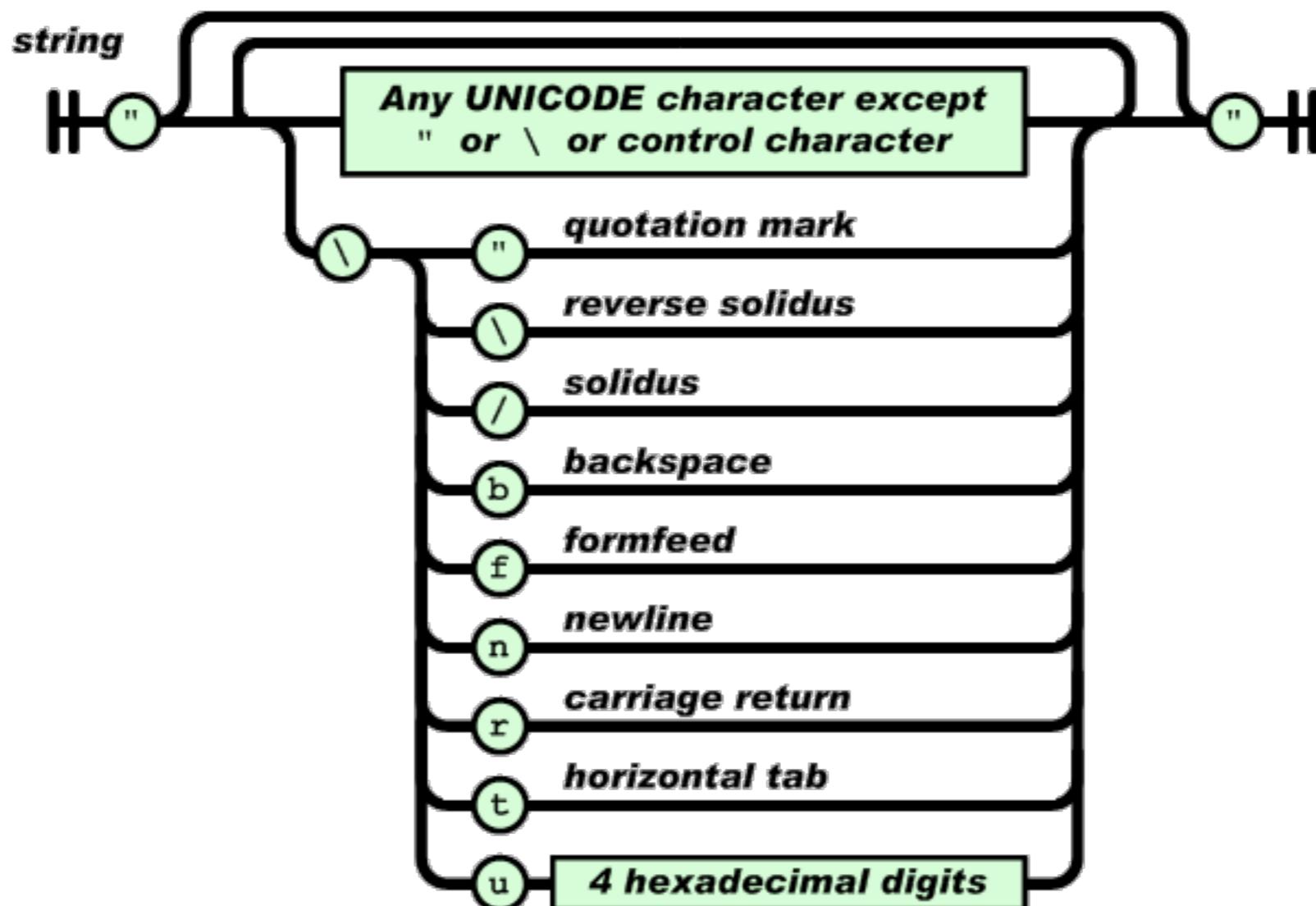
- JavaScript object notation
- by Douglas Crockford
- Very popular now

```
{  
  "glossary": {  
    "title": "example glossary",  
    "GlossDiv": {  
      "title": "S",  
      "GlossList": {  
        "GlossEntry": {  
          "ID": "SGML",  
          "SortAs": "SGML",  
          "Abbrev": "ISO 8879:1986",  
          "GlossDef": {  
            "para": "A metabook.",  
            "GlossSeeAlso": ["GML", "XML"]  
          },  
          "GlossSee": "markup"  
        }  
      }  
    }  
  }  
}
```

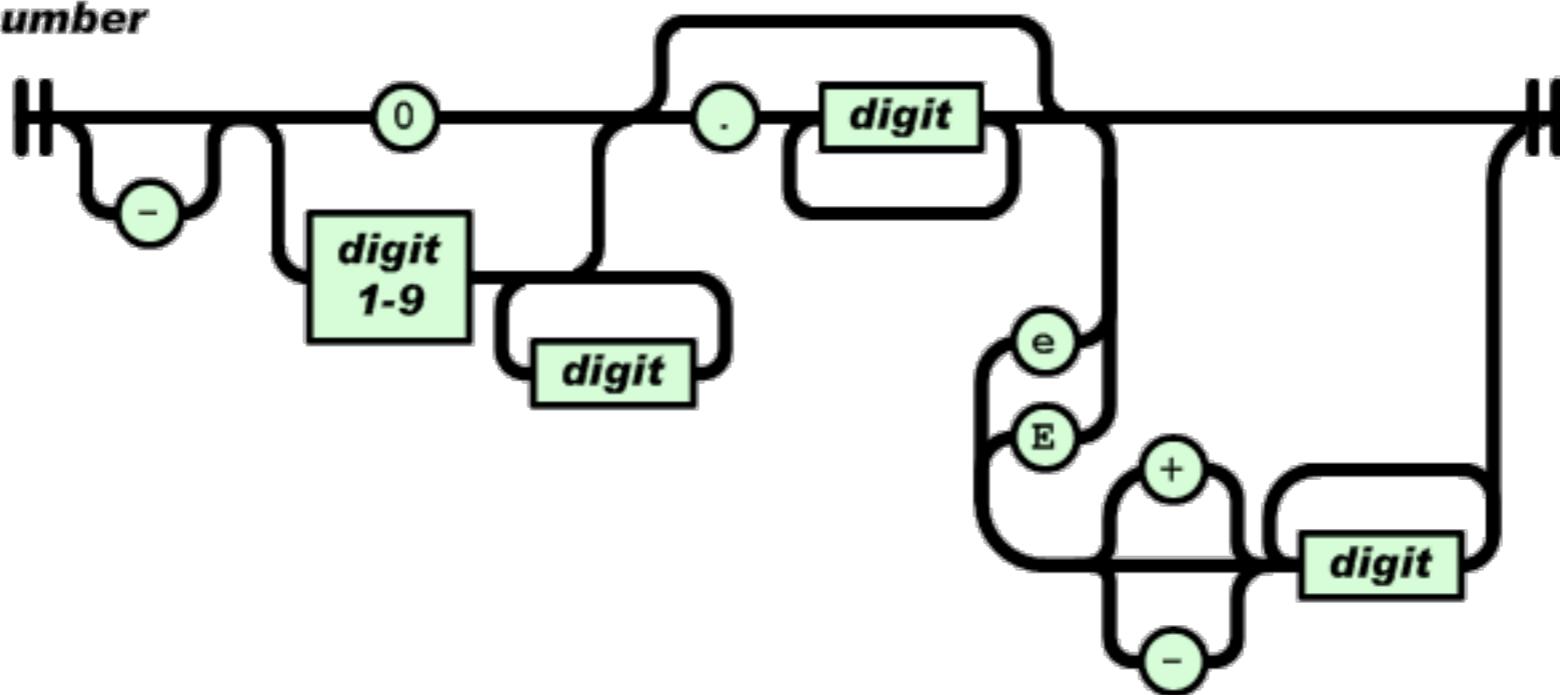
JSON Tips

- Key require double quote "
- Always double quote, not single
- No function support (use eval is danger)
- No comma , after last item
- Use library





number



Parse.com

- Easy to start cloud storage platform
- RESTful API

Home | Parse

https://www.parse.com/apps

Select an App

Dashboard

othree@gmail.com

Create a new App

DEV todoapp Created about 7 hours ago

Just getting started?
Check out the [quickstart guide!](#)

DEV othree Created 27 days ago

2 Requests 0 Users 0 Installations

Docs Billing Downloads Help Status Blog Parse.com

The screenshot shows the Parse Dashboard interface. At the top, there's a header bar with the Parse logo, a search bar, and user account information. Below the header, a button says "Create a new App". The main area displays two app cards. The first card, "todoapp", was created about 7 hours ago and has a placeholder icon. The second card, "othree", was created 27 days ago and also has a placeholder icon. Both cards show metrics: "Requests", "Users", and "Installations". At the bottom of the dashboard, there's a footer with links to various Parse services.

todos | Parse

https://www.parse.com/apps/todoapp--200/collections#class/todos

Core Analytics Push Settings Docs othree@gmail.com

Data

+ Row - Row + Col Security More

objectId	String	title	String	createdAt	Date	updatedAt	Date	ACL	ACL
ZBszm2hlpH		Homework		Oct 06, 2015, 02:53		Oct 06, 2015, 04:20		Public	Read and Write

+ Add Class Import

Cloud Code

Webhooks

Jobs

Logs

Config

API Console

Add a new class

Custom Class name

Class names must only contain numbers, letters, and underscore, and can only begin with a letter.

Create Class Cancel

20 rows/page 1 - 1 of 1 rows

Docs Billing Downloads Help Status Blog Parse.com

todos | Parse

https://www.parse.com/apps/todoapp--200/collections#class/todos

P todoapp DEV Core Analytics Push Settings Docs othree@gmail.com

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+ Row - Row + Col Security More

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20 rows/page 1 - 1 of 1 rows

Docs Billing Downloads Help Status Blog Parse.com

https://www.parse.com/apps/todoapp--200/collections#

REST API Developers Guide... +

https://www.parse.com/docs/rest/guide#quick-reference-objects

Quickstart API Reference

Quick Reference

Objects

- Users
- Sessions
- Roles
- Files
- Analytics
- Push Notifications
- Installations
- Cloud Functions
- Schemas
- Apps
- Function Hooks
- Trigger Hooks
- Request Format
- Response Format
- Calling from Client Apps

Users

- Objects
- Queries
- Users
- Sessions
- Roles
- Files
- GeoPoints
- Push Notification

URL	HTTP Verb	Functionality
/1/classes/<className>	POST	Creating Objects
/1/classes/<className>/<objectId>	GET	Retrieving Objects
/1/classes/<className>/<objectId>	PUT	Updating Objects
/1/classes/<className>	GET	Queries
/1/classes/<className>/<objectId>	DELETE	Deleting Objects

URL	HTTP Verb	Functionality
/1/users	POST	Signing Up Linking Users
/1/login	GET	Logging In
/1/logout	POST	Logging Out
/1/users/<objectId>	GET	Retrieving Users
/1/users/me	GET	Validating Session Tokens Retrieving Current User

CORS

- Cross-Origin Resource Sharing

Access-Control-Allow-Origin: http://foo.example

Simple Request

- GET, HEAD, POST
- Accept, Accept-Language, Content-Language
- Content-Type
 - application/x-www-form-urlencoded
 - multipart/form-data
 - text/plain

Non Simple Request

- Need preflighted request
- Use OPTION method
- And Access-Control-Request-* headers

OPTIONS /resources/post-here/ HTTP/1.1
Host: bar.other
User-Agent: Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10.5
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Connection: keep-alive
Origin: http://foo.example
Access-Control-Request-Method: POST

HTTP/1.1 200 OK

Date: Mon, 01 Dec 2008 01:15:39 GMT

Server: Apache/2.0.61 (Unix)

Access-Control-Allow-Origin: http://foo.example

Access-Control-Allow-Methods: POST, GET, OPTIONS

Access-Control-Max-Age: 1728000

Vary: Accept-Encoding, Origin

Content-Encoding: gzip

Content-Length: 0

Keep-Alive: timeout=2, max=100

Connection: Keep-Alive

Content-Type: text/plain

POST /resources/post-here/ HTTP/1.1

.....

Take A Look

MVC and Parse

Mobile Web

Course 4

Outline

- Mobile ?
- Responsive
- Mobile Web
- Remote Debug

**Page Layout
Depends on
Window Size**

Window Size
Depends on
Screen Size

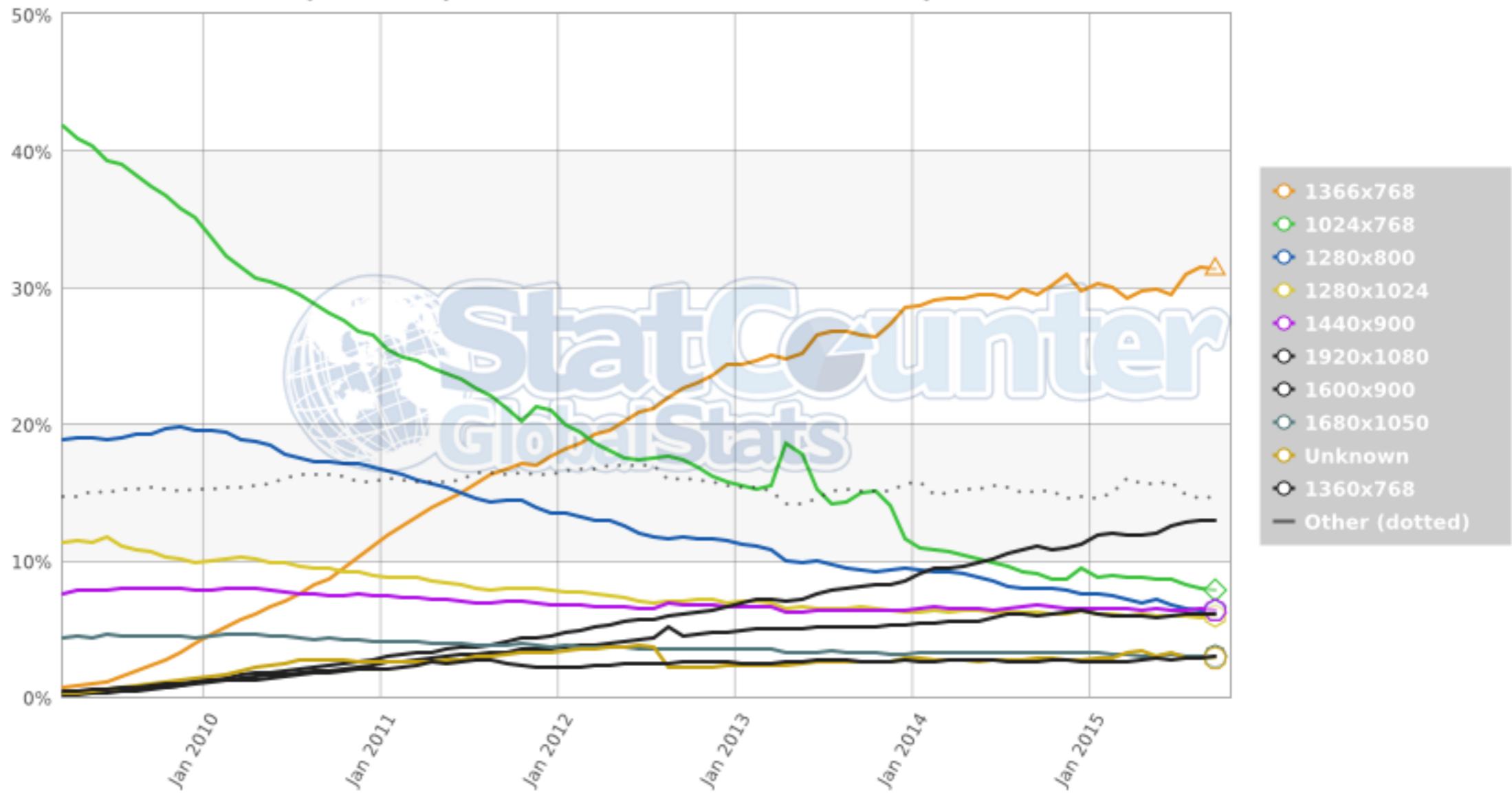
Screen Size

- a.k.a Resolution
- 1024*768(XGA) in old times



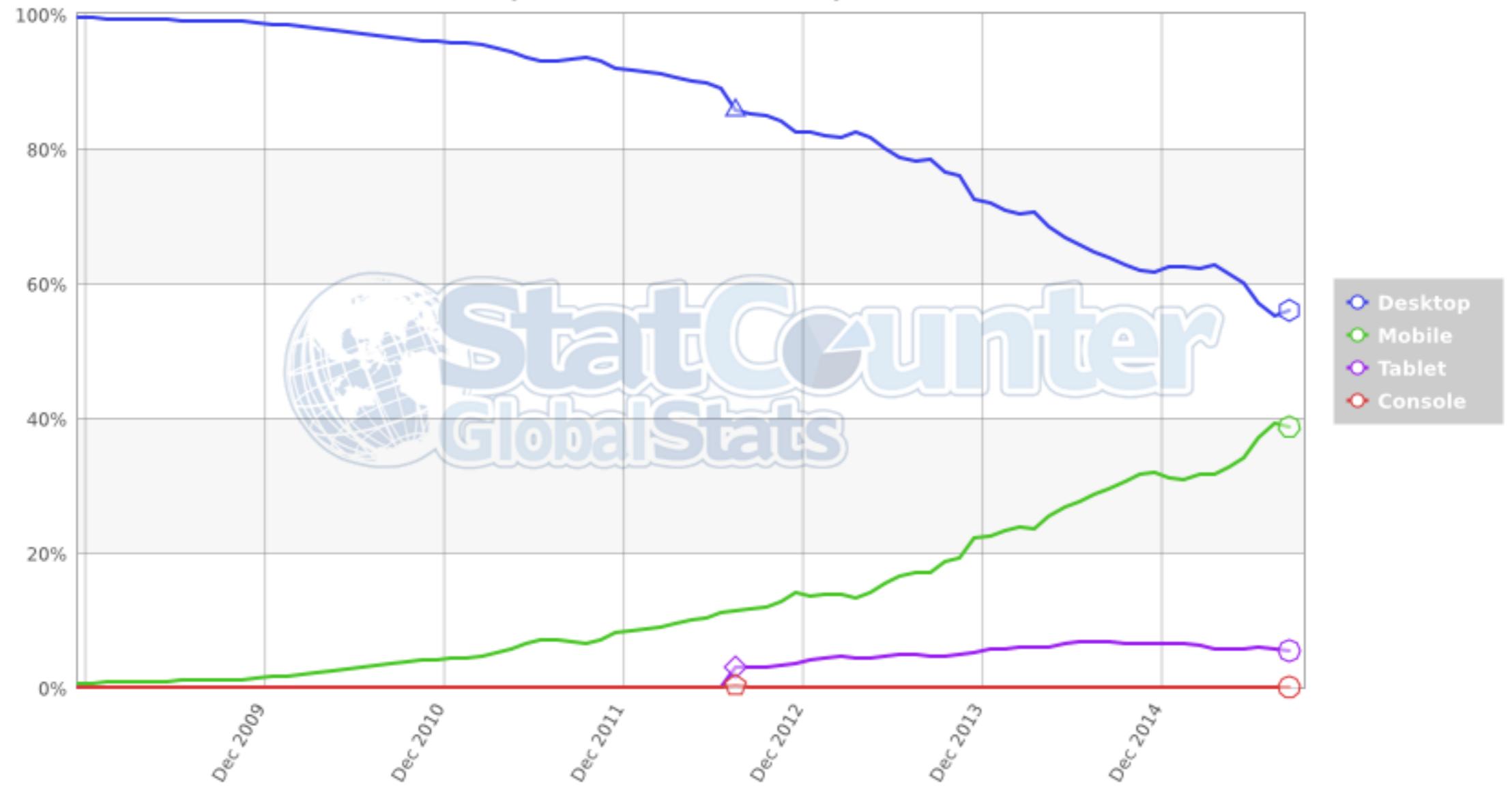
StatCounter Global Stats

Top 10 Desktop Screen Resolutions from Mar 2009 to Sept 2015

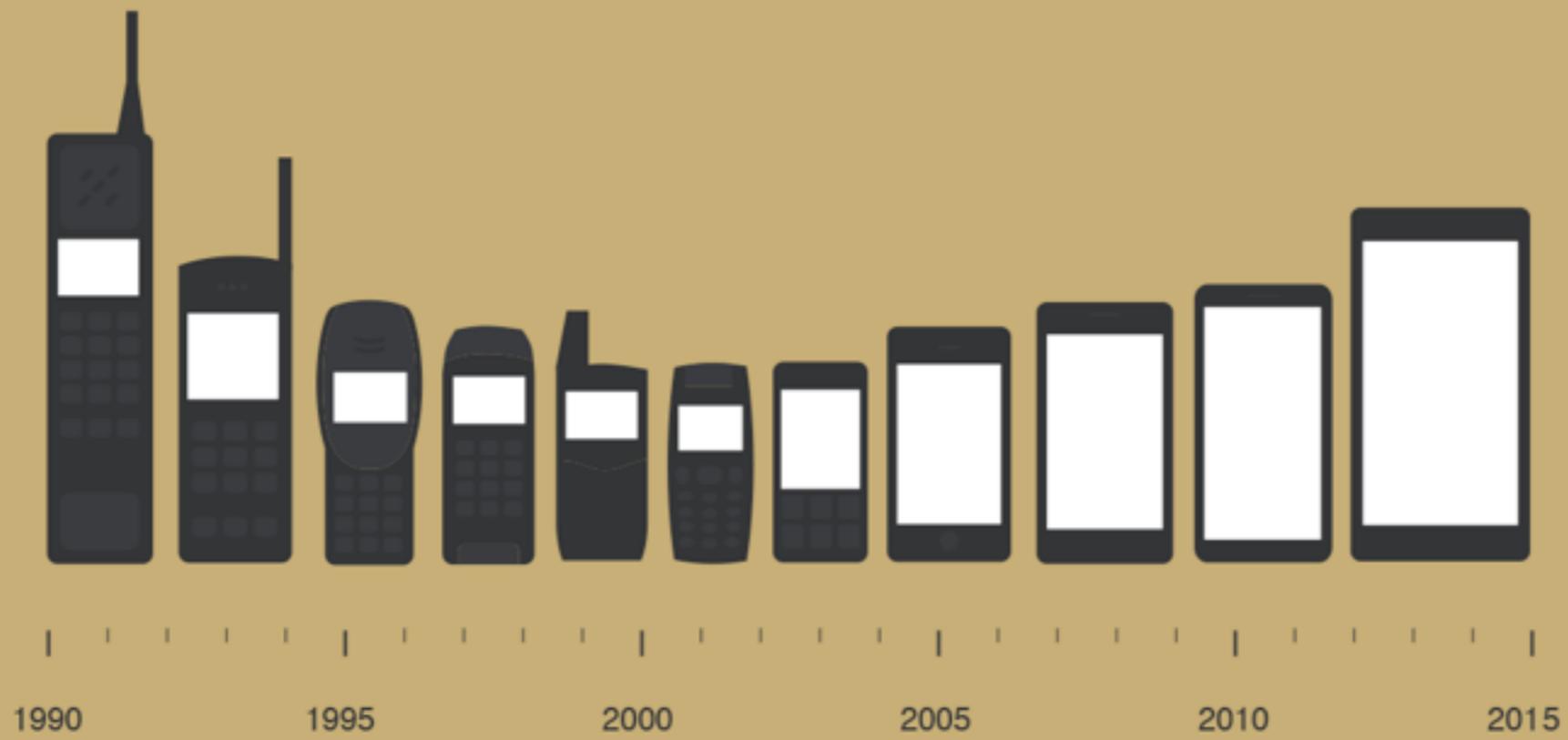




StatCounter Global Stats
Comparison from Dec 2008 to Sept 2015

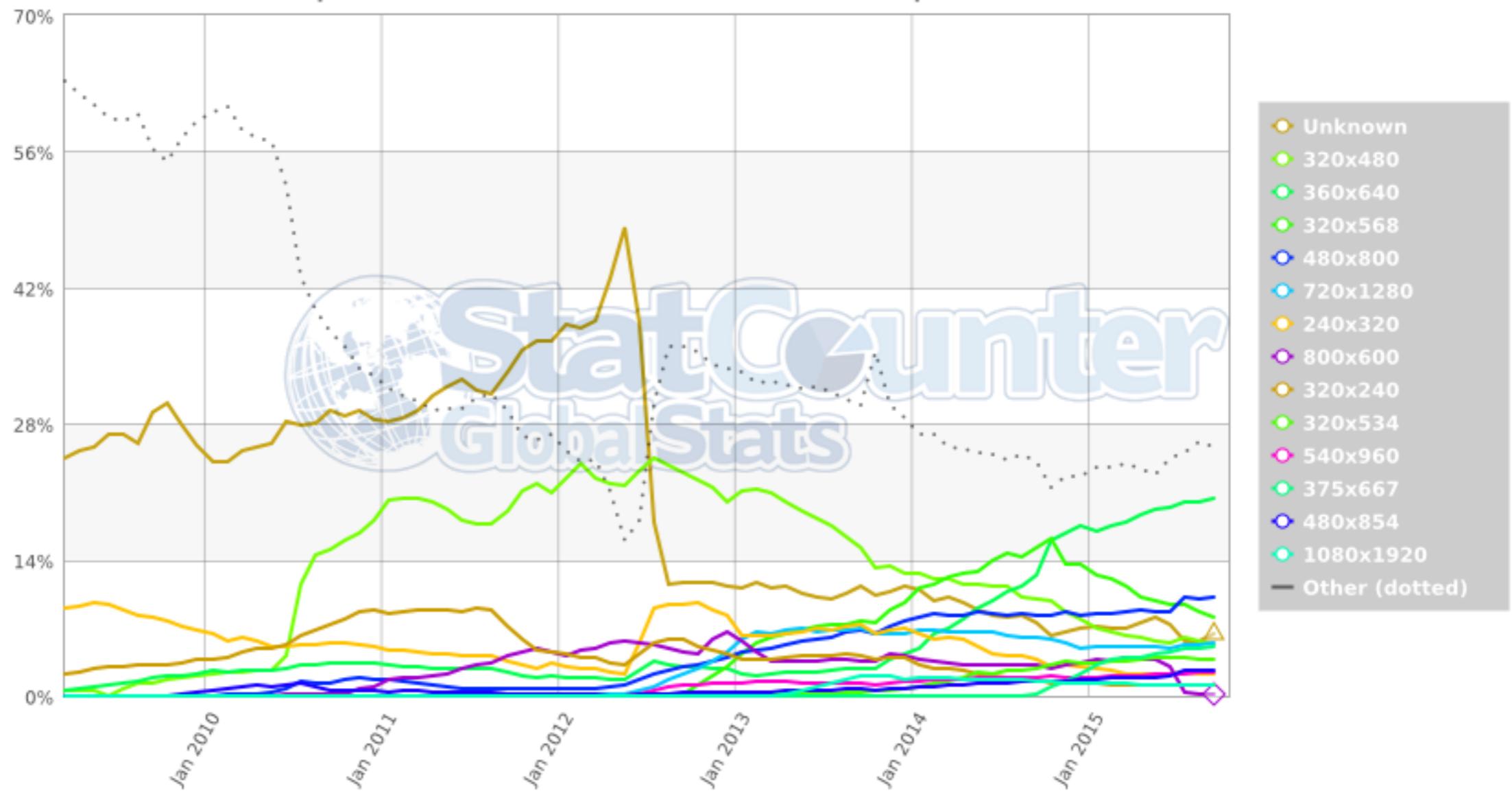


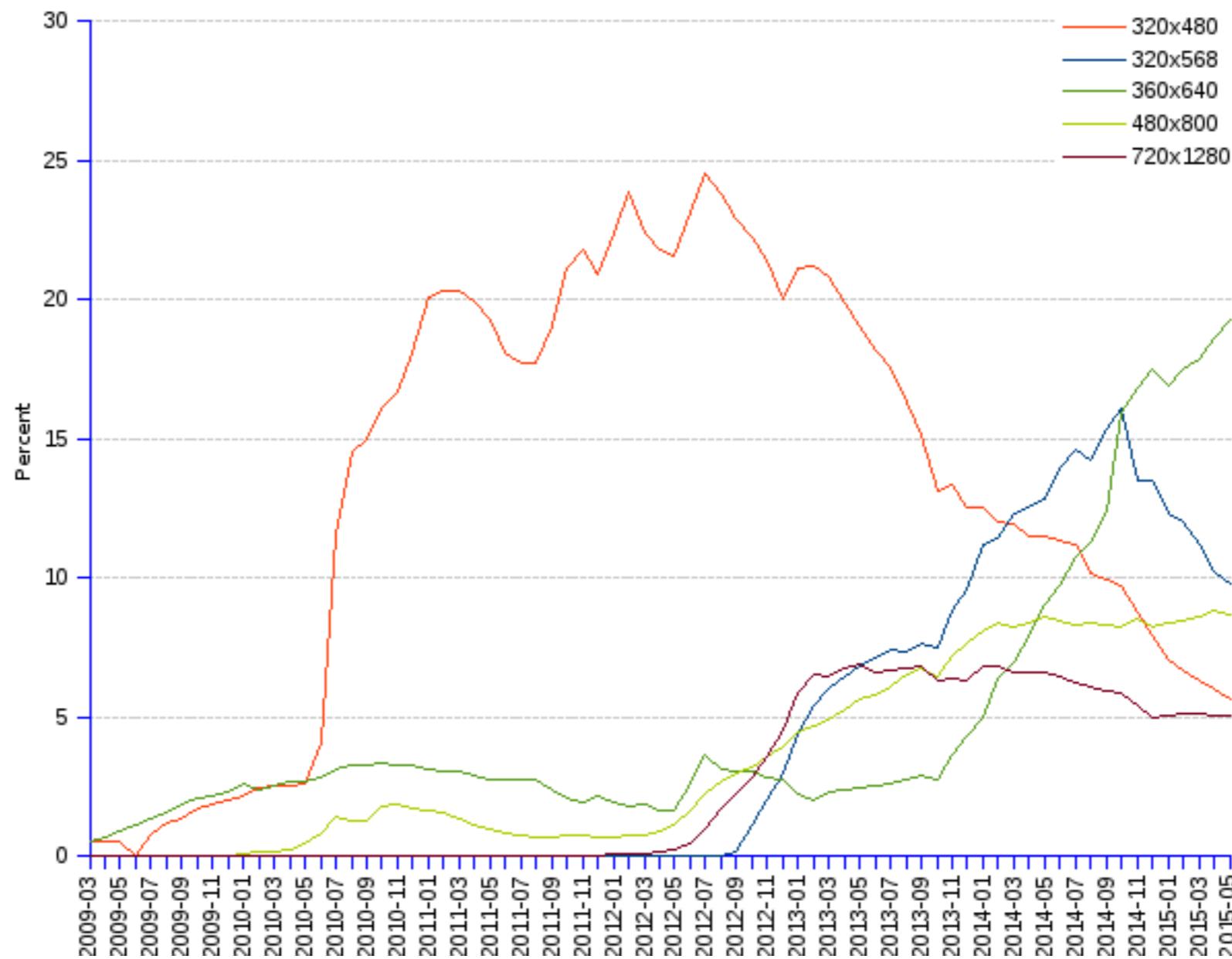
Mobiltelefonens evolution

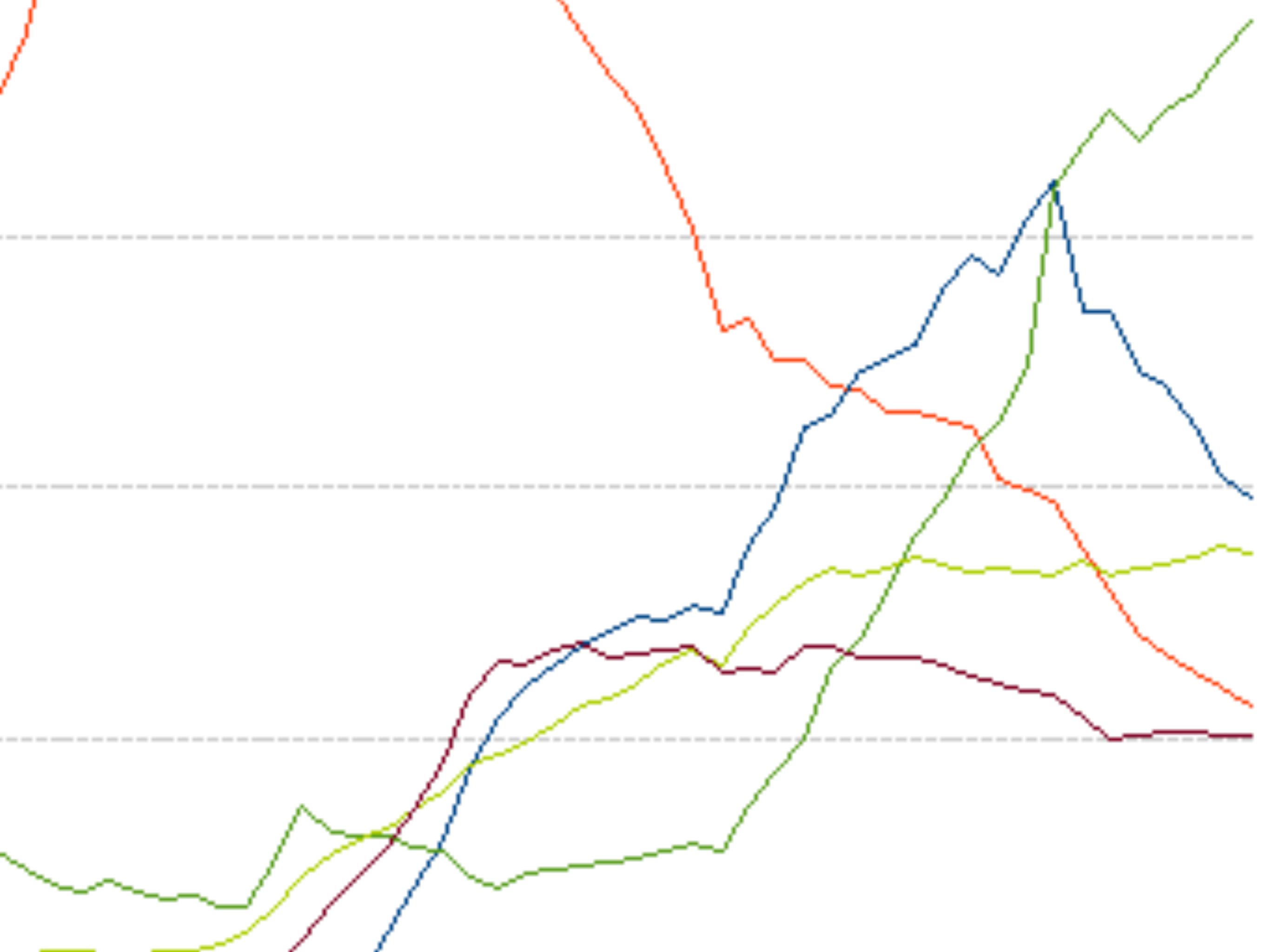


StatCounter Global Stats

Top 14 Mobile Screen Resolutions from Mar 2009 to Sept 2015



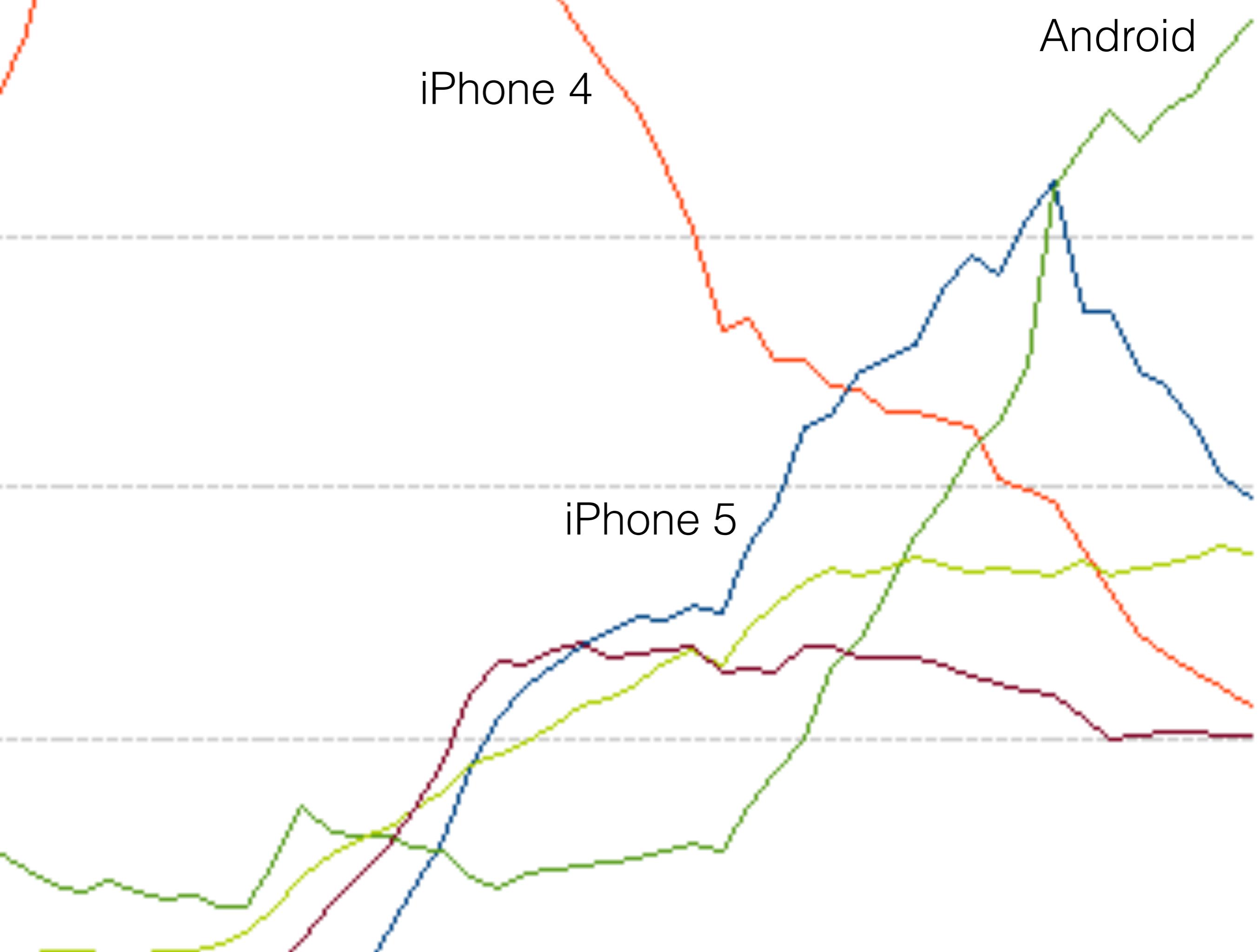




Android

iPhone 4

iPhone 5



Mobile

- Lots devices on internet
- Keep increasing
- And tablet appears



A BOOK APART

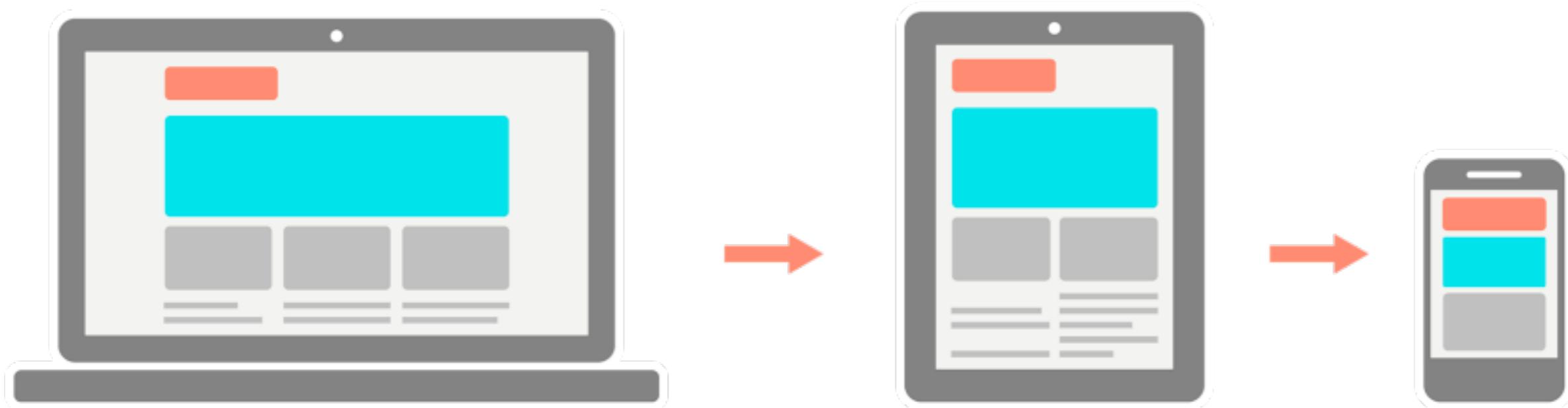
Brief books for people who make websites

NO.

6

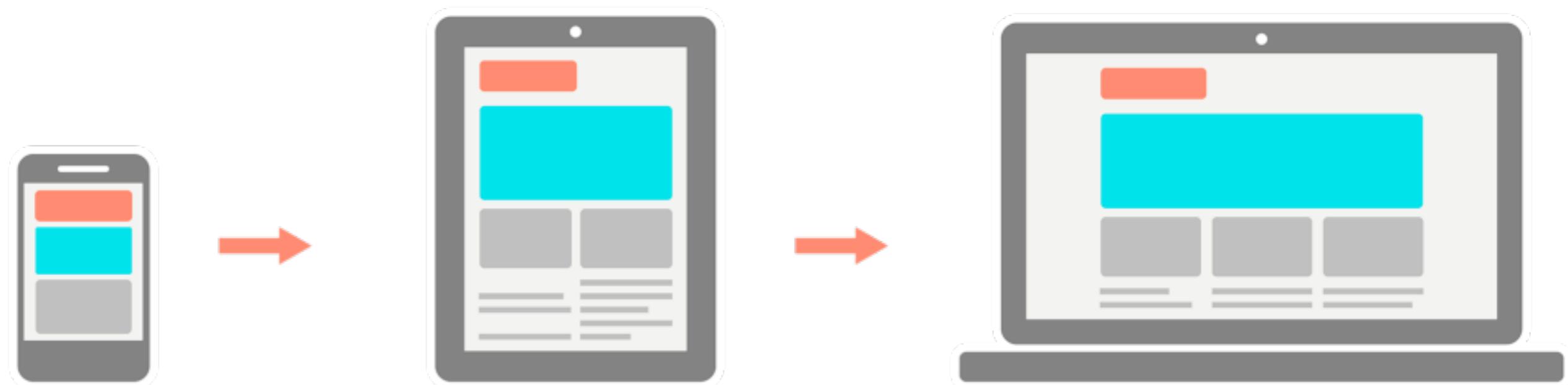
Luke Wroblewski

MOBILE FIRST



Responsive Web Design

Mobile First Web Design



Official Google Webmaster X

googlewebmastercentral.blogspot.tw/2015/09/mobile-friendly-web-pages-using-app.html?

Google | Webmaster Central Blog

Official news on crawling and indexing sites for the Google index

Mobile-friendly web pages using app banners

Posted: Tuesday, September 01, 2015

G+ 726 Twitter Facebook

When it comes to search on mobile devices, users should get the most relevant answers, no matter if the answer lives in an app or a web page. We've recently made it easier for users to [find and discover apps](#) and [mobile-friendly web pages](#). However, sometimes a user may tap on a search result on a mobile device and see an app install interstitial that hides a significant amount of content and prompts the user to install an app. Our analysis shows that it is not a good search experience and can be frustrating for users because they are expecting to see the content of the web page.

Starting today, we'll be updating the [Mobile-Friendly Test](#) to indicate that sites should avoid showing app install interstitials that hide a significant amount of content on the transition from the search result page. The [Mobile Usability report](#) in Search Console will show webmasters the number of pages across their site that have this issue.

After November 1, mobile web pages that show an app install interstitial that hides a significant amount of content on the transition from the search result page will no longer be considered mobile-friendly. This does not affect other types of interstitials. As an alternative to app install interstitials, browsers provide ways to promote an app that are more user-friendly.

Hey! Rankings in mobile search results changed April 21st.

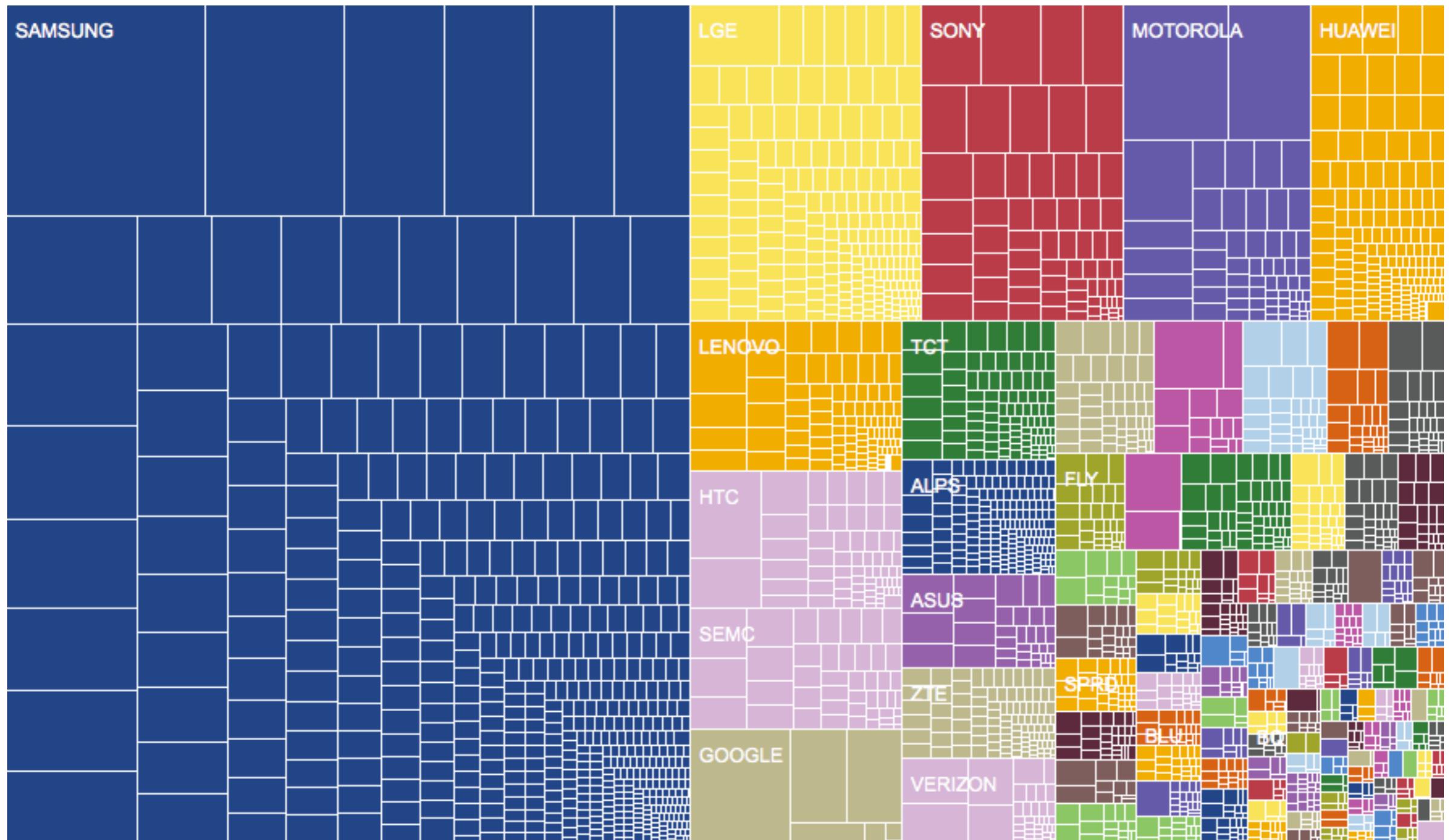
Check here if your site is mobile-friendly.

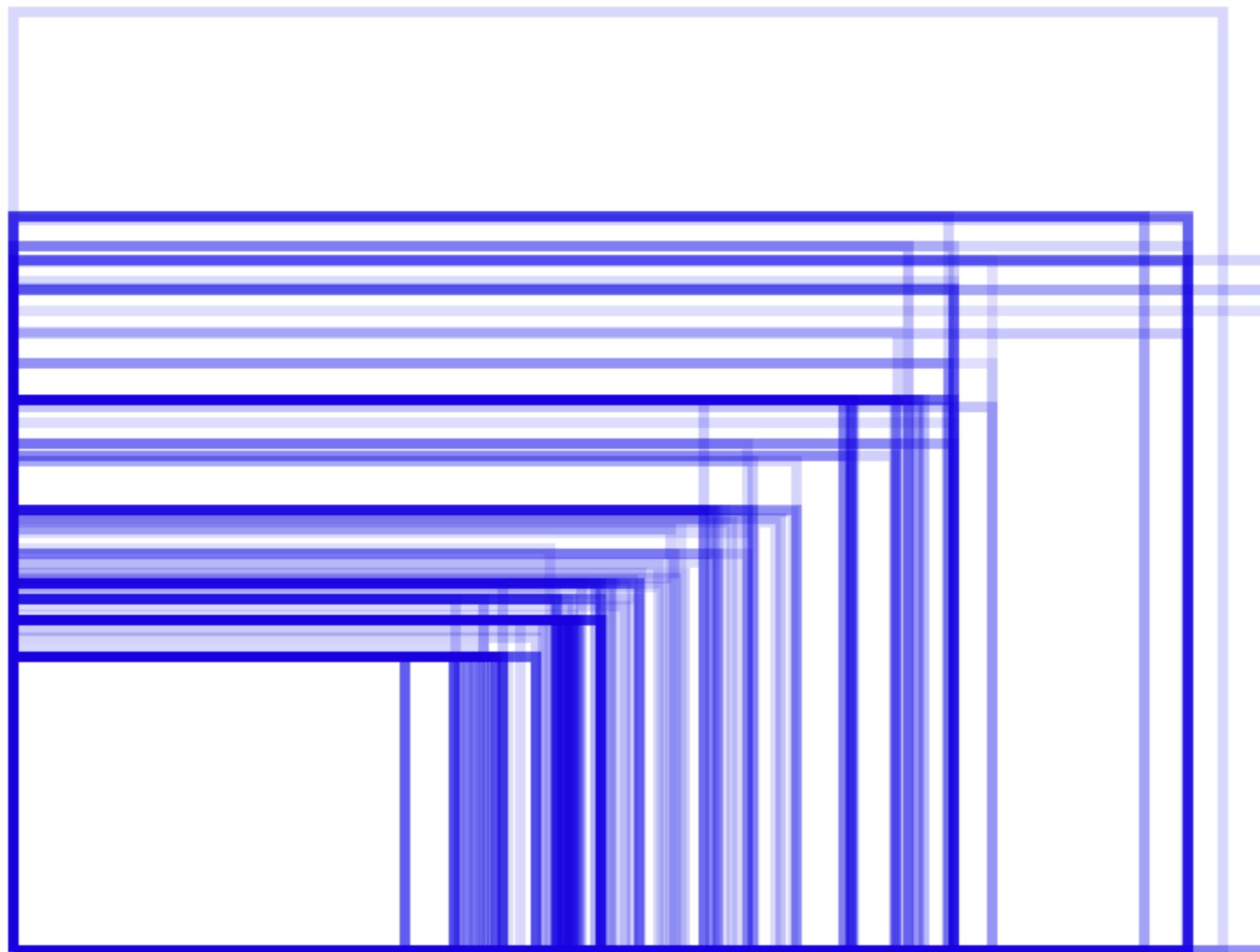
Google Webmasters
google.com/+GoogleWebmaster...
Helping webmasters create great sites.

G+ 追蹤 +1
+ 626,963

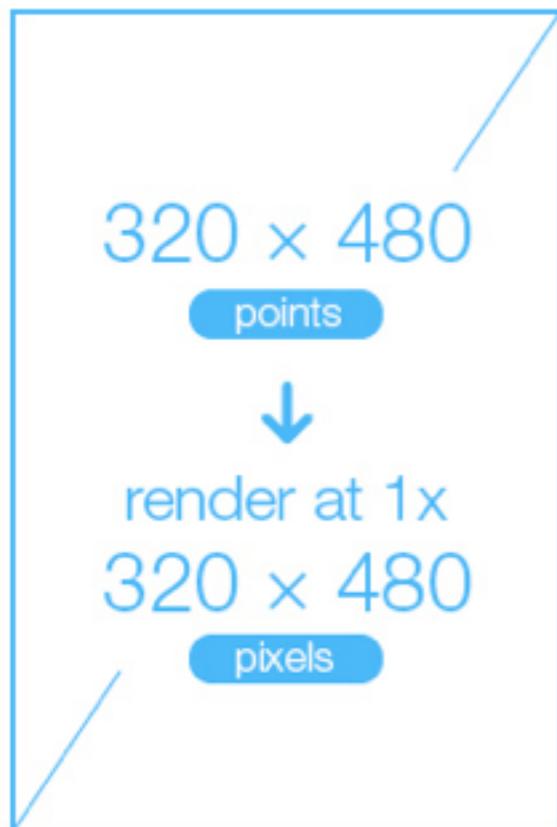
Labels

Archive

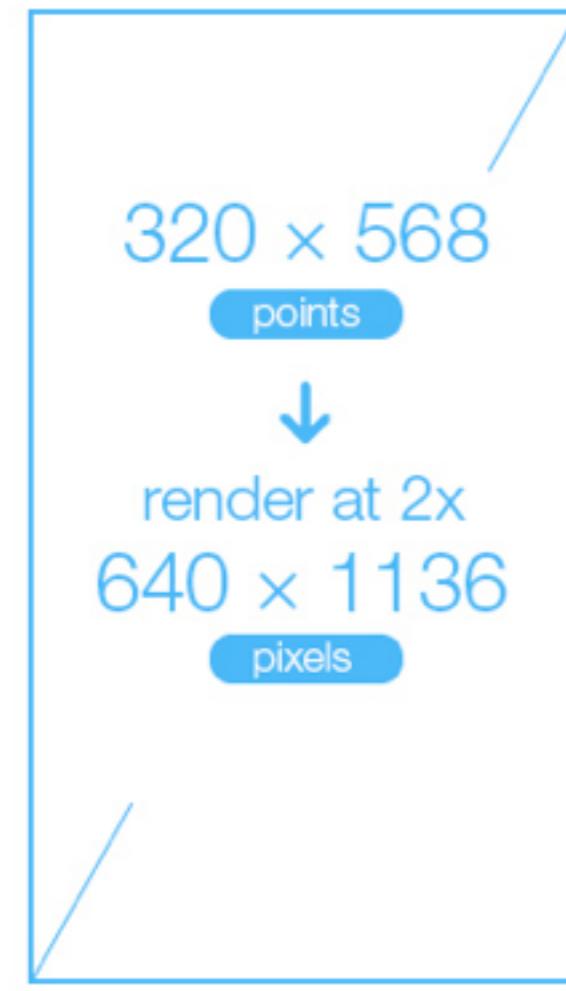




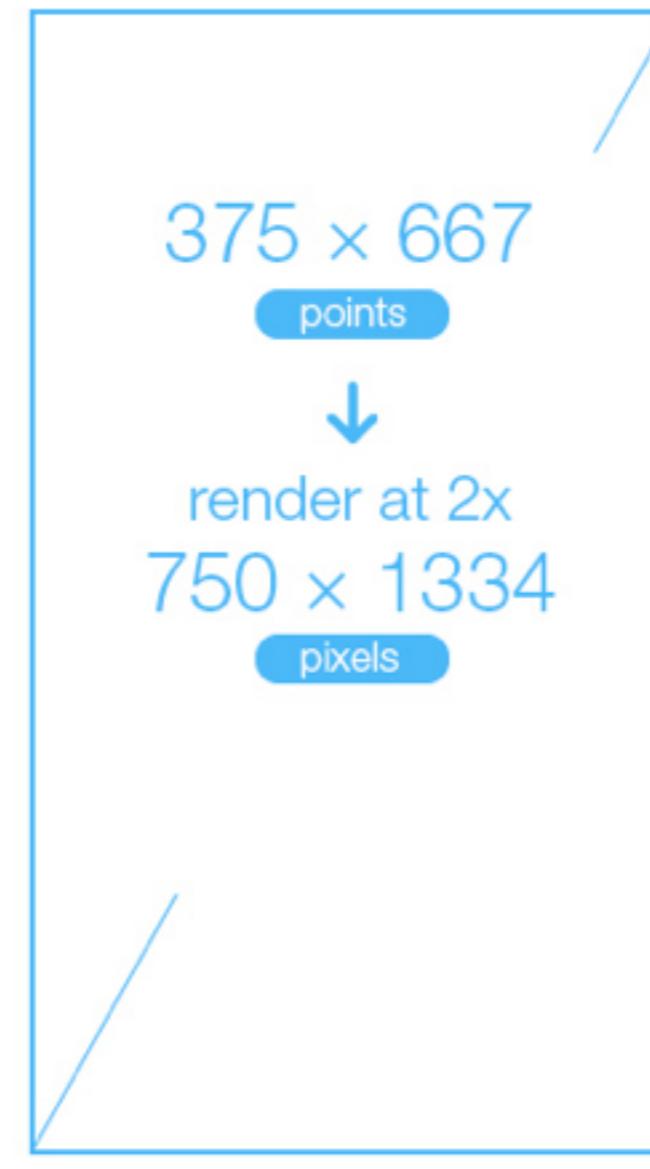
Original iPhone - 3,5"



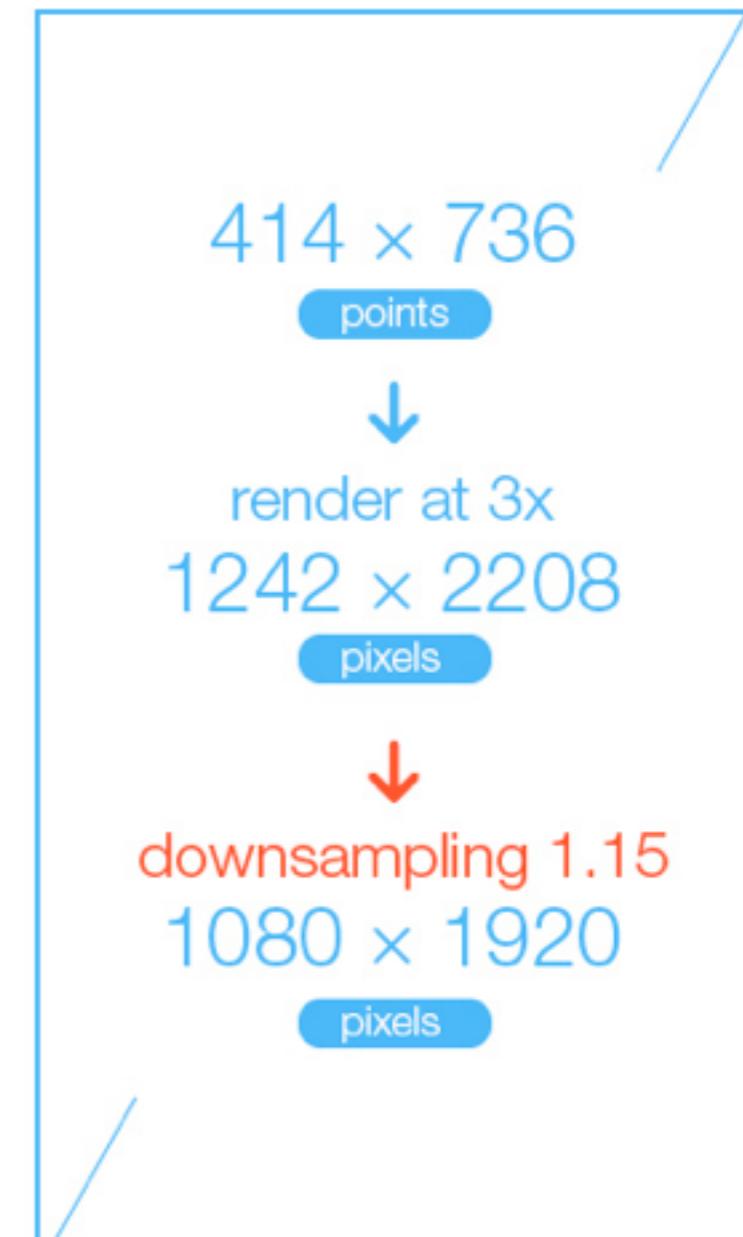
iPhone 5 - 4"



iPhone 6 - 4,7"



iPhone 6 Plus - 5,5"



Before Responsive

- Center main content
- Set main content width to 960px

If you want a responsive grid framework, check out [Unsemantic.com](#)

 Twitter
@NATHANSMITH

960 GRID SYSTEM

[Download](#) - CSS, sketch paper, and templates for: Acorn, Fireworks, Flash, InDesign, GIMP, Inkscape, Illustrator, OmniGraffle, Photoshop, QuarkXPress, Visio, Exp Design. Repository at [GitHub](#).

ADS BY FUSION

JIRA is the #1 software tool used by agile teams. You want in on that, right?

Atlassian JIRA
Plan, track, & ship. On time.

Get started

Big ol' DOWNLOAD button :)

 INTERVIEW ABOUT 960.gs

VIEW SLIDES ABOUT THE 960 GRID SYSTEM

ADAPT.JS - ADAPTIVE CSS CUSTOM CSS GENERATOR GRID OVERLAY BOOKMARK

Essence

The 960 Grid System is an effort to streamline web development workflow by providing commonly used dimensions, based on a width of 960 pixels. There are two variants: 12 and 16 columns, which can be used separately or in tandem. [Read more](#).

Dimensions

The 12-column grid is divided into portions that are 60 pixels wide. The 16-column grid consists of 40 pixel increments. Each column has 10 pixels of margin on the left and right, which create 20 pixel wide gutters between columns. [View demo](#).

Purpose

The premise of the system is ideally suited to rapid prototyping, but it would work equally well when integrated into a production environment. There are printable sketch sheets, design layouts, and a CSS file that have identical measurements.

More Columns

For those more comfortable designing on a 24-column grid, an alternative version is also included. It consists of columns 30 pixels wide, with 10 pixel gutters, and a 5 pixel buffer on each side of the container. This keeps text from touching browser chrome — helpful for devices like the iPhone, where a lower-

Source Order

By utilizing the *push_XX* and *pull_XX* classes, elements can be rearranged, independent of the order in which they appear in the markup. This allows you to keep more pertinent info higher in the HTML, without sacrificing precision in your page layout. For instance, view the source code of this page to see how

Responsive

- Website respond to the environment

Environment

- Screen Size
- Device Pixel Density

網站設計的原則 – Web Fundamentals

<https://developers.google.com/web/fundamentals/principles/?hl=zh-tw>

Google Developers

查看原始碼 | 提供意見

/Web ▾ Fundamentals Get Started Documentation ▾ Tools

網站設計的原則

Google 和 AnswerLab 聯手進行了一項十分詳盡的研究，檢視某個範圍的使用者與各種行動網站互動的情況。研究目的就是為了告訴大家：什麼樣的網站是好的行動網站？

首頁和網站導覽

電腦首頁通常會有許多用途，但行動首頁應專注將使用者引向他們正在尋找的內容。

目

- 01 將號召性文字放在中心位置
- 02 讓選單簡潔明瞭

網站搜尋

如要協助行動使用者快速找到所需內容，網站搜尋功能至關重要。

目

- 05 使網站搜尋欄顯而易見
- 06 確保網站搜尋結果的關聯性

回應式網頁設計基礎 – Web X

https://developers.google.com/web/fundamentals/layouts/rwd-fundamentals/

Google Developers

查看原始碼 | 提供意見

/Web Fundamentals Get Started Documentation Tools

Web / Web Fundamentals / Multi-Device Layouts /

English | العربية | Deutsch | Español | Français | Italiano | 日本語 | Nederlands | Polski | Português (Brasil) |
Русский | Türkçe | 中文 (简体) | 中文 (繁體)

#MULTI-DEVICE LAYOUTS

回應式網頁設計基礎

by  Pete LePage
Published: April 30, 2014

透過行動裝置上網的使用者數量正以難以想像的速度暴增，但是大多數的網站並未針對行動裝置進行最佳化。礙於行動裝置的螢幕大小，開發人員必須針對行動裝置螢幕上的內容另行編排。

Udacity: Responsive Web Design Fundamentals

Explore what makes a site responsive and how some

CAMERON PITTMAN

Device Google Nexus 5 Network No throttling

360 x 640 3 Fit UA Mozilla/5.0 (Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/41.0.2228.0 Mobile Safari/537.36

Stop hitting refresh!

Demo

How

- Media Query

Media Query

- Query media device spec
- in CSS syntax

Specs

- Color Depth
- Aspect Ratio
- Width/Height
- Scan
- Orientation
- Resolution

Specs

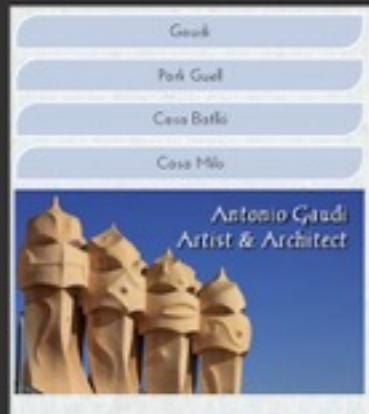
- Color Depth
- Aspect Ratio
- Width/Height
- Scan
- Orientation
- Resolution

Specs

- Color Depth
- Aspect Ratio
- Width/Height
- Scan
- Orientation
- Resolution

```
@media (max-width: 600px) {  
  .facet_sidebar {  
    display: none;  
  }  
}
```

Mobile Tablet



Antonio Gaudi
The voices of Barcelona blur in a mix of Spanish and Catalan in much the way Gaudi's work blurs the lines between architecture and artwork.
From the tiled benches in Gaudi Park to the towers over Casa Mila and Casa Batllo, I fell in love with Gaudi's work on my first trip to Barcelona.

Park Guell
The benches as Lizard fountain in Park Guell make up part of the UNESCO World Heritage Site known as, "The Works of Antonio Gaudi." The park features Gaudi's famous Lizard Fountain, as well as benches and other extraordinary examples of Gaudi's talent with tiles.

Casa Batllo
The first time I strolled down the Passeig de Gracia (Catalan for the Promenade of Grace), I stopped in my tracks in front of Gaudi's Casa Batllo. The house, 'wedged between two 'normal' buildings,' looks more like a giant sculpture than any house I'd ever seen anywhere else.

Casa Mila
A popular attraction in Barcelona, Casa Mila, also known as La Pedrera, is equally one of the most famous buildings designed by Gaudi. The roof features a collection of chimneys and towers that look like they'd fit right in as characters in a Dr. Seuss book.



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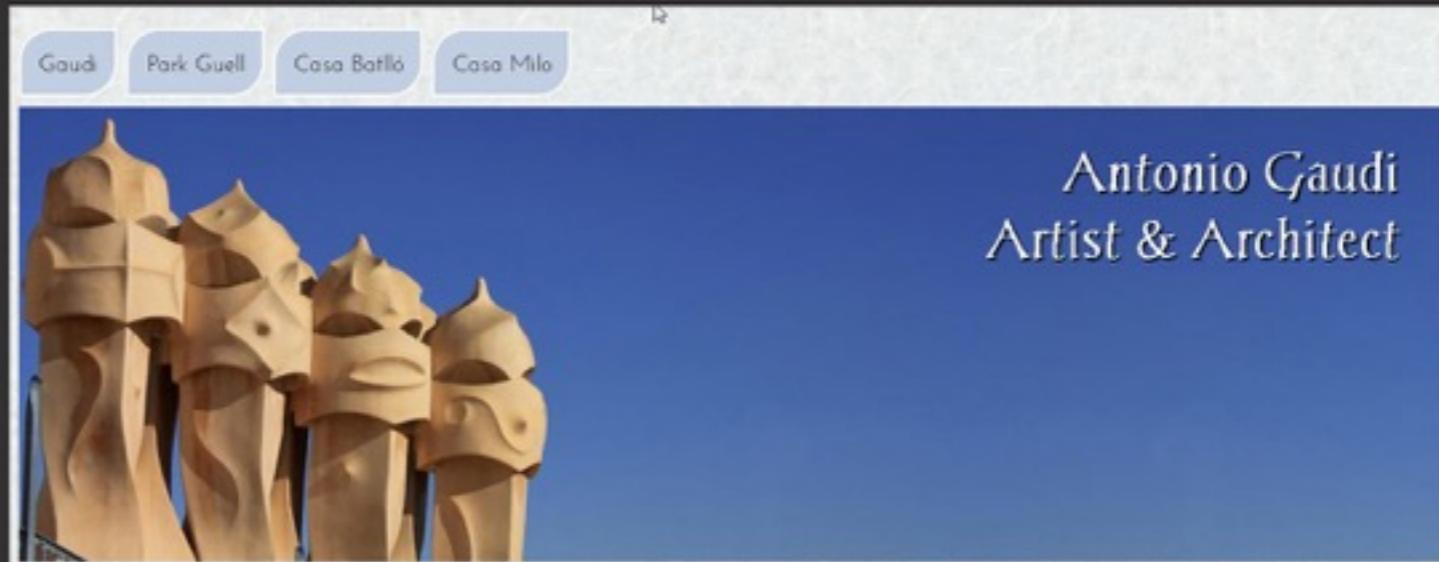
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Web design by Janine Warner, <http://www.digitalfamily.com>. Photos by <http://www.istockphoto.com>.

Desktop



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THIS IS TEIXIDÓ

a branding, web/interface design studio that blah blah blah. In all seriousness, we can pretty much write whatever we want here and chances are, nobody will notice.
The itsy bitsy spider went up the water spout. Down came the rain, and washed the spider out. See what we mean? Scroll down and find out why this happens...



WEBSITE & INTERFACES WE CRAFTED



LOGOS & BRANDS WE DESIGNED

PEOPLE SIMPLY DON'T READ WEBSITES ANYMORE

They just scan it. They glance it in the same way you glance at advertisements in a magazine. Don't believe us? Just think about this for a second. Think about your own browsing behavior. How many times have you Googled a website, clicked on one of the first results, waited for the page to load, scrolled down, scrolled back up and went back to results page? We're guessing more than once.

Two years ago you were wondering whether you even needed a website. Nowadays the question is: What can you do to your website so it will stop being invisible to your potential customers?

You need to be authentic – you can't fake it anymore. The new consumer is smarter and more knowledgeable than ever before. They just won't consume brands, nor spend time on websites that don't convey authenticity, passion and quality. Why should they? They've got so many options to choose from and so little time to make their choices.

This is where we come in. Through a streamlined, five-stage process we will plan, design, build, launch and monitor your professional and high-impact online presence for your company.



PLAN
Bring out the sharpeners
Once information is collected, it is processed into a plan. This step strategically outlines future tactics, budget, timeline and technology needs for the project. We ask questions, we gather your ideas, learn your business objectives and wrap our minds around what needs to be accomplished.



DESIGN
Burning the midnight oil
With one plan established, design and concept begin taking shape. The design process is best described as a funnel of ideas based on the objectives. All the pieces start coming together, we utilize various techniques and resources to execute the project.



BUILD
Engineering from the inside out
Once the right solution has been proposed, it is time to take meticulous measures toward execution. All the pieces start coming together, we utilize various techniques and resources to execute the project.



LAUNCH
Houston, we've got a solution
We put the spit-shine on our work and once we're sure all development is complete, we deploy the project in a live production environment.



MANAGE
Rinse & Repeat
Over time, projects are monitored and processes are continuously re-evaluated. As soon as we find room for improvements, the cycle begins once more.

HAPPY CLIENTS

We strive to provide brilliant ideas and impeccable executions to all our clients. They appreciate the ability to work with the actual people who pitch the ideas. We believe it fosters trust and confidence in our product because it assures we'll only pitch ideas we believe in and want to execute. At the end of the day their appreciation is the seal of approval we work for. We are therefore extremely proud that they come back to stay with us year after year. But that's just take our word for it...

"Juanna is a brilliant, funny, and competent designer and developer. But perhaps more important than his uncanny ability to make you laugh is



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This is where we come in. Through a streamlined, five-stage process we will plan, design, build, launch and monitor your professional and high-impact online presence for your company.



PLAN
Bring out the sharpeners
Once information is collected, it is processed into a plan. This step strategically outlines future tactics, budget, timeline and technology needs for the project. We ask questions, we gather your ideas, learn your business objectives and wrap our minds around what needs to be accomplished.



DESIGN
Burning the midnight oil
With one plan established, design and concept begin taking shape. The design process is best described as a funnel of ideas based on the objectives. All the pieces start coming together, we utilize various techniques and resources to execute the project.



BUILD
Engineering from the inside out
Once the right solution has been proposed, it is time to take meticulous measures toward execution. All the pieces start coming together, we utilize various techniques and resources to execute the project.



LAUNCH
Houston, we've got a solution
We put the spit-shine on our work and once we're sure all development is complete, we deploy the project in a live production environment.



MANAGE
Rinse & Report
Over time, projects are monitored and processes are continuously re-evaluated. As soon as we find room for improvements, the cycle begins once more.

HAPPY CLIENTS

We strive to provide brilliant ideas and impeccable executions to all our clients. They appreciate the ability to work with the actual people who pitch the ideas. We believe it fosters trust and confidence in our product because it assures we'll only pitch ideas we believe in and want to execute. At the end of the day their appreciation is the seal of approval we work for. We are therefore extremely proud that they come back to stay with us year after year. But that's just take our word for it...



THIS IS TEIXIDÓ

a branding, web/interface design studio that blah blah blah. In all seriousness, we can pretty much write whatever we want here and chances are, nobody will notice.
The itsy bitsy spider went up the water spout. Down came the rain, and washed the spider out. See what we mean? Scroll down and find out why this happens...



WEBSITE & INTERFACES WE CRAFTED



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PEOPLE SIMPLY DON'T READ WEBSITES ANYMORE

They just scan it. They glance it in the same way you glance at advertisements in a magazine. Don't believe us? Just think about this for a second. Think about your own browsing behavior. How many times have you Googled a website, clicked on one of the first results, waited for the page to load, scrolled down, scrolled back up and went back to results page? We're guessing more than once.

The past two years you were wondering whether you even needed a website. Nowadays the question is: What can you do to your website so it will stop being invisible to your potential customers?

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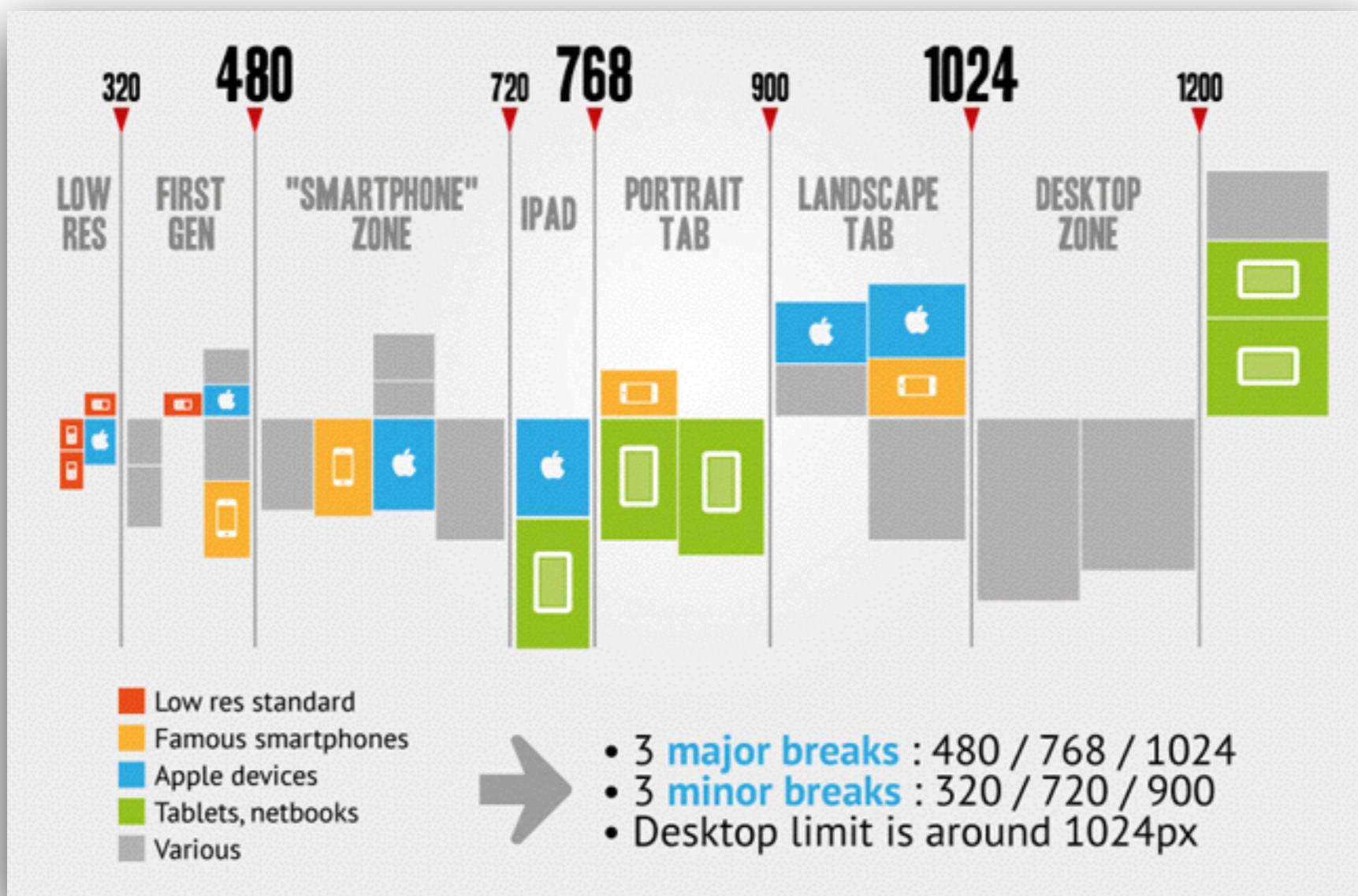
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Boundary

- For different window size
- For different device

Boundary



```
@media (max-width: 1024px) { ... }
```

```
@media (max-width: 768px) { ... }
```

```
@media (max-width: 480px) { ... }
```

Bootstrap - The world's most popular front-end framework for developing responsive, mobile first projects on the web.

Aww yeah, Bootstrap 4 is coming!

Bootstrap Getting started CSS Components JavaScript Customize Themes Expo Blog



Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.

[Download Bootstrap](#)

Currently v3.3.5

 Upwork
Painless time tracking for creative professionals.

Foundation | The Most Adv X

foundation.zurb.com

See What's Happening in Foundation 6 - Leaner, Meaner & Cleaner Sass

ZURB Foundation Learn Develop Support Business Docs Getting Started

Foundation

The most advanced responsive front-end framework in the world.

Download Foundation 5

★ 21.0k stargazers @ZURBfoundation



P Pure

purecss.io

PURE

Get Started

Layouts

Base

Grids

Forms

Buttons

Tables

Menus

Tools

Customize

Extend

Blog

Releases

P Pure.CSS

A set of small, responsive CSS modules
that you can use in every web project.

```
<link rel="stylesheet" href="http://yui.yahooapis.com/pure/0.6.0/pure-min.css">
```

[Get Started](#) [View on GitHub](#)

Base 1.1KB	Grids 0.8KB	Forms 1.5KB	Buttons 0.8KB	Tables 0.5KB	Menus 0.8KB
---------------	----------------	----------------	------------------	-----------------	----------------

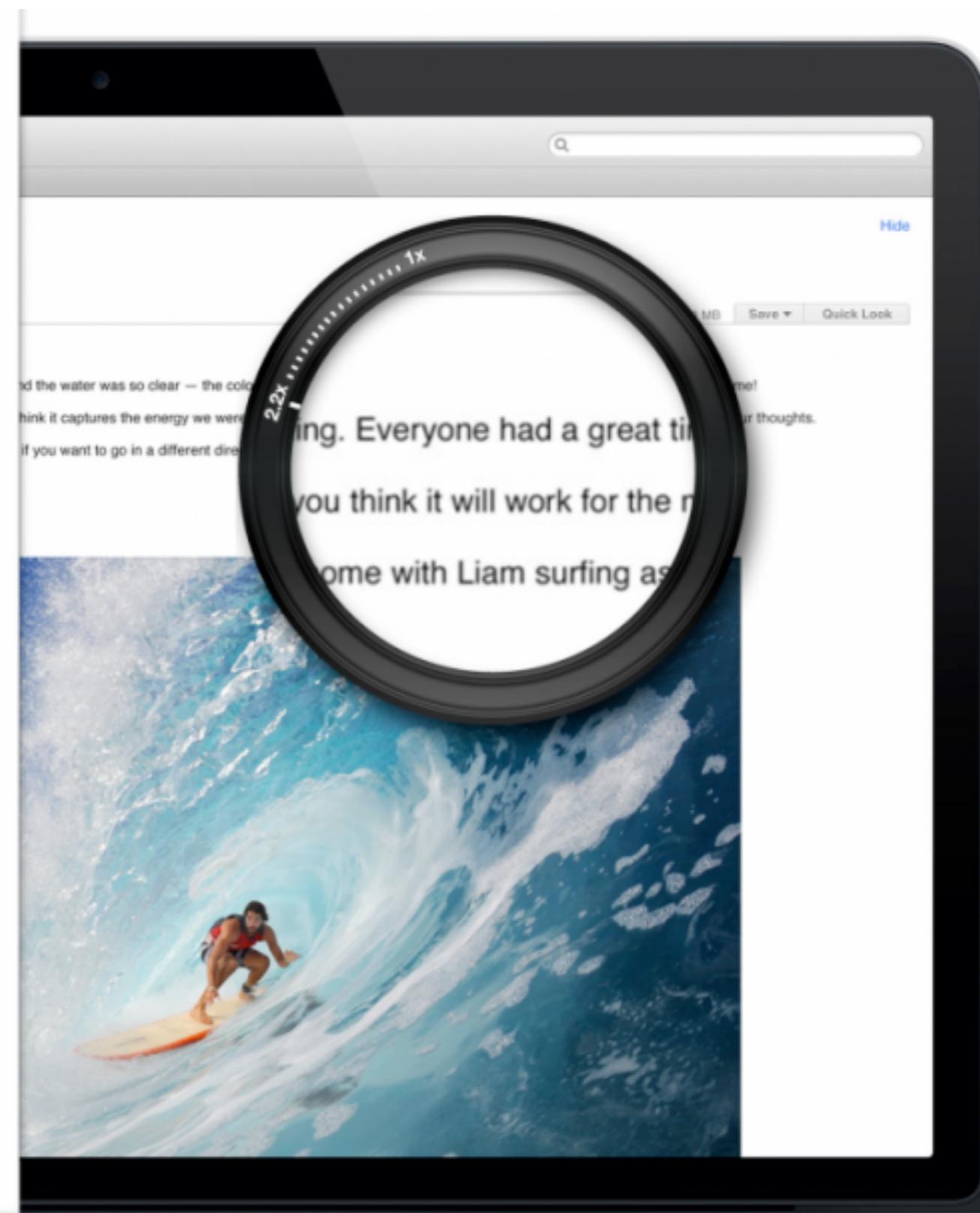
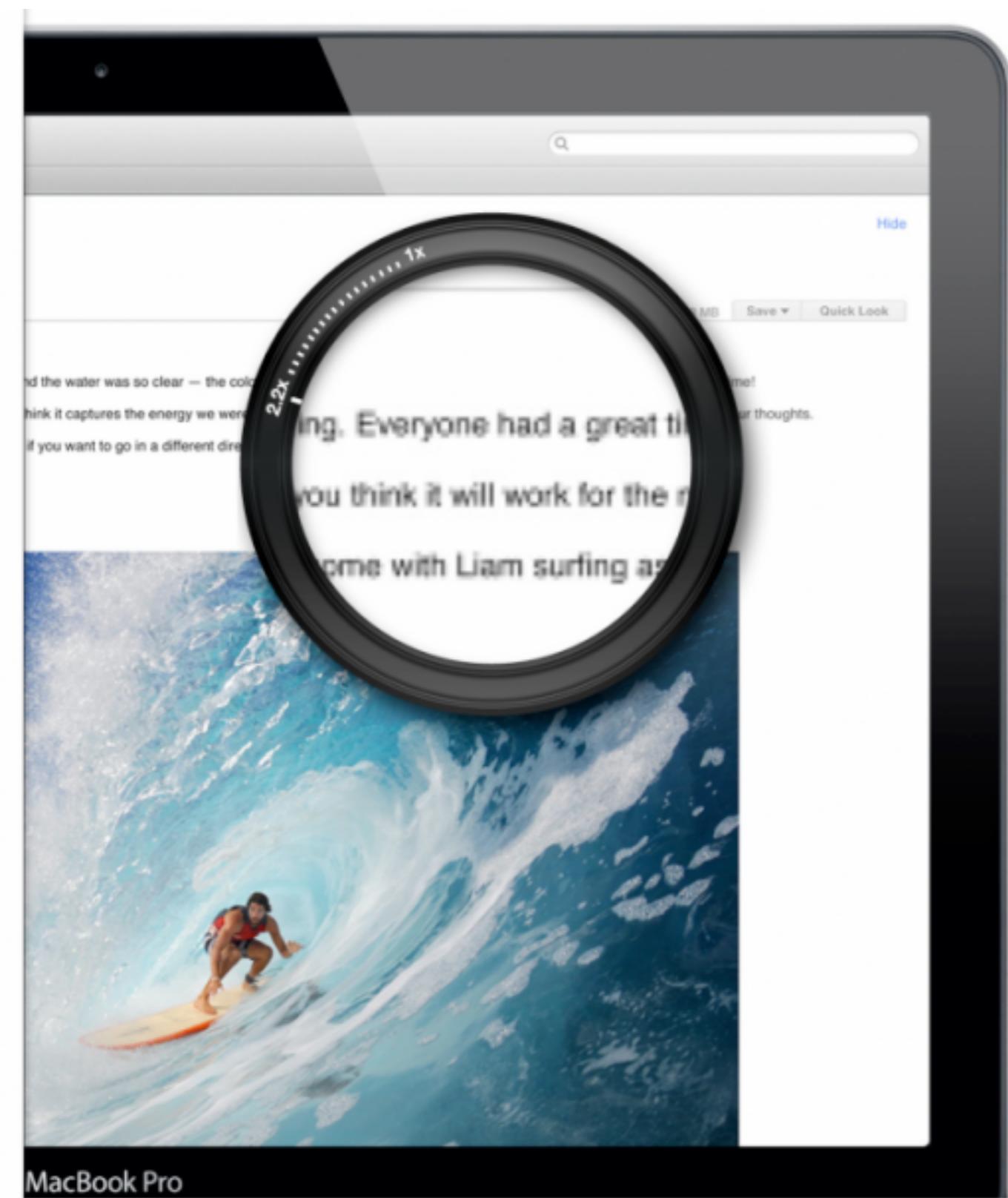
CSS with a minimal footprint.

Pure is ridiculously tiny. The entire set of modules clocks in at 4.0KB* minified and
gzipped. Crafted with mobile devices in mind, it was important to us to keep our

Resolution

- Used to be device pixel density
- A.k.a device pixel ratio (js)
- Retina Display





MacBook Pro

Retina

- Layout is CSS
- Text is vector glyphs
- Images...

Images

- Adaptive image
- CSS background image
-

CSS Background

- Use media query

```
@media (min-resolution: 192dpi) {  
    /* Retina-specific stuff here */  
}
```

```
@media (min-resolution: 192dpi) {  
    /* Retina-specific stuff here */  
}
```

```
@media (min-resolution: 288dpi) {  
    /* Retina-specific stuff here */  
}
```

```
@media  
(-webkit-min-device-pixel-ratio: 2),  
(min-resolution: 192dpi) {  
    /* Retina-specific stuff here */  
}
```

```
@media  
(-webkit-min-device-pixel-ratio: 3),  
(min-resolution: 288dpi) {  
    /* Retina-specific stuff here */  
}
```

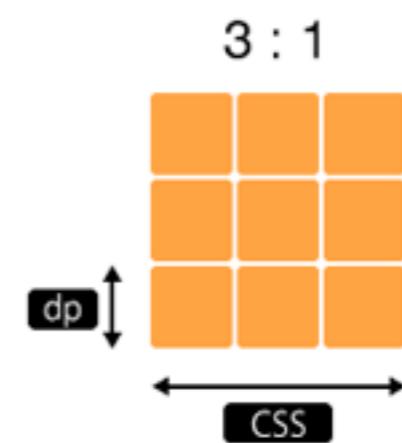
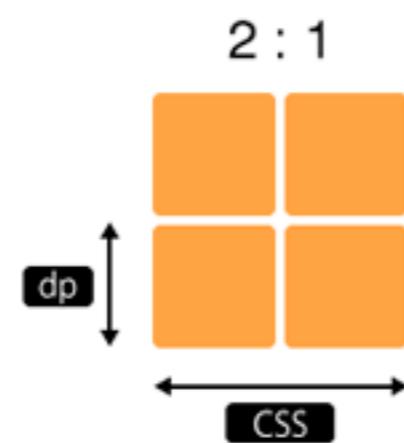
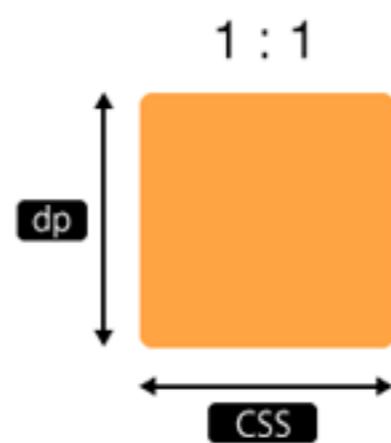
Device Pixel Ratio

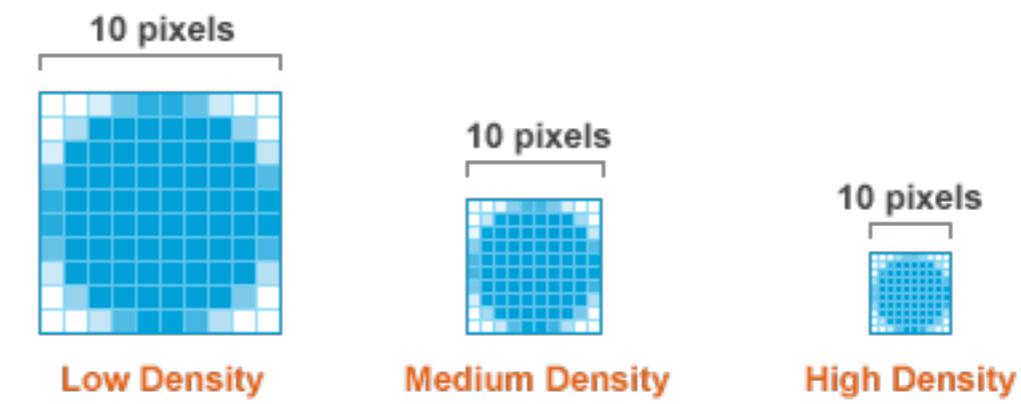
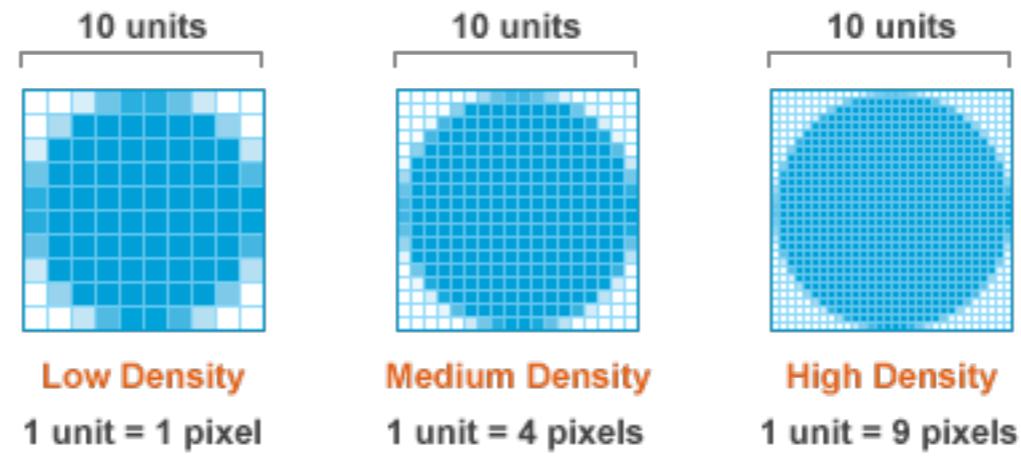
- HiDPI screen dot vs old screen dot
- Retina Display is 2
- Some mobile phone's ratio are over 2
- Related to CSS pixel



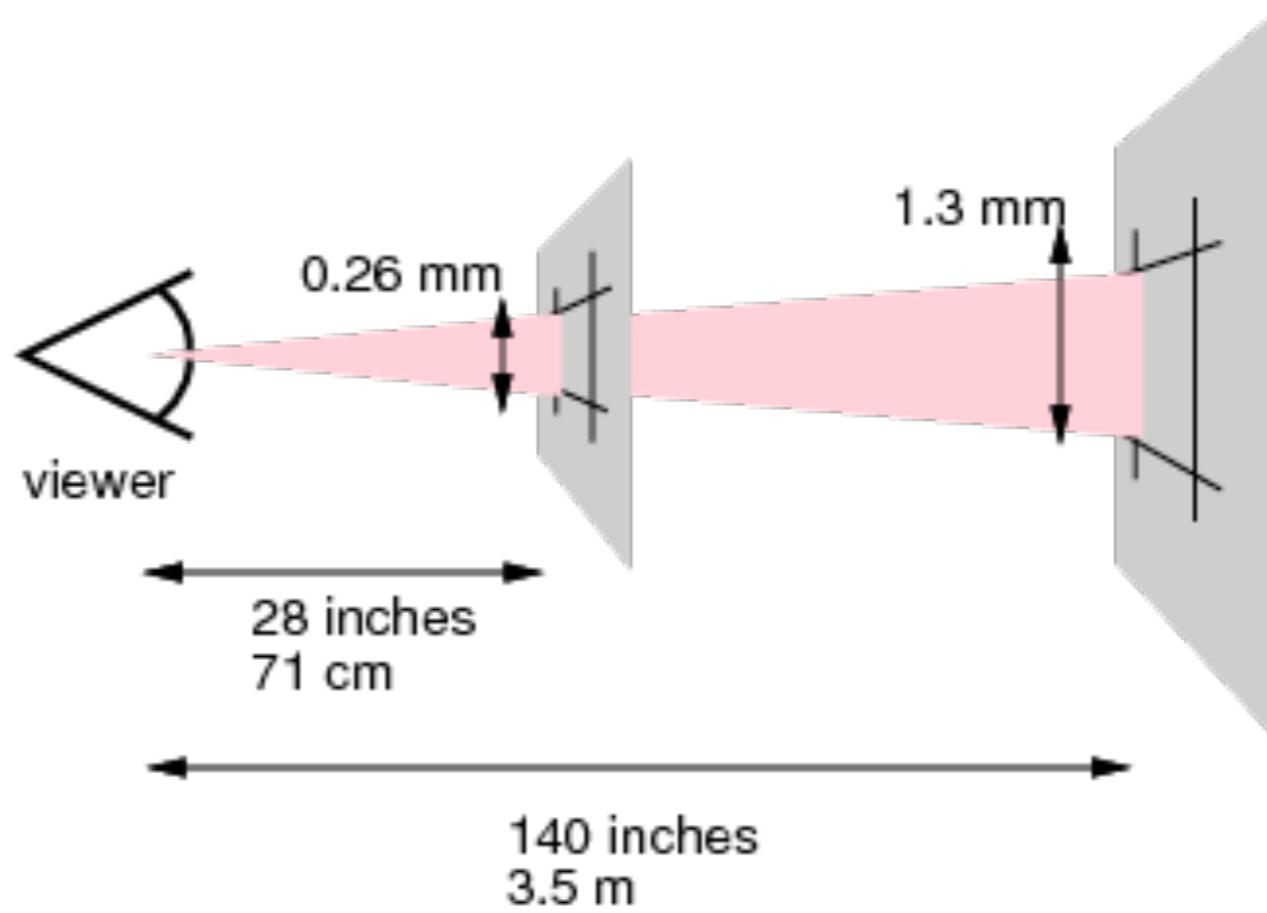
dp … デバイス・ピクセル

CSS … CSS ピクセル





CSS Pixel



- Not related to CSS
- No media query support
- Use ~~secretes~~ attribute
- Or <picture>

```

```

```

```

srcset : O3noBLOG

<https://blog.othree.net/log/2015/04/08/more-on-srcset/>

首頁 條紋 部落滾 關於 GitHub

O3noBLOG

srcset

搜尋

Responsive Image 大概定案成 `srcset` 和 `<picture>` 都有了，`src-N` 已經消失，雖然我還蠻喜歡，不過總之最近發現 `srcset` 和我當初介紹時已經差蠻多，中文資源有找到 Zhusee 有另外一篇 [介紹](#)，不過其實我去看現在的 spec 的時候發現，又有些修改了！最早 `srcset` 後面是用類似 media query 的設計，後來改成對圖片的 metadata，spec 裡面稱為 descriptor，分別有 width descriptor 用 `w` 和 density descriptor 用 `x`，而且限制 `srcset` 裡面只能用同一種 descriptor，例如全部用 `x` 或是全部用 `w`，所以：

- 不能在一張圖片裡面同時有 `w` 和 `x`
- 全部都用 `w` 或是全部都用 `x`
- 不可有相同的數值，例如兩個 `1x` 或是兩個 `760w`
- Descriptor 可以算是該圖片的資訊

不過最新的 spec 裡面少了第二點的限制，所以會有一組 `srcset` 混和 width descriptor 和 density descriptor 的情形，然後怎麼挑選圖片的地方 寫說：

In a user agent-specific manner, choose one image source from source set. Let this be

關於本文章

`srcset` 發表於 2015-04-08，文章類別為 [CSS & HTML](#)，你可以為此篇文章留下你的想法。

16 0 5
Facebook G+1 Twitter

[上一篇：Loader](#)
[下一篇：React.js Conf](#)

關於本網站

本網站是 [othree](#) 的個人部落格，主要內容為網路標準、網頁設計，穿插些ACG心得和敗家紀錄，更詳細

Can I use... Support tables x

caniuse.com/#search=srcset

Srcset attribute — LS

Global 56.46% + 7.72% = 64.17%

Allows authors to define various image resources and "hints" that assist a user agent to determine the most appropriate image source to display (e.g. high-resolution displays, small monitors, etc).

Current aligned Usage relative Show all

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser	Chrome for Android
8		38	31					4.1	
9		39	43					4.3	
10		40	44	8			8.4	4.4	
11	2	12	41	45	9	32	9	4.4.4	
		13	42	46		33		44	45
			43	47		34			
			44	48					

Notes Known issues (0) Resources (4) Feedback

1 Can be enabled in Firefox by setting the about:config preference dom.image.srcset.enabled to true

2 Supports the subset of the syntax for resolution switching (using the x descriptor), but not the full syntax that can be used with sizes (using the w descriptor).

```
<picture>
  <source srcset="p-mobile.jpg" media="(max-width: 720px)">
  <source srcset="p-tablet.jpg" media="(max-width: 960px)">
  
</picture>
```

<source>

- Supports
 - media query
 - srcset
 - type

```
<picture>
  <source srcset="mdn-logo.svg" type="image/svg+xml">
    
</picture>
```

Can I use... Support tables x

← → C caniuse.com/#search=picture

Picture element - LS

Global 54.29%

A responsive images method to control which image resource a user agent presents to a user, based on resolution, media query and/or support for a particular image format

Current aligned Usage relative Show all

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser	* Chrome for Android
8		38	31					4.1	
9		39	43					4.3	
10		40	44	8			8.4	4.4	
11	12	41	45	9	32	9	8	4.4.4	45
		13	42	46		33			
			43	47		34			
			44	48					

Notes Known issues (1) Resources (10) Feedback

Current MS Edge status: [Preview Release](#)

¹ Enabled in Chrome through the "experimental Web Platform features" flag in chrome://flags

² Enabled in Opera through the "experimental Web Platform features" flag in opera://flags

³ Enabled in Firefox by setting the about:config preference dom.image.picture.enable to true

Can I use... Support tables x

caniuse.com/#search=media

CSS3 Media Queries - REC

Method of applying styles based on media information. Includes things like page and device dimensions

Global 96.19% + 0.01% = 96.2%

Current aligned Usage relative Show all

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser	* Chrome for Android
8		38	31					4.1	
9		39	43					4.3	
10		40	44	8			8.4	4.4	
11	12	41	45	9	32	9	8	44	45
	13	42	46		33				
		43	47		34				
		44	48						

Notes Sub-features (2) Known issues (2) Resources (5) Feedback

¹ Does not support nested media queries

² Partial support refers to only acknowledging different media rules on page reload

Polyfills

- Respond.js
- css3-mediaqueries-js - discontinued

Respond.js

- Simple media query polypill
- Only deal with screen width

but

- For performance, usability
- Server a real mobile version

Mobile Web

- No desktop assets, save network
- Mobile UI for touch control
- Use mobile version framework, ex: Zepto.js
- Mobile meta data, ex: viewport

How

- Use user agent string
- Need server side support

Mobile

Mozilla/5.0 (Linux; U; Android 4.0.3; ko-kr; LG-L160L Build/IML74K) AppleWebKit/534.30 (KHTML, like Gecko) Version/4.0 Mobile Safari/534.30

Mozilla/5.0 (compatible; MSIE 9.0; Windows Phone OS 7.5; Trident/5.0; IEMobile/9.0)

Mozilla/5.0 (Android; Mobile; rv:14.0) Gecko/14.0 Firefox/14.0

Mozilla/5.0 (Linux; U; Android-4.0.3; en-us; Galaxy Nexus Build/IML74K) AppleWebKit/535.7 (KHTML, like Gecko) CrMo/16.0.912.75 Mobile Safari/535.7

BlackBerry8100/4.5.0.124 Profile/MIDP-2.0 Configuration/CLDC-1.1 VendorID/100

BlackBerry8100/4.5.0.124 Profile/MIDP-2.0 Configuration/CLDC-1.1
VendorID/100

Mozilla/5.0 (Windows Phone 10.0; Android 4.2.1; NOKIA; Lumia 735) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/39.0.2171.71 Mobile Safari/537.36 Edge/12.0

Mozilla/5.0 (iPhone; U; CPU iPhone OS 4_0 like Mac OS X; en-us) AppleWebKit/532.9 (KHTML, like Gecko) Version/4.0.5 Mobile/8A293 Safari/6531.22.7

Mozilla/5.0 (iPad; U; CPU OS 3_2 like Mac OS X; es-es) AppleWebKit/531.21.10 (KHTML, like Gecko) Version/4.0.4 Mobile/7B360 Safari/531.21.10

U List of User Agent Strings X

https://udger.com/resources/ua-list

udger

Home Products Prices Resources Support Contact Log In || Register

Resources > UA list: browsers, email clients ...

UA database includes detailed information about every single user agent and operating system

Select list type: Browsers, email clients ... | Operating systems | Devices | Robots (Crawlers) | Inactive robots (crawlers)

Browsers - Offline browsers - Mobile browsers - Email clients - Library - WAP browsers - Validators - Feed readers - Multimedia Players - Others

Browser	
Name	Layout engine
360 browser	Trident/WebKit
3DS Browser	NetFront
Abolimba	Trident
ABrowse	WebKit
Acoo Browser	Trident
Alienforce	Gecko
Amaya	Proprietary
Amiga Aweb	Proprietary
Amiga Voyager	Proprietary
Amigo	WebKit
ANT Fresco	Proprietary
AOL Explorer	Trident
Arora	WebKit
Avant Browser	Trident/Gecko/WebKit
Aviator	Blink
Baidu Browser	Webkit/Trident
Baidu Spark	Blink
	WebKit

We have placed cookies on your device to make your experience better. Find more info here. [x](#)

```
isMobile/isMobile.js at master · kaimallea/isMobile
```

GitHub, Inc. [US] https://github.com/kaimallea/isMobile/blob/master/isMobile.js

```
12 (function (global) {
13
14     var apple_phone      = /iPhone/i,
15         apple_ipod       = /iPod/i,
16         apple_tablet     = /iPad/i,
17         android_phone    = /(?=.*\bAndroid\b)(?=.*\bMobile\b)/i, // Match 'Android' AND 'Mobile'
18         android_tablet   = /Android/i,
19         amazon_phone     = /(.*\bAndroid\b)(?=.*\bSD4930UR\b)/i,
20         amazon_tablet   = /(.*\bAndroid\b)(?=.*\b(?:KF0T|KFTT|KFJWI|KFJWA|KFSOWI|KFTHWI|KFTHWA|KFAPWI|KFAPWA|KFA
21         windows_phone    = /IEMobile/i,
22         windows_tablet   = /(.*\bWindows\b)(?=.*\bARM\b)/i, // Match 'Windows' AND 'ARM'
23         other_blackberry = /BlackBerry/i,
24         other_blackberry_10 = /BB10/i,
25         other_opera      = /Opera Mini/i,
26         other_chrome     = /(CriOS|Chrome)(?=.*\bMobile\b)/i,
27         other_firefox    = /(.*\bFirefox\b)(?=.*\bMobile\b)/i, // Match 'Firefox' AND 'Mobile'
28         seven_inch = new RegExp(
29             '(?:' +           // Non-capturing group
30
31             'Nexus 7' +     // Nexus 7
32
33             '|\'' +          // OR
34
35             'BNTV250' +     // B&N Nook Tablet 7 inch
36
37             '|\'' +          // OR
38
39             'Kindle Fire' + // Kindle Fire
40
41             '|\'' +          // OR
42
43             'Silk' +         // Kindle Fire, Silk Accelerated
44
45             '|\'' +          // OR
46
47             'GT-P1000' +    // Galaxy Tab 7 inch
48
49             ')',            // End non-capturing group
50
51             'i');           // Case-insensitive matching
```

Viewport

- The real canvas of web page in browser
- width, height, scale

```
<meta name="viewport"  
      content="width=device-width, initial-scale=1">
```

```
<meta name="viewport"  
      content="width=device-width, initial-scale=1">
```

device-width is the available css width of device screen

```
<meta name="viewport"  
      content="width=device-width, initial-scale=1">
```

scale = 1 means no scale

Scale

- Mobile device only have small screen
- Hard to read text on traditional webpages
- Support zoom-in

Viewport

- You can set width/height of browser canvas
- And set scale level

Viewport

- width
- height
- initial-scale
- minimum-scale
- maximum-scale
- user-scalable

Viewport

- width
- height
- initial-scale
- minimum-scale
- maximum-scale
- user-scalable → You can disable user control scale

user-scalable

- Disable if you have mobile layout
- User scale is bad user experience

```
<meta name="viewport"  
      content="width=device-width,  
              initial-scale=1,  
              user-scalable=no">
```

Mobile Version

- Disable user scale and use device width
- Also use media query to deal with orientation

Events

- Still have mouse event
- Use touch events

mousemove

- Play game
- Arrange items
- Mouse gesture
- Draw on canvas

Drag & Drop

- mousedown
 - start position, listen move/up event
- mousemove
 - moving item based on position
- mouseup
 - stop listen move/up events, handle drop

touch swipe

- touchstart
 - start position, listen move/end event
- touchmove
 - moving item based on position
- touchend
 - stop listen move/end events, handle swipe

click

- 300 ms delay for gesture detect
- FastButton
- No delay on android chrome at no scalable page

FastClick

- Detect touchstart, touchend period
- And move inside throttle region
- <https://github.com/ftlabs/fastclick>

Mobile Browsers

- iOS Safari
- Android Browser
- Android Firefox
- Android Chrome
- Phone vendor customized browser

iOS Safari

- Webkit based
- Always update
- ok

Android Browser

- Webkit based
- Very old, buggy
- Hard to debug
- Old smart phones (until Android 2.x, 3.x)
- Not ok

Android Firefox

- Gecko based
- User can update to latest version

Android Chrome

- Webkit based
- User can update to latest version
- Easy to debug
- ok

Webkit is The New IE

- 3/4 webkit based major mobile browser
- Mobile first trend
- Lots of feature are first implemented by webkit
- Lots of Webkit only webpage

Remote Debug

- iPhone, iPad
- Mobile Chrome
- Mobile Firefox
- weinre

Demo

Mobile Web Application

甘苦談

othree @ MOPCON 2013