GAINING CONTROL IN THE GREAT UNKNOWN

MobileTechCon Munich - March 2014

Servus

@ddprrt

Netural

Lafers grill recipes
The need precise control
I need to put meat on fire

Weber-Kit

Controlled Environments

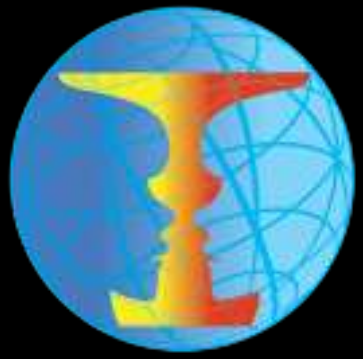
Controllable Environments

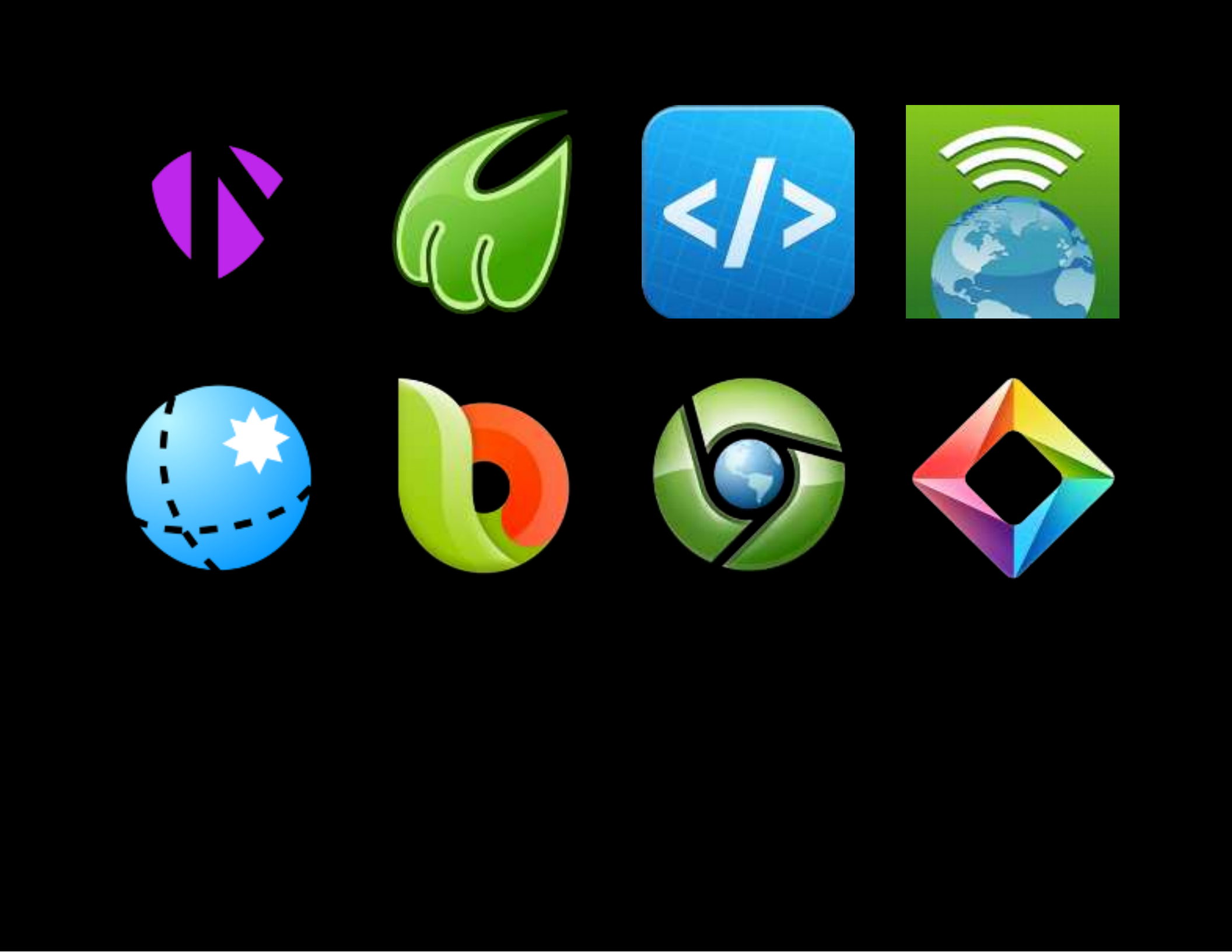
iOS

Uncontrollable Environments

QuickTime Player Ablage Bearbeiten Darstellung Fenster Hilfe
Stefan Baumgartner
IE8.XP.For.MacVMware
Business Guide - Windows Internet Explorer
ADVANTAGE AUSTRIA
start

APOLLO





UC Browser

UC Browser

400 million users

32% market-share in China

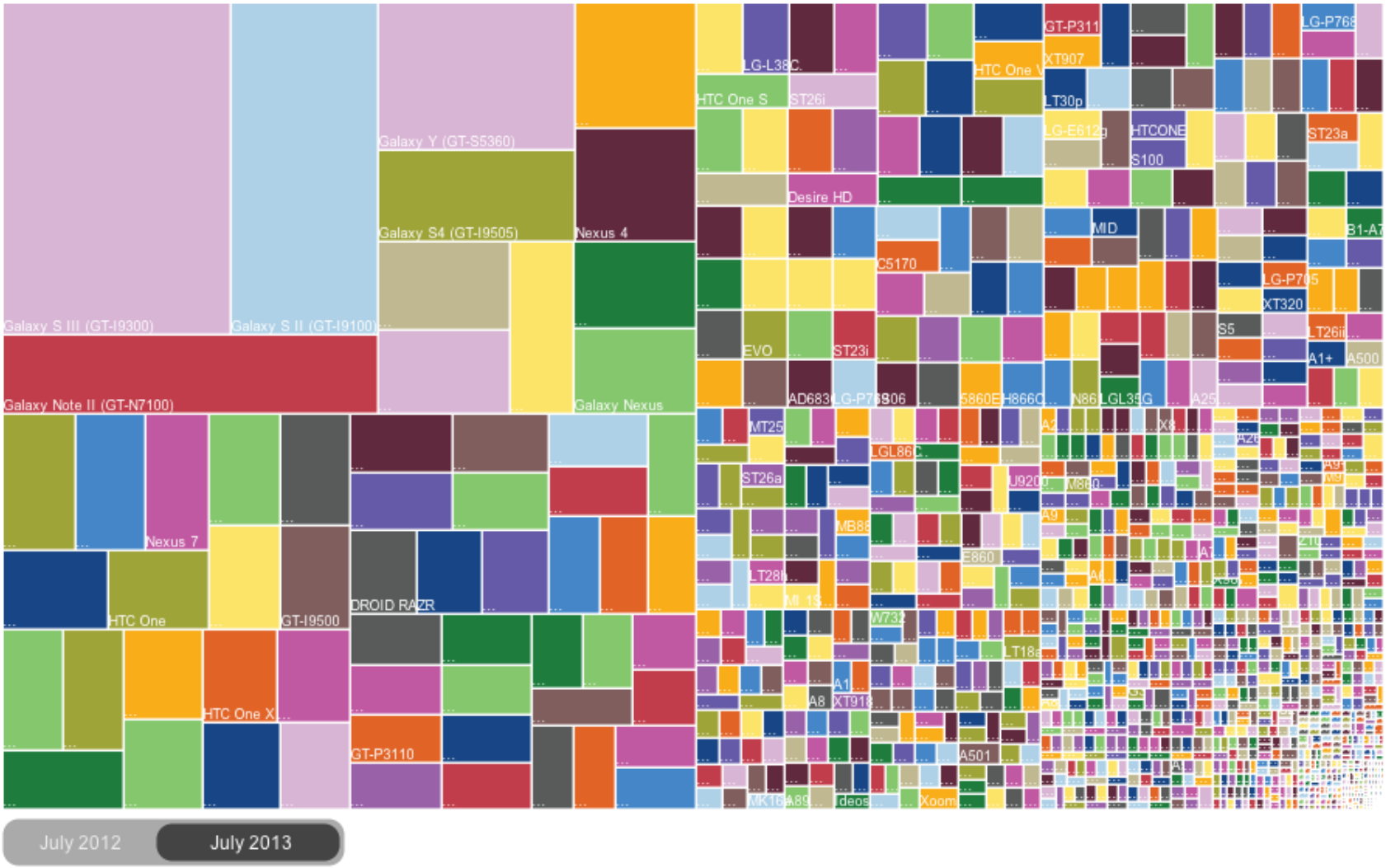
... to be honest ...

only few of them come with their own engine

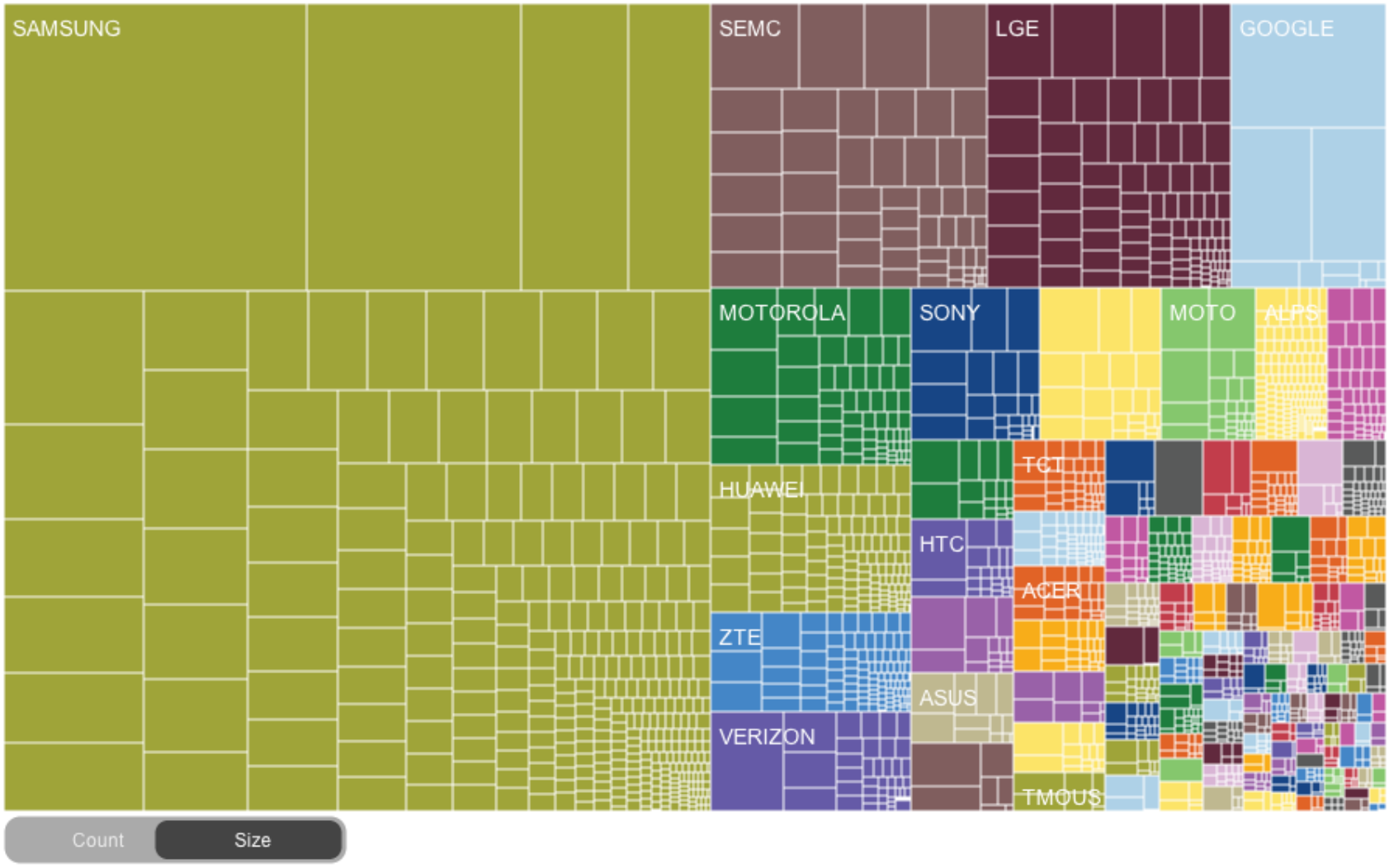
Under the top-most used browsers on iOS and Android

Fragmentation

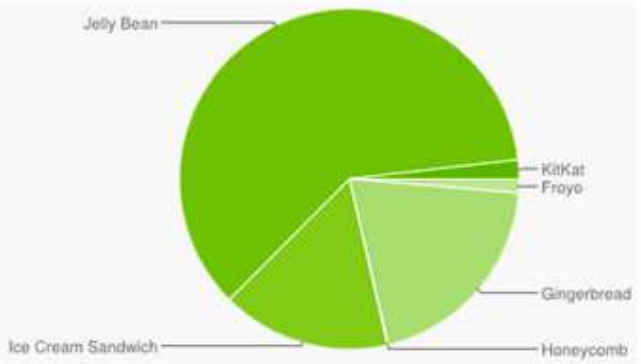
DEVICE FRAGMENTATION



BRAND FRAGMENTATION

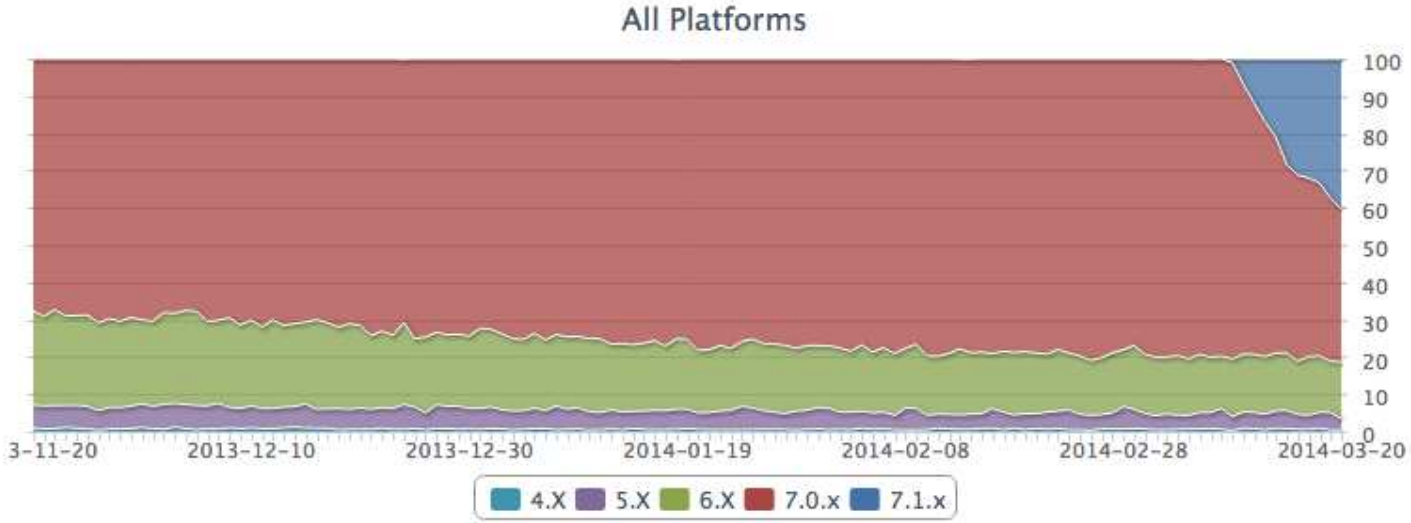


Version	Codename	API	Distribution
2.2	Froyo	8	1.3%
2.3.3 - 2.3.7	Gingerbread	10	20.0%
3.2	Honeycomb	13	0.1%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	16.1%
4.1.x	Jelly Bean	16	35.5%
4.2.x		17	16.3%
4.3		18	8.9%
4.4	KitKat	19	1.8%

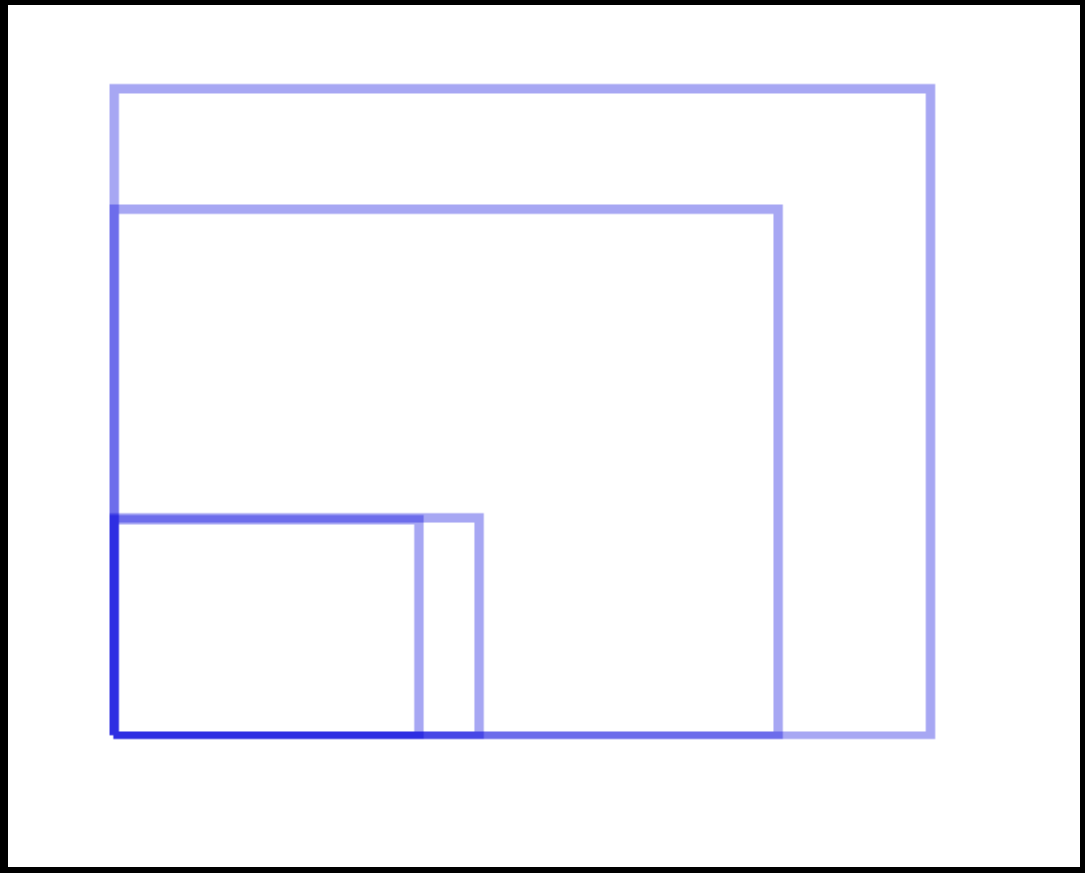


All Platforms:

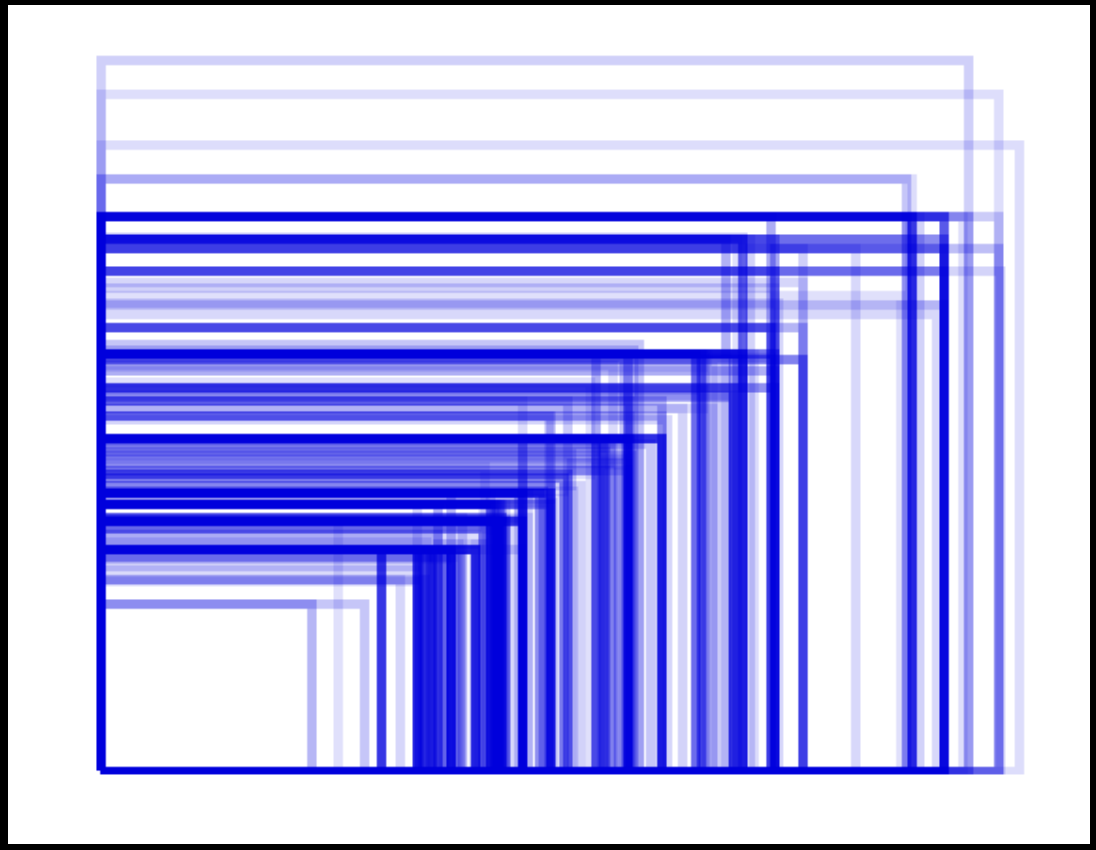
7.X	81.5%
6.X	15.2%
5.X	3.0%
4.X	0.4%



iOS screen fragmentation



Android screen fragmentation



Holy fragmentation, Batman

And that is just Android ...

What are people really using?

Holiday season in Austria
pseudonymized target audience of a B2C website
male or female
age 0 to 99
Worth1000.com

The stats

different device types: 723

different browser families: 68

Top 5 browser families

1. Safari
2. Chrome
3. Firefox
4. Android Stock Browser
5. Internet Explorer

Viewport is one thing...

Features?

Implementation quality?

Memory?

Resolution?

Browser Speed?

Connection speed?

Parallax Scrolling?

Oakley Airbrake MX // A

moto.oakley.com

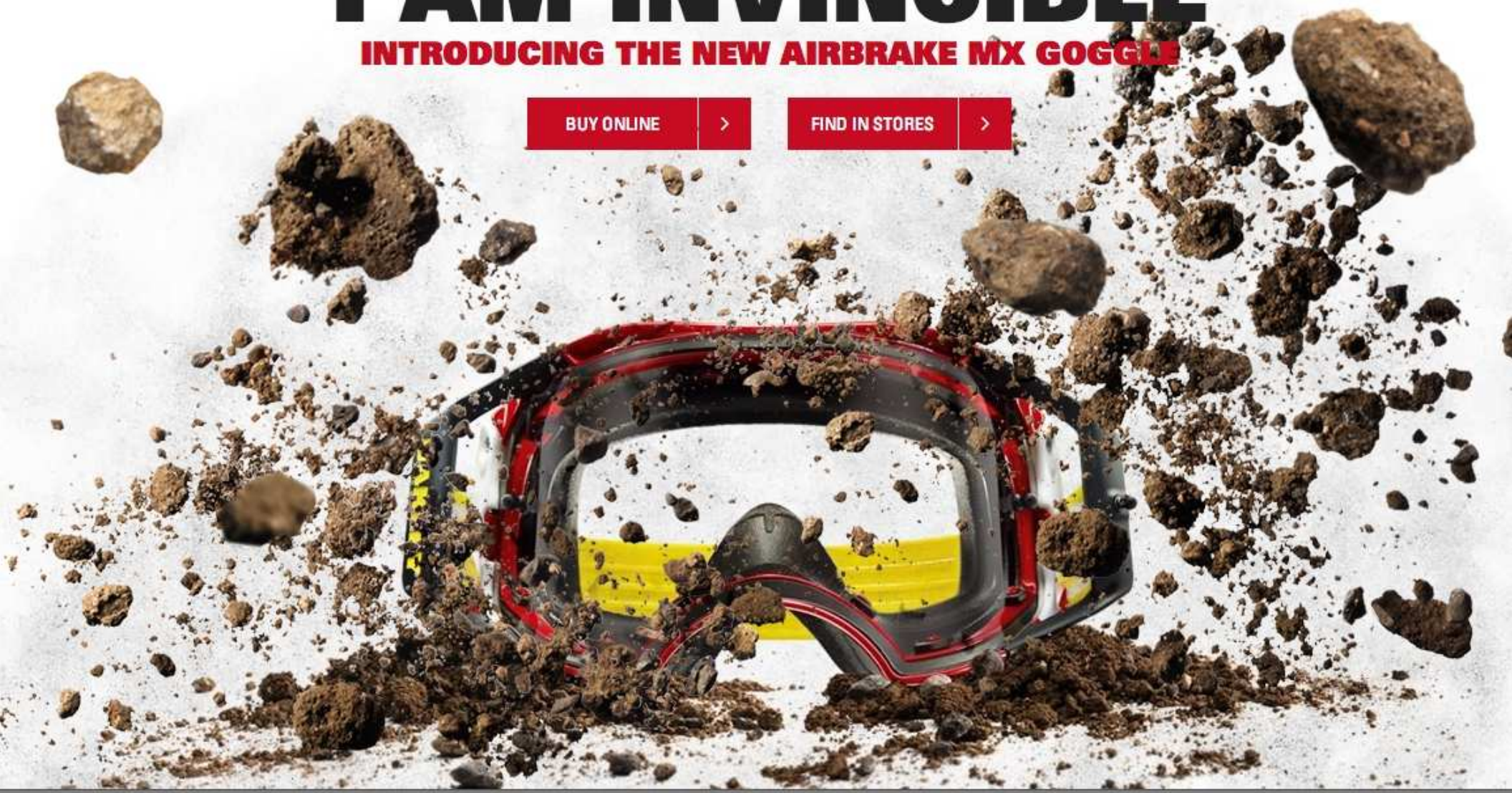
STORE | CUSTOM | INNOVATION | SPORTS | COMMUNITY | View Cart | Order Status | Store Locator | Product Search...

I AM INVINCIBLE

INTRODUCING THE NEW AIRBRAKE MX GOGGLE

BUY ONLINE >

FIND IN STORES >

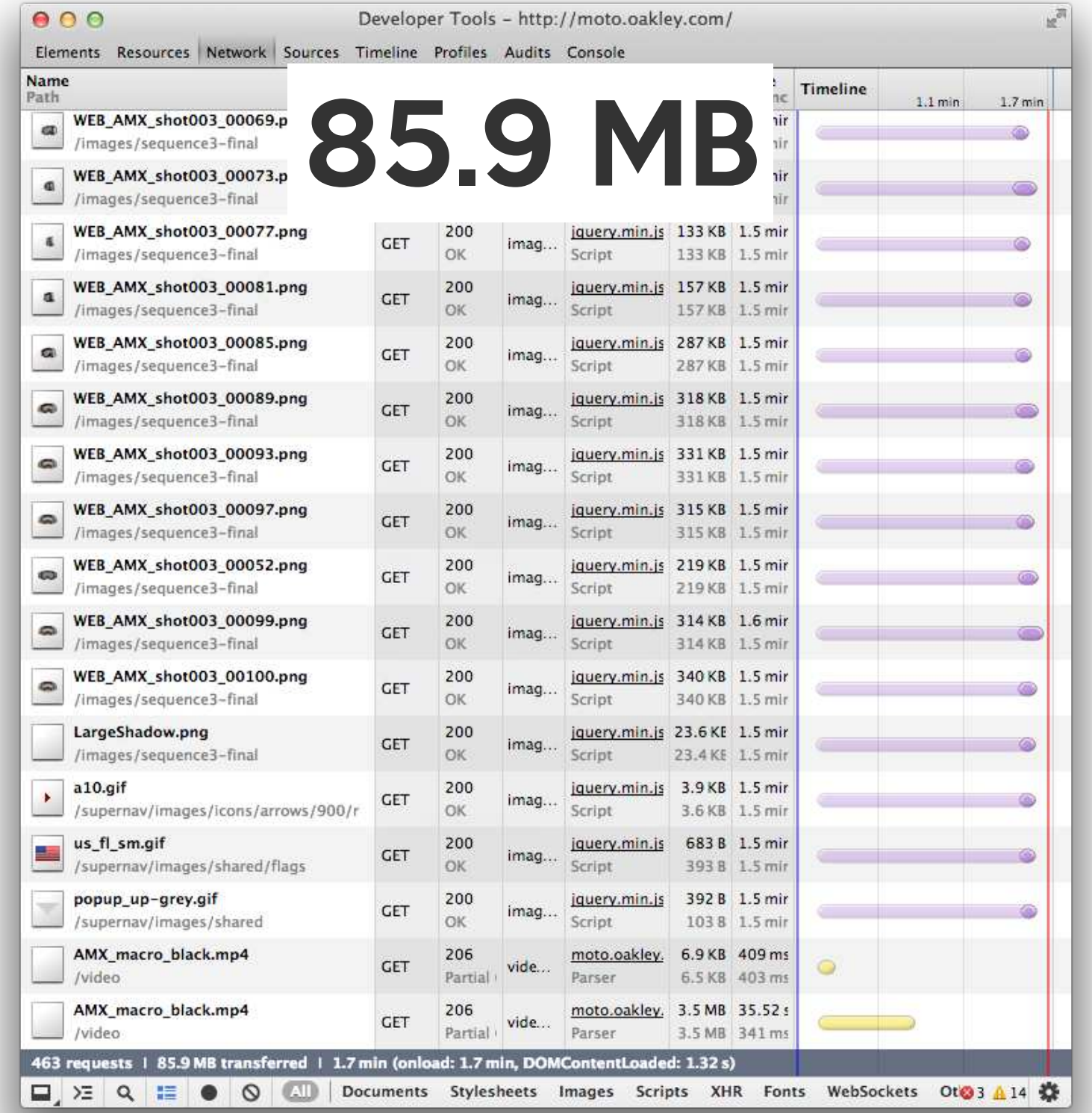


moto.oakley.com

1. 85.4 MB page weight
2. 471 HTTP Requests
3. 2 minutes 45 seconds
   until loading screen replaced with content
4. 4 minutes 10 seconds
   to wait for onLoad event

There sure is a mobile version?

... oh yeah, there is...


Developer Tools - http://moto.oakley.com/
Elements Resources Network Sources Timeline Profiles Audits Console
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Name
Path
Timeline
1.1 min
1.7 min
WEB_AMX_shot003_00069.p
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WEB_AMX_shot003_00077.png
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moto.oakley.
Parser
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409 ms
403 ms
AMX_macro_black.mp4
/video
GET
206
Partial
vide...
moto.oakley.
Parser
3.5 MB
3.5 MB
35.52 s
341 ms
463 requests | 85.9 MB transferred | 1.7 min (onload: 1.7 min, DOMContentLoaded: 1.32 s)
All Documents Stylesheets Images Scripts XHR Fonts WebSockets
3 14

Costs

Roaming in Switzerland for EU clients is 1€ per MB

Costs

vodafone UK charges 1£ per 25 MB

Assumptions

Features: Scrolling

Implementation quality: Tried, trusted and Robust

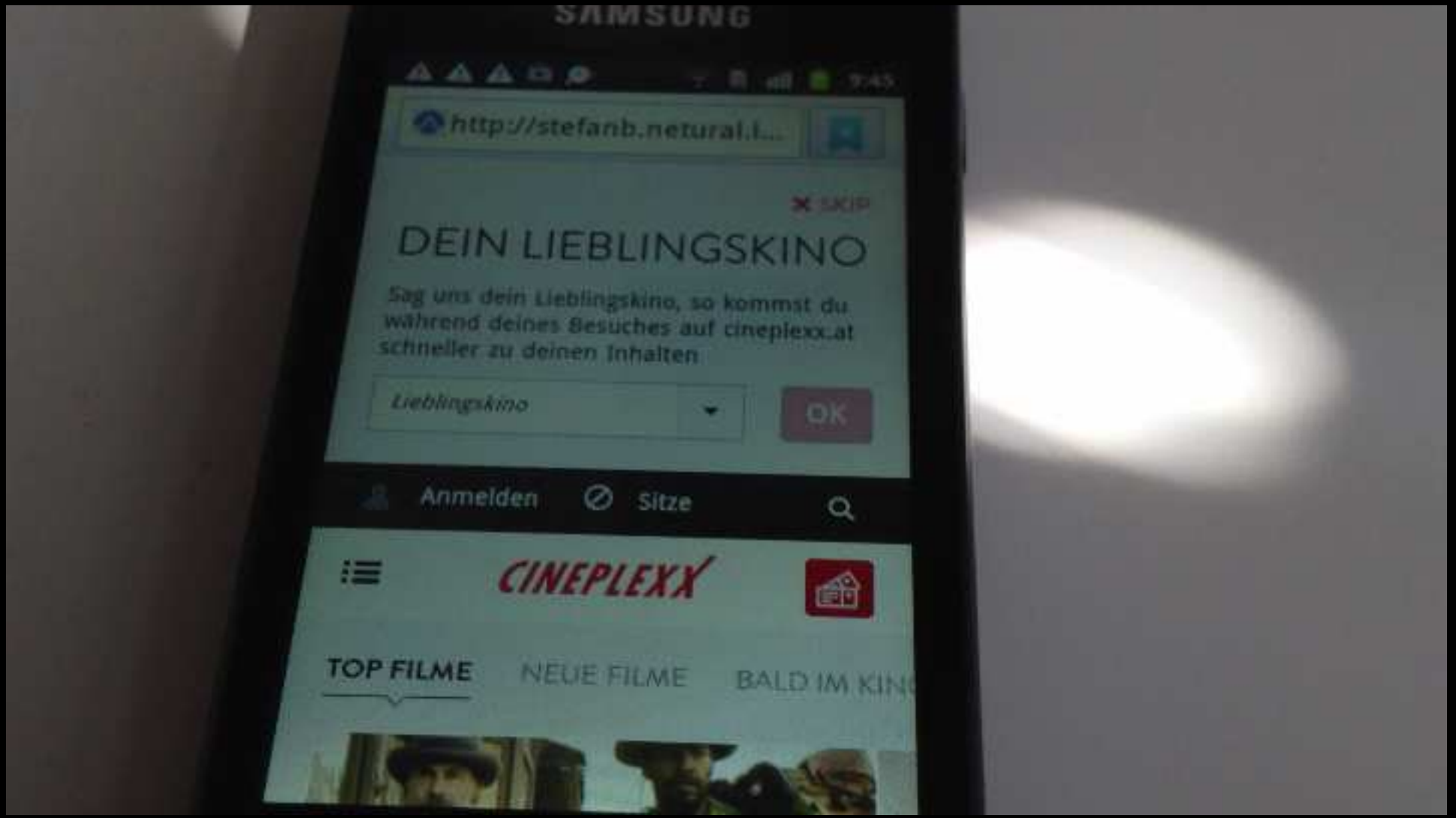
Memory: A shitload

Resolution: Of course Retina!

Browser Speed: iPad-near JS execution time

Connection speed: Harddrive

Features


SAMSUNG
http://stefanb.netural.i...
SKIP
DEIN LIEBLINGSKINO
Sag uns dein Lieblingskino, so kommst du während deines Besuches auf cineplexx.at schneller zu deinen Inhalten
Lieblingskino
OK
Anmelden
Sitze
CINEPLEXX
TOP FILME
NEUE FILME
BALD IM KIN

Login

CINEPLEXX

TOP FILME NEUE FILME BALD IM KINO

Filmstart: 25.09.2013

PRAKTI.COM

Film

GR

HIGHLIGHTS

overflow: scroll

-webkit-overflow-scrolling: touch

Feature detection

Test for overflow-scrolling, otherwise use iScroll

```
var has3d = 'WebKitCSSMatrix' in window && 'm11' in new
WebKitCSSMatrix()
```

The good:

We did feature detects, and polyfilled in case

The bad:

We assumed iScroll will fix all our problems

iScroll assumed hardware acceleration is a good idea overall

The ugly:

We broke IE10 on Windows Phone 8

skrollr – parallax scrolling
prinzhorn.github.io/skrollr/
skrollr
parallax scrolling for the masses
let's get scrollin' ;-)

When using skrollr on mobile you don't actually scroll. When detecting a mobile browser skrollr disables native scrolling and instead listens for touch events and moves the content

A classic

```
$('a').on('click', function()) {
  window.location.href = $(this).attr('href');
}
```

4GIFS.com

Don't recreate browser features

You can't control everything

You can't control anything

Brings Parallax back to its roots

```
body {   perspective: 1px;   transform-style: preserve-3d; }


.slide:before {
  position: absolute; top: 0; left: 0;
  right: 0; bottom: 0;
  background-image: url("...");
  transform: translateZ(-1px) scale(2);
  z-index:-1;
}
```

http://codepen.io/keithclark/pen/JycFw

Implementation quality

Win2day
Login
Optionen
Machen Sie Ihr Spiel
0/2/3
5/8
ZERO
1st 12
2nd 12
3rd 12
1 to 18
EVEN
ODD
19 to 36

meta-Viewport

<meta name="viewport" content="width=device-width, initial-scale=1.0">

meta-Viewport

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0">

... not that it does anything ...

```
@media(max-width: 320px) {
  @ms-viewport { width: 320px }
}
```

```
@-ms-viewport {
  width: device-width;
}
```

GRUNT

The JavaScript Task Runner

Latest Version

- Stable: v0.4.1
- Development: N/A

Take the **Front-end Developer Track** at Bocoup Oct 17 - Nov 1st in Boston & save 36%.

*Ads by **Bocoup**.*

Latest News

Why use a task runner?

In one word: automation. The less work you have to do when performing repetitive tasks like minification, compilation, unit testing, linting, etc, the easier your job becomes. After you've configured it, a task runner can do most of that mundane work for you—and your team—with basically zero effort.

Why use Grunt?

The Grunt ecosystem is huge and it's growing every day. With literally hundreds of plugins to choose from, you can use Grunt to automate just about anything with a minimum of effort. If someone hasn't already built what you need, authoring and publishing your own Grunt plugin to npm is a breeze.

-webkit-text-stroke: 4px;

Grunt
The JavaScript Task Runner

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-webkit-text-stroke: 4px;

grunt

The JavaScript Task Runner

API

Latest Version

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- Development: N/A

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This is madness!

-webkit-something: something

For what it's worth, the current trend inside Mozilla is exactly what you say: avoiding vendor prefixes by either turning things off before shipping or shipping them unprefixed if they're stable enough.

W3C List
http://lists.w3.org/Archives/Public/public-webapps/2012OctDec/0731.html

In short: we won't use vendor prefixes for new features. Instead, we'll expose a single setting to enable experimental DOM/CSS features for you to see what's coming, play around, and provide feedback [...] Only when we're ready to see these features ship to stable will they be enabled by default in the dev/canary channels.

Blink Developer FAQ
http://www.chromium.org/blink/developer-faq

Vendor prefixes

for experimental features

experimental means: not stable, not final

not stable: not ready for production

noPrefixes in v3.0

ModernizrProto._config.usePrefixes

```
"options": [
  "setClasses",
  "addTest",
  "html5printshiv",
  "load",
  "testProp",
  "fnBind",
  "prefixedCSS"
  "noPrefixes"
],
```

Browser Speed
Lightspeed

Truth is ...

JavaScript takes long to execute

```
$('.item.' + filterCriteria).each(function() {
    $(this).hide();
});
```

```
$('.filterArea').addClass('.filterCritera');


.filterCritera .hasCritera {
    display: none;
}
```

Where is JavaScript necessary?

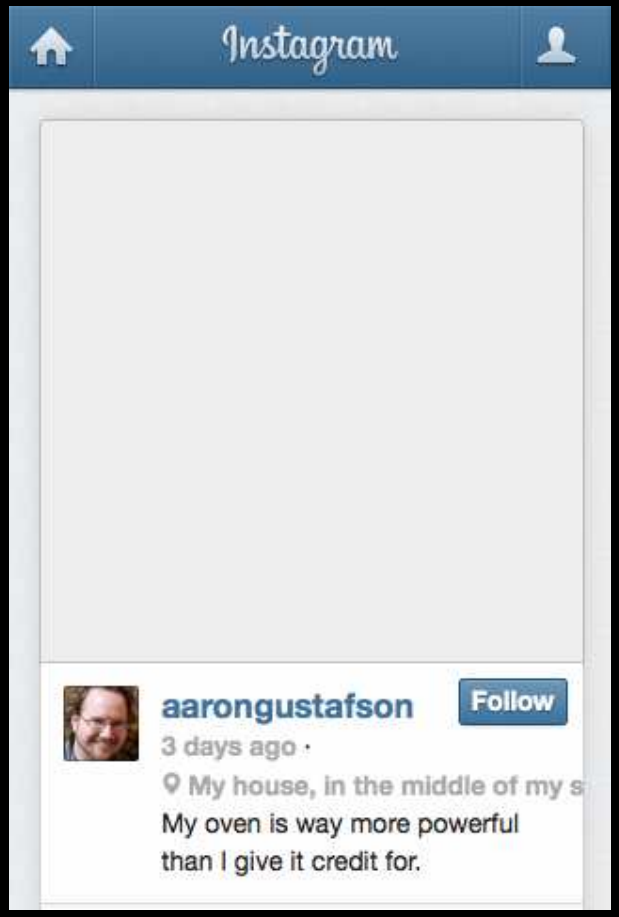
Lanyrd

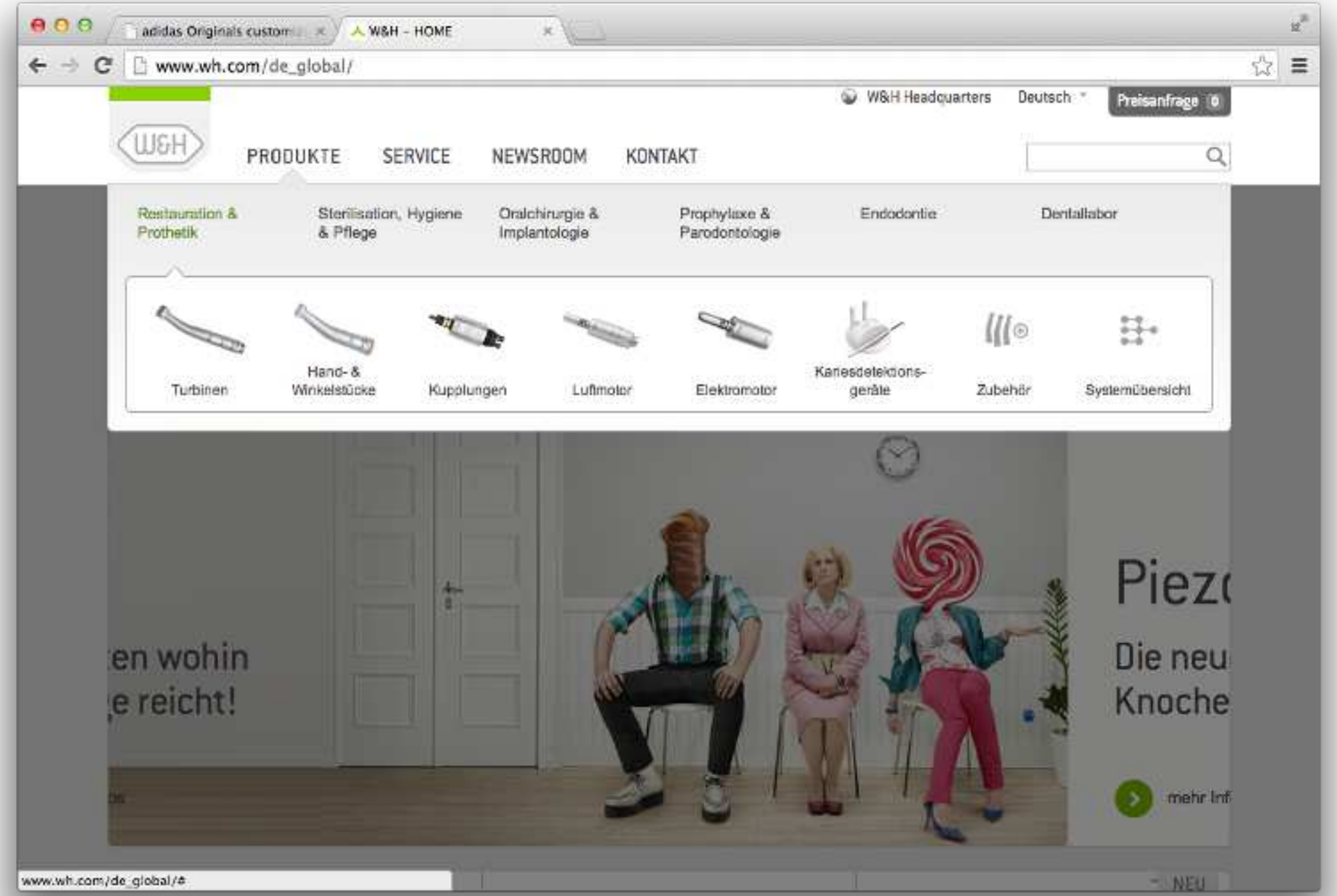
Lanyrd

User Agent Detection ... done right!

Got a slow JS engine? Don't get any JS.

Instagram on iOS5
2/13 - 7/13 and since 12/13




adidas Originals custom
W&H – HOME
www.wh.com/de_global/
W&H Headquarters
Deutsch
Preisanfrage
PRODUKTE
SERVICE
NEWSROOM
KONTAKT
Restauration & Prothetik
Sterilisation, Hygiene & Pflege
Oralchirurgie & Implantologie
Prophylaxe & Parodontologie
Endodontie
Dentallabor
Turbinen
Hand- & Winkelstücke
Kupplungen
Luftmotor
Elektromotor
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en wohin
e reicht!
Piezo
Die neu
Knoche
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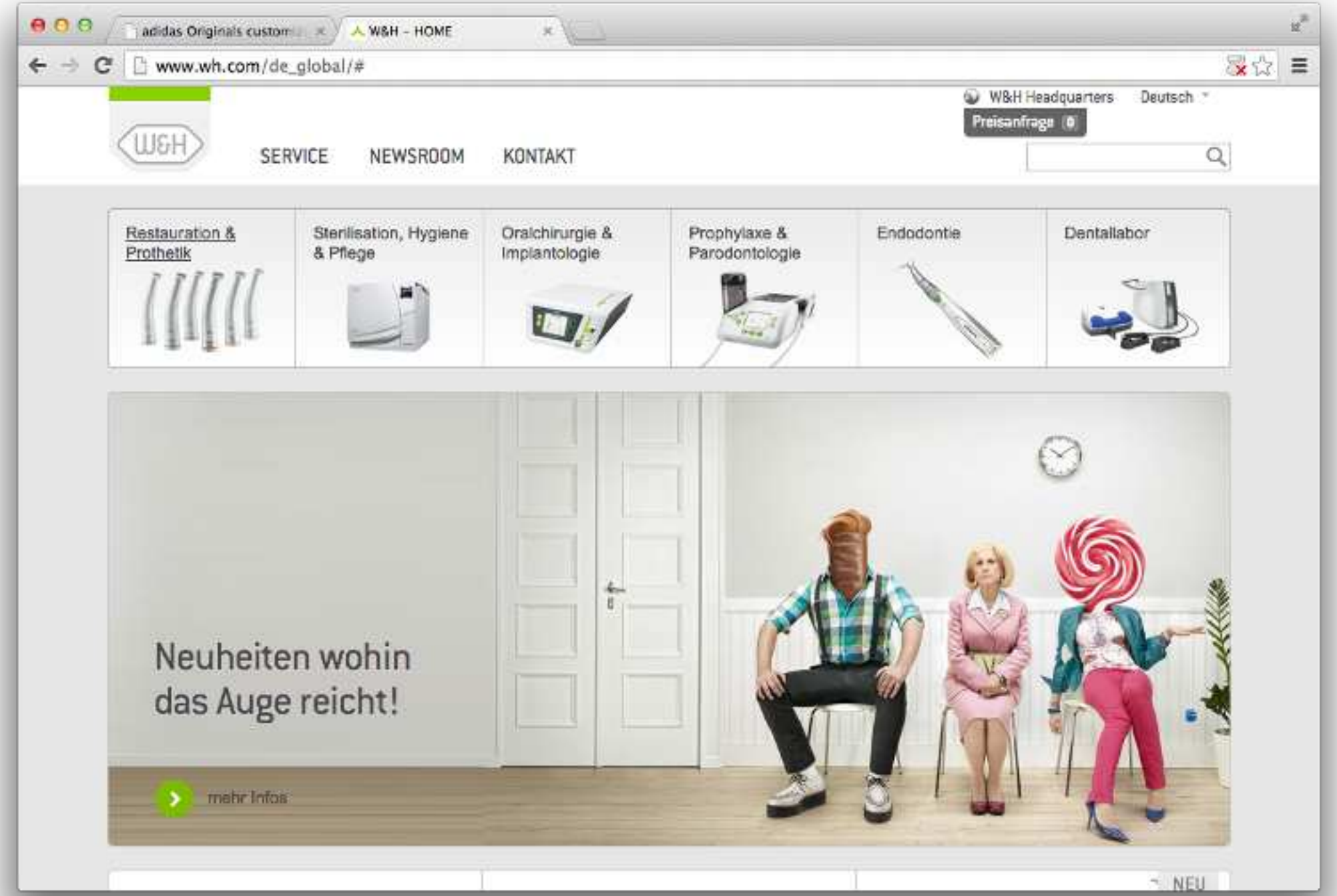
www.wh.com/de_global/#
NEU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NEWSROOM
KONTAKT
Restauration & Prothetik
Sterilisation, Hygiene & Pflege
Oralchirurgie & Implantologie
Prophylaxe & Parodontologie
Endodontie
Dentallabor
Neuheiten wohin das Auge reicht!
mehr Infos
NEU

Browsers other than Chrome don't priorize JS over IMG assets

They take everything in order, to ensure nothing is missing on execution

Use JavaScript to load content that's only available with JavaScript

13s > 1.4s

sighjavascript.tumblr.com

Connection speed

LIGHTSPEED IS TOO SLOW. WE'LL HAVE
TO GO RIGHT TO LUDICROUS SPEED.

A though one ... but rule of thumb is to reduce requests

Load content that is necessary for the first impression

Reduce everything!

What does not kill me makes me smaller

RESS

Responsive & Server-Side

```
if ($(document).width() > 640) {
  $.get('path/to/html', function(data){
    $('[role="complementary"]').append(data);
  });
}
```

LUDICROUS SPEED

They're going plaid.

Solutions

Features: Use, when certain that it's there!

Implementation quality: Modern features should be an add-on

Browser Speed: Less JavaScript dependent content

Memory: Optimize Images, reduce Image Footprint

Resolution: See above, use SVG, use Responsive Images!

Connection speed: Fear for worst, reduce requests!

Solutions

Features: Progressive Enhancement

Implementation quality: Progressive Enhancement

Browser Speed: Progressive Enhancement

Memory: Progressive Enhancement

Resolution: Progressive Enhancement

Connection speed: Progressive Enhancement

Progressive Enhancement

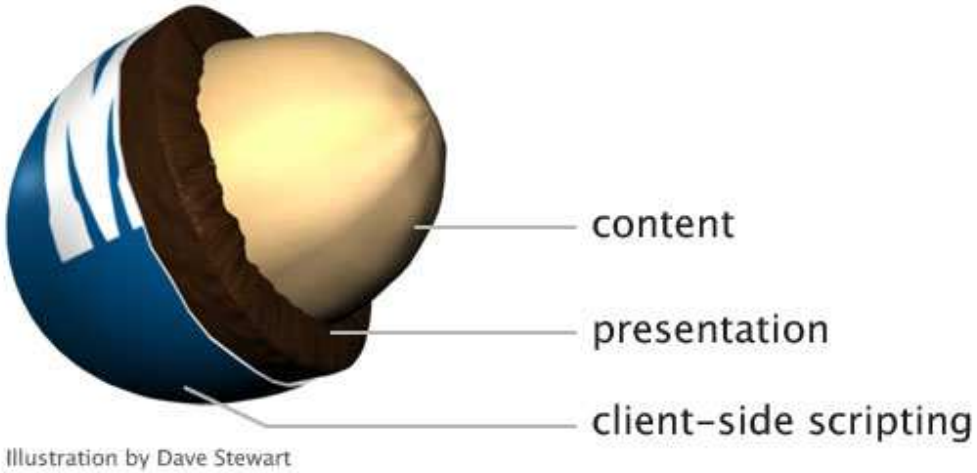

Illustration by Dave Stewart

Progressive Enhancement

Provide a solid (HTML) base, something you trust and know

Enhance your presentation by applying new styles

Enhance further by applying behaviour with JavaScript

Why Progressive Enhancement

Not only for the old things we know

But also for the uncertainty of the future!

workingdraft.de/135

workingdraft.de/137

workingdraft.de/144