

Magento Mobile Performance:

The Responsive Mythes



Is Magento mobile ready?

Magento 1.0 - No
Magento 1.2 - Yes (2008)
Magento 1.4 - Yes (2009/2010)
Magento 1.4.2 - Yes (app + web) (2011)
Magento 1.6.2 - Yes (2012)
Magento 1.8.1 - Yes (2013)
Magento 2.0 - Yes, I would guess so!



SPEED



Magento 1.0 - No

Magento 1.2 - Yes (2008)

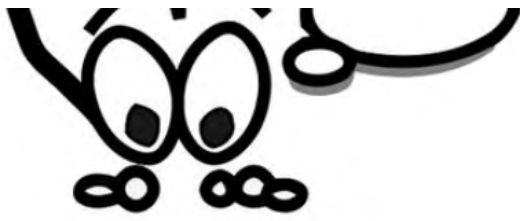
Magento 1.4 - Yes (2009/2010)

Magento 1.4.2 - Yes (app + web) (2011)

Magento 1.6.2 - Yes (2012)

Magento 1.8.1 - Yes (2013)

Magento 2.0 - Yes, I would guess so!



What is
Mobile Performance?

and is it
possible with
Magento



Top 5

- **minim**
defl

SPEED

LIMIT

10

Top 5

basic performance





- minimize http request
- deflate content
- merge css/js
- expire data
- images



Network latency



Is this the same with
mobile performance?

Yes, but there is **much more!**

XHTML Mobile Profile

```
<?xml version="1.0" encoding="UTF-8"?>  
<!DOCTYPE html PUBLIC "-//WAPFORUM//DTD XHTML Mobile 1.2//EN"
```

Hundred of

...

is the same with
mobile performance?

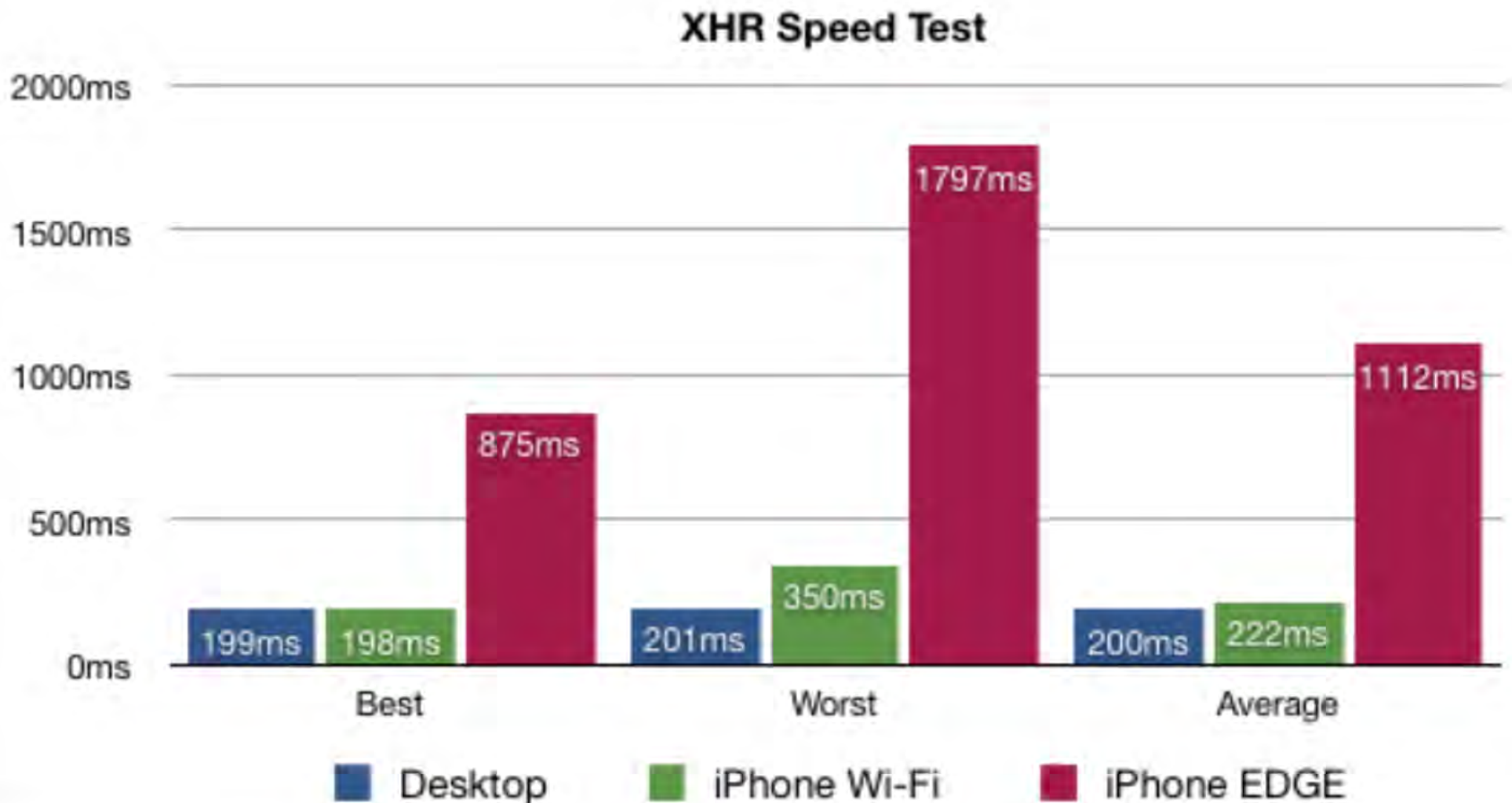
Yes, but there is **much more!**

XHTML Mobile Profile

```
1.0" encoding="UTF-8"?>  
PUBLIC "-//WAPFORUM//DTD XHTML Mobile 1.2//EN"  
http://www.w3.org/1999/xhtml xml:lang="en">
```

**Hundred o
different d**

Network latency



XHTML Mobile Profile

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//WAPFORUM//DTD XHTML Mobile 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/xhtml-mobile12.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <title>Hello world</title>
  </head>
  <body>
    <p>Hello <a href="http://example.org/">world</a>.</p>
  </body>
</html>
```

The MIME type for XHTML Mobile Profile is "application/vnd.wap.xhtml+xml"

ch more!



Hundred of different devices

(low, medium, high end devices)



```
<p>Hello <a href="http://example.org/">world</a>.</p>
</body>
</html>
```

The MIME type for XHTML Mobile Profile is "application/vnd.wap.xhtml+xml"



	LocalStorage	SQLite	IndexedDB
Safari iOS 5	✓	✓	✗
Android 2.2 Browser	✓	✓	✗
Firefox 8	✓	✗	✓
Chrome 15	✓	✓	✓
Safari 5	✓	✓	✗
IE 8	✓	✗	✗

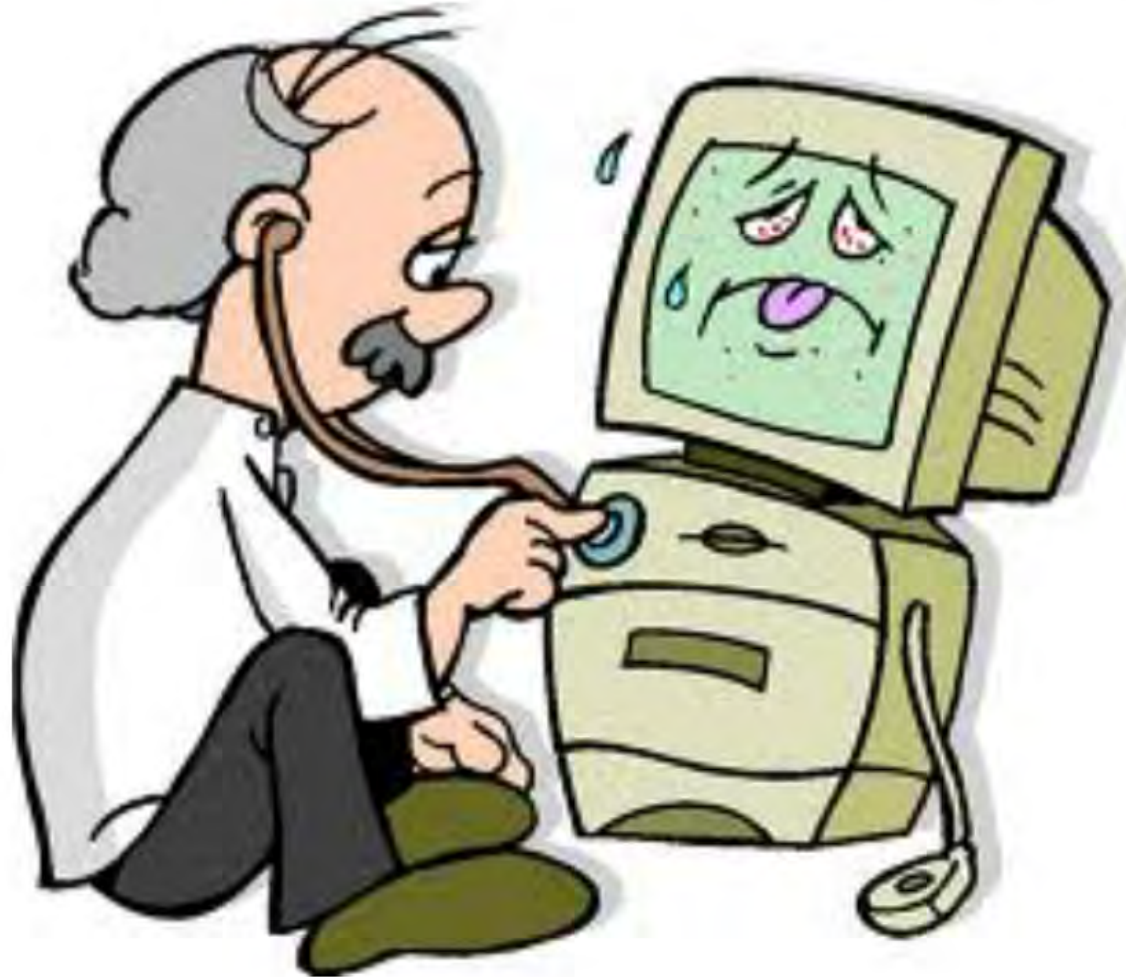


search ID: ake0008

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www.CartoonStock.com



Less Power





Is
less
More?

How do we optimize image
using Data URI's?



How can we fix this!

Only use image in:

- Logo
- Article
- Map

Don't use image <tag> for:

- Buttons
- Backgrounds
- Visual separators
- Titles

Is there a max on images?

Are there Java



Only use image in:

- Logo**
- Article**
- Map**

Don't use image <tag> for:

- Buttons
- Backgrounds
- Visual separators
- Titles



How do we optimize image using Data URI's?

```
1 /* Data URI images */
2 #top{background-image:url
  (data:image/
  gif;base64,R0lGODlhAQACAIAAAP///
  01NTSH5BAAAAAAALAAAAABAAIAAAICDA
  oA0w==)}
3 #nav-home a,#nav-services a,#nav-
  about a,#nav-contact a
  {background-image:url(data:image/
  png;base64,iVBORw0KGgoAAAANSUHEUg
  AAAIVAAAAALCAVAAAAD1n7IMVAAAAAGYDFWHD
```

Is there a max on images?

Yes 124kb is max, otherwise it will be loaded in memory

- no favicon.ico
- no apple-touch-icon (less request)

Is there a max on images?

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-

rators

```
3 #nav-home a,#nav-services a,#nav-  
  about a,#nav-contact a  
  {background-image:url(data:image/  
  png;base64,iVBORw0KGgoAAAANSUg  
  AAAIIVAAAALCAVAAAD1hTM/AAAAACYPFWHD
```

Are there Javascript frameworks for mobile?



Are CSS Sprites A Mobile Web "Worst Practice?"

- no apple-touch-icon (less request)

What about @font-face

@font-face {

font-family: Fertigo;

src: url("Fertigo_PRO.otf") format("opentype"); }

h1 { font-family: Fertigo; color: #204A87;

text-shadow: #AAA 2px 2px 0px }

- not every mobile device supports this
- Using an extra request to eg. google-fonts: this does not speed up

What is a manifest file, and do I need this?

```
1 CACHE MANIFEST
2 #version 1
3
4 CACHE:
```

Can we va

nt-face

- not every mobile device supports this
- Using an extra request to eg. google-fonts:
this does not speed up

Are CSS Sprites A Mobile Web “Worst Practice?”



- not always a good idea
- know your browser
- penalty on every subsequent page rendering

What is a manifest file, and do I need this?

```
1 CACHE MANIFEST
2 #version 1
3
4 CACHE:
5 style.css
6 script.js
7 index.htm
8
9 NETWORK:
10 style2.css
11
12 FALLBACK:
13 main_image.jpg backup_image.jpg
```

- store images in base64 offline storage for usage as inline images later
- Client Storage (localStorage and sessionStorage)
- Safari on iOS accepts up to 5 MB in offline storage

- not always a good idea
- know your browser
- penalty on every subsequent page rendering

Can we validate/test our mobile website?

- google pagespeed insight - mobile
- ready.mobi
- mobileperf - firebug mobile
- validator.w3.org/mobile/
- weinre/adobe edge/charles proxy
- mobitest Akamai



Mythes

trick to auto



Can we validate/test our

- google pagespeed insight - mobile**
- ready.mobi**
- mobileperf - firebug mobile**
- validator.w3.org/mobile/**
- weinre/adobe edge/charles proxy**
- mobitest Akamai**

- store images in base64 offline storage for usage as inline images later
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- validator.w3.org/m
- weinre/adobe edge
- mobitest Akamai

what's the **story** on these **Responsive Mythes**



Responsive is a **very nice trick** to auto detect the browser size and scale. Does it **satisfy** on all the performance needs I showed before?

Consider a couple of things before you just pick a responsive theme.

It's **not** the one and only solution for the best optimized mobile website!



Responsive Myths

Responsive is a **very nice trick** to auto detect the browser size and scale. Does it **satisfy** on all the performance needs I showed before?

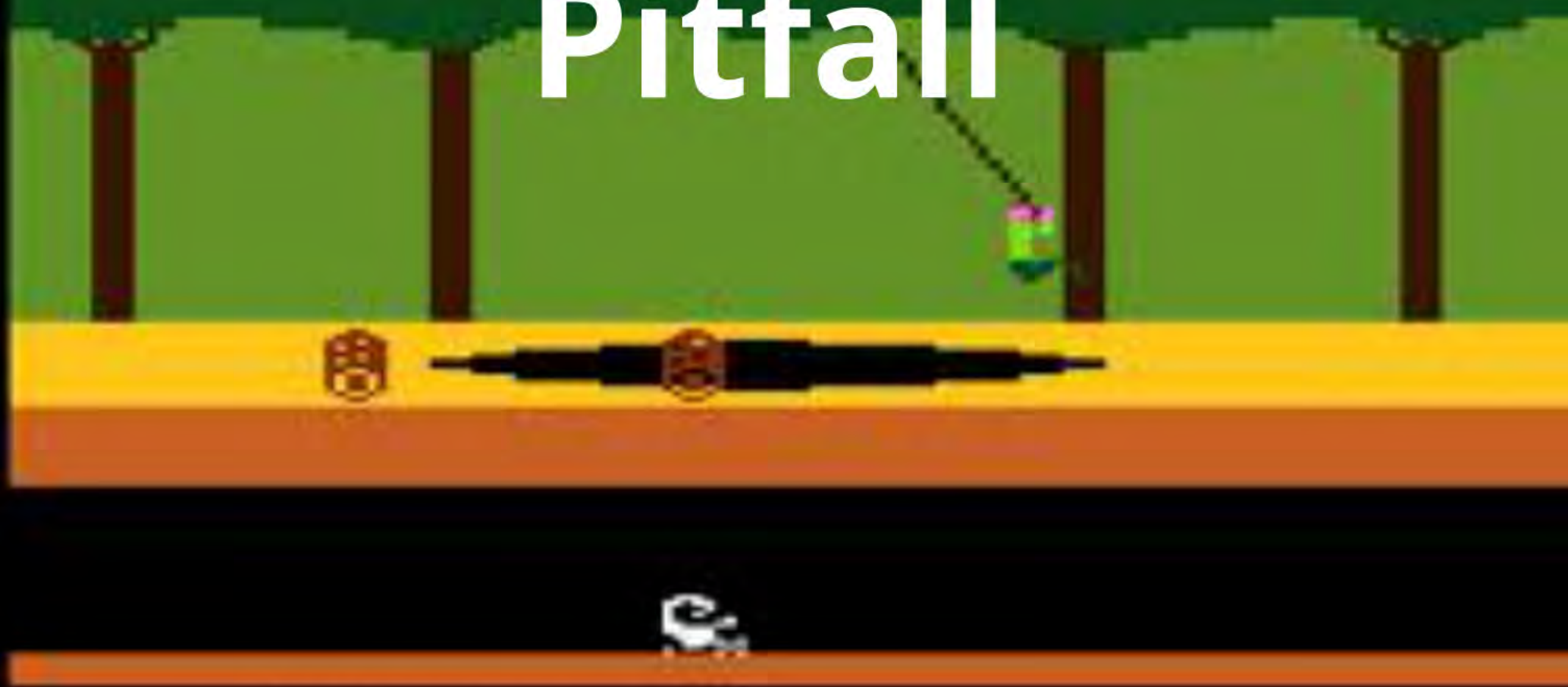
Consider a couple of things before you just pick a responsive theme.

It's **not** the one and only solution for the best optimized mobile website!



1986
|| 19:48

Pitfall



ACTIVISION

demo.mage-world.com/170d2/check

PayPal Website Payments Standard [What is PayPal?](#)

Check / Money order

Credit Card (VISA, MC, AMEX, DEBIT)

Name on Card *

Credit Card Type *


[-Please Select-]

Credit Card Number *

Expiration Date *

Month Year

REVIEW YOUR ORDER

Product Name	Price	Qty	Subtotal
 Coalesce Functioning On Impatience T-Shirt Size Small	\$15.00	1	\$15.00
Subtotal			\$15.00
Shipping & Handling (Flat Rate - Fixed)			\$100.00
Grand Total			\$115.00

Update Cart

DISCOUNT CODES

Forgot an item? [Edit Your Cart](#)

What is your favorite color

I accept the [Terms and Conditions](#)

Subscribe newsletter

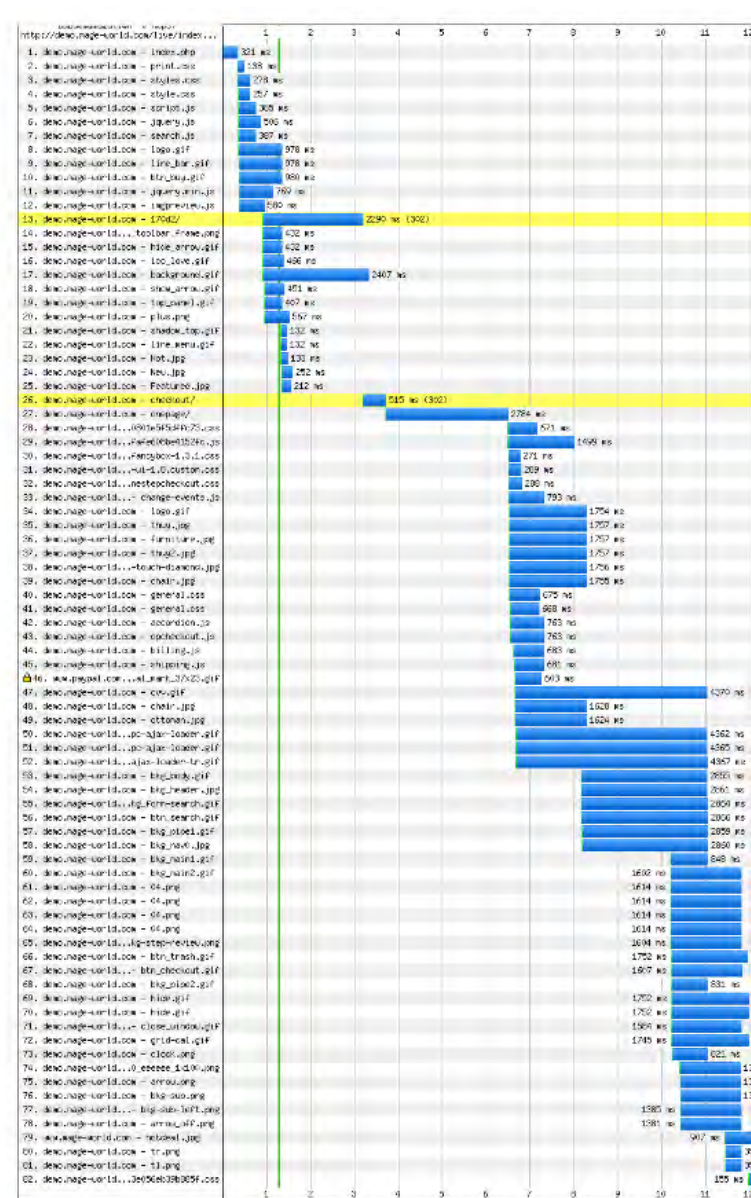
About Us | Customer Service | Privacy Policy
 Site Map | Search Terms | Advanced Search | Orders and Returns | Contact Us

Help Us to Keep Magento Healthy - [Report All Bugs](#) (Ver 1.7.0.2)
 © 2012 Magento Demo Store. All Rights Reserved.

198.193.43

Name	Resources	Network	Sources	Timeline	Profiles
Path					
bkg-su... (/170d2/sk)	GET	200 OK	bbcs...	Script	4.69 s
arrow_o... (/170d2/sk)	GET	200 OK	bbcs...	Script	6.79 s
updates... (/170d2/on)	P..	200 OK	bbcs...	Script	11.6 9.0
hotdeal... www.mag	GET	200 OK	bbcs...	Script	31 n
coalesc... (/170d2/mc)	GET	304 Not	bbcs...	Script	2.1 1.1 1.65
tr.png (/170d2/sk)	GET	200 OK	bbcs...	Script	3. 3. 34 n
ll.png (/170d2/sk)	GET	200 OK	bbcs...	Script	3. 3. 31 n

54 requests | 40.9 KB transferred | 6.74 s (onload: 4.28 s, DOMContentLoaded: 4.24 s)













Latest Performance Report for:
<http://demo.mage-world.com/live/index.php?id=1>

Report generated: Wed, Jun 26, 2013, 8:01 AM -0700

Test Server Region: Massachusetts, Canada
 Using Chrome (Android, Galaxy Nexus), 26.0.1310.42, Firefox (Linux), 17.0.10, Yahoo, 3.1.6

Summary

Page Speed Grade: **E (55%)** | YSlow Grade: **C (72%)** | Page load time: 14.53s
 Total page size: 576KB | Total number of requests: 83

	updates... /170d2/on	P...	200 OK	te...	bbc5... Script	3... 11.9	9... 910	
	hotdeal... www.mag	GET	200 OK	i...	bbc5... Script	(f... 31 n	3...	
	coalesc... /170d2/me	GET	304 Not	i...	bbc5... Script	2... 3.3	1... 165	
	tr.png /170d2/ski	GET	200 OK	i...	bbc5... Script	(f... 34 n	3...	
	tl.png /170d2/ski	GET	200 OK	i...	bbc5... Script	(f... 31 n	3...	

54 requests | 40.8 KB transferred | 6.74 s (onload: 4.28 s, DOMContentLoaded: 4.24 s)







All | Documents Stylesheets Images Scri 

One Step Checkout Pro Allows to

- + Choose 2 or 3 column layout
- + Customize heading, description, style color
- + Enable/Disable Shopping Cart to speed up

Payment Methods

Supports ALL popular payment methods

Already registered? [Click here to login.](#)

1 BILLING ADDRESS

First Name * Last Name *
 Company Email Address *
 Address *
 City State/Province
 Zip/Postal Code Country *
 Telephone
 Tax/VAT number
 Create an account for later use
 Ship to same address

2 SHIPPING METHOD

United Parcel Service

- Worldwide Expedited \$525.25
- Worldwide Express Saver \$715.22
- Worldwide Express \$741.40
- Worldwide Express Plus \$785.40

3 DELIVERY TIME

Select preferred time
 Date: 06/26/2013
 Time: 09:50 am

4 PAYMENT METHOD

- PayPal Website Payments Standard
- PayPal** [What is PayPal?](#)
- Check / Money order
- Credit Card (VISA, M/C, AMEX, DEBIT)

Name on Card *
 Credit Card Type *
 Credit Card Number *

3 Manage Address Fields

You can enable / disable / sort all address fields, set them as mandatory or optional.

Easy to Update Cart

Customers can add or subtract items from their cart on the checkout page

REVIEW YOUR ORDER

Product Name	Price	Qty	Subtotal
 Chair	\$129.99	1	\$129.99
 Ottoman	\$299.99	1	\$299.99
Subtotal			\$429.98
Shipping & Handling (Flat Rate - Fixed)			\$200.00
Grand Total			\$629.98

Discount Coupon

Allow to apply discount coupon directly on the checkout page

More Convenient Features

- + **Responsive Design! Support ALL devices**
- + Allow to add poll (Admin / CMS / Polls)
- + Enable check box for approval of terms and conditions
- + Enable Newsletter subscription when checking out
- + Plus Many More Features!

Forgot an Item? [Edit Your Cart](#)

What is your favorite color Please select

I accept the [Terms and Conditions](#)

Place Order

image-world.com/170d2/check

Payments Standard **PayPal** What is PayPal?

er

(M/C, AMEX, DEBIT)

Year

ORDER

Product Name	Price	Qty	Subtotal
Coalesce:	\$15.00	1	\$15.00

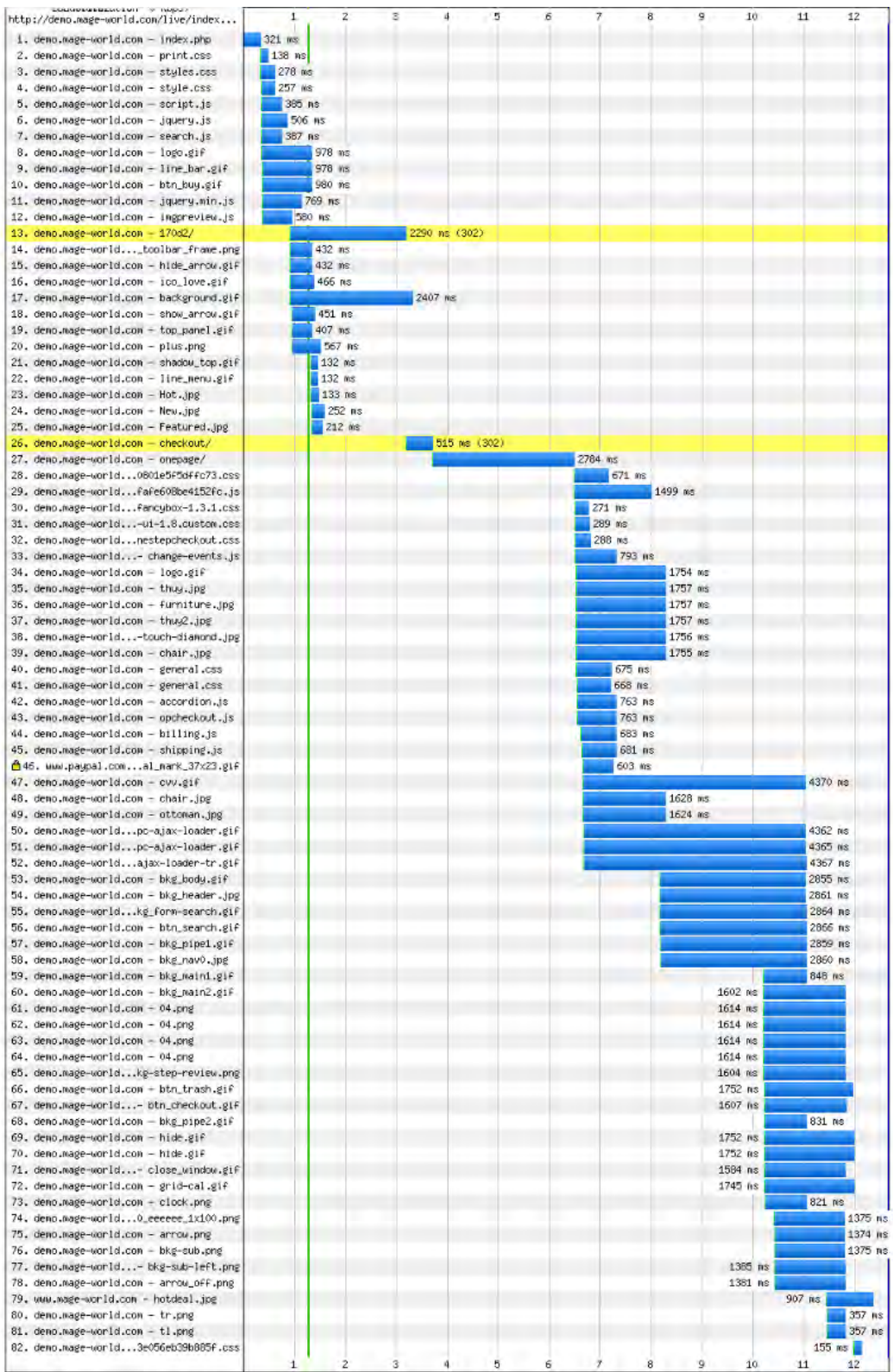
Subtotal \$15.00

Shipping & Handling (Flat Rate - Fixed) \$100.00

Grand Total \$115.00

Apply Coupon

198.193.43



www.plazathemes.com

Page: 1 2

NEWSLETTER

Newsletter sign-up form with a plus icon.

INFORMATION

81. demo.mage-world.com - t1.png
82. demo.mage-world...3e056eb39b885f.css



Latest Performance Report for: <http://demo.mage-world.com/live/index.php?id=1>

[Download PDF](#)

Report generated: Wed, Jun 26, 2013, 9:01 AM -0700

Test Server Region: Vancouver, Canada

Using: Chrome (Android, Galaxy Nexus) 26.0.1410.58, Page Speed 1.12.16, YSlow 3.1.6



Looks like you're running Magento
[Have a look at our Magento optimization tips »](#)

Summary

Page Speed Grade:
(55%) ↓

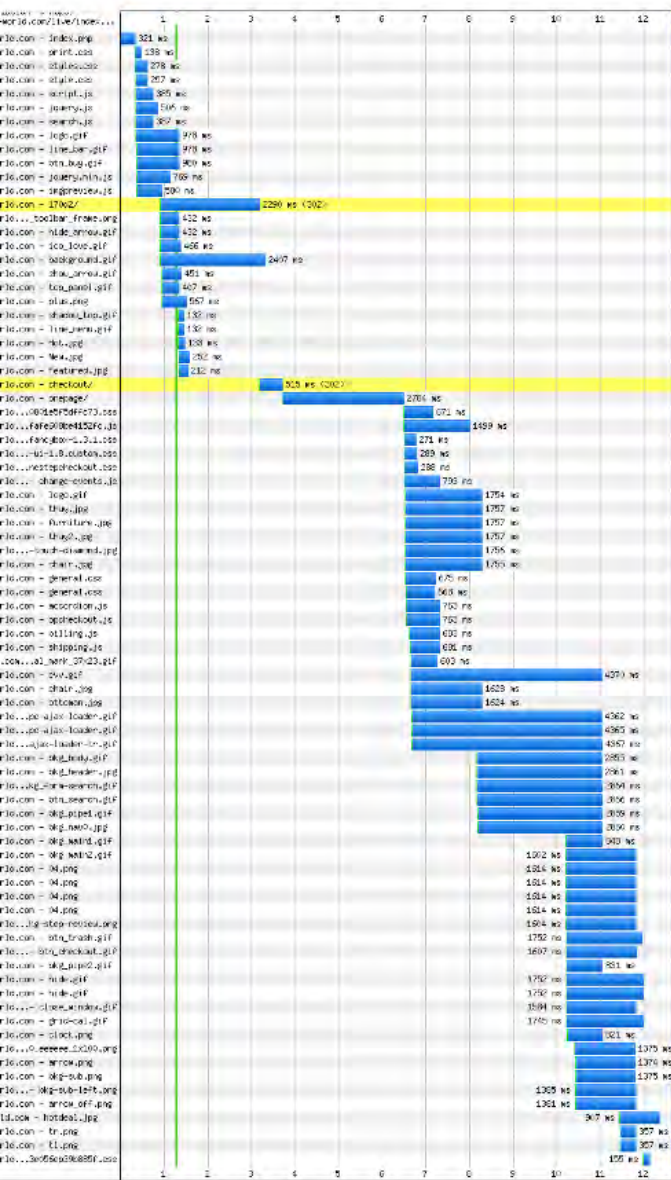
E

YSlow Grade:
(72%) ↓

C

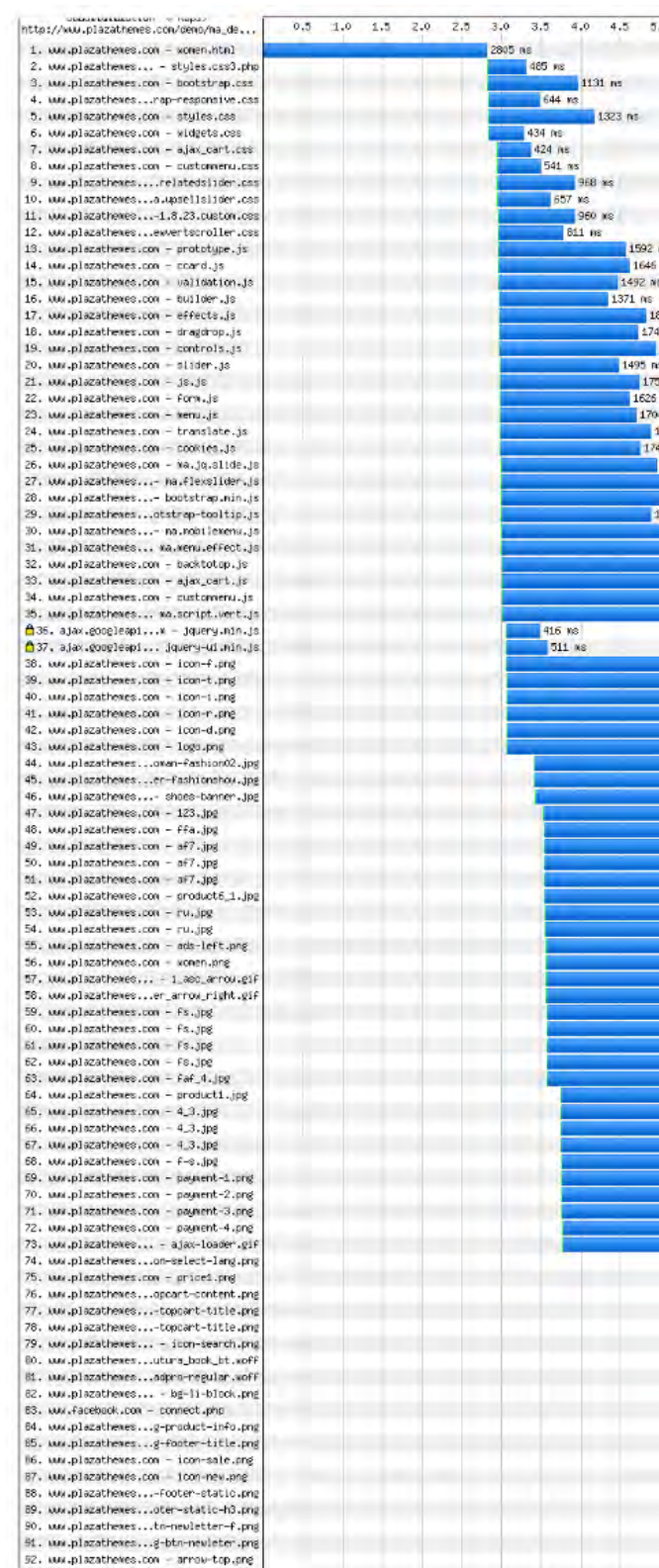
Page load time: 14.53s
Total page size: 676KB
Total number of requests: 83

Options



Screenshot of a web browser showing a fashion-themed demo page. The page features a top navigation bar, a main image of a woman in a white dress, a "NEW" badge, a woman in a blue dress, a newsletter sign-up form, and an information section. The browser's developer tools are open at the bottom, showing the "Timeline" tab with a list of resources and their load times.

Name	Path	Type	Size	Time
ajax-loc...	/demo/ma...	GET	200	0.08
bg-nav...	/demo/ma...	GET	200	0.08
arrow-d...	/demo/ma...	GET	200	0.08
arrow-u...	/demo/ma...	GET	200	0.08
ui-bg_h...	/demo/ma...	GET	200	0.08
ui-bg_g...	/demo/ma...	GET	200	0.08
bg-btn...	/demo/ma...	GET	200	0.08

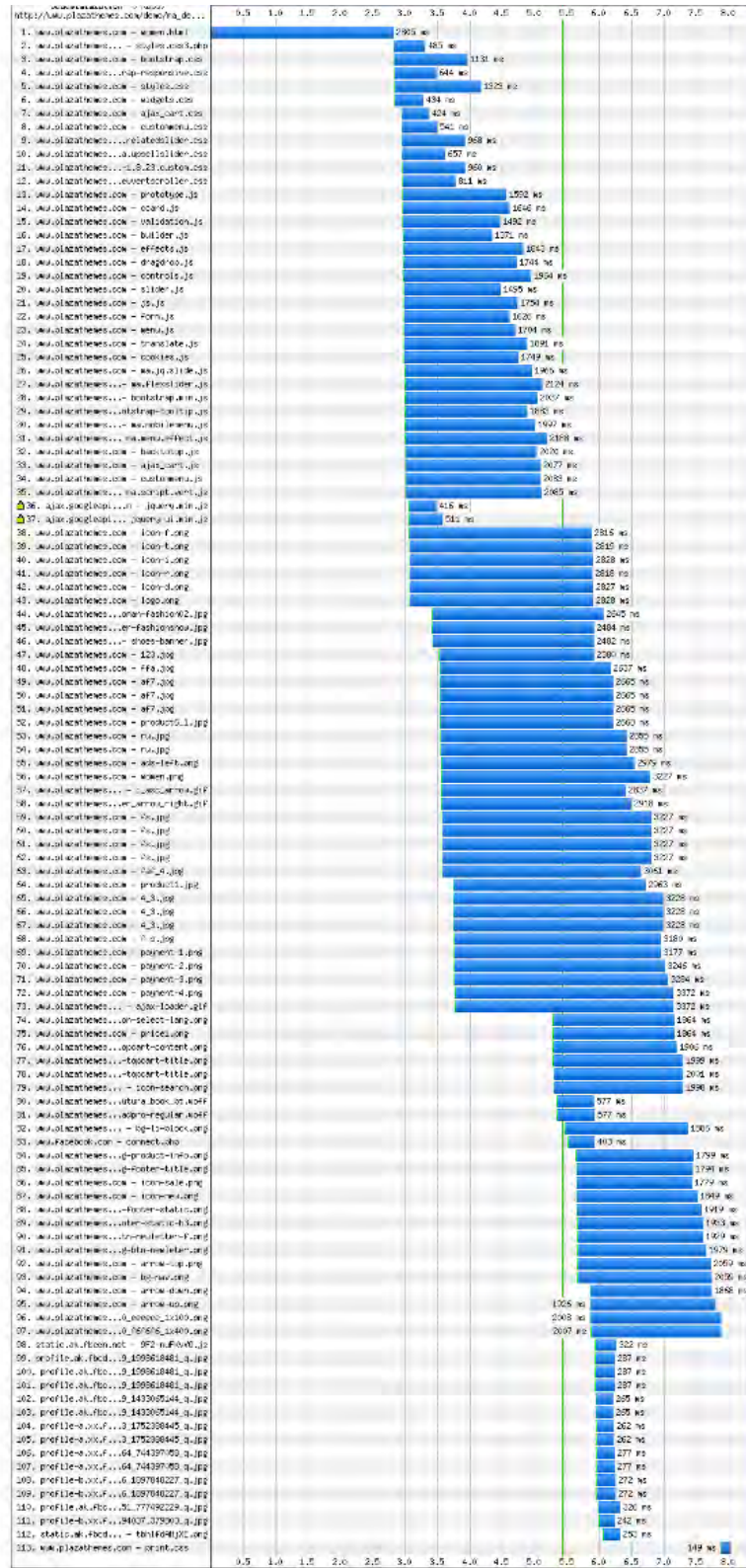


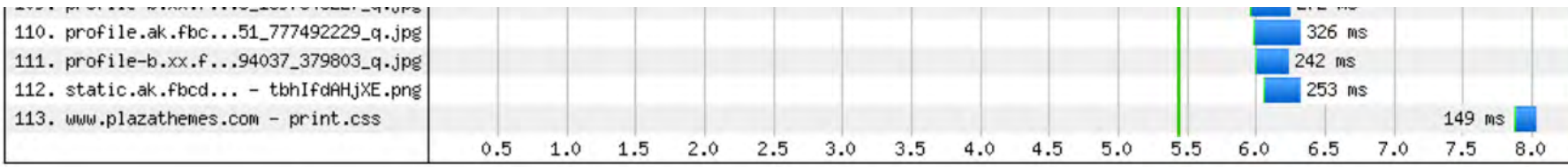
	/demo/ma	GET	OK	i...	Script	999	189												
	arrow-d...	GET	200	i...	ma.jq...	1....	1...												
	/demo/ma	GET	OK		Script	101!	180												
	arrow-u...	GET	200	i...	ma.jq...	1....	1...												
	/demo/ma	GET	OK		Script	101:	184												
	ui-bg_h...	GET	200	i...	wom...	1....	2...												
	/demo/ma	GET	OK		Parser	1.1	280												
	ui-bg_g...	GET	200	i...	wom...	1....	3...												
	/demo/ma	GET	OK		Parser	1.4	333												
	bg-btn....	GET	200	i...	Other	(f...	P...												
	/demo/ma	GET	OK																

119 requests | 2.6 MB transferred | 30.23 s (onload: 7.33 s, DOMContentLoaded: 4.30 s)

Documents
 Stylesheets
 Images 2

http://www.plazathemes.com/demo/ma...



Options

Latest Performance Report for: http://www.plazathemes.com/demo/ma_deluxe/women.html

[Download PDF](#)

Report generated: Wed, Jun 26, 2013, 10:05 AM -0700
 Test Server Region: Vancouver, Canada
 Using: Chrome (Android, Galaxy Nexus) 26.0.1410.58, Page Speed 1.12.16, YSlow 3.1.6

- Looks like you're running Magento [Have a look at our Magento optimization tips »](#)
- Your page generation time is slow [Find out why and explore possible solutions »](#)

Summary

Page Speed Grade: (44%)↓	F	YSlow Grade: (64%)↓	D	Page load time: 7.32s Total page size: 2.83MB Total number of requests: 114
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That's all Folks!

My name: **Ray Bogman**



- Joomla/Magento evangelist
- Trainer
- Performance nerd
- Security geek

@ SupportDesk.nu

<http://www.linkedin.com/in/raybogman>

Resources:

- <http://sixrevisions.com/javascript/mobile%C2%A0web-development-frameworks/>
- <http://caniuse.com/fontface>
- <http://blog.cloudfour.com/are-css-sprites-a-mobile-web-worst-practice/>
- <http://stevesouders.com/mobileperf/mobileperfbkm.php>
- https://en.wikipedia.org/wiki/XHTML_Mobile_Profile
- <http://mobile.smashingmagazine.com/2013/01/09/bandwidth-media-queries-we-dont-need-em/>
- <http://www.igvita.com/2013/03/07/faster-smaller-and-more-beautiful-web-with-webp>
- <http://mobitest.akamai.com/m/index.cgi>
- <http://www.slideshare.net/jiraict/magento-mobile-seminar>
- <http://themeforest.net/item/deluxe-responsive-magento-theme/4778953>
- <http://demo.mage-world.com/live/index.php?id=1>