

High Performance HTML5



stevesouders.com/docs/velocity-html5-20111207.pptx

Disclaimer: This content does not necessarily reflect the opinions of my employer.

flickr.com/photos/djbiesack/85833076/

High Performance HTML5

<http://www.w3.org/TR/html5/>



WPO

Web
Performance
Optimization

drives traffic

improves UX

increases revenue

reduces costs

Web Performance Working Group

chartered June 2010

Web Timing

- **Navigation Timing**
- **User Timing**
- **Resource Timing**

Page Visibility

Script-based animations

Efficient script yielding

<http://www.w3.org/2010/webperf/>

Navigation Timing



```
var timing = performance.timing;  
var loadtime =  
    timing.loadEventEnd -  
    timing.navigationStart;
```

Chrome 6+, IE9+, Firefox 7+, Android 4+

<http://blog.chromium.org/2010/07/do-you-know-how-slow-your-web-page-is.html>

ADVANCED SEGMENTS

EXPORT

ADD TO DASHBOARD

Site Speed

Oct 18, 2011 - Nov 17, 2011

100.00% of total pageviews

Explorer

Performance

Map Overlay

Site Usage

Avg. Page Load Time (sec)

5.90

Site Avg: 5.90 (0.00%)

Pageviews

43,592

% of Total: 100.00% (43,592)

Page Load Sample

3,152

% of Total: 100.00% (3,152)

Bounce Rate

81.80%

Site Avg: 81.80% (0.00%)

% Exit

73.23%

Site Avg: 73.23% (0.00%)



Viewing: Page Page Title Other

Secondary dimension: Select...

Sort Type: Default

advanced

View:

1 - 10 of 588

	Page	Avg. Page Load Time (sec)	Pageviews	Page Load Sample	Bounce Rate	% Exit
1.	/blog/2010/02/15/browser-performance-wishlist/	175.57	206	18	90.34%	86.89%
2.	/blog/2010/12/10/velocity-china/	89.25	16	1	100.00%	100.00%
3.	/blog/2011/10/20/http-archive-new-code-new-charts/	38.86	1,070	62	86.16%	77.38%
4.	/?ex=2&title=	22.67	1	1	100.00%	100.00%

VISITORS

ADVERTISING

TRAFFIC SOURCES

CONTENT

Overview

Site Content

Site Speed

Site Search

Events

AdSense

In-Page Analytics

CONVERSIONS

Help

The Site Speed Report

Page Speed Online

Find Your Old Reports in the New Interface

Help center

Search help center

Go

GA site speed

Oct 18, 2011 - Nov 17, 2011

Site Speed

on by default

browsers that support Nav Timing

Chrome 6+

IE9+

Firefox 7+ (buggy)

Android 4+

1% sampling rate by default

can change to 10%

`_setSiteSpeedSampleRate()`

<http://analytics.blogspot.com/2011/11/site-speed-now-even-easier-to-access.html>

Resource Timing

- DNS, redirects, etc.
- security safeguards

User Timing

- for web apps
- mark, measure

Page Visibility

detect when page is visible

- stats
- video & audio
- polling, DHTML
- performance: prefetching, prerendering

Chrome 13:

- `document.webkitHidden`
- `webkitvisibilitychange`

code.google.com/chrome/whitepapers/pagevisibility.html

script async & defer

script src

halts parsing, blocks rendering

async

execute once script is downloaded

defer

execute after page is parsed

missing

download & execute last

download last, execute on demand

GMail Mobile

```
<script type="text/javascript">  
/*  
var ...  
*/  
</script>
```

get script DOM element's text

remove comments

eval() when invoked

awesome for prefetching JS that *might*
(*not*) be needed

<http://goo.gl/l5ZLQ>

ControlJS

a JavaScript module for making scripts load faster

just change HTML

inline & external scripts

```
<script type="text/cjs"  
    data-cjssrc="main.js">  
</script>
```

```
<script type="text/cjs">  
var name = getName();  
</script>
```


ControlJS

a JavaScript module for making scripts load faster

download without executing

```
<script type="text/cjs"  
        data-cjssrc="main.js"  
        data-cjsexec=false>  
</script>
```

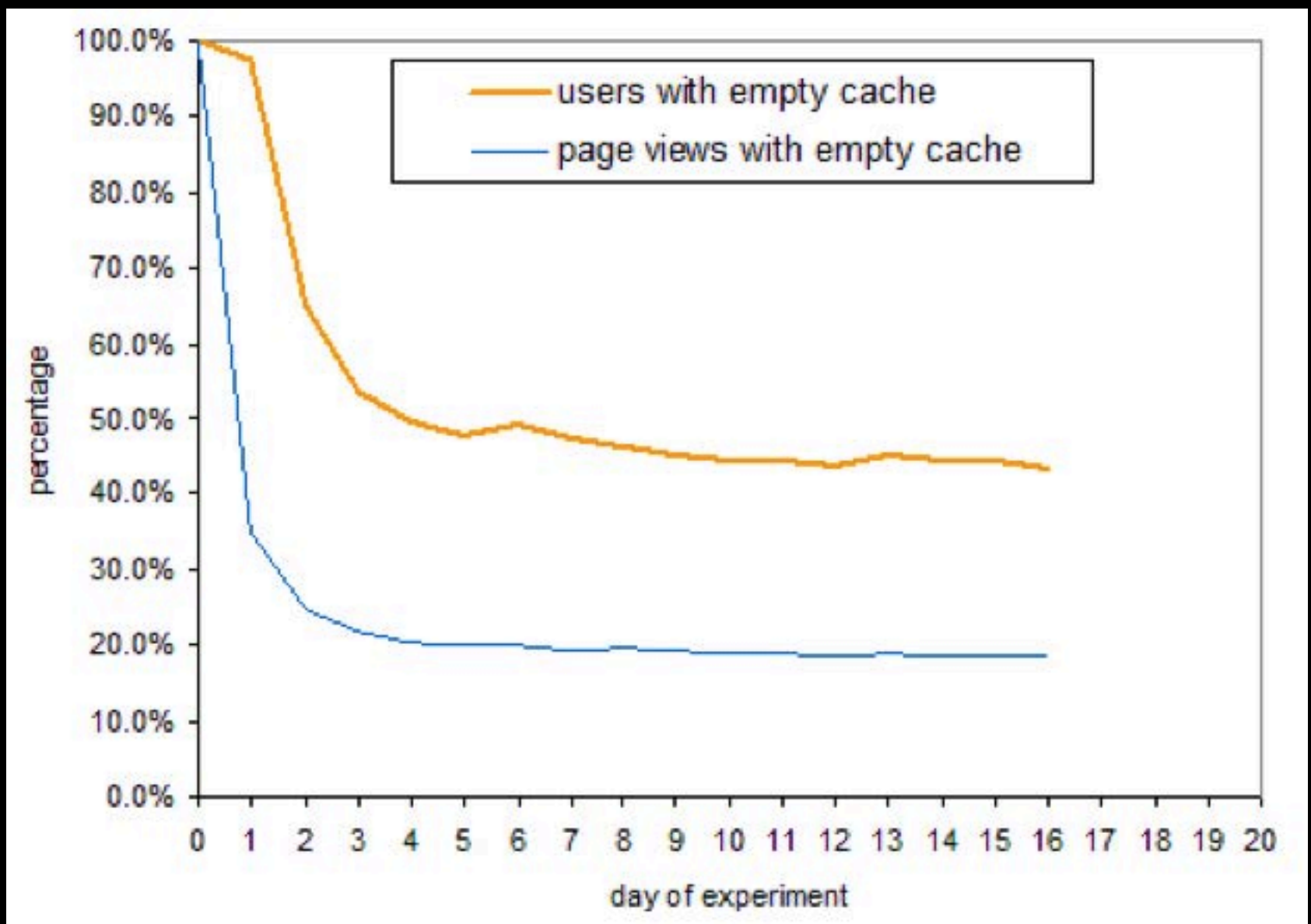
Later if/when needed:

```
CJS.execScript(src) ;
```

app cache

offline apps, longer cache





yuiblog.com/blog/2007/01/04/performance-research-part-2/

Cache size for desktop browsers (in MB)

Browser	Chrome	Firefox	Opera	Safari	IE
Version	12	5.0	10	5	9
Persistent	85	75	20	0/100*	150**
Memory	85	75	80	60	150**

* Safari on windows demonstrated no persistent cache, while on Mac it stored 100MB of data

UPDATE: We couldn't reproduce this with the beta version of Safari 5.1, will update the table once its released

** We stopped measuring at 150MB, IE9 can [reportedly go up to 250MB](#)

Cache size for Mobile Browsers/Devices (in MB)

Smartphones	iPhone 4	Galaxy S	Nexus S	Blackberry Torch
OS / Ver	iOS/4.3	Android 2.2	Android 2.3	Blackberry 6
Persistent*	0	4	4	25
Memory**	100	4	4	25

Tablets	iPad 1	iPad 2	XOOM
OS / Ver	iOS/4.3	iOS/4.3	Android 3.0
Persistent*	0	0	20
Memory**	20	50	20

blaze.io/mobile/understanding-mobile-cache-sizes/

June 28, 2011 10:14 pm | [9 Comments](#)

When you load the same URL back-to-back in Safari, the second load is treated the same as hitting Reload.

Home screen apps on iPhone are slower

even though the
cache.

Whenever I see strange performance behavior I think about where that behavior might have a significant impact. Is there any place where this back-to-back Safari Reload behavior could have a significant impact? A comment from yesterday's post hints at the answer:

app cache

offline apps, longer cache

```
<!doctype html>
```

```
<html manifest="myapp.appcache">
```

```
myapp.appcache:
```

```
CACHE MANIFEST
```

```
# Revision: 1.28
```

```
CACHE:
```

```
/images/logo.gif
```

```
NETWORK:
```

```
/login.html
```

```
FALLBACK:
```

```
/index.html /offline.html
```

Content-Type: text/cache-manifest

app cache gotchas

html docs w/ manifest are cached

404 => nothing is cached

size: 5MB+

must rev manifest to update resources

update is served on 2nd reload (?!?!)

1 push app
logo.gif = 🌟

2 user loads app
app cache is empty
fetch manifest
fetch logo.gif
app cache = 🌟
user sees 🌟

app cache reload

3 push app
logo.gif = ✨
rev manifest

4 user loads app
app cache = 🌟
user sees 🌟
fetch manifest
fetch logo.gif
app cache = ✨

5 user loads app again
app cache = ✨
➡ user sees ✨
fetch manifest (304)

load twice workaround

```
window.applicationCache.addEventListener('updateready',
```

```
function(e) {  
    if ( window.applicationCache.status ==  
        window.applicationCache.UPDATEREADY) {  
        if ( confirm("Load new content?" ) ) {  
            ...  
        }  
    }  
}
```

<http://www.webdirections.org/blog/get-offline/>

<http://www.html5rocks.com/en/tutorials/appcache/beginner/>

localStorage

`window.localStorage:`

`setItem()`

`getItem()`

`removeItem()`

`clear()`

also `sessionStorage`

all popular browsers, 5MB max

<http://dev.w3.org/html5/webstorage/>

<http://diveintohtml5.org/storage.html>

localStorage as cache

1st doc: write JS & CSS blocks to localStorage

```
mres.-0yDUQJ03U8Hjija: <script>(function(){...
```

set cookie with entries & version

```
MRES=-0yDUQJ03U8Hjija:-4EaJoFuDoX0iloI:...
```

later docs: read JS & CSS from localStorage

```
document.write( localStorage.getItem(mres.-0yDU  
QJ03U8Hjija) );
```

<http://stevesouders.com/blog/2011/03/28/storager-case-study-bing-google/>

» flowers

About 80

Storage bookmarklet

3 items, 168 kB

localStorage

add clear

MOG.RESOURCES.CSS: #og_head .og_p_119(background-image:url(

MOG.RESOURCES.VERSION: 13

msuggest.history.his...: flowers starfish

sessionStorage

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www.teleflora.com

[Get Well Flowers](#) - [Birthday Flowers](#)

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www.ftd.com/

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Flowers Delivered - Send Flowers Online, ProFl

www.proflowers.com/

Send flowers with ProFlowers, your online florist. Offering na

Birthday flowers, all flowers and many occasi... - [Cached](#)

[Birthday](#) - [Sympathy](#) - [Just Because](#) - [Get Well Flowers](#)

Flower - Wikipedia, the free encyclopedia

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Storage bookmarklet

7 items, 332 kB

localStorage

add clear

sessionStorage

add clear

web-c: (["4a45fb01e8ce48fc"])

web-c4a45fb01e8ce48fc: ({"css": "body{color:#000;margin:3px 0}body,#

web-rt: -1479430611

web-s: (["#sclient=psy-ab&hl=en&source=hp&q=flowers&pbx=1&oq=flow

web-s#sclient=psy-ab&...: ({"n": "ad", "a": ["flowers - Google Search", "Sfo

web-s#sclient=psy-ab&...: ({"n": "ad", "a": ["flowers - Google Search", "Tfq

web-v: 21_1f309c0

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Shop FTD®'s 100th Anniversary Sale.

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Same Day Local Delivery.

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Aug 2, 2011 – Order **flowers** online for same da

chocolates, roses, gifts and gift baskets by occa

[Sympathy & Funeral](#) - [Under \\$35](#) - [Birthday flow](#)

[Evan Gilbert](#), [Ben Lisbakken](#), [David](#)

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Birthday **flowers**, fall **flowers** and many occasio

[Birthday](#) - [Sympathy](#) - [Just Because](#) - [Get Well](#)

mobile

desktop

flowers

all shopping images news local de

Storage bookmarklet

37 items, 364 kB

localStorage

add clear

BGINFO: (*PortraitLink*:http://www.bing.com/fd/hpk2/JavaVolcano_Eh
CApp.Answers.A7E3A0D0: .imgLnd{background:#000;color:#fff}.imgH
CApp.Home.FD66E1A3: #ContentBody{position:relative;overflow:hidd
CApp.News.4B53F555: .nwsTitle{font-size:20px;line-height:22px;color
CApp.Shop_Answers.31F...: .h11{font-size:font(20px);line-height:22px;
CUX.Animations.8B10DC...: body.showAbar #PageContent,body.show
CUX.Autosuggest.16DD6...: #ddAS{clear:both}.as{overflow-y:hidden}.s
CUX.CommonAnswer.A90D...: .w40{width:40%}.w35{width:35%}.w30{
CUX.Keyframes.B8625FE...: @-webkit-keyframes scaleout{from{-web
CUX.Site.18BDD936: *(margin:0;padding:0)table{border-collapse:sepa
CUX.Site.C0876CA0: *(margin:0;padding:0)table{border-collapse:sepa
CUX.SiteHires.282E35D...: .blogaN{background-image:url(data:image
CUX.SiteLowRes.C8A1DA...: .blogaN{background-image:url(data:imag
CUX.Ux.1E2DAEB1: .star0,.star1,.star2,.star3,.star4,.star5,.star
J UX.MorePageView.2F7...: (function(){function a(){Type.registerName
JApp.Expander.F4876AA...: (function(){function a(){Type.registerName
JApp.Home.DE384EBF: (function(){function a(){Type.registerNamespa
JApp.Serp.418E2806: (function(){function a(){Type.registerNamespa
JUX.Autosuggest.D6423...: (function(){function a(){Type.registerName
JUX.Compat.0907AAD4: function \$(a){return document.getElementBy
JUX.Compat.F18CD868: function \$(a){return document.getElementBy
JUX.Framework.5D18B4F...: (function(){function a(){Type.registerNam
JUX.FrameworkCore.A39...: (function(){function a(){Type.registerName
JUX.FrameworkCore.AC8...: (function(){function a(){Type.registerNam
JUX.LoadImageBehavior...: (function(){function a(){Type.registerName
JUX.MorePageView.2F72...: (function(){function a(){Type.registerName
JUX.MsCorlib.172D90C3: window.ss={version:"0.6.1.0",isUndefined:fu
JUX.MsCorlib.2F963AA7: window.ss={version:"0.6.4.0",isUndefined:fu
JUX.NavSliding.9E89EA...: (function(){function a(){Type.registerName
JUX.PublicJson.540180...: if(!this.JSON)this.JSON={};(function(){funct
JUX.Searchbox.B109AB...: (function(){function a(){Type.registerName
JUX.Co...: (function(){function a(){Type.registerName
JUX.U...: (function(){function a(){Type.registerName
JUX.U...: (function(){function a(){Type.registerName
LastRMSMUpdate: 1317074299.931
RMSM.Keys: CUX.Site.18BDD936~CUX.Keyframes.B8625FEE~CApp
qc: 1

sessionStorage

mobile

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bing

flowers

Storage bookmarklet

save to Jdrop

0 items, 0 kB

localStorage

sessionStorage

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Flowers

Pictures Flowers

Chrysanthemum

Flower

Valentine Flowers

Types of Flowers

Spring Flowers

Pictures

SEARCH HISTORY

Search more to see your history

See all

Clear all · Turn off

NARROW BY DATE

All results

Past 24 hours

Past week

Past month

Flowers at 1-800-FLOWERS.COM

1800flowers.com · Flowers Now.

FTD® Official Site

www.FTD.com · \$19.99 Flowers

Other ideas: discount flowers

Images of flowers

Discover images of flowers

See also: Hibiscus Flower, F

Flowers | Flower Delivery

1-800-FLOWERS.COM

Same-Day Delivery · Sympa

Send flowers and send a sn

designed arrangements. Flo

www.1800flowers.com

desktop

Profile

Storager bookmarklet

3426 items, 3162 kB

localStorage

add clear

```
ft_fly_10100151185500... {"time":1317074487550,"value":<
ft_fly_10100151362525... {"time":1317074486074,"value":<
ft_fly_10100154232304... {"time":1317074454909,"value":<
ft_fly_10100154947775... {"time":1317074443863,"value":<
ft_fly_10100155275818... {"time":1317074440171,"value":<
ft_fly_10100155277060... {"time":1317074440171,"value":<
ft_fly_10100156099961... {"time":1317074425427,"value":<
ft_fly_10100157160101... {"time":1317074415668,"value":<
ft_fly_10100157210336... {"time":1317074415663,"value":<
ft_fly_10100157537196... {"time":1317074413231,"value":<
ft_fly_10100158869346... {"time":1317074400965,"value":<
ft_fly_10100158901656... {"time":1317074400964,"value":<
ft_fly_10100163279493... {"time":1317074359410,"value":<
ft_fly_10100164775325... {"time":1317074347134,"value":<
ft_fly_10100165657872... {"time":1317074341981,"value":<
ft_fly_10100191497778... {"time":1317074451521,"value":<
ft_fly_10100191566935... {"time":1317074451519,"value":<
ft_fly_10100191573976... {"time":1317074451518,"value":<
ft_fly_10100197398967... {"time":1317074388857,"value":<
ft_fly_10100439237755... {"time":1317074497710,"value":<
ft_fly_10100439272156... {"time":1317074497707,"value":<
ft_fly_10100439648762... {"time":1317074493877,"value":<
ft_fly_10100440248769... {"time":1317074490268,"value":<
ft_fly_10100440277227... {"time":1317074490264,"value":<
ft_fly_10100440587780... {"time":1317074488913,"value":<
ft_fly_1010044101013... {"time":1317074483434,"value":<
ft_fly_1010044101013... {"time":1317074483432,"value":<
ft_fly_1010044101013... {"time":1317074480866,"value":<
ft_fly_10100441946392... {"time":1317074480864,"value":<
ft_fly_10100443530303... {"time":1317074467297,"value":<
ft_fly_10100444660643... {"time":1317074460119,"value":<
ft_fly_10100444949359... {"time":1317074458489,"value":<
```



Storager bookmarklet

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0 items, 0 kB

+ localStorage

+ sessionStorage

FAVORITE



Messages

Events

Find Friends

LISTS

Close Friends

Family

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APPS

Photos

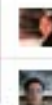
Music

MORE

Friends on Chat



RECENT STORIES



Update Status

What's on your mind

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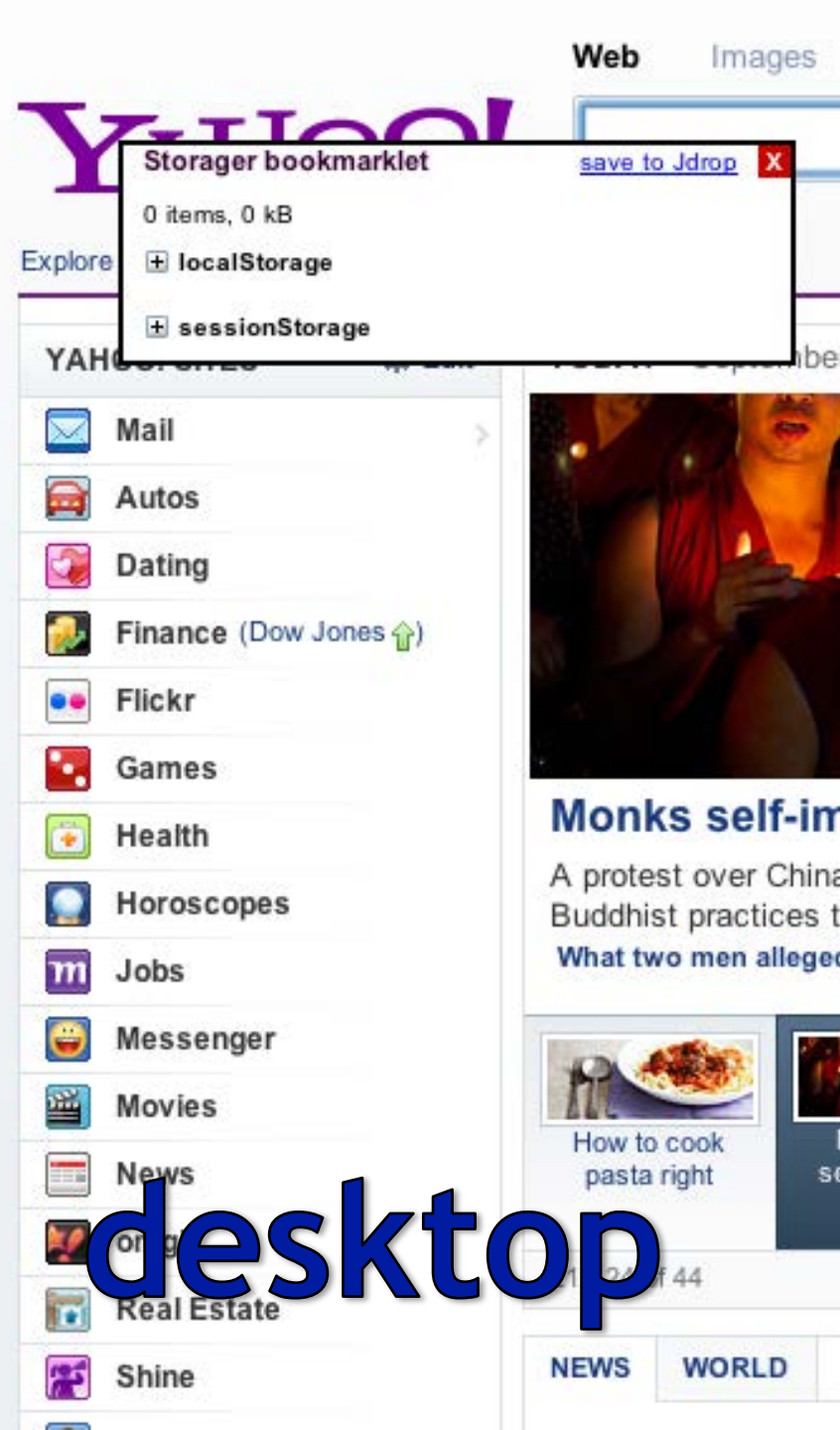
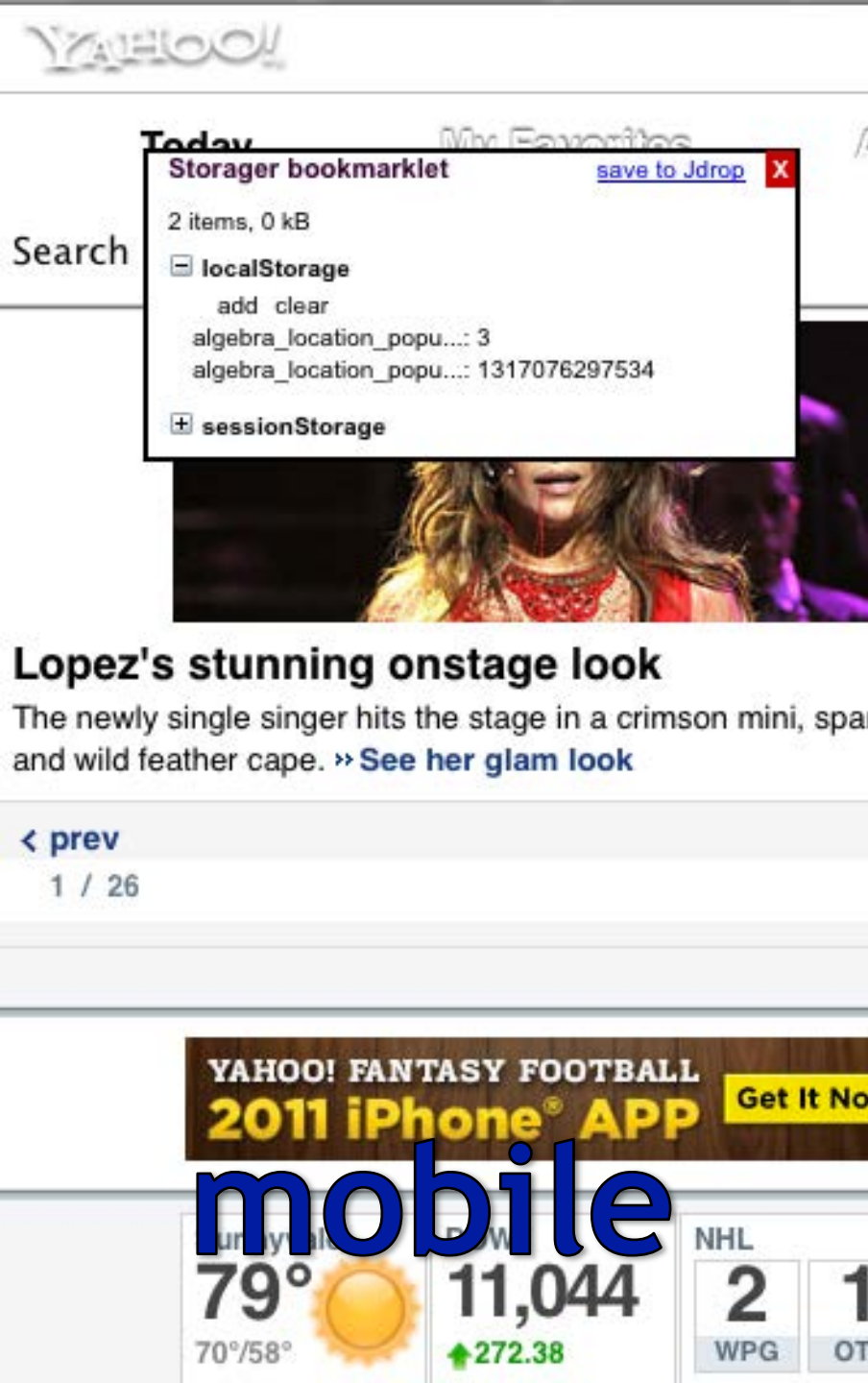
TOP STORIES SINCE YOUR LAST VISIT



Andrew Magee



mobile desktop



mobile

desktop

Storage bookmarklet

6 items, 345 kB

localStorage

add clear

APPCACHE_CODE_TIME: 1317074287847
APPCACHE_CSS_CODE: body{font-family:arial,helvetica,ve
serif,fo...
APPCACHE_JS_CODE: var settings = { isTablet : false, exp
APPCACHE_PAGE_TIME: 1317074287
ajax_request: {"version":"1316674917enUSstevesouders","d
[""/home?ajax=...
watches: {"version":"1314343855enUSstevesouders","data":

sessionStorage

0:30

by stephancelmare360

from Recommended

3:23

Super Junior 슈퍼주니어_A-C

VIDEO

by SMTOWN New

from Top Favorited

0:30

Volkswagen R32 Commercial

by szandor26

from Recommended

1:41

Parody of LMFAO - Sexy And

by keeptheheat New

from Top Favorited

This

Storage bookmarklet

0 items, 0 kB

localStorage

sessionStorage

Terra Nova

SERIES PREMIERE TONIGHT 8/7c FOX

souders@goog...

All activity

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Reco...

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Music

1:40

Claudia Leitte sendo

vaiada no R...

by jeeefdiretor

1:40

Lady Gaga - "Hair"

[Jamey Rodeme...

by monsternemoirs

1:40

Rock In Rio 2009

Red Hot Chili...

by 1387Raffam...

mobile

desktop

1 items, 0 kB

[-] localStorage

[add](#) [clear](#)[amznfbid:](#) 179-7076773-7198322:1298843695

[-] sessionStorage

[add](#) [clear](#)

Storager bookmarklet

[save to Jdrop](#) X

0 items, 0 kB

[-] localStorage

[-] sessionStorage

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Recommendations For You



Prince Valiant Vol 5

Hal Foster

~~\$29.99~~ **\$18.24**[More Recommendations](#)[Shop All Documents](#)

Books

Kindle

mobile

Steve

Today's Recommendations For You

Here's a daily sample of items recommended for you. C

[Prince Valiant Vol 5](#) (Hardcover)

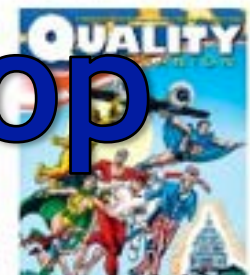
by Hal Foster

\$18.24[Fix this recommendation](#)[Prince Valiant: 1943](#)

4)... (Hardcover) by

\$16.29[Fix this recommendation](#)

Coming Soon for You



desktop

New! Download the Twitter for iPhone app

twitter

What's h

Storage bookmarklet [save](#)

1 items, 6 kB

 **localStorage**

[add](#) [clear](#)

anonymous: {"strs":{"retweet":"Retweet","tap_here_lists":"Tap

 **sessionStorage**

Home Mentions Favs Msgs

 **slightlylate** super(nerdFight).popcorn; // it's a
19 minutes ago

 **joehe Witt** Three20, by the way, was an attempt
web conventions (links, CSS) to iOS. I wouldn't do that
again. Will follow Apple conventions.
29 minutes ago

 **joehe Witt** You know how loading a PDF in your
feels like entering an archaic world? That's what
embedded web browsers feel like on iOS/Android.
about 1 hour ago

 **joehe Witt** Inability to control the timing of rendering
to flickering and stalling that I just can't avoid

mobile

twitter

Search

Storage bookmarklet

1 items, 3 kB

 **localStorage**

[add](#) [clear](#)

:USER:: {"v1:131040918875711003":{"value":{"login":1315

 **sessionStorage**

Timeline @souders Activity Searches

7 new tweets

 **slightlylate** Alex Russell
super(nerdFight).popcorn; // it's a be
59 minutes ago

 **joehe Witt** Joe Hewitt
Three20, by the way, was an attempt
(links, CSS) to iOS. I wouldn't do that
conventions.
1 hour ago

 **joehe Witt** Joe Hewitt
You know how loading a PDF in your
feels like entering an archaic world? That's what embedded
web browsers feel like on iOS/Android.
1 hour ago

 **joehe Witt** Joe Hewitt

desktop

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+ localStorage

+ sessionStorage

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How Search Marketing Costs Are Evolving



Tumblr Raises \$85 Million
Round From Richard Branson



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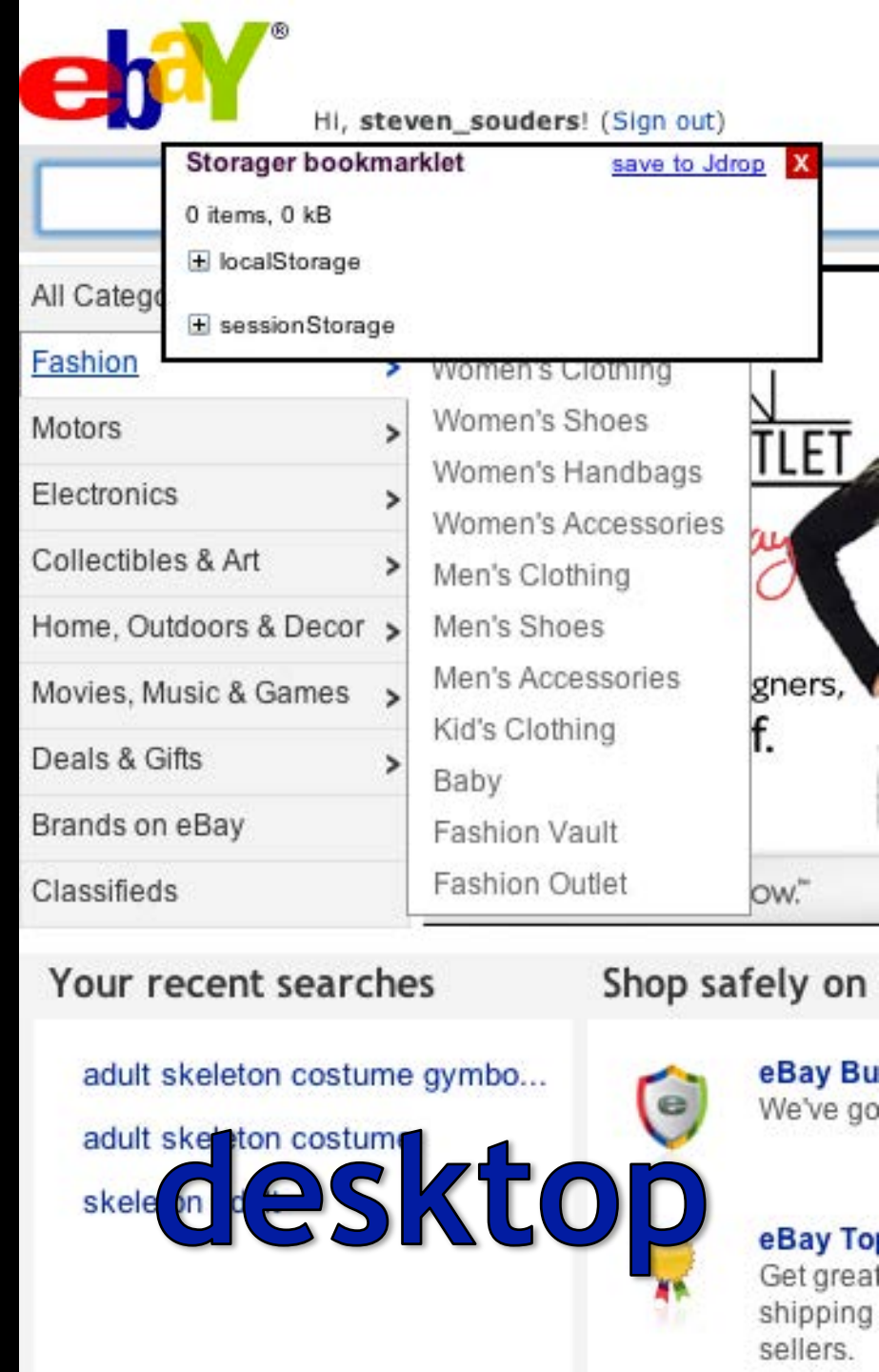
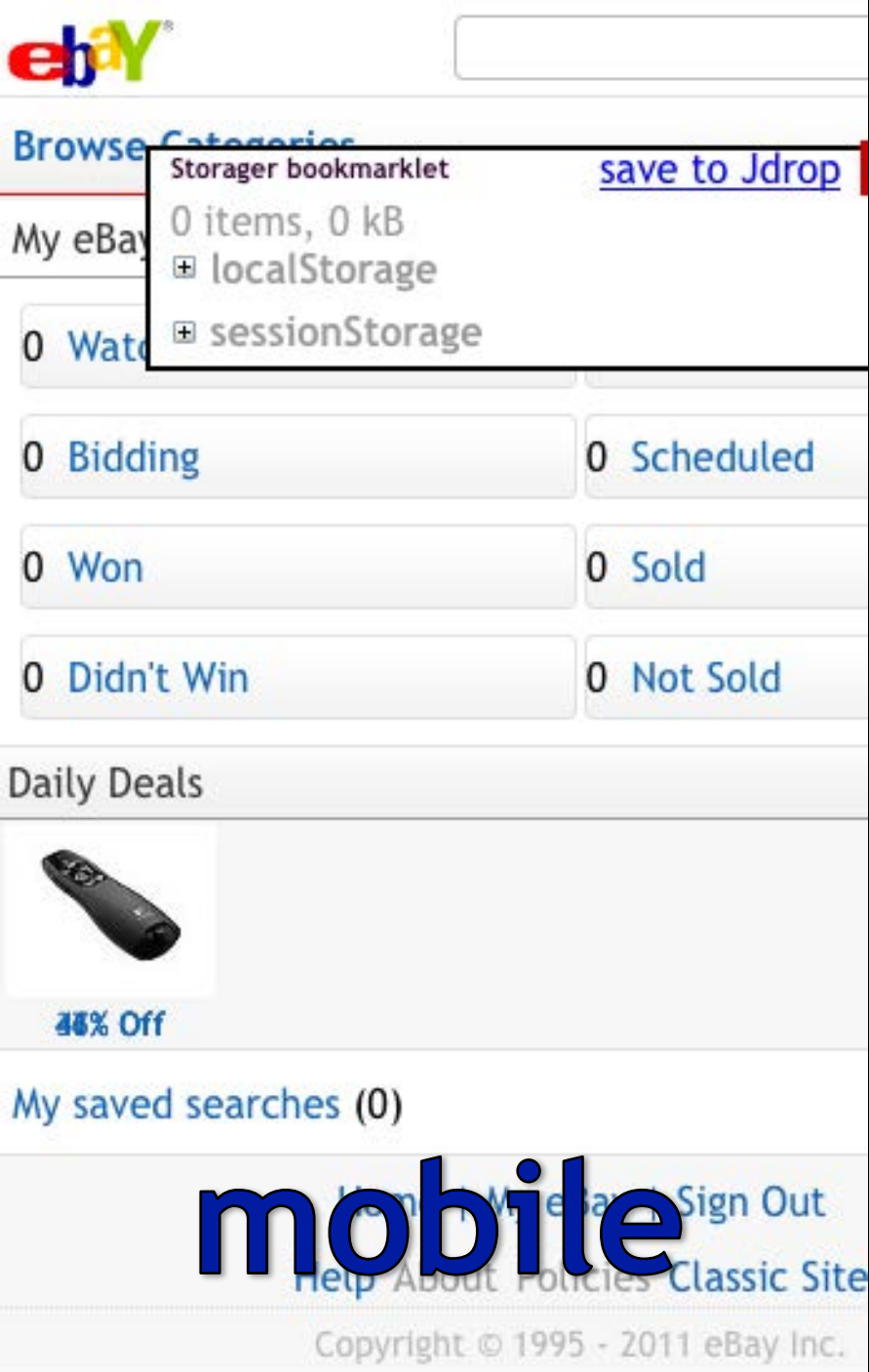
Football

desktop

via Twitter

Mobile delivery bugaboos: L





msn

Set local...

Storage bookmarklet [save to Jdrop](#) X

0 items, 0 kB

- + localStorage
- + sessionStorage

MSNBC



Poor economy poses fundraising challenge for Obama

This is no 2008, when money seemed to fall from the sky

< || > 5 of 5

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mobile

TODAY ON MSN

- NYPD chief: We could take down plane
- 'Matchmaker' in hot water over gay comments

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Web | MSN | Images

Storage bookmarklet [save to Jdrop](#) X

0 items, 0 kB

- + localStorage
- + sessionStorage

NEWS

September 26, 2011 as of 2:49 PM



< || > 7 of 7

desktop

EDITORS' PICKS

- \$210M... B&J going up

MUST SEE

NEWS

@font-face

Frontend SPOF test	Chrome	Firefox	IE	Opera	Safari
<u>External Script</u>	blank below	blank below	blank below	blank below	blank below
<u>Stylesheet</u>	flash	flash	blank below	flash	blank below
<u>inlined @font-face</u>	delayed	flash	flash	flash	delayed
<u>Stylesheet with @font-face</u>	delayed	flash	totally blank*	flash	delayed
<u>Script then @font-face</u>	delayed	flash	totally blank*	flash	delayed

* IE9 does not display a blank page, but does "flash" the element.

stevesouders.com/blog/2010/06/01/frontend-spoof/

Worth delaying most important design elements? Or entire page?

flickr.com/photos/typoatelier/4261455105/

<http://archive.org/trends.php#perFonts>

Sites with Custom Fonts



improving @font-face

smaller, custom font files

avoid FOUT, impatient fallback

- n milliseconds
- DOM loaded, window onload
- user interaction

higher priority caching

aggressively use expired fonts

today: localStorage

there's more

CSS instead of images: border radius,
linear & radial gradients, drop shadow

SVG, inline SVG, and canvas

video tag

WebSockets

web workers

builtin controls: progress, datetime

and more

history - http://www.kylescholz.com/blog/2010/04/html5_history_is_the_future.html

<a ping

requestAnimationFrame - not timers

native JSON parse/stringify

<http://bit.ly/browserscope-modernizr>

<http://www.html5rocks.com/>

Thanks to...

Max Firtman
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Lindsey Simon
Annie Sullivan
Tim Kadlec
Paul Irish
Jason Grigsby
Brad Neuberg

more stuff



Overview

Critical Path Explorer

[Show Critical Path Only](#)

Medium priority (1)

Combine images into CS...

Low priority (8)

Leverage browser caching
Defer parsing of JavaScript
Optimize the order of styl...
Optimize images
Specify a cache validator
Minify HTML
Remove query strings fro...
Specify a Vary: Accept-E...

Experimental rules (1)

Already done! (18)



The [HTTP Archive](#) tracks how the Web is built.

Trends in web technology

load times, download sizes,
performance scores

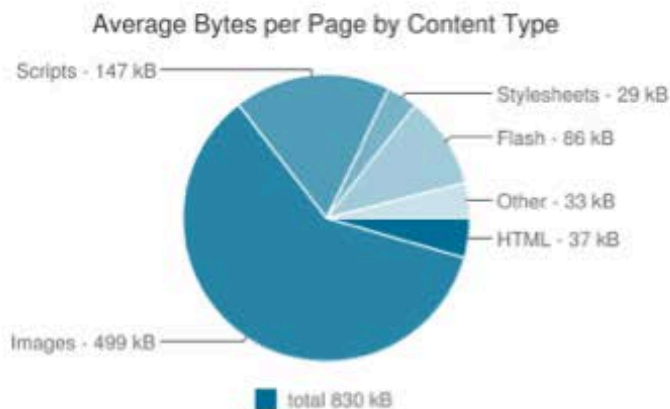
Interesting stats

popular scripts, image formats,
errors, redirects

Website performance

specific URL screenshots,
waterfall charts, HTTP headers

The [HTTP Archive code](#) is open source and the data is [downloadable](#).



http:// **www.taobao.com/**

Dec 1 2011 ▾

Top of page

Filmstrip

Stats

Trends

Waterfall

Page Speed

Requests

Downloads

took 14.4 seconds to load 1274kB of data over 168 requests.

Alexa rank: 16

Filmstrip, Video

0s

5s

10s

14.5s



Show screenshots every: ▾

[WPT filmstrip](#) [watch video](#)

Stats

Trends

Total Transfer Size & Total Requests

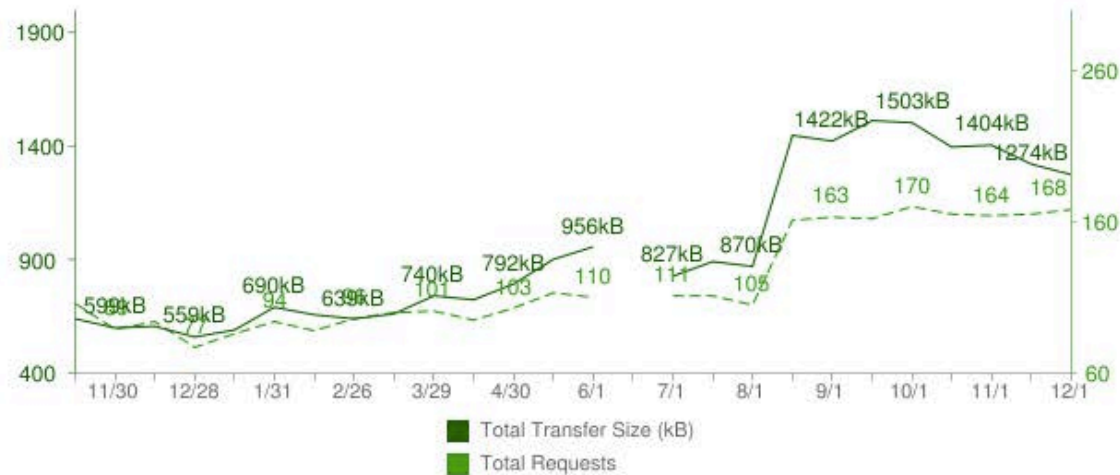
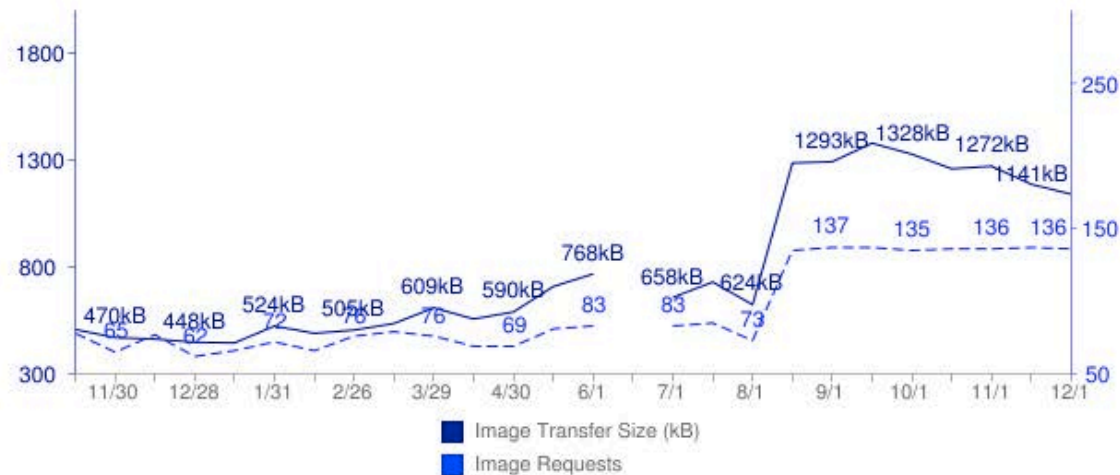


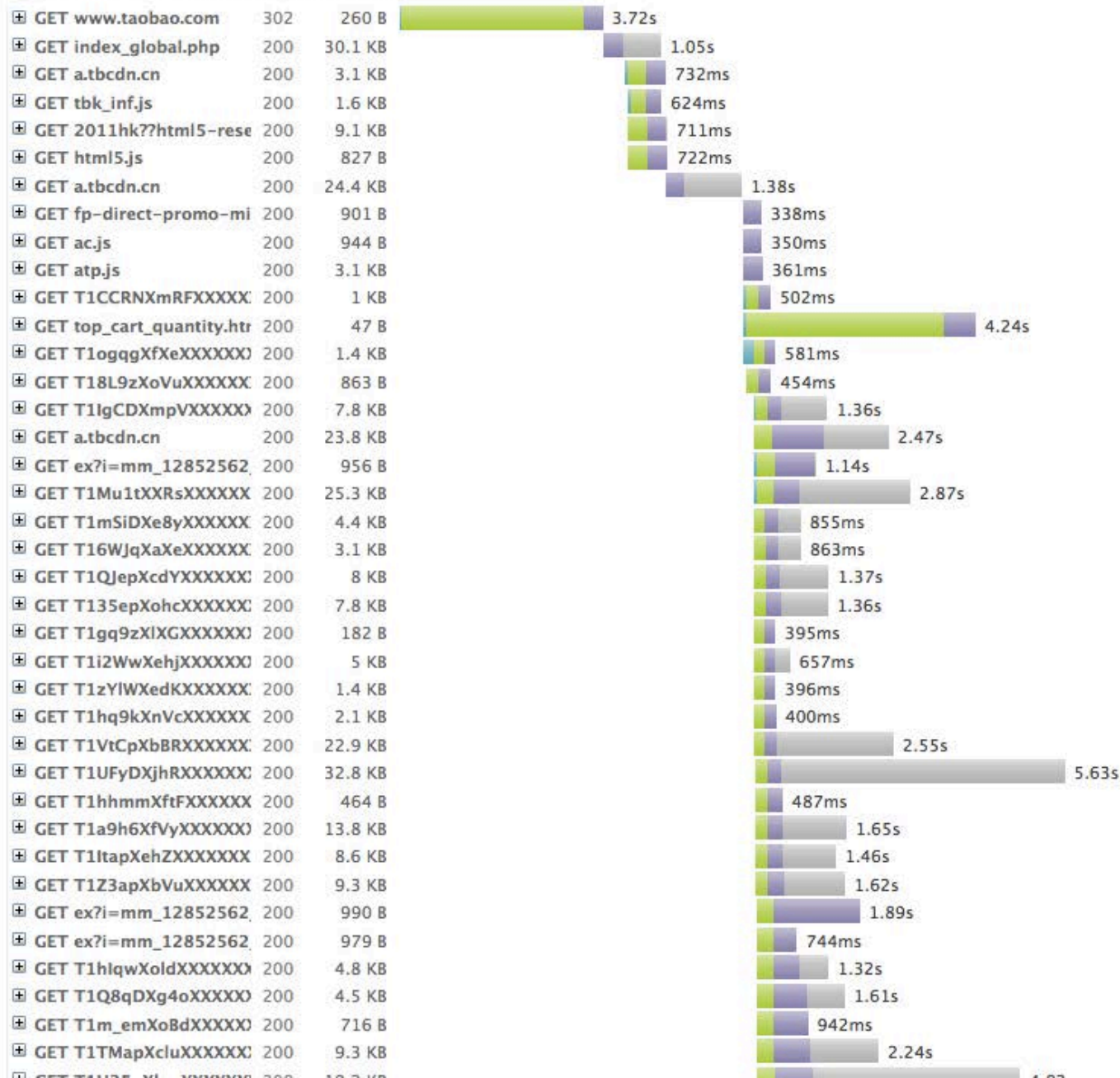
Image Transfer Size & Image Requests



- Top of page
- Filmstrip
- Stats
- Trends
- Waterfall
- Page Speed
- Requests
- Downloads

HTTP Waterfall

Run 2, First View for http://www.taobao.com/



Top of page
Filmstrip
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Requests
Downloads



httparchive

Archive of Internet performance information.

Search projects

[Project Home](#)
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[Source](#)
[Administer](#)

[Checkout](#)
[Browse](#)
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[Search Trunk](#)
[Request code review](#)

Source path: `svn/`

[< r326](#) [r327](#)

Directories	Filename	Size	Rev	Date	Author
▼ svn	.htaccess	915 bytes	r59	Oct 24, 2010	stevesoudersorg
branches	COPYING	11.1 KB	r2	Oct 11, 2010	stevesoudersorg
tags	Makefile	1.1 KB	r324	Today (15 hours ago)	stevesoudersorg
▼ trunk	about.php	11.3 KB	r322	Today (15 hours ago)	stevesoudersorg
archives	admin.php	1.3 KB	r319	Yesterday (18 hours ago)	stevesoudersorg
bulktest	cachegen.php	859 bytes	r311	Mar 26 (4 days ago)	stevesoudersorg
downloads	check.php	2.7 KB	r16	Oct 11, 2010	stevesoudersorg
images	download.php	6.9 KB	r38	Oct 21, 2010	stevesoudersorg
lists	downloads.php	3.6 KB	r319	Yesterday (18 hours ago)	stevesoudersorg
wiki	favicon.ico	894 bytes	r7	Oct 11, 2010	stevesoudersorg
	filmstrip.js	2.5 KB	r296	Mar 23 (6 days ago)	stevesoudersorg
	har.css	20.9 KB	r287	Mar 22, 2011	stevesoudersorg
	har.js	221 KB	r17	Oct 11, 2010	stevesoudersorg
	test-runner	1.1 MB	r320	Mar 21, 2011	stevesoudersorg

Your project is using approximately 844 MB out of 4096 MB total quota.

You can [reset this repository](#) so that `svn sync` can be used to upload existing code history.

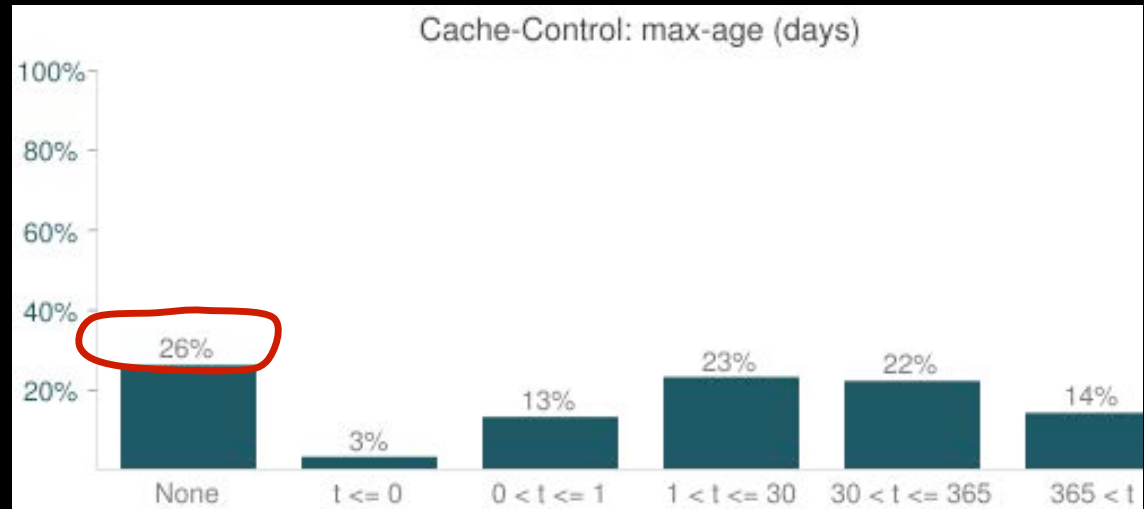
Downloads

There's a download file for each run:

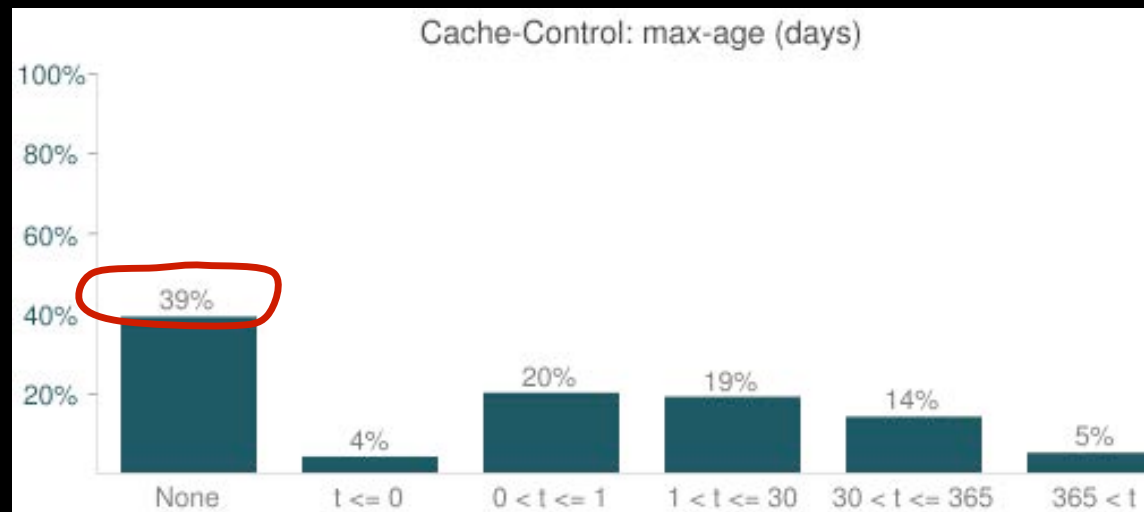
HTTP Archive (desktop):

- [Sep 15, 2011](#) (120 MB)
- [Sep 1, 2011](#) (118 MB)
- [Aug 15, 2011](#) (122 MB)
- [Aug 1, 2011](#) (113 MB)
- [Jul 15, 2011](#) (118 MB)
- [Jul 1, 2011](#) (117 MB)
- [Jun 15, 2011](#) (113 MB)
- [Jun 1, 2011](#) (113 MB)
- [May 16, 2011](#) (113 MB)
- [Apr 30, 2011](#) (111 MB)
- [Apr 15, 2011](#) (112 MB)
- [Mar 29, 2011](#) (106 MB)
- [Mar 15, 2011](#) (104 MB)
- [Feb 26, 2011](#) (105 MB)
- [Feb 11, 2011](#) (102 MB)
- [Jan 31, 2011](#) (104 MB)
- [Jan 20, 2011](#) (103 MB)
- [Dec 28, 2010](#) (104 MB)
- [Dec 16, 2010](#) (104 MB)

Top 100



Top 1000



takeaways

speed matters

WPWG

window.performance

async & defer

app cache, localStorage

! @font-face



THANK
YOU

Steve Souders

@souders

<http://stevesouders.com/docs/velocity-html5-20111207.pptx>