Getting Loaded

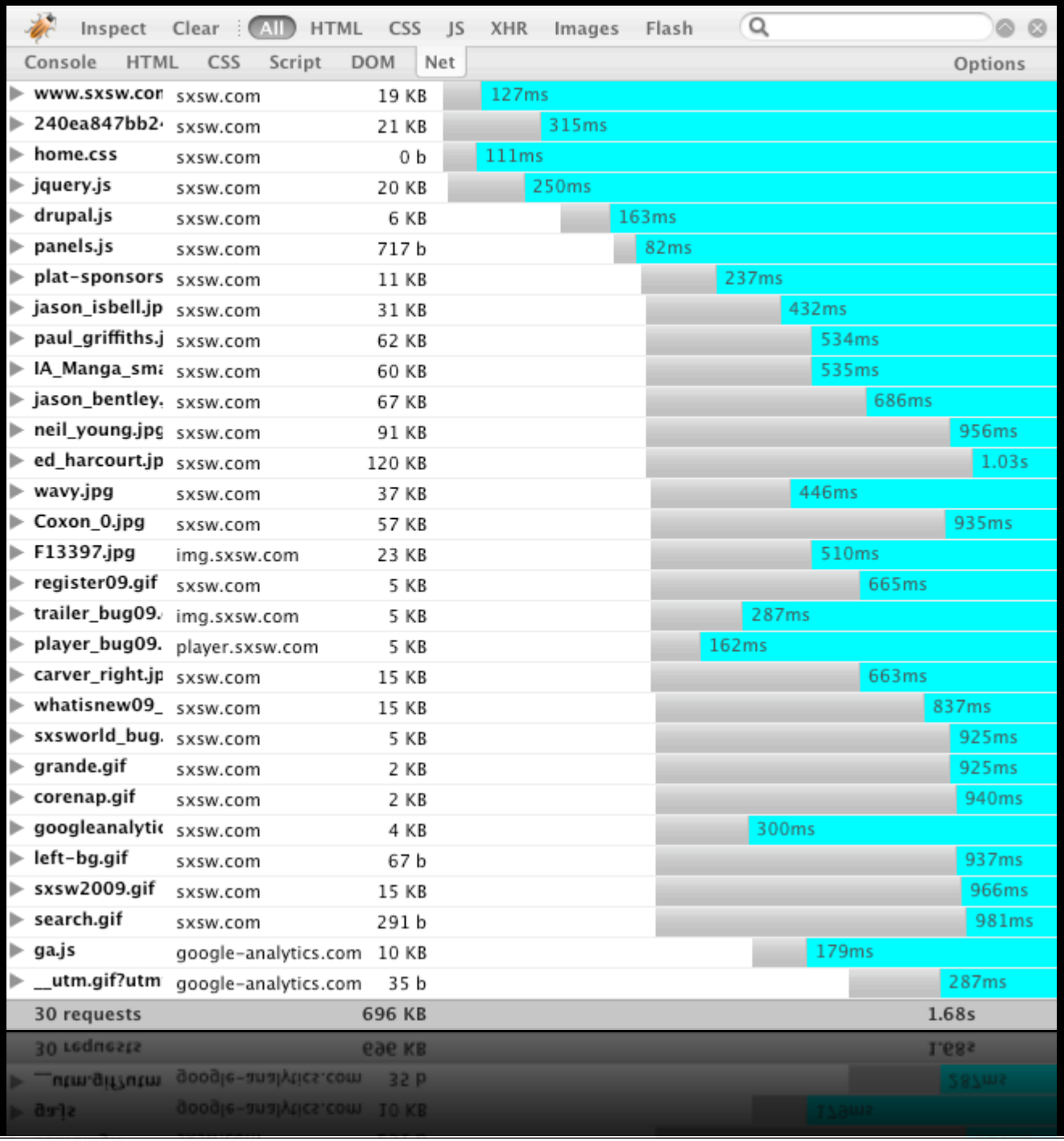
Easier development. Better performance.

Get & Loader

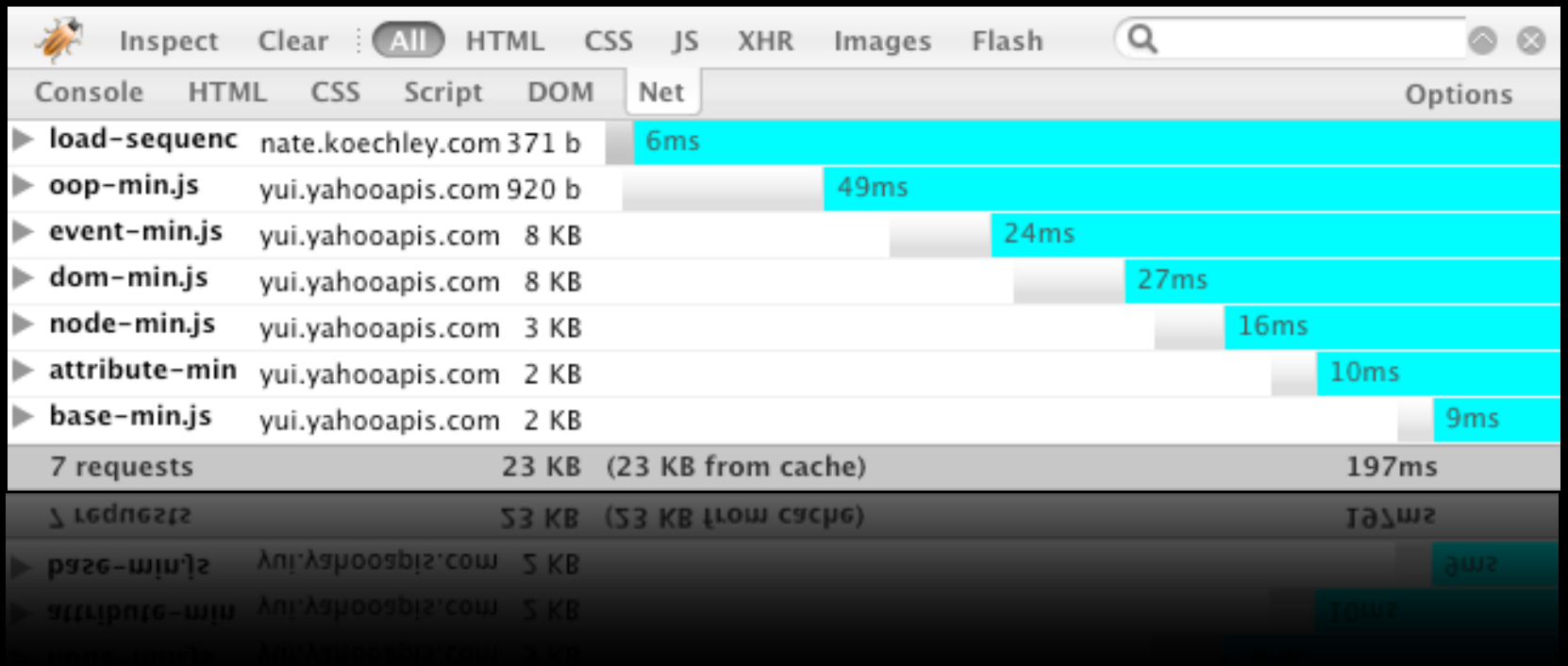
Easier development. Better performance.

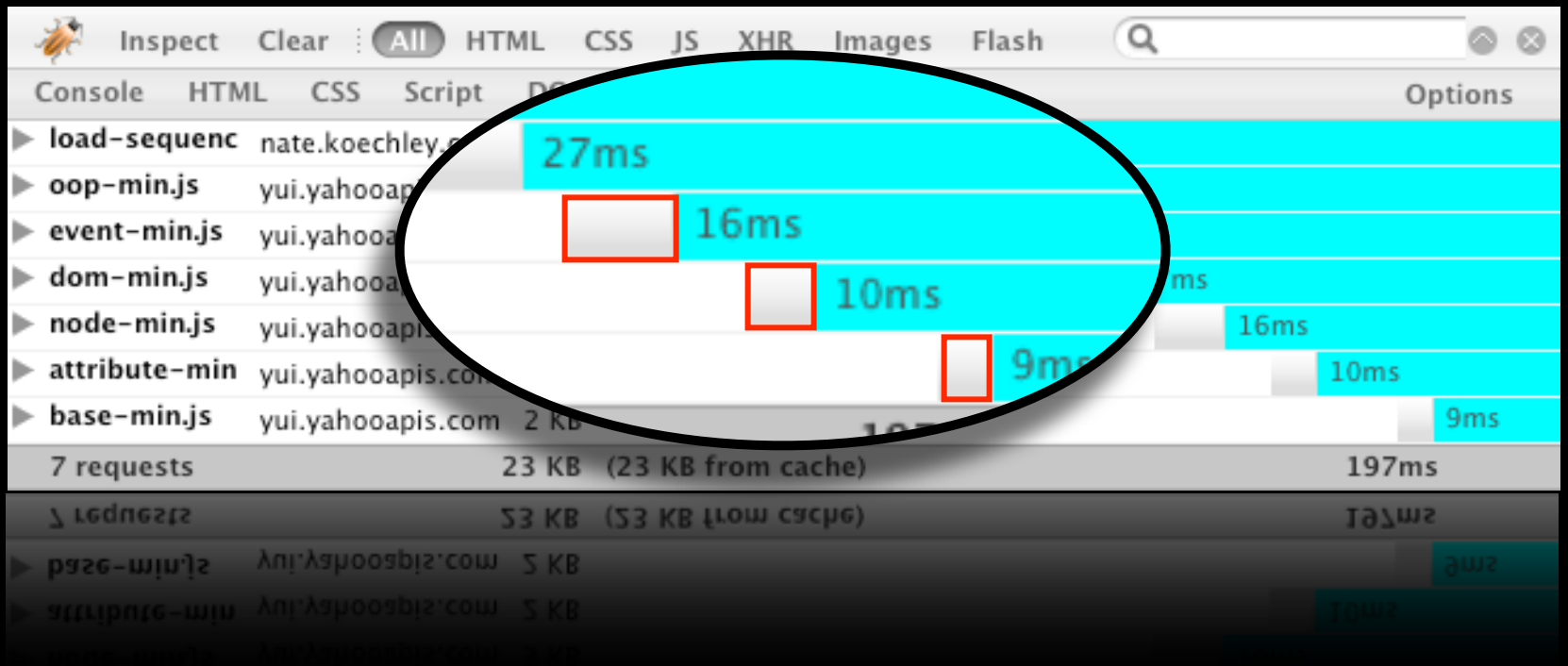
The Problems

JavaScript loading
blocks page rendering.

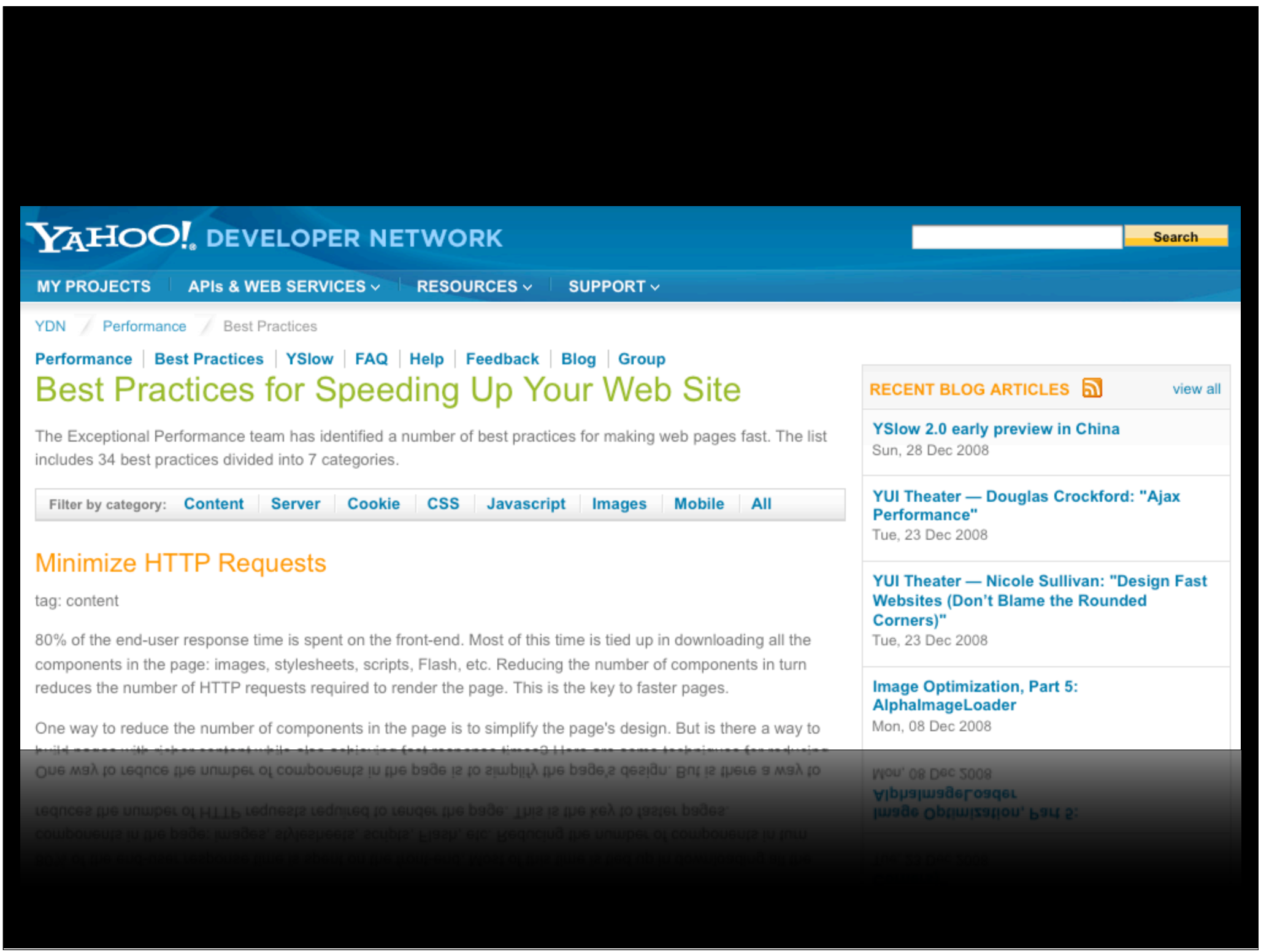

Inspect
Clear
All
HTML
CSS
JS
XHR
Images
Flash
Console
HTML
CSS
Script
DOM
Net
Options
www.sxsw.cor sxsw.com 19 KB 127ms
240ea847bb2 sxsw.com 21 KB 315ms
home.css sxsw.com 0 b 111ms
jquery.js sxsw.com 20 KB 250ms
drupal.js sxsw.com 6 KB 163ms
panels.js sxsw.com 717 b 82ms
plat-sponsors sxsw.com 11 KB 237ms
jason_isbell.jp sxsw.com 31 KB 432ms
paul_griffiths.j sxsw.com 62 KB 534ms
IA_Manga_sma sxsw.com 60 KB 535ms
jason_bentley. sxsw.com 67 KB 686ms
neil_young.jpg sxsw.com 91 KB 956ms
ed_harcourt.jp sxsw.com 120 KB 1.03s
wavy.jpg sxsw.com 37 KB 446ms
Coxon_0.jpg sxsw.com 57 KB 935ms
F13397.jpg img.sxsw.com 23 KB 510ms
register09.gif sxsw.com 5 KB 665ms
trailer_bug09. img.sxsw.com 5 KB 287ms
player_bug09. player.sxsw.com 5 KB 162ms
carver_right.jp sxsw.com 15 KB 663ms
whatisnew09_ sxsw.com 15 KB 837ms
sxsworld_bug. sxsw.com 5 KB 925ms
grande.gif sxsw.com 2 KB 925ms
corenap.gif sxsw.com 2 KB 940ms
googleanalytic sxsw.com 4 KB 300ms
left-bg.gif sxsw.com 67 b 937ms
sxsw2009.gif sxsw.com 15 KB 966ms
search.gif sxsw.com 291 b 981ms
ga.js google-analytics.com 10 KB 179ms
__utm.gif?utm google-analytics.com 35 b 287ms
30 requests 696 KB 1.68s

More files increases blocking.


Inspect
Clear
All
HTML
CSS
JS
XHR
Images
Flash
Console
HTML
CSS
Script
DOM
Net
Options
load-sequenc nate.koechley.com 371 b 6ms
oop-min.js yui.yahooapis.com 920 b 49ms
event-min.js yui.yahooapis.com 8 KB 24ms
dom-min.js yui.yahooapis.com 8 KB 27ms
node-min.js yui.yahooapis.com 3 KB 16ms
attribute-min yui.yahooapis.com 2 KB 10ms
base-min.js yui.yahooapis.com 2 KB 9ms
7 requests 23 KB (23 KB from cache) 197ms


Inspect
Clear
All
HTML
CSS
JS
XHR
Images
Flash
Console
HTML
CSS
Script
Options
load-sequenc
nate.koechley.
27ms
oop-min.js
yui.yahooap
16ms
event-min.js
yui.yahooa
dom-min.js
yui.yahooa
10ms
node-min.js
yui.yahooapi
16ms
attribute-min
yui.yahooapis.co
9ms
10ms
base-min.js
yui.yahooapis.com
2 KB
9ms
7 requests
23 KB
(23 KB from cache)
197ms

We know a single file is best:


YAHOO! DEVELOPER NETWORK
Search
MY PROJECTS
APIs & WEB SERVICES
RESOURCES
SUPPORT
YDN
Performance
Best Practices
Performance
Best Practices
YSlow
FAQ
Help
Feedback
Blog
Group
Best Practices for Speeding Up Your Web Site
The Exceptional Performance team has identified a number of best practices for making web pages fast. The list includes 34 best practices divided into 7 categories.
Filter by category:
Content
Server
Cookie
CSS
Javascript
Images
Mobile
All
Minimize HTTP Requests
tag: content
80% of the end-user response time is spent on the front-end. Most of this time is tied up in downloading all the components in the page: images, stylesheets, scripts, Flash, etc. Reducing the number of components in turn reduces the number of HTTP requests required to render the page. This is the key to faster pages.
One way to reduce the number of components in the page is to simplify the page's design. But is there a way to
RECENT BLOG ARTICLES
view all
YSlow 2.0 early preview in China
Sun, 28 Dec 2008
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Tue, 23 Dec 2008
YUI Theater — Nicole Sullivan: "Design Fast Websites (Don't Blame the Rounded Corners)"
Tue, 23 Dec 2008
Image Optimization, Part 5: AlphaImageLoader
Mon, 08 Dec 2008

But in practice...

Widgets & Plugins may have various prerequisites.

```
<script src="jquery/jquery-1.2.2.pack.js"/>
<script src="jquery/chili/chili.js"/>
<script src="jquery.cookie.js"/>
<script src="jquery.clickmenu.pack.js"/>
<script src="jquery.columnmanager.js"/>
```

```
<script src="yahoo-dom-event.js"/>
<script src="element-min.js"/>
<script src="connection-min.js"/>
<script src="tabview-min.js"/>
```

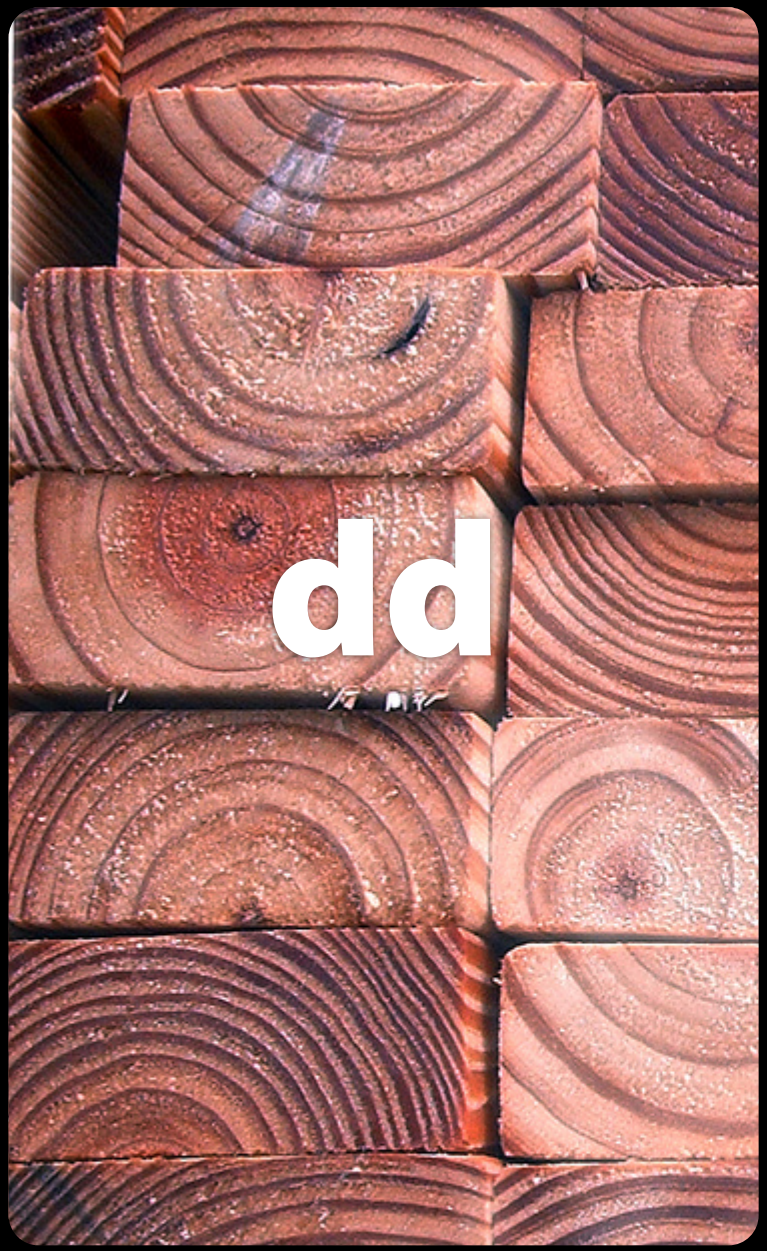
Sites often use multiple unrelated JavaScript files.

```
<script src="prototype.js"/>
<script src="scriptaculous.js"/>
<script src="csiManager.js"/>
<script src="StorageManager.js"/>
<script src="main.js"/>
<script src="urchin.js">
```

Larger projects use
multiple files for
flexibility & optimization

```
<script src="yui-base.js"/>
<script src="oop.js"/>
<script src="event.js"/>
<script src="attribute.js"/>
<script src="base.js"/>
<script src="dom.js"/>
<script src="node.js"/>
<script src="widget.js"/>
<script src="dd.js"/>
<script src="slider/slider.js/">
```

```
<script src="dd.js"/>
```



- dd-ddm-base
- dd-ddm
- dd-drag
- dd-proxy
- dd-constrain
- dd-drop
- dd-plugin
- dd-drop-plugin

Most files are
order-dependent.

Other files aren't needed right away.

Yahoo!
http://www.yahoo.com/
Yahoo
1P
Disable
Cookies
CSS
Forms
Images
Information
Miscellaneous
Outline
Resize
Tools
View Source
Options
The YUI Glo...
The YUI Glo...
http://...der.js
The IO Utility
The Get Utility
http://...yui.js
http://...yui.js
Yahoo!
Mexico Air + Hotel Specials from Yahoo! Travel
YAHOO!
Web
Images
Video
Local
Shopping
more
Search:
Web Search
Yahoo! Home
My Yahoo!
Mar 13, 2009
Page Options
Answers
Autos
Finance
Flickr
Games
Groups
HotJobs
Maps
Mobile Web
Movies | TV
Music
OMG
Personals
Real Estate
Shine
Shopping
Sports
Travel
Yellow Pages
More Yahoo! Services
Small Business
• Get a Web Site
• Domain Names
• Sell Online
Featured
Entertainment
Sports
Video
Anderson's runway debacle
Pamela Anderson shocks the catwalk in an outrageous polka-dotted dress.
» See the outfit that turned heads
Watch Pamela walk the runway
Elle Macpherson's red-hot look
Check out Pamela's trash-bag-looking dress
Couple finds stowaway surprise in bargain couch
10 worst high-calorie, high-fat foods
One governor plans to reject stimulus millions
» More: Featured | Buzz
News
World
Local
Finance
As of 11:20 p.m. PDT
• Madoffs were worth more than $823M, documents show
• Upbeat Obama touts new economic model for recovery
• Investigator uses phony documents to get passports
• Obama admin. to end use of term 'enemy combatant'
• Ten children mistakenly drink wiper fluid at Ark. day care
• Archaeologists uncover Mayan carvings from 300 B.C.
• Remains of 16th-century 'vampire' found in Venice | Photos
• NBA · NCAA Hoops · NHL · MLB · WBC · NFL · Golf
» More: News | Popular | Odd News
Markets: Dow: +0.8% Nasdaq: +0.4%
Sponsored by: Scottrade
Marketplace
Save Up To 75% On Cruises
Hi, Nate
Sign Out
Mail
Messenger
Puzzles
Weather
Events
San Fran...
Horoscopes
San Francisco, CA
Change Location
Today
Partly Cloudy
H: 60° L: 47°
Tomorrow
Mostly Cloudy
H: 57° L: 52°
» Get Weather On Your Cell
» Extended Forecast
Average Auto Insurance Cost: $69/Mo.
Think You Pay Too Much? Find Out!
Click Your State
Alabama
Alaska
Arizona
Arkansas
California
LowerMyBills.com
Calculate New Payment
Ad Feedback
YUI Found!
0 linked files
3 modules
Be a Better Jet Setter
Find:
full
Next
Previous
Highlight all
Match case
http://www.yahoo.com/r/wb/*~http://weather.yahoo.com/forecast/USCA0987_f.html
1 Error

And it's nice to easily toggle between `-raw.js`, `-min.js`, and `-debug.js` versions.

three flavors of each

/**
* Subscriber listener sigature constant. The FLAT type returns two
* parameters: the first argument passed to fire and the optional
* custom object
* @property YAHOO.util.CustomEvent.FLAT
* @static
* @type int
*/
YAHOO.util.CustomEvent.FLAT = 1;
YAHOO.util.CustomEvent.prototype = {
/**
* Subscribes the caller to this event
* @method subscribe
* @param {Function} fn The function to execute
* @param {Object} obj An object to be passed along when the event
* fires
* @param {boolean|Object} override If true, the obj passed in becomes
* the execution scope of the listener.
* if an object, that object becomes the
* the execution scope.
*/
subscribe: function(fn, obj, override) {
if (!fn) {
throw new Error("Invalid callback for subscriber to '" + this.type + "'");
fully-commented

if (this.signature == YAHOO.util.CustomEvent.FLAT) {
var param = null;
if (args.length > 0) {
param = args[0];
}
try {
ret = s.fn.call(scope, param, s.obj);
} catch(e) {
this.lastError = e;
YAHOO.log(this + " subscriber exception: " + e,
"error", "Event");
}
} else {
try {
ret = s.fn.call(scope, this.type, args, s.obj);
} catch(e) {
this.lastError = e;
YAHOO.log(this + " subscriber exception: " + e,
"error", "Event");
}
}
if (false === ret) {
if (!this.silent) {
YAHOO.log("Event cancelled, subscriber " + i +
" of " + len, "info", "Event");
}
-debug with logging

-min for deployment

So, our goals:

Features

- Handle prerequisies without duplication
- Manage order dependency
- Per-module flexibility
- Fast toggling between flavors
- Continue fetching onDemand
- Minimize HTTP requests
  and not block rendering

That's what YUI's Get & Loader Utilities do.

They’re partners.

Loader Get

Loader

Get

Combo Handler

Loader

The “seed” file.

Meta data.

Config options.

Helpers/Sugar.

Get

Creates new nodes & src’s.

Non-blocking.

Cross-domain.

GET not POST.

Combo

Parses request.

Concats modules if first.

Edge-caches.

Loads anything:

- Library files
- Your own files
- JS, CSS, JSON, ...
- Urchin.js, badges, includes, ...

Easily define your resources

```
// one or more external modules
// that can be loaded along side of YUI

modules: {
  json_org: {
    fullpath: "http://www.json.org/json.js"
  },
  json2_org: {
    fullpath: "http://www.json.org/json2.js"
  }
}
```

And their relationships

```
modules: {
  dom: {
    requires: ['event'],
    submodules: {
      'dom-base': {
        requires: ['event']
      },
      'dom-style': {
        requires: ['dom-base']
      },
      'dom-screen': {
        requires: ['dom-base', 'dom-style']
      },
      selector: {
        requires: ['dom-base']
      }
    }
  },
```

With fine-grained control

name

type

path

fullpath

requires

optional

supersedes

after

rollup

Once the seed is on the page:

```
<script src="yui-min.js"/>
<script>
  YUI().use("slider", function(Y) {
    // Slider available and ready for use.
  });
</script>
```

Other cool features in Get:

Choose where the nodes go.

Purge After Reading

Benefits

- Easy to use.
- No typos. Less to manage.
- Much faster performance.
- Extensive flexibility.
- Nice support for lazy-loading.
- Library agnostic.

developer.yahoo.com/yui/3/yui/#loader
developer.yahoo.com/yui/3/get/

nate@koechley.com