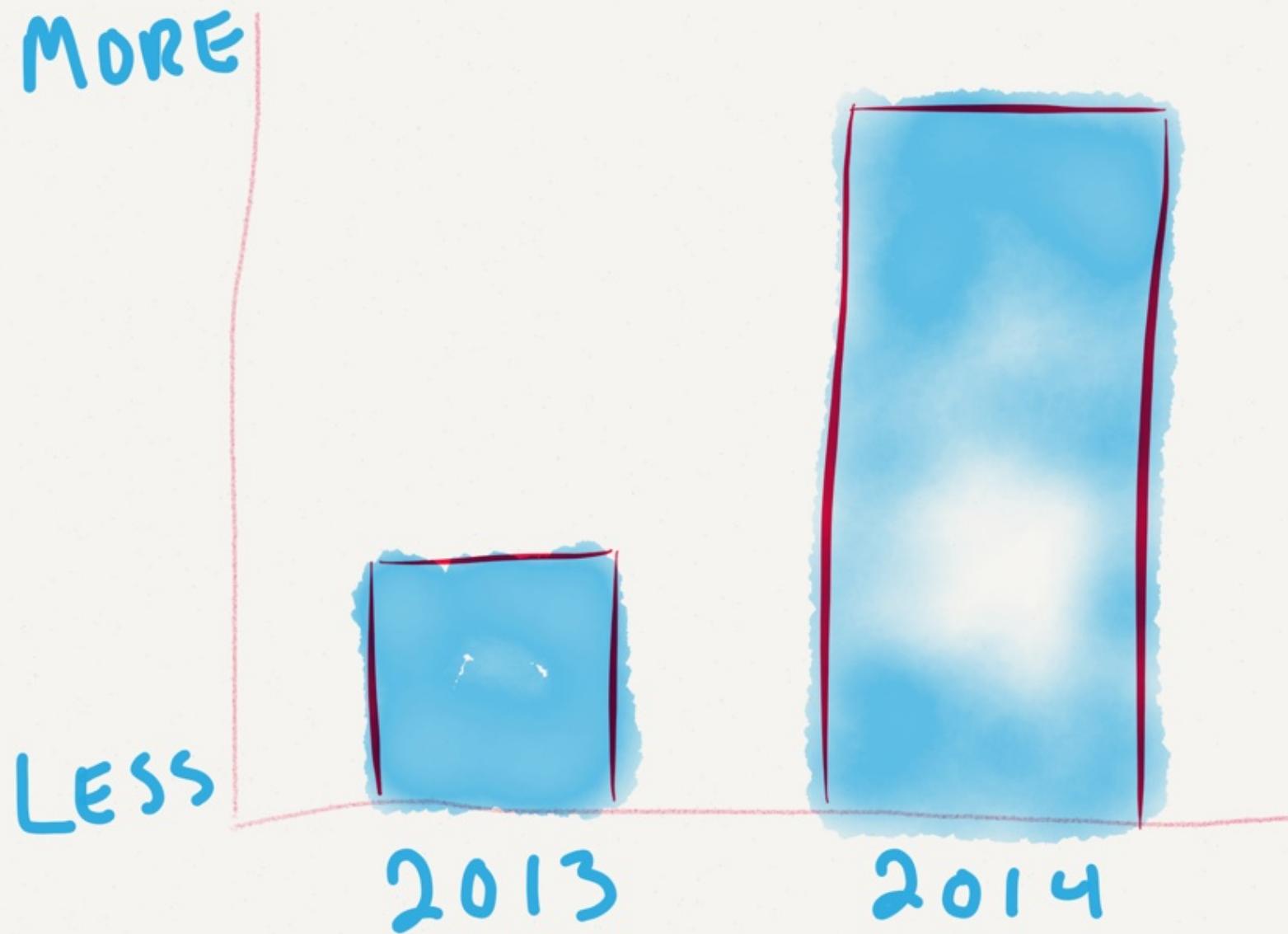


SPEED AS A FEATURE

Getting a Handle on

PAGE LOAD TIME

GIT BISECT USAGE



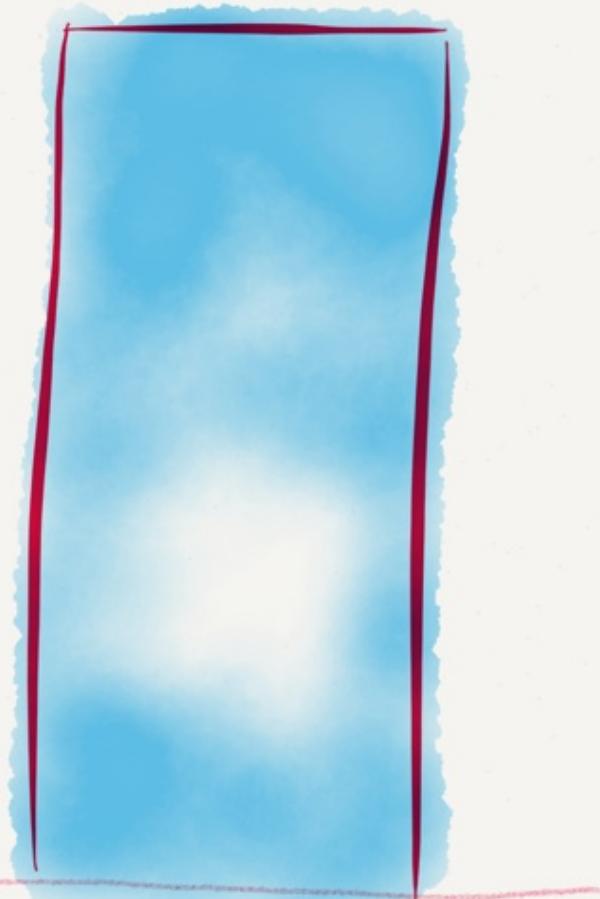
FEAR OF SVN

MORE

LESS

2013

2014



SVN VCS SWITCHES TO GIT

Details

Type:	<input checked="" type="checkbox"/> Task	Status:	CLOSED
Priority:	<input checked="" type="checkbox"/> Major	Resolution:	Not a Problem
Component/s:	Git	Fix Version/s:	Apr 2013
Labels:	None		

Description

Grrrr... vote passed. Not happy, but here we go:

Infra: please migrate our repository at /repos/asf/subversion/ over to the Git repository stuffs.

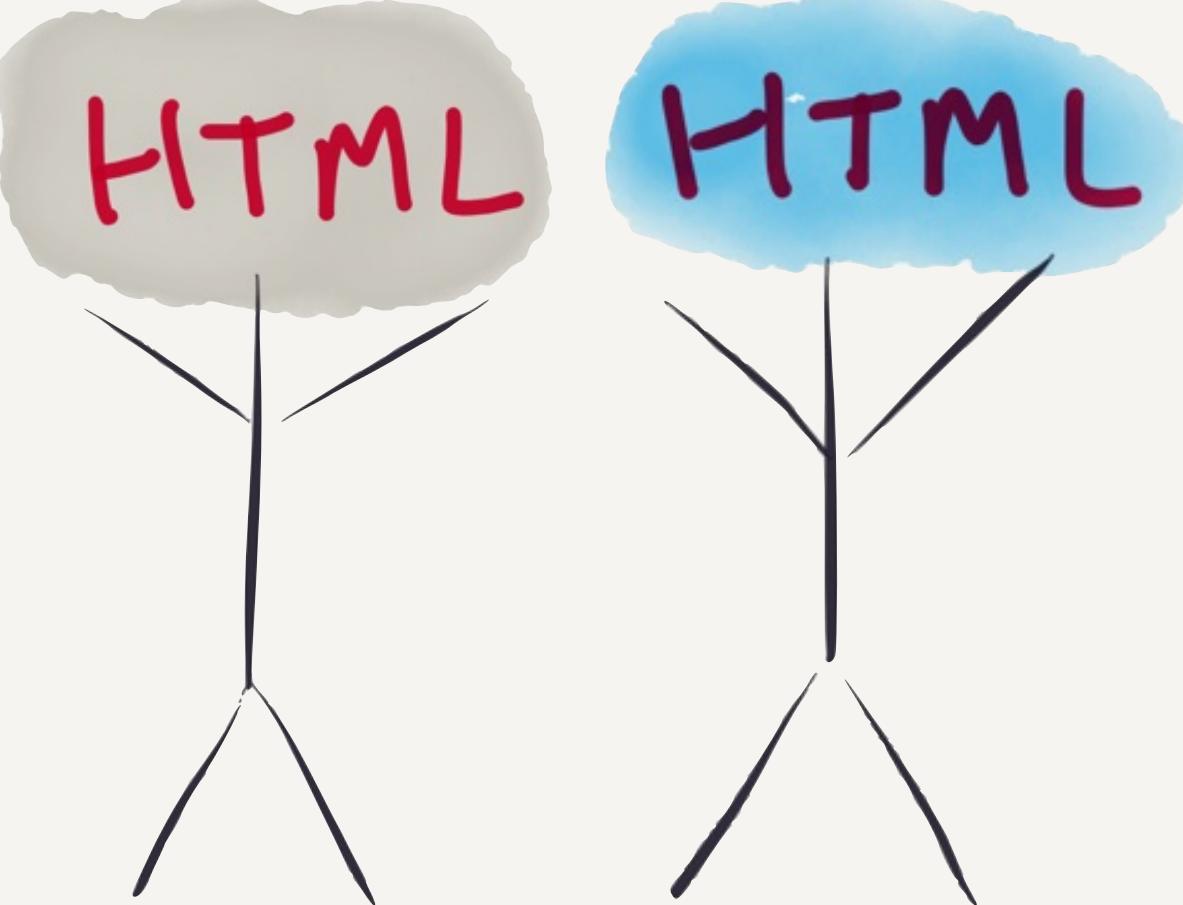
We already have the mirror at git.apache.org. But that has always been there as a read-only mirror (along with the copy over to GitHub). Will the git repo be at git-wip.apache.org? (is it *still* considered -wip "work in progress"?)

Not sure what else you guys need. Haven't exactly studied up on the migration process. Please let me know.

(tho I'm up late here now and need to sleep soon; others from the PMC will be able to help)

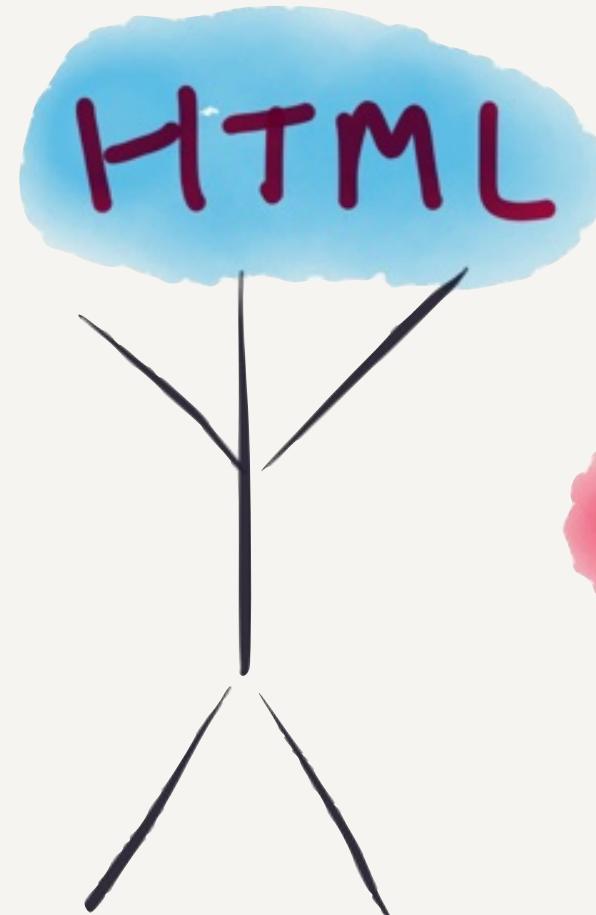
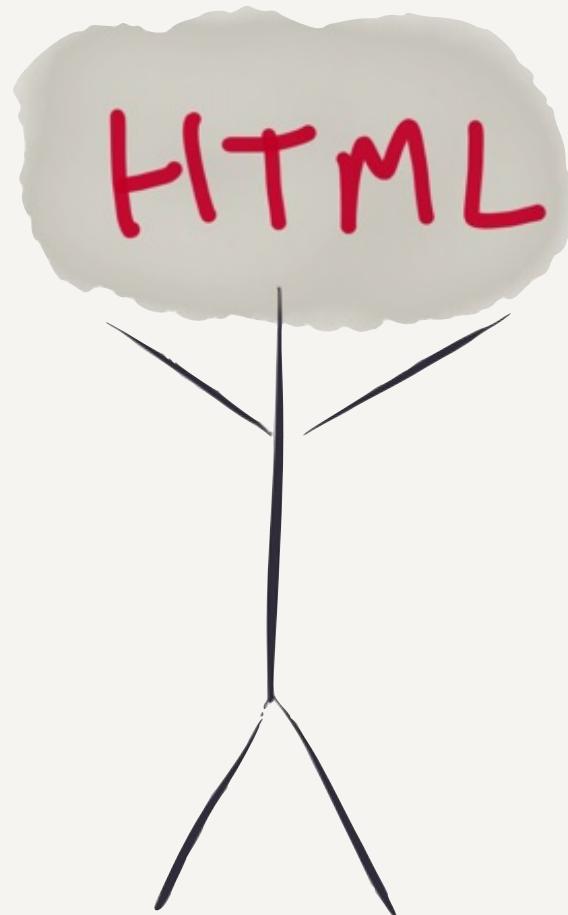
<https://issues.apache.org/jira/browse/INFRA-7524>

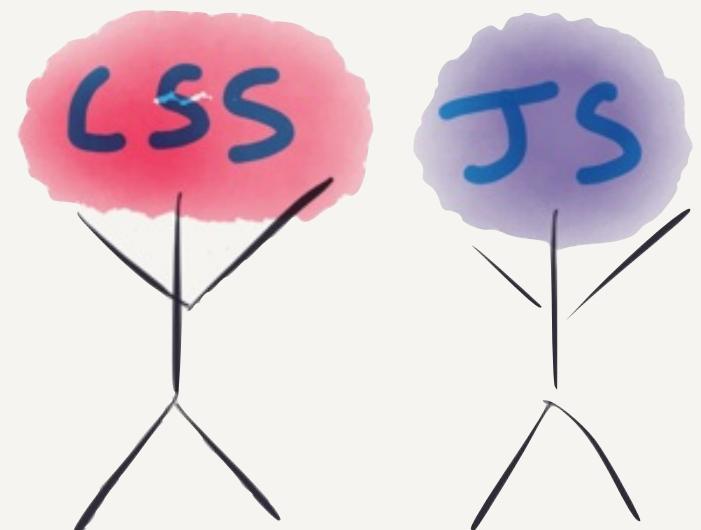
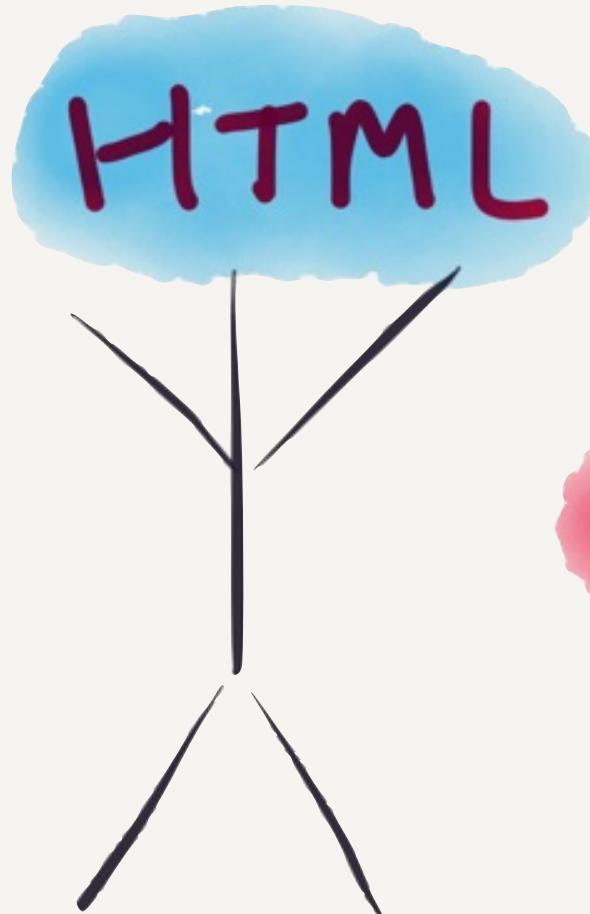
* April Fool's joke

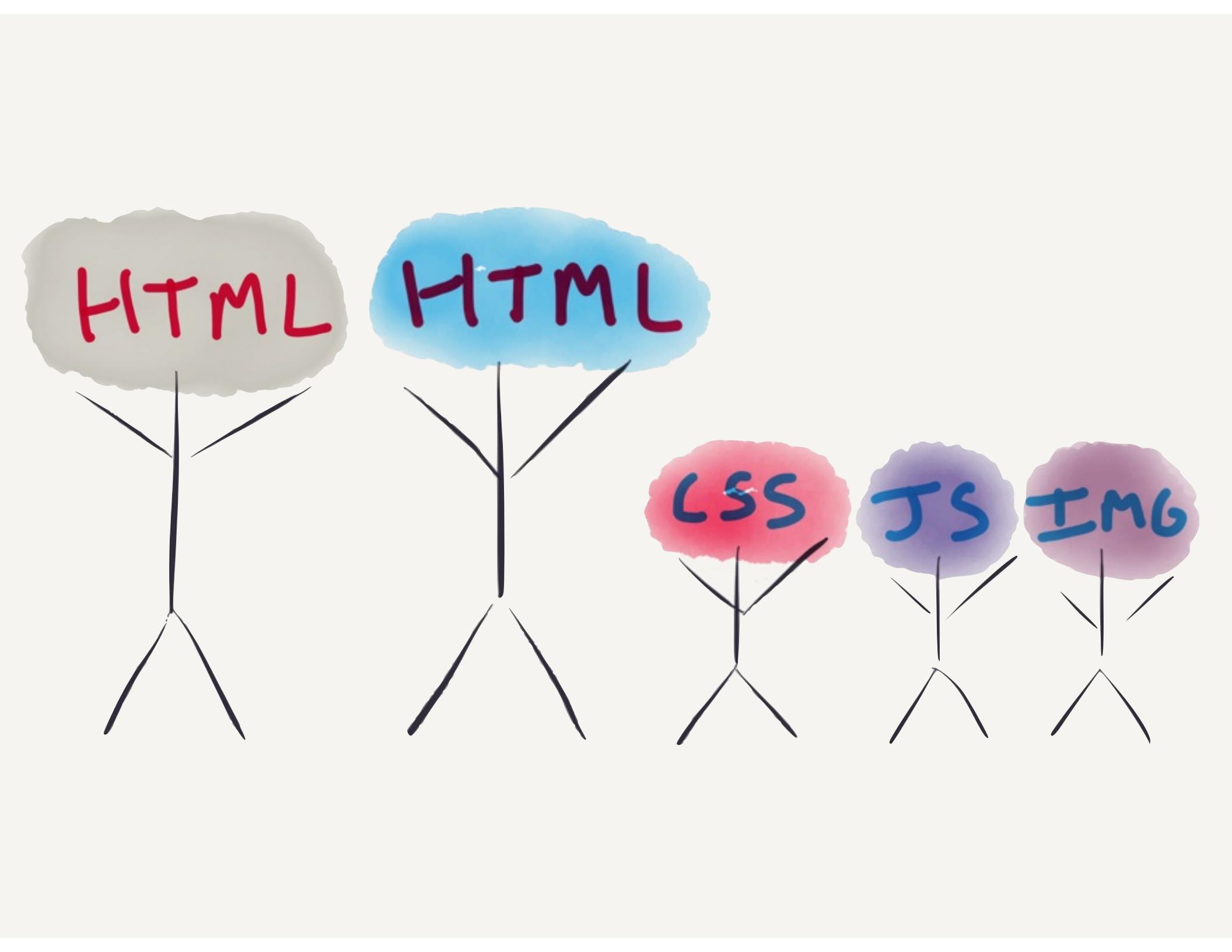


HTML

HTML







HTML

HTML

CSS

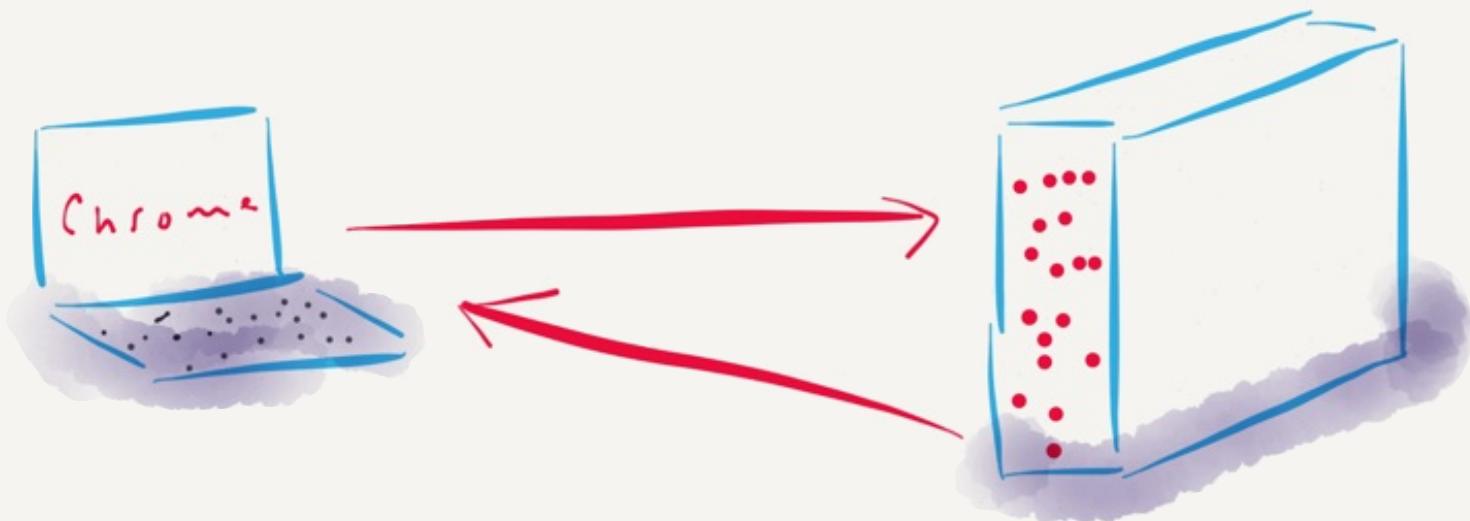
JS

IMG



UNDERSTAND WHY YOUR PAGE IS SLOW

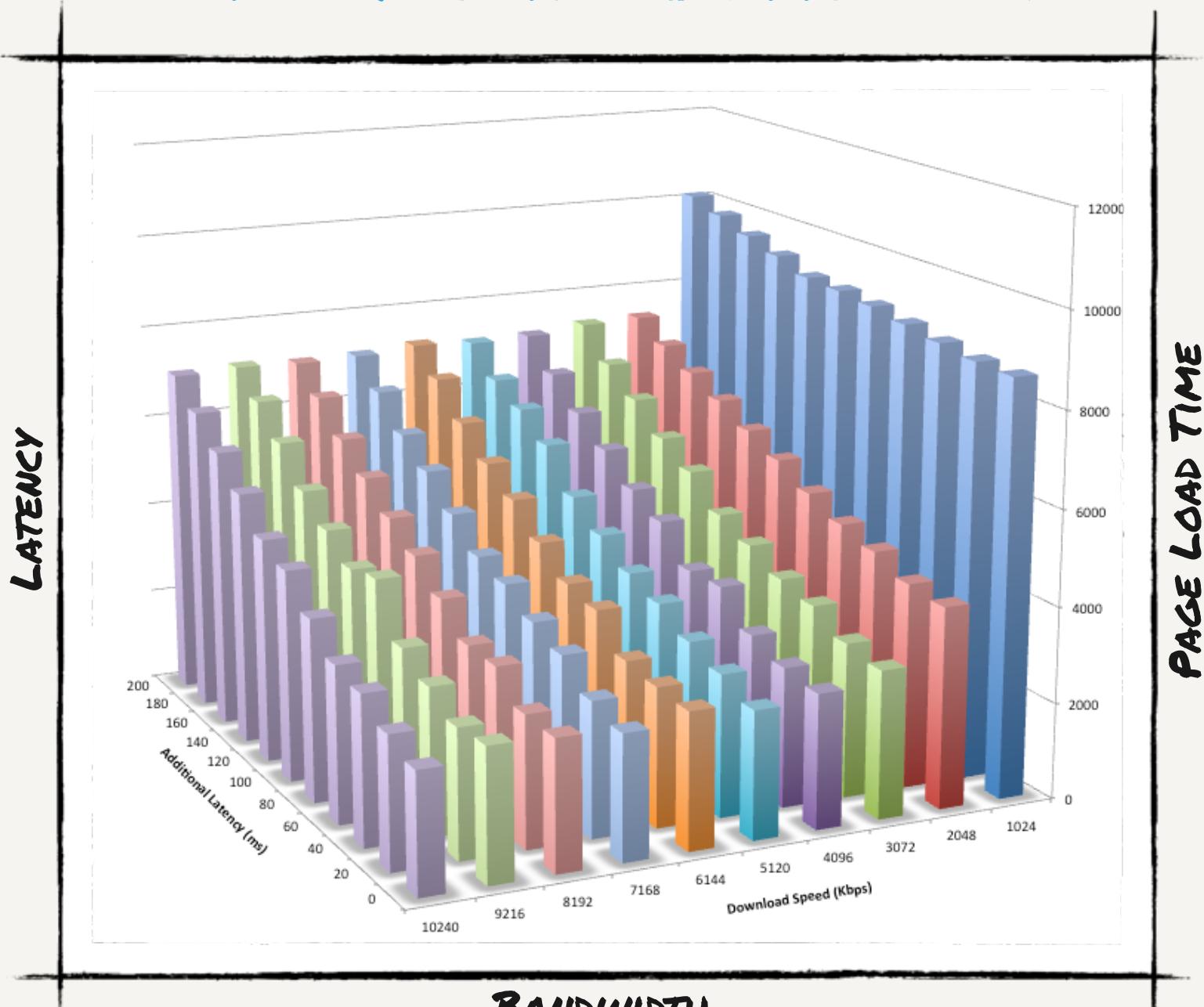
LATENCY / ROUND TRIP TIME



Time to transmit signal to server and receive a response

80 - 20 RULE

LATENCY IS THE BOTTLENECK



BANDWIDTH

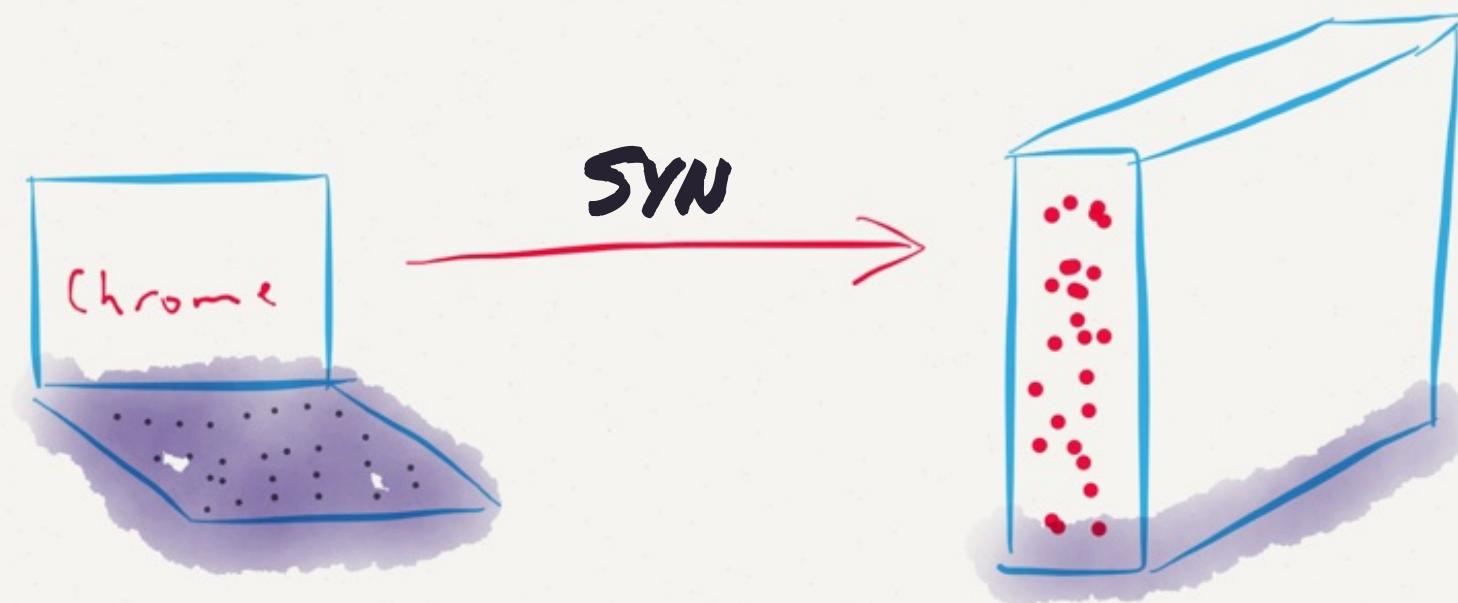
<https://twitter.com/AndyDavies/status/459716093993447424>

<https://www.belshe.com/2010/05/24/more-bandwidth-doesnt-matter-much/>

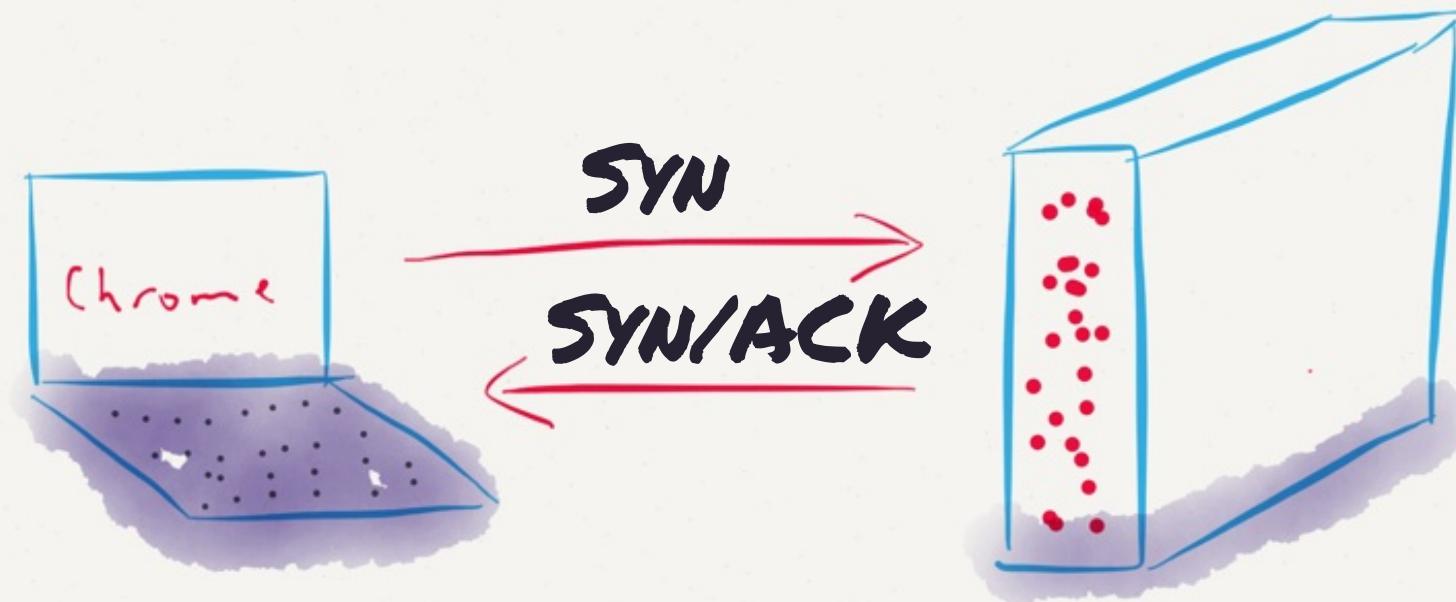
WE MUST ACCEPT LATENCY

HTTP 1.1 IS A LAYER ABOVE TCP/IP

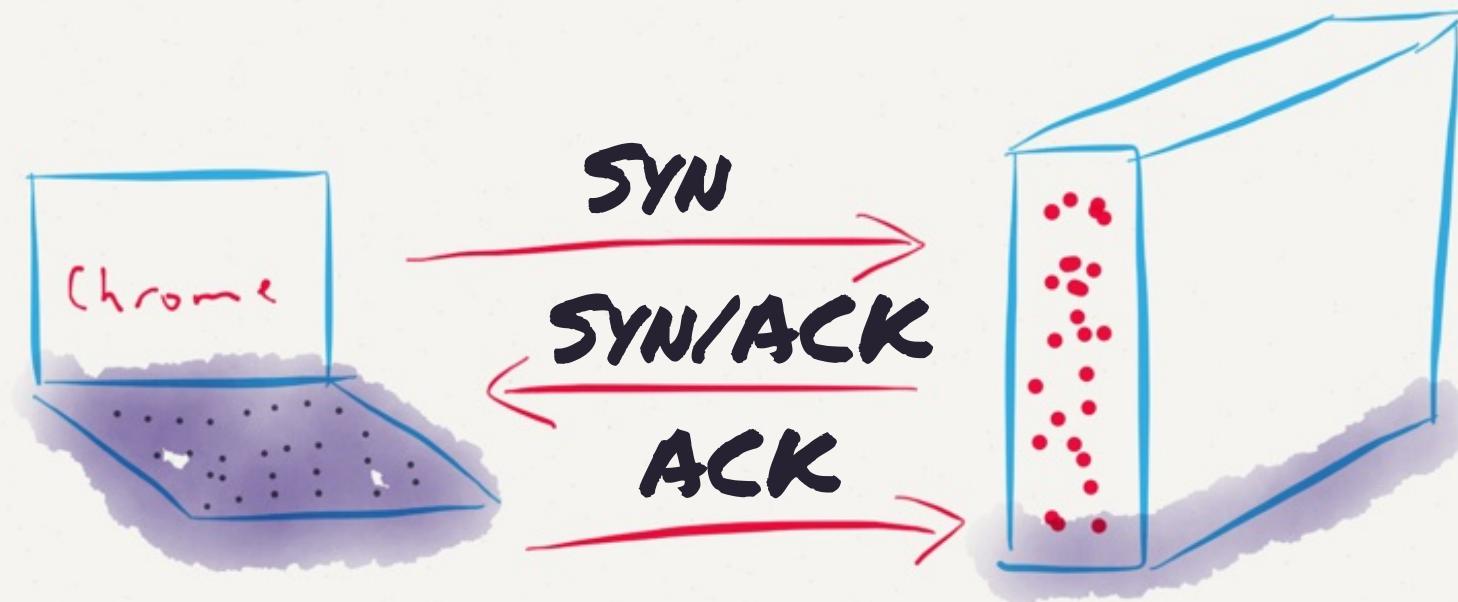
TCP THREE WAY "HANDSHAKE"



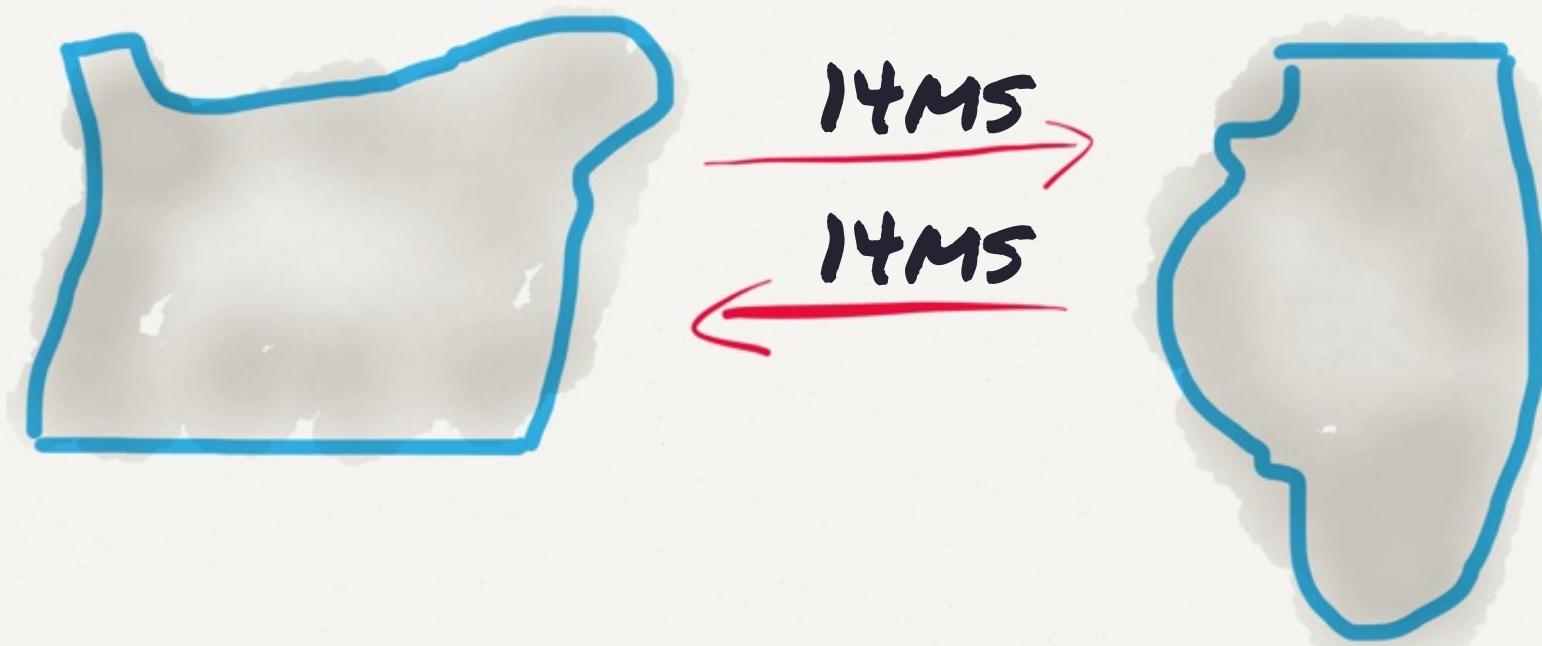
TCP THREE WAY "HANDSHAKE"



TCP THREE WAY "HANDSHAKE"



PERFECT CONDITIONS



28MS RTT

ACTUAL CONDITIONS

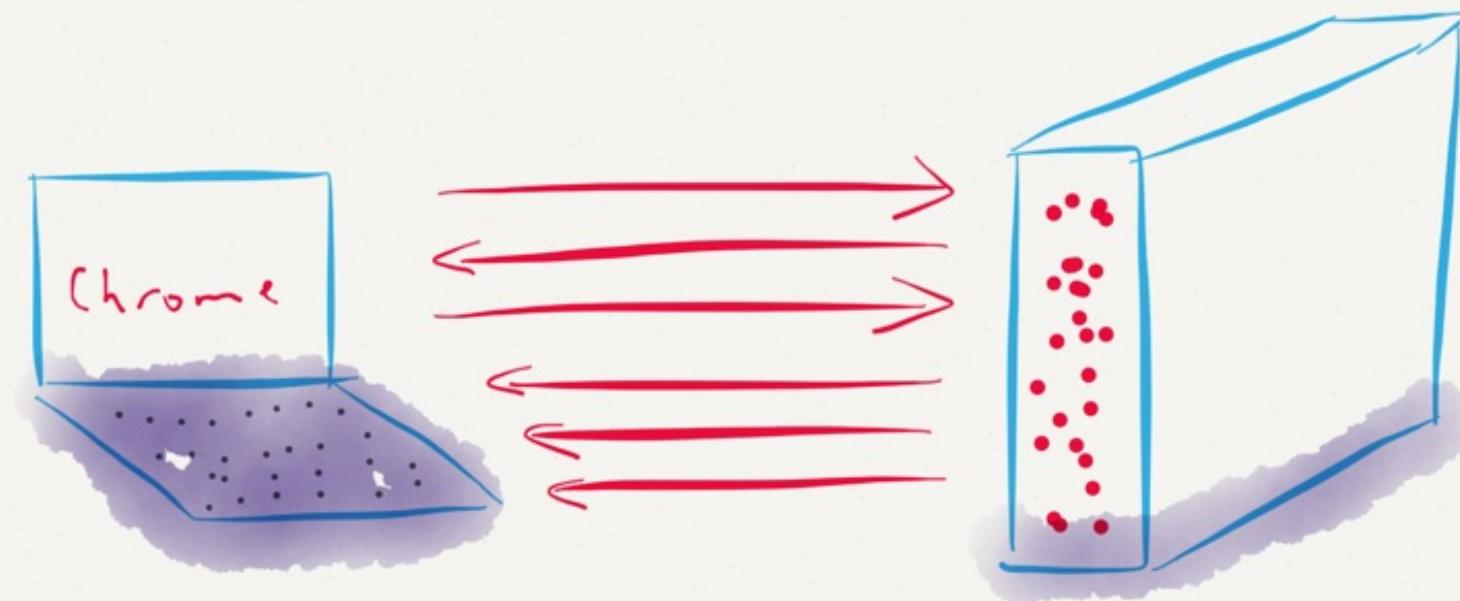


AVERAGE PING TIME TO 69.175.11.202

57 MS AND NO HTTP YET

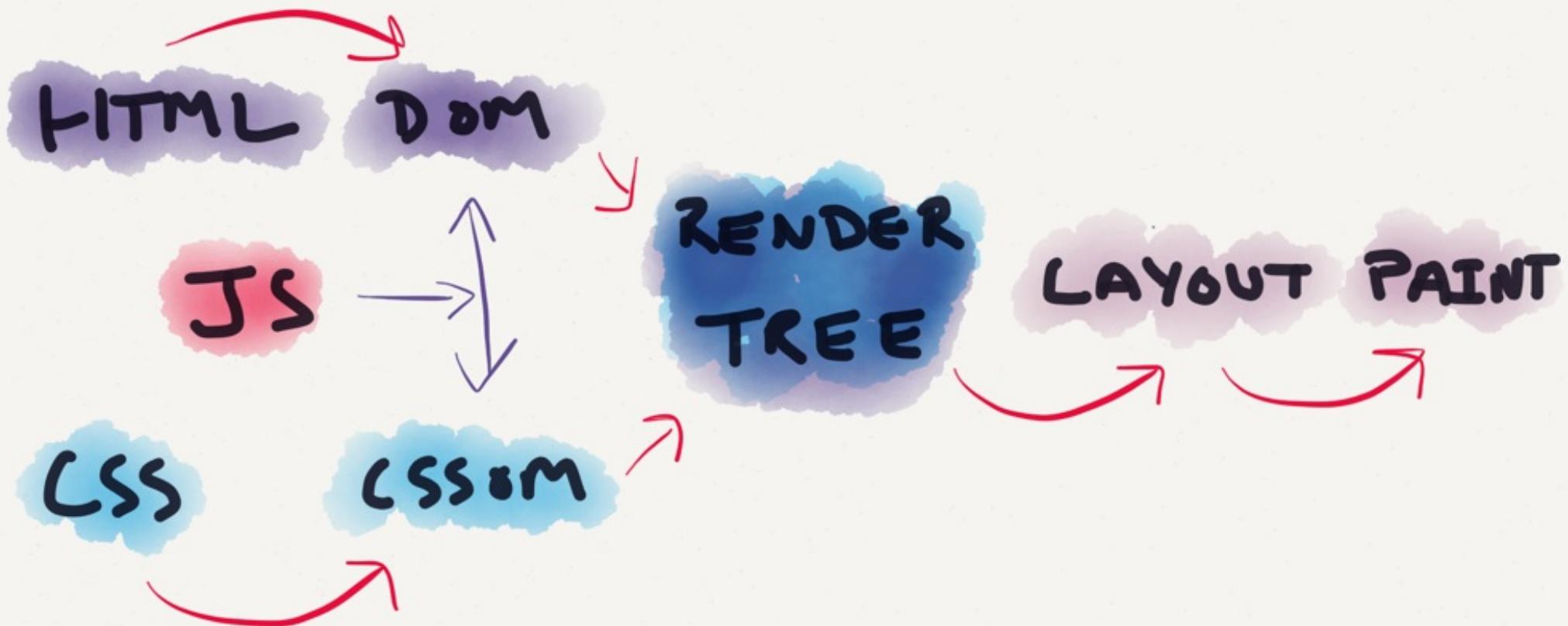
IT GETS WORSE

HTML TRANSFERS WILL TAKE MULTIPLE TRIPS

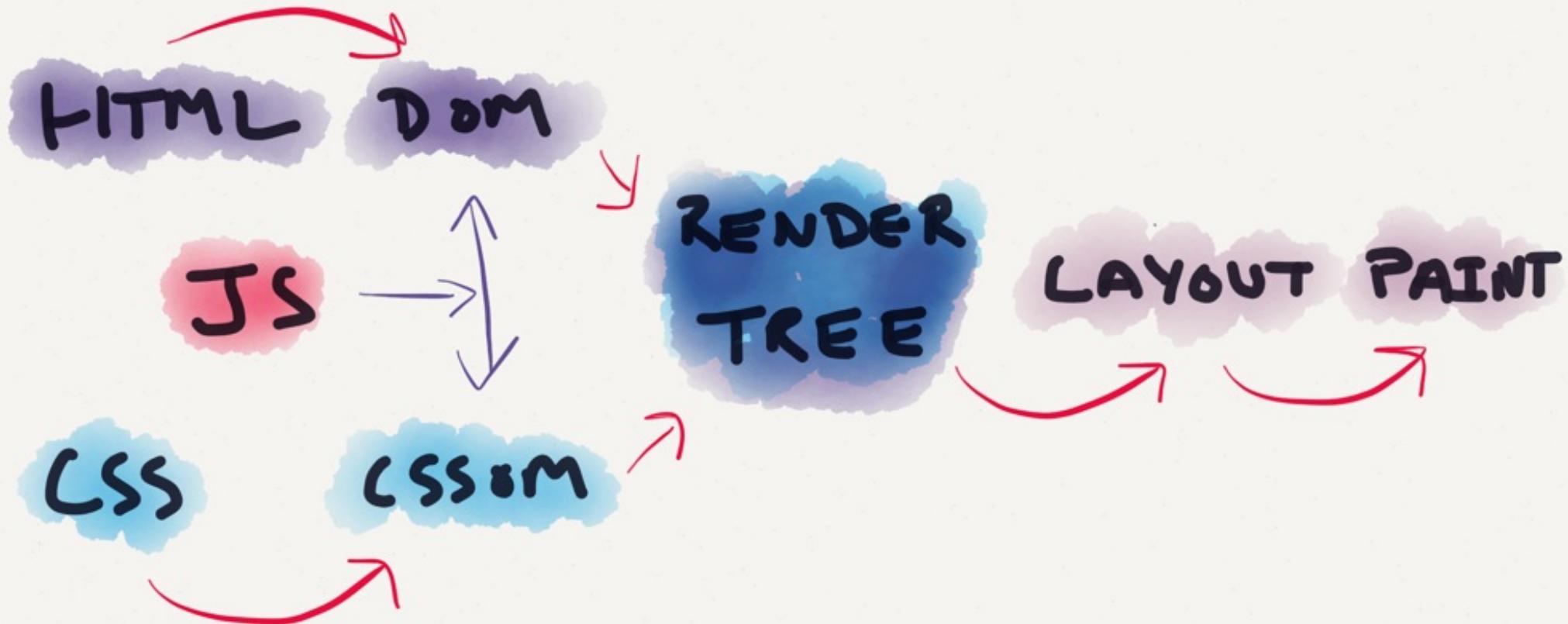


TIME TO FIRST BYTE (TTFB)

HTML PARSING



CSSOM BLOCKS JS EXECUTION



JS BLOCKS DOM CONSTRUCTION

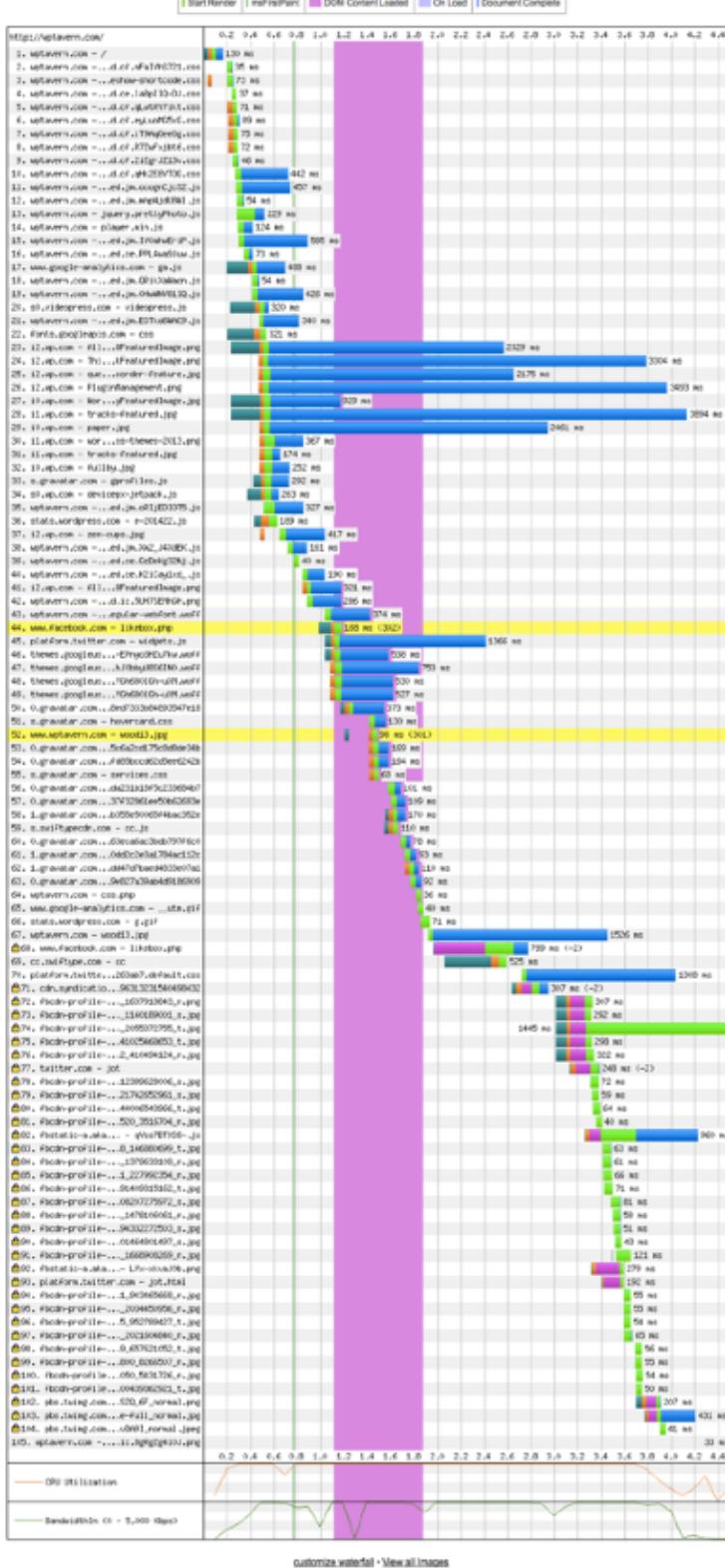
EACH NEW ASSETS REQUIRES AN HTTP REQUEST

HTTP = TCP CONNECTION = LATENCY

BROWSERS WILL MAKE 4-8 CONNECTIONS TO A
DOMAIN

WP TAVERN

EST  2007

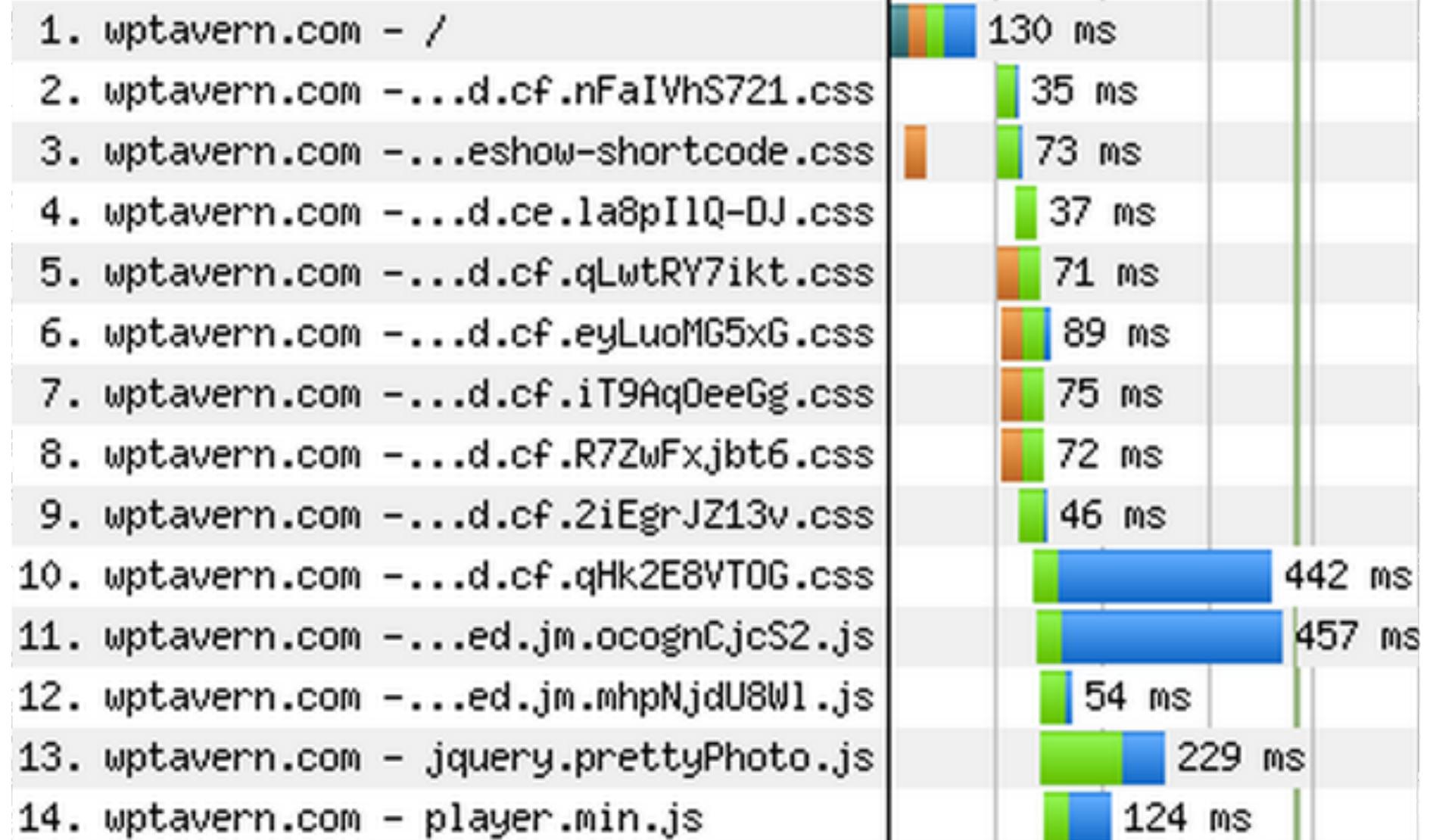


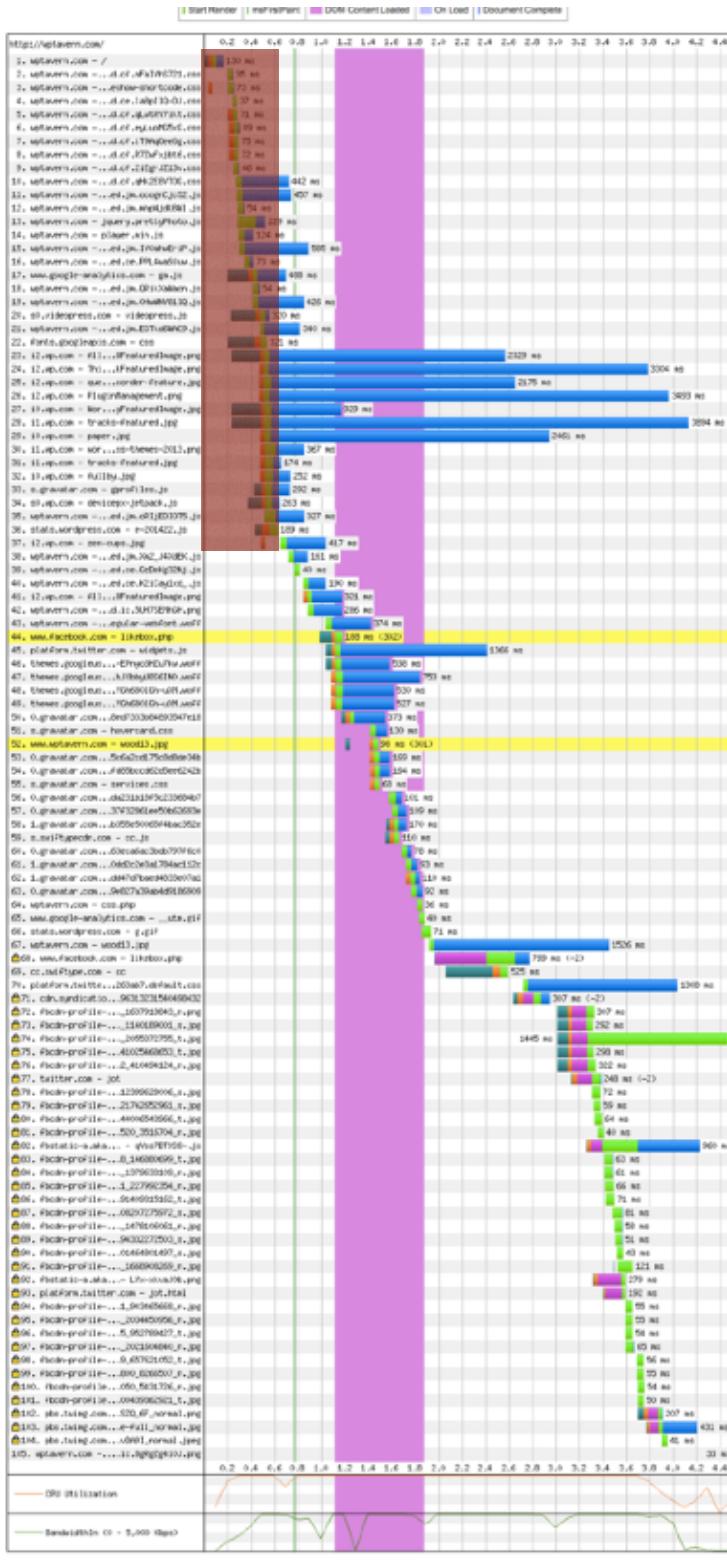
Median of 9 Chrome runs
106 requests (1.8 MB)
2.7 s visually complete

2.7 s visually complete

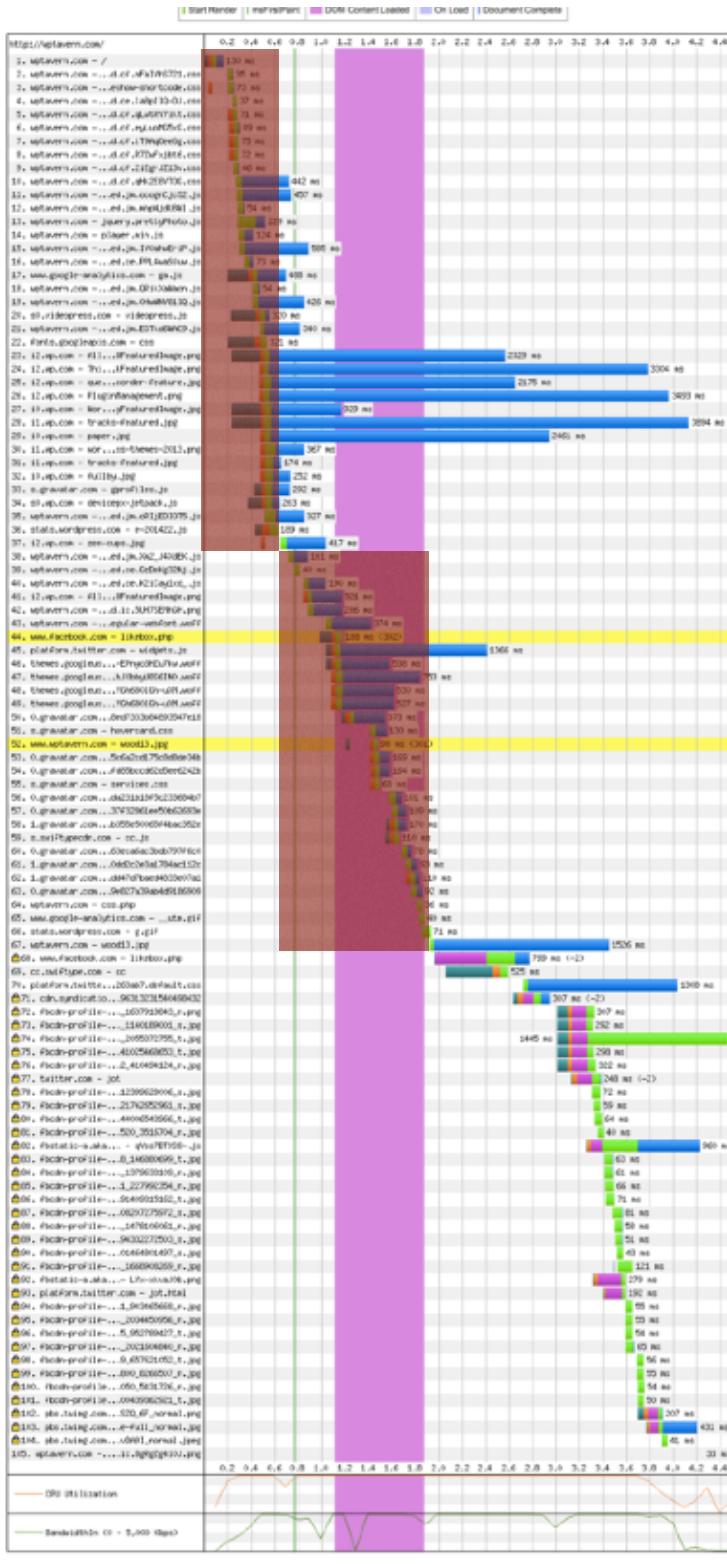
http://www.webpagetest.org/result/140601_0T_2355baff3ff37dfa133714b0505022b

http://wptavern.com/





First 37 assets start download in ~400ms



Next 29 assets start download in ~1200ms

1.1s

1.2s

1.3s

1.4s

0%

36%

36%

36%

2.4s

2.5s

2.6s

2.7s

WP TAVERN



93%

93%

93%

100%

WP TAVERN



WordPress Pingin All in One SEO Releases Important Security Update

WP TAVERN

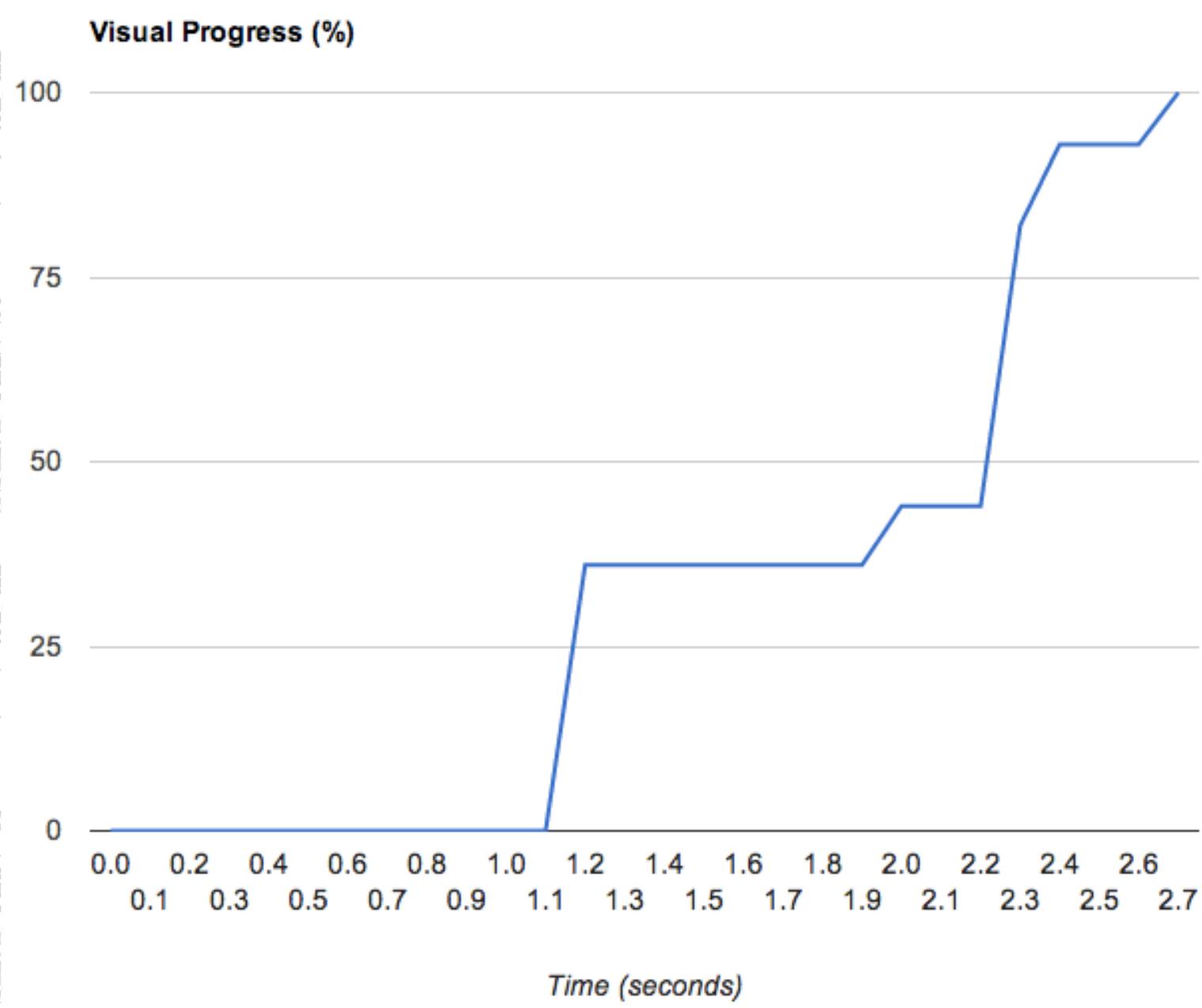


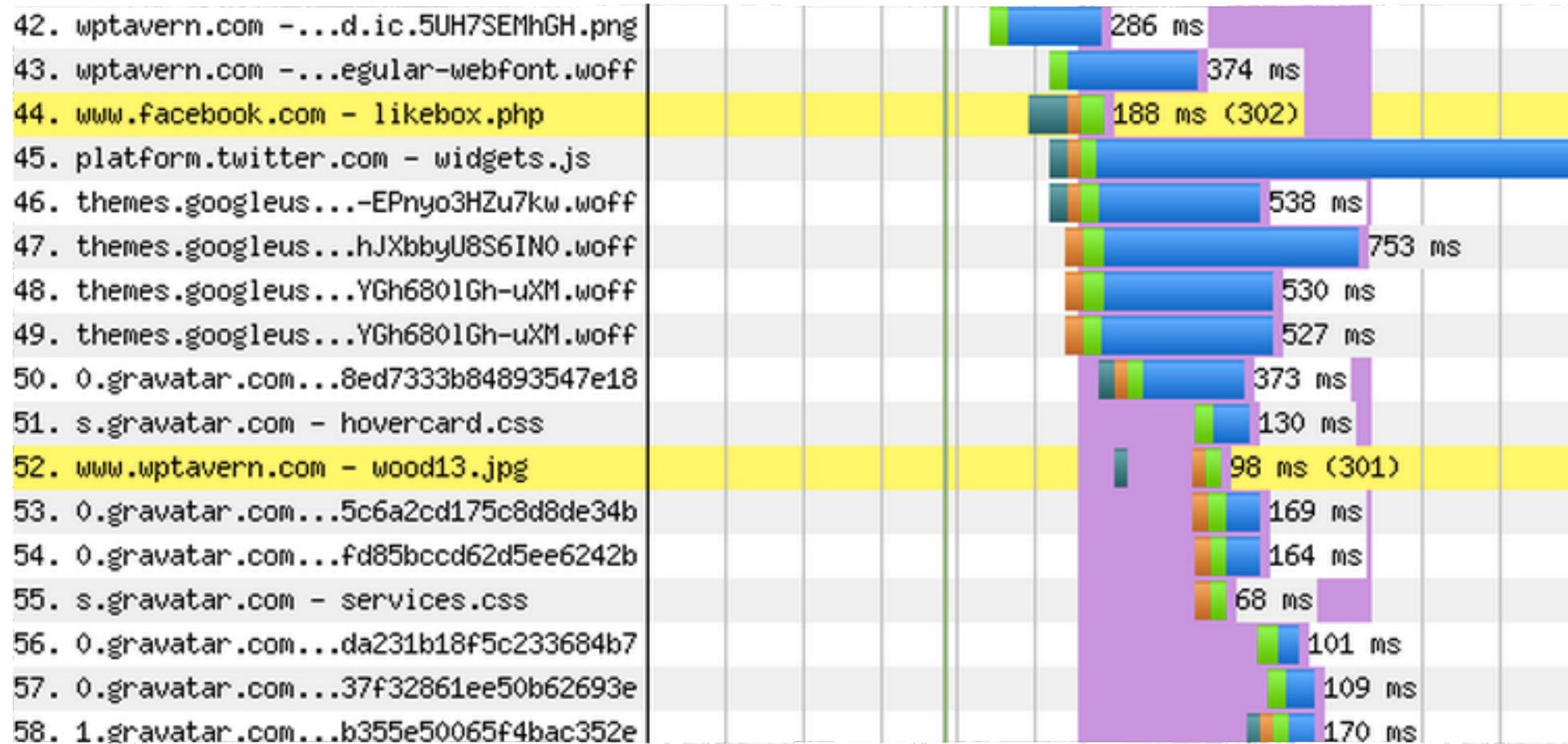
WordPress Pingin All in One SEO Releases Important Security Update

WP TAVERN



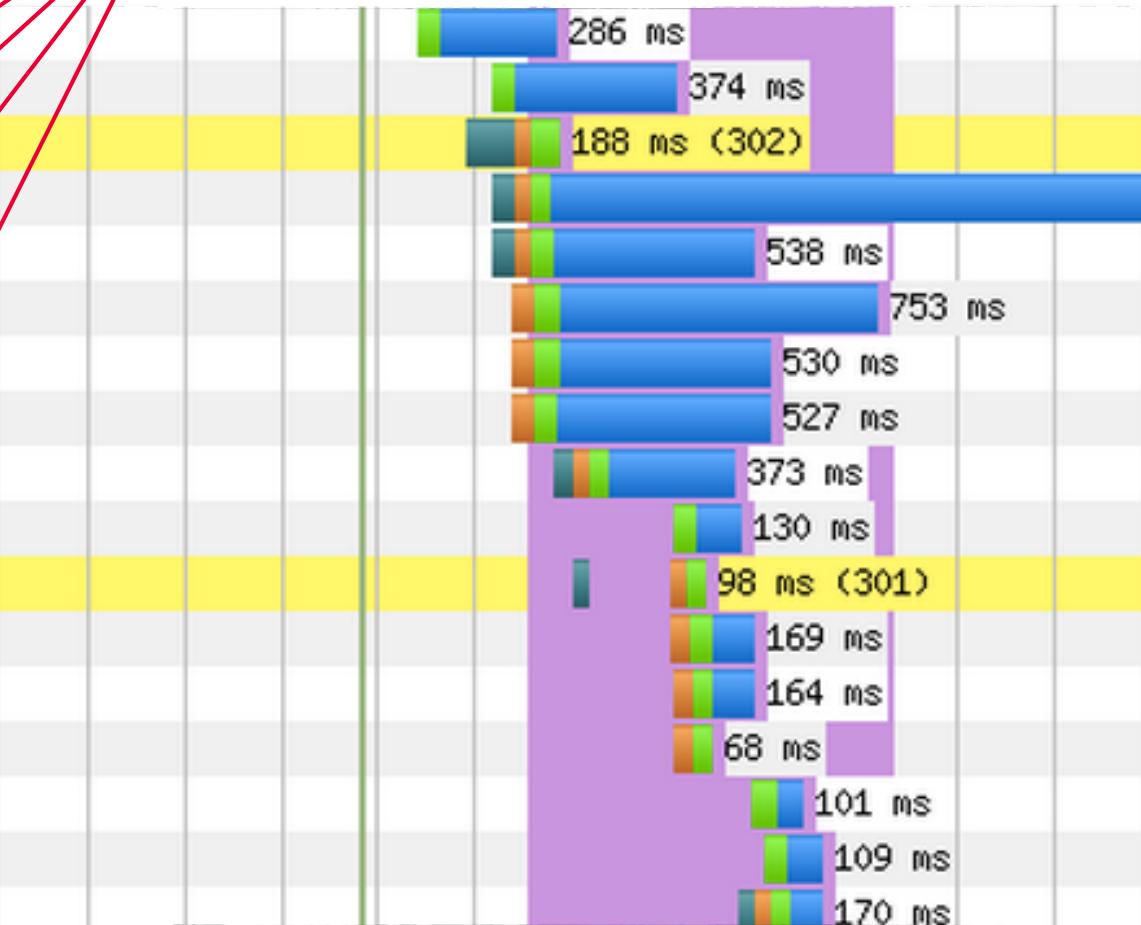
WordPress Pingin All in One SEO Releases Important Security Update





FONTS

42. wptavern.com - ...d.ic.5UH7SEMhGH.png
43. wptavern.com - ...egular-webfont.woff
44. www.facebook.com - likebox.php
45. platform.twitter.com - widgets.js
46. themes.googleus...-EPnyo3H2u7kw.woff
47. themes.googleus...hJXbbyU8S6IN0.woff
48. themes.googleus...YGh6801Gh-uXM.woff
49. themes.googleus...YGh6801Gh-uXM.woff
50. 0.gravatar.com...8ed7333b84893547e18
51. s.gravatar.com - hovercard.css
52. www.wptavern.com - wood13.jpg
53. 0.gravatar.com...5c6a2cd175c8d8de34b
54. 0.gravatar.com...fd85bccd62d5ee6242b
55. s.gravatar.com - services.css
56. 0.gravatar.com...da231b18f5c233684b7
57. 0.gravatar.com...37f32861ee50b62693e
58. 1.gravatar.com...b355e50065f4bac352e



10 EXTERNAL NON-ASYNC SCRIPTS IN HEADER
5 INLINED JS BLOCKS

JS IS BLOCKING CSSOM

FONT DISCOVERY IS REALLY SLOW
1.2 S TO START FONT DOWNLOADS

RECOMMENDATIONS

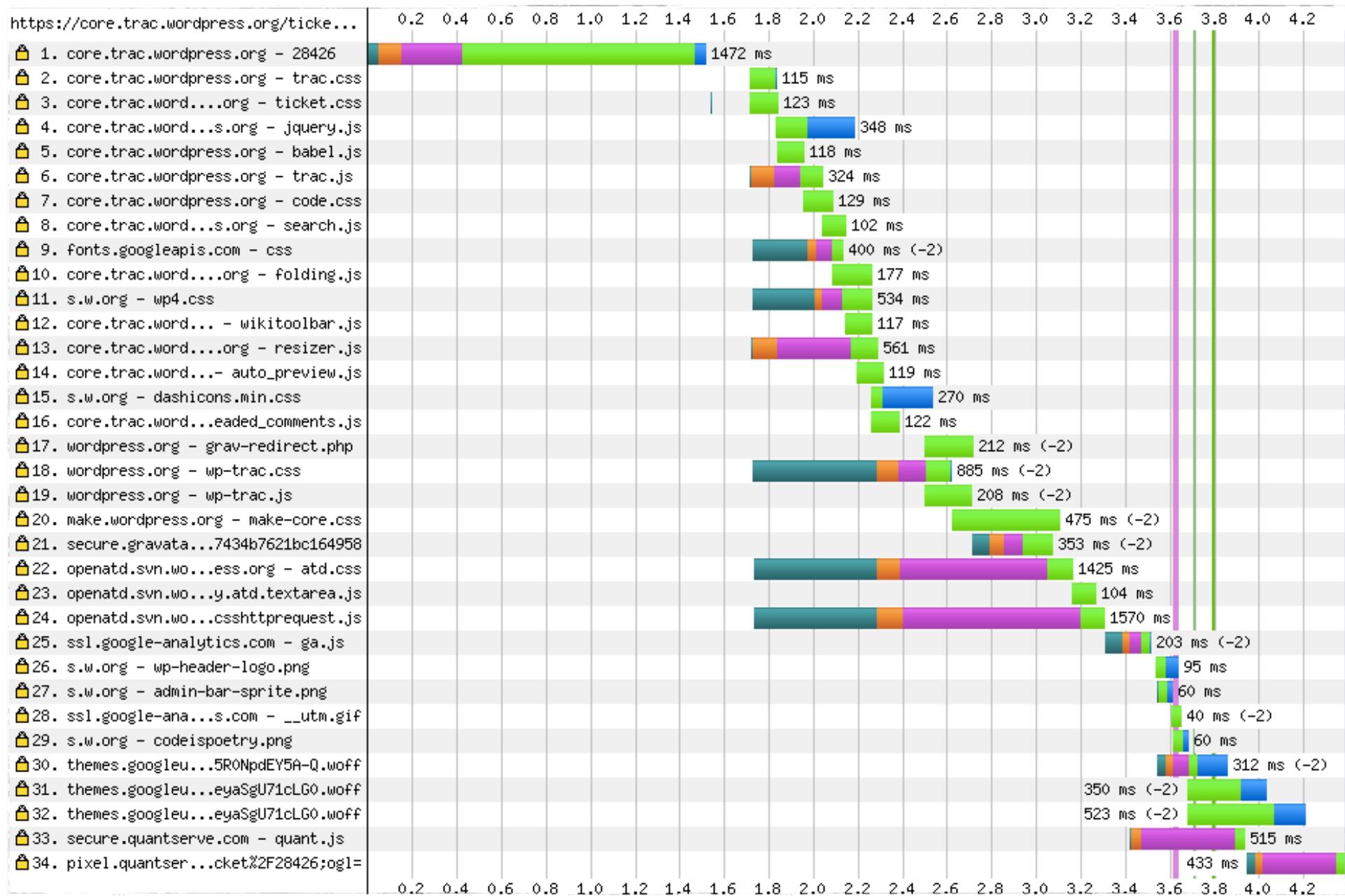
Audit scripts

Concatenate scripts

Remove unneeded fonts

Compress images

<https://core.trac.wordpress.org/ticket/28426>



34 REQUESTS (647KB)
4.3 S VISUALLY COMPLETE

http://www.webpagetest.org/result/140601_78_5e0b2a188cf008c79811ab12be2ad2b/



1017 MS TTFB

1472 MS TO RECEIVE FULL HTML

TCP

SSL

110 ms

267 ms



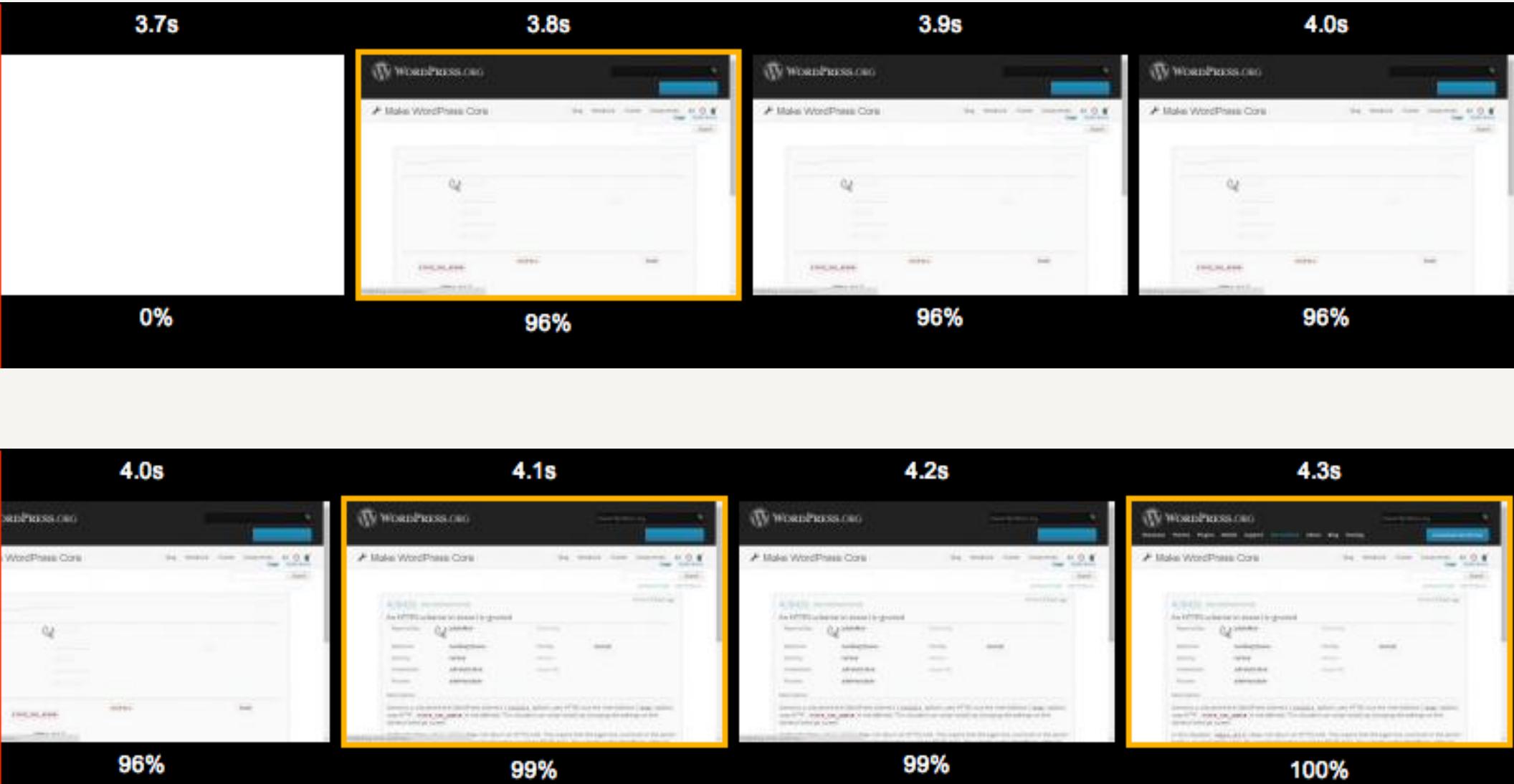
BACKEND DOWNLOAD

1047 ms

48 ms

3.8s START RENDER

4.3s VISUALLY COMPLETE

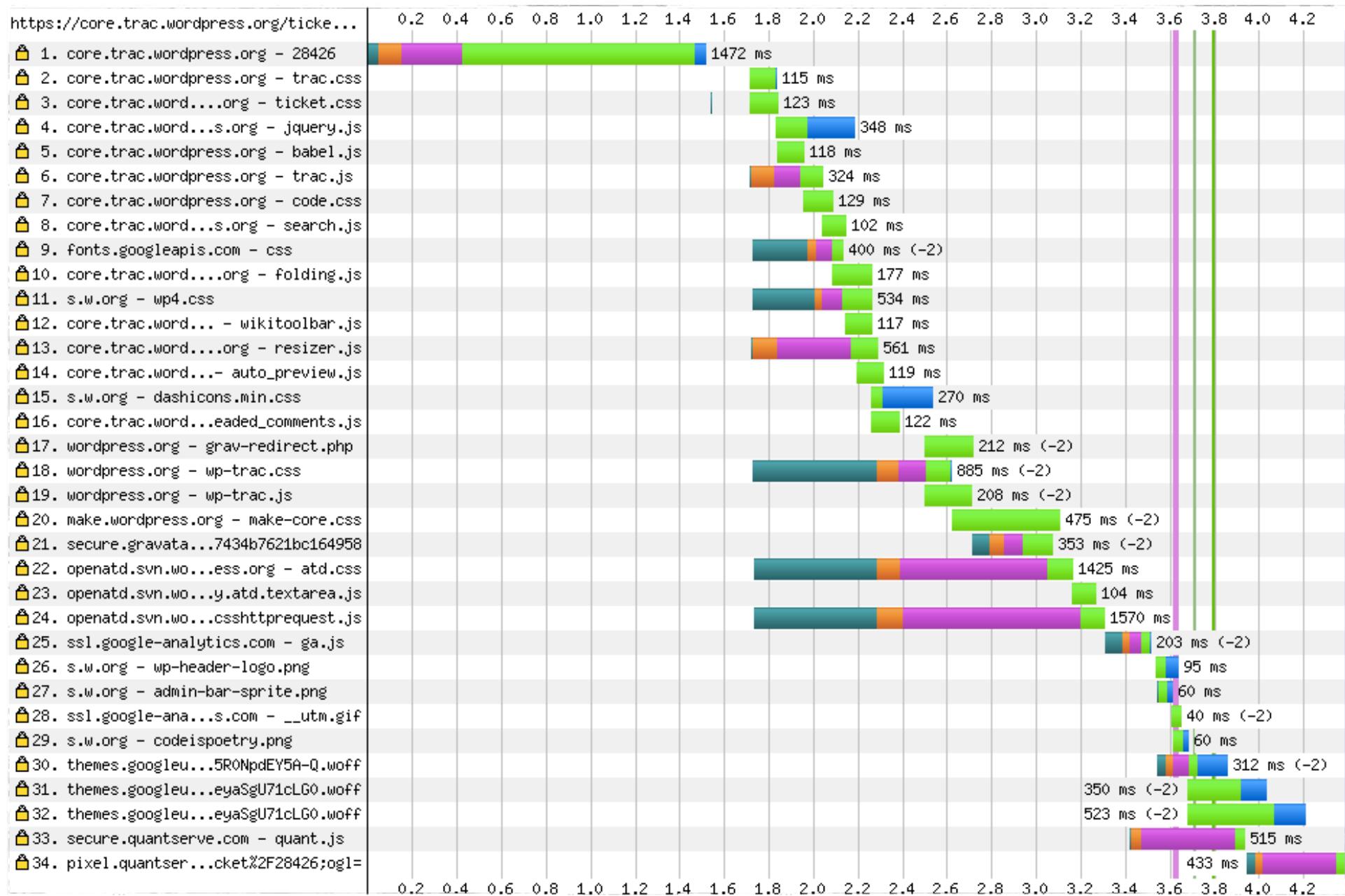


SUBTRACT OUT THE 1.45 HTML LOAD TIME

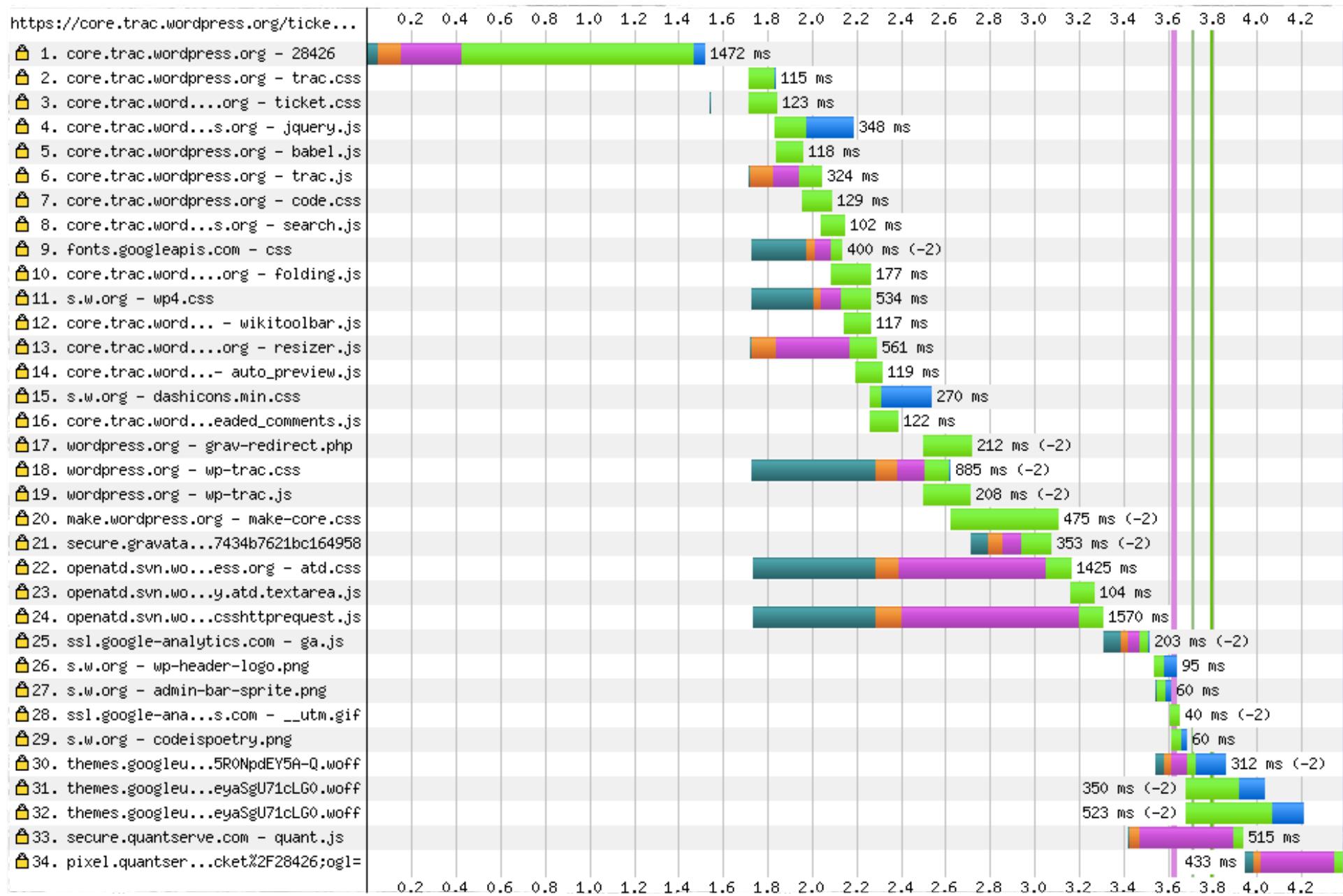
2.45 START RENDER

2.95 VISUALLY COMPLETE

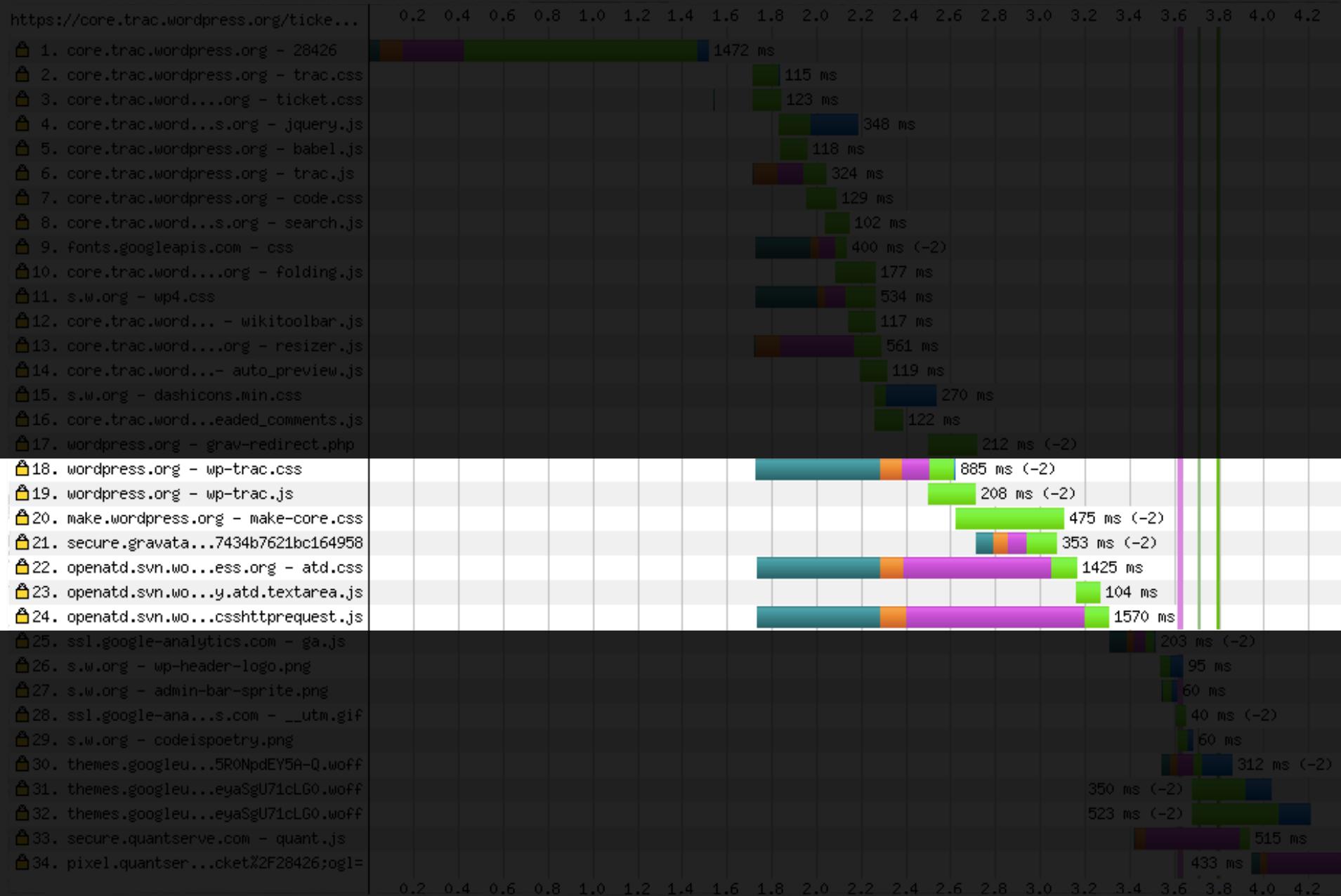
<https://core.trac.wordpress.org/ticket/28426>

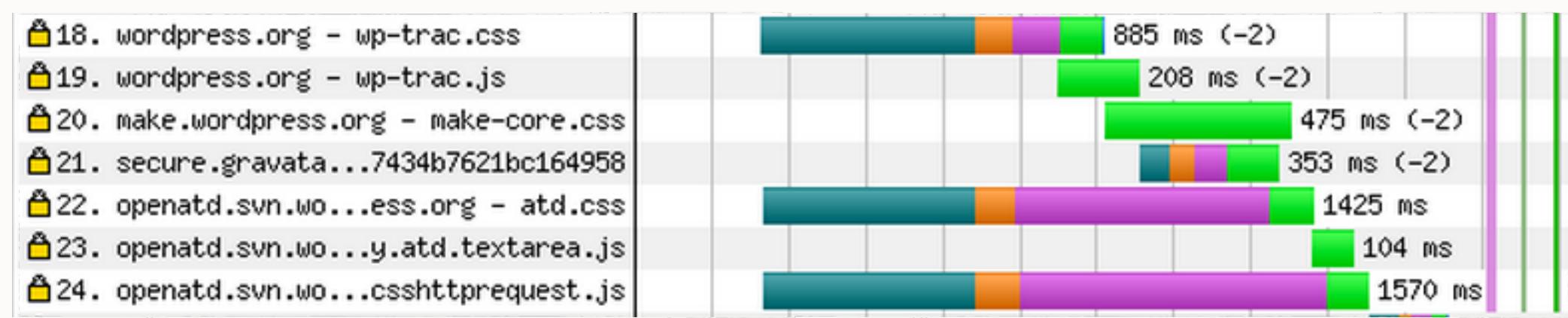


DNS TCP SSL



DNS TCP SSL

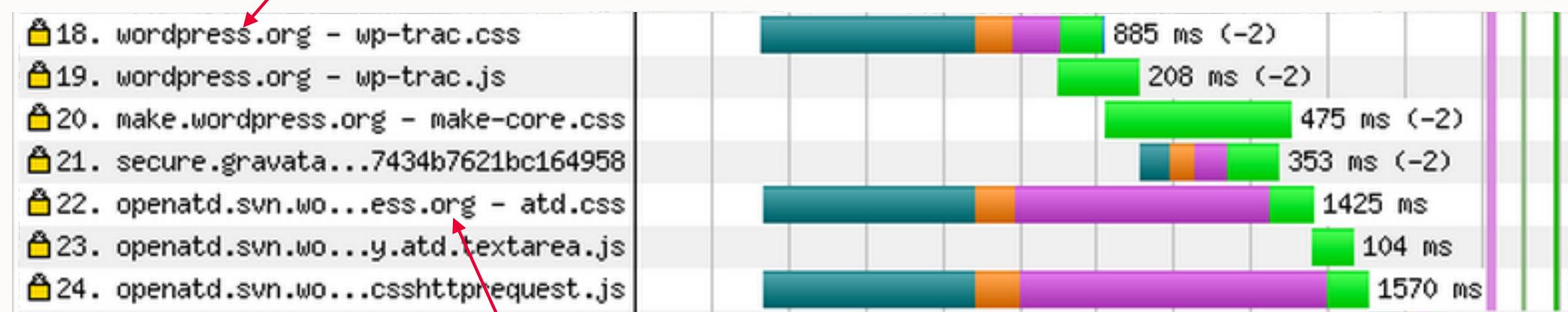




1.65

3.85

WORDPRESS.ORG



1.65

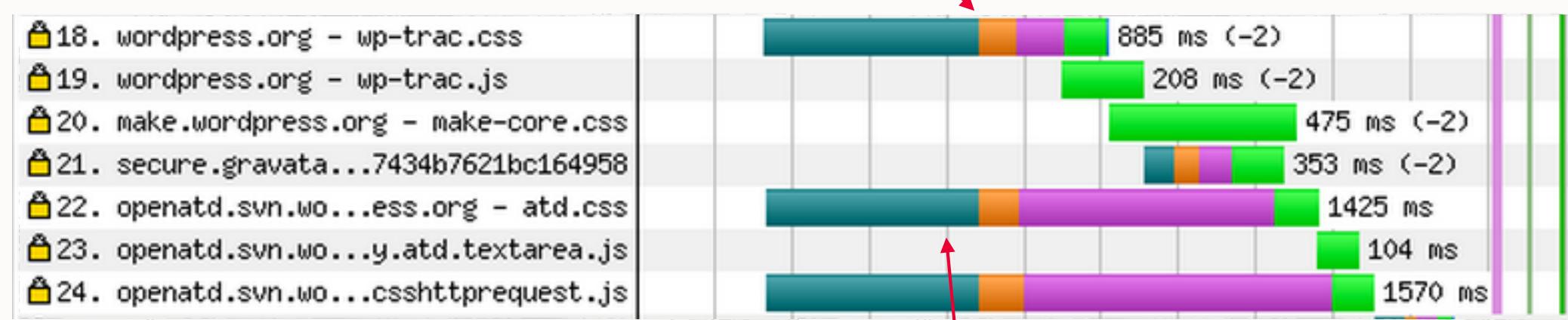
3.85

OPENATD.SVN.WORDPRESS.ORG

WORDPRESS.ORG

768 ms TOTAL CONNECTION TIME

546 ms DNS * 102 ms TCP * 120 ms SSL



1.6 s

3.8 s

OPENATD.SVN.WORDPRESS.ORG

1311 ms TOTAL CONNECTION TIME

548 ms DNS * 102 ms TCP * 661 ms SSL

CSSOM IS BLOCKING RENDERING

RECOMMENDATION

Move assets to same domain

RECOMMENDATION

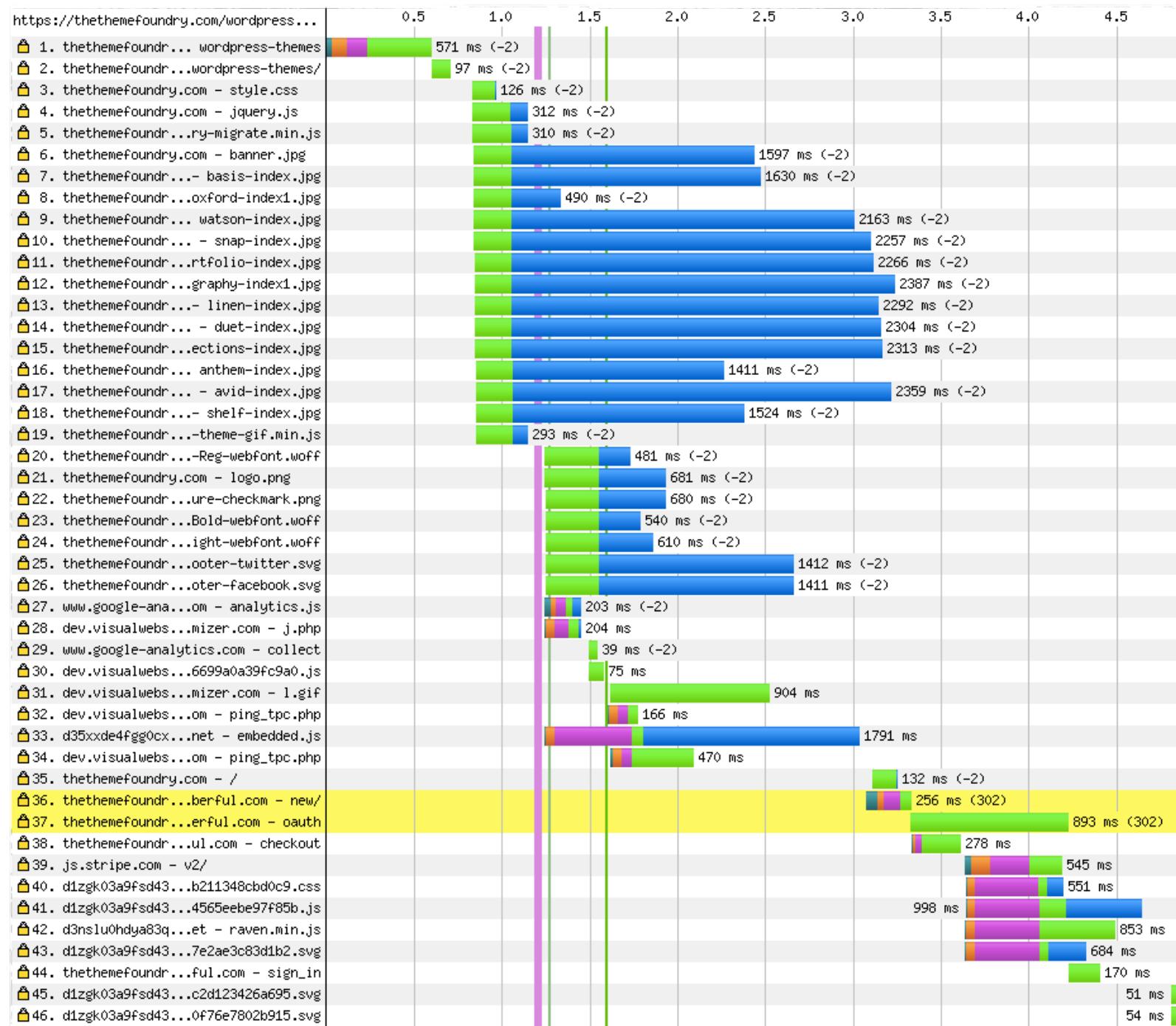
Enable SPDY

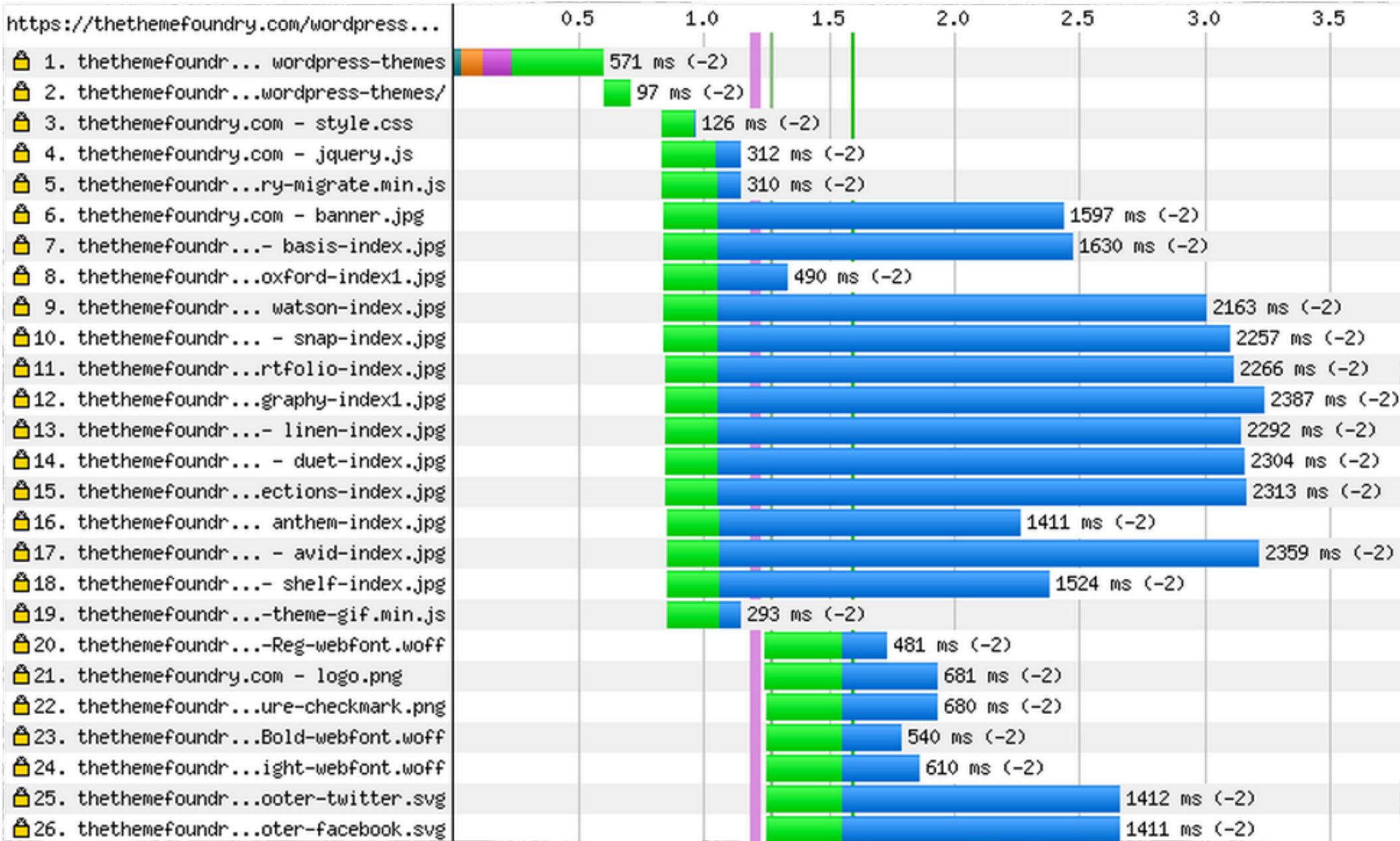
SPDY

Protocol on top of SSL
Allows HTTP multiplexing

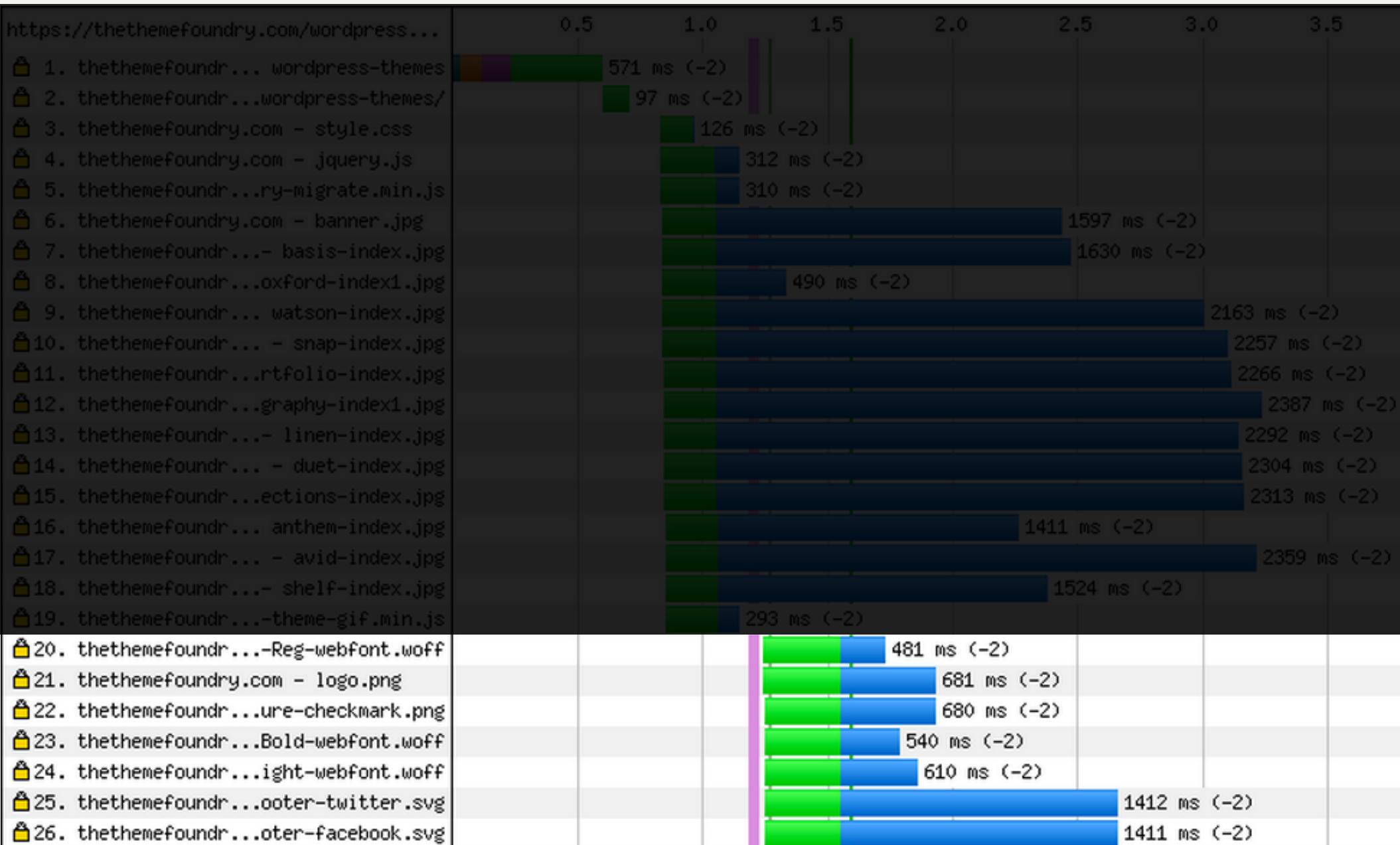
REDUCES THE REPEATED CONNECTION LATENCY

<https://thethemefoundry.com/wordpress-themes>

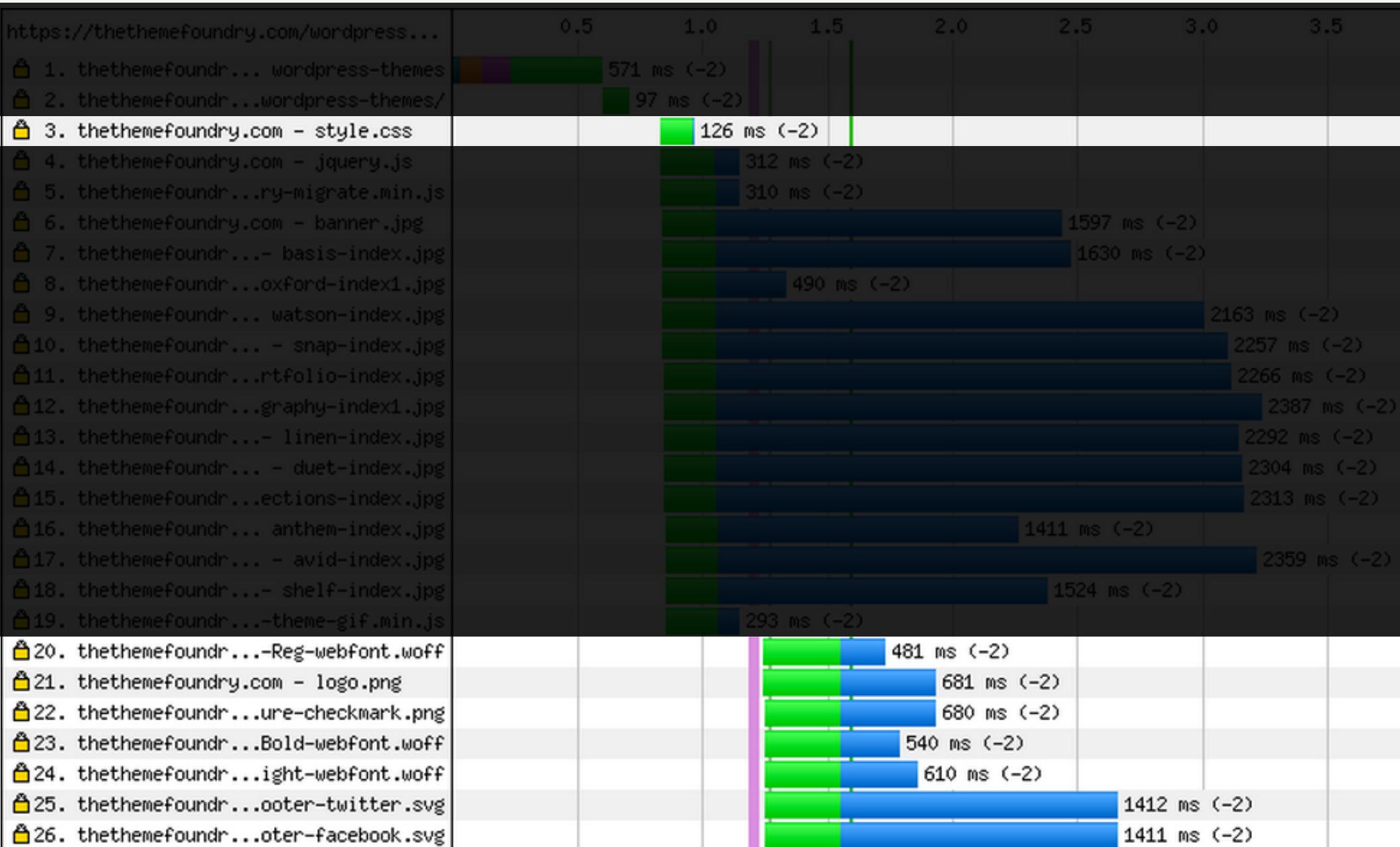




FONTS AND IMAGES LOADED VIA CSS



FONTS AND IMAGES LOADED VIA CSS



IT IS A MUST THAT YOU
SHOULD ALWAYS NEVER LISTEN TO DOGMA

UNDERSTAND THE PROBLEM BEFORE SOLVING IT

RESOURCES

High Performance Browser Networking: Ilya Grigorik

High Performance Web Sites: Steve Souders

Web Performance: Andy Davies