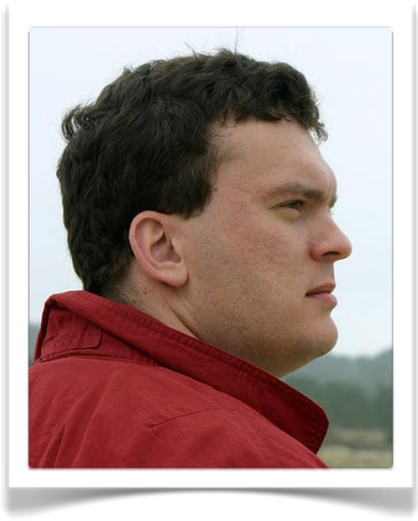
Introduction To Web Performance

IEEE

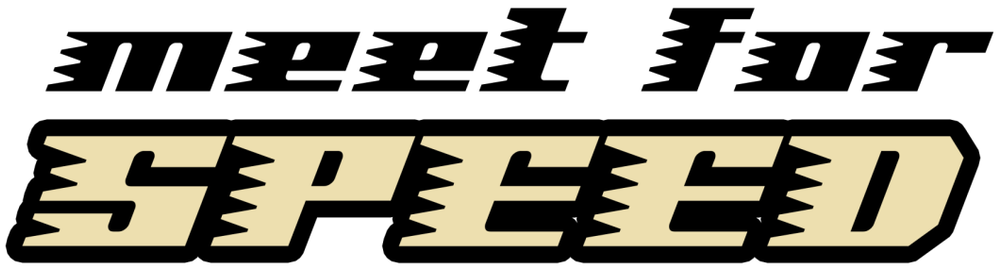
May 3, 2011



Sergey Chernyshev
Director, Web Systems & Applications
truTV, Web Services

NY Web Performance Meetup

~925 members



What is Web Performance?

Performance is **how fast**

your site works for **each end user**

Update your SLAs

NOT how many users it can serve (Scalability)

NOT how often it's **down** (Reliability)

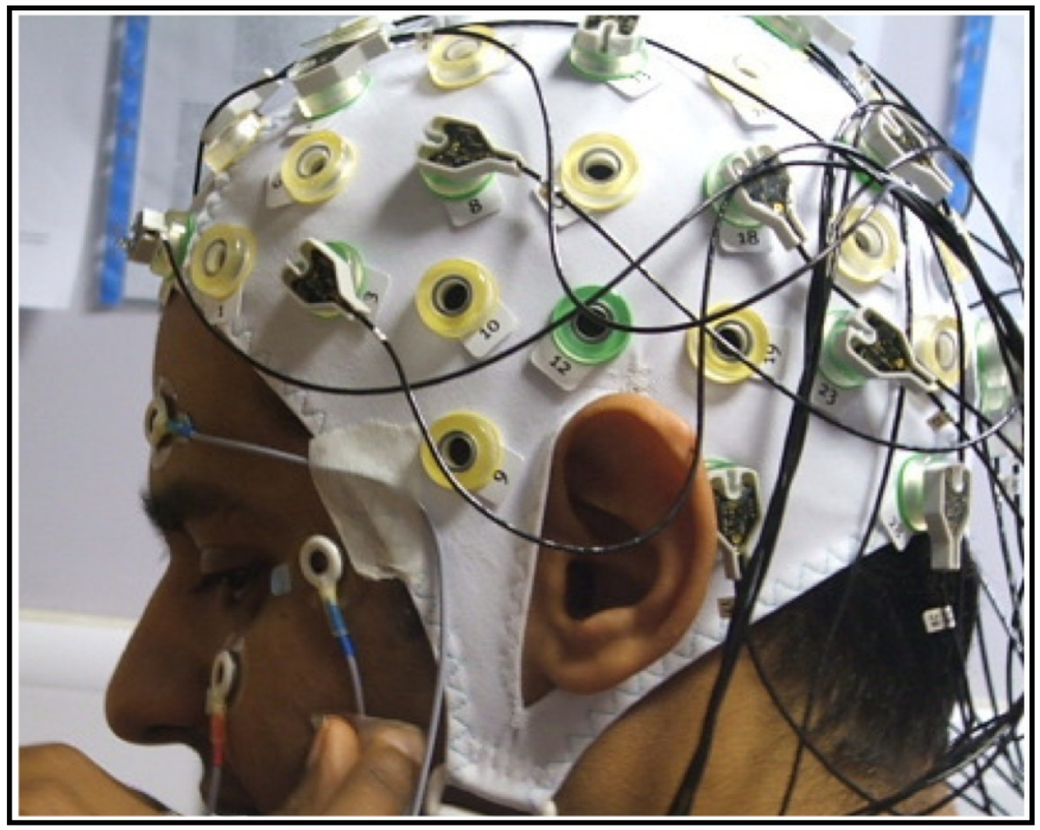
Why Web Performance?

User experience

"participants had to concentrate up to 50% more"

"greater agitation and stress"

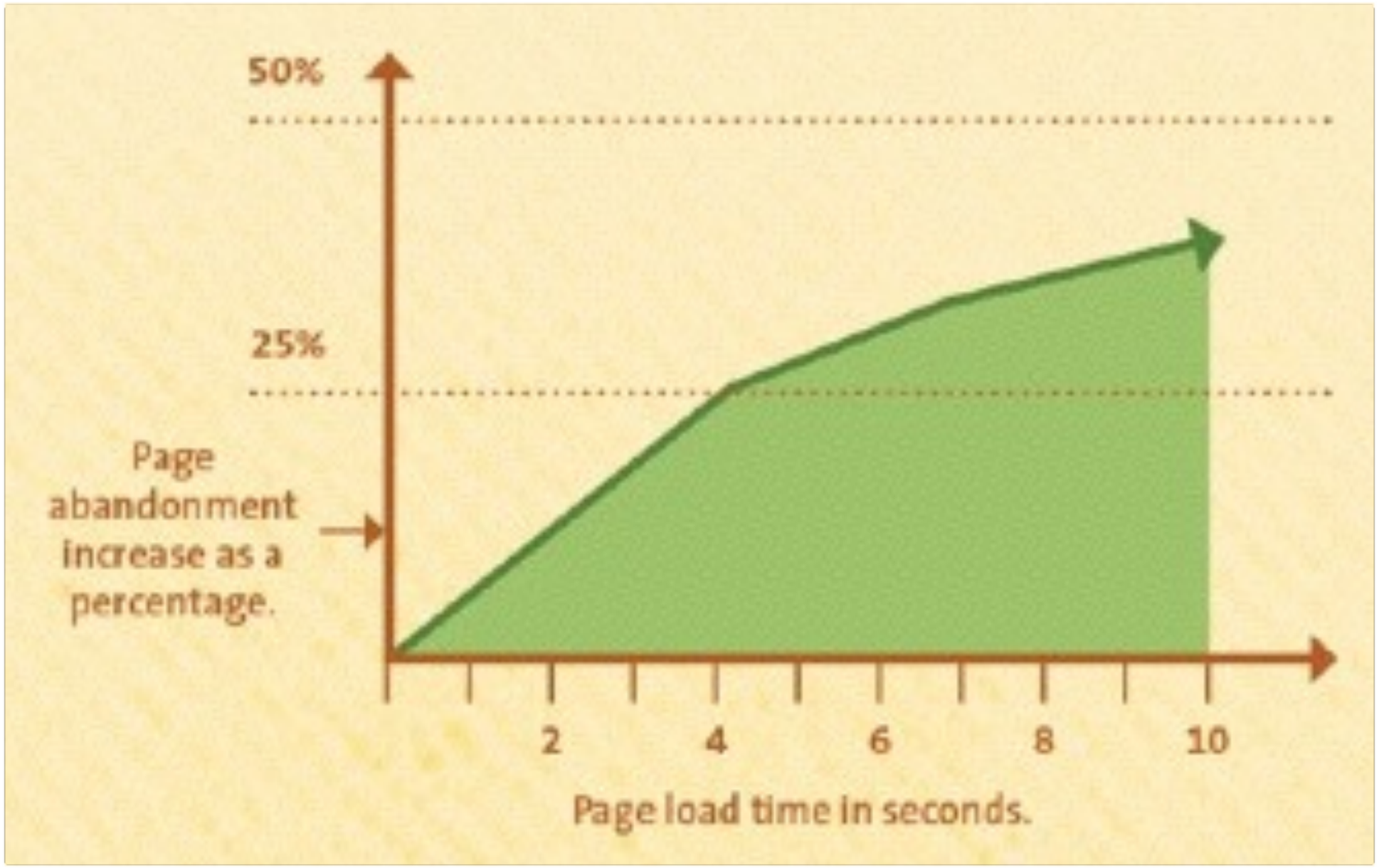
"40% will go to a rival web site, 37% will abandon"



Web user connected to EEG

Web Stress. A wake up call for European business. Foviance on behalf of CA
http://www.ca.com/Files/SupportingPieces/final_webstress_survey_report_229296.pdf

Abandonment Rate



How Loading Time Affects Your Bottom Line. KISSmetrics
http://blog.kissmetrics.com/loading-time/

Why Web Performance?

$$$** Money **$$$

- Shopzilla **+7-12%** conversions!
  -50% operation costs

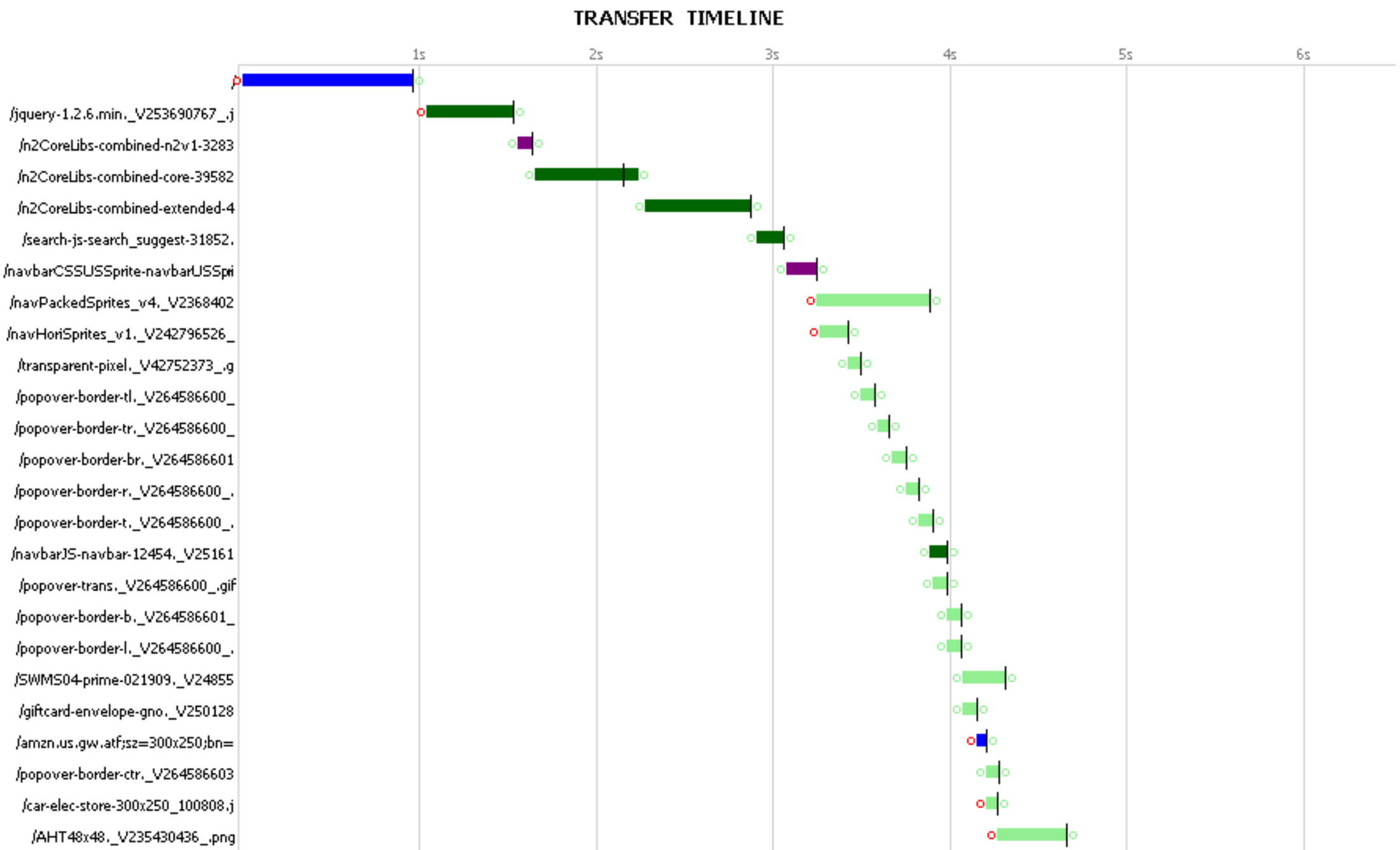
- **+15%** (+60M) downloads for Firefox.
  (-1 sec => +2.7% downloads)

- Slowness is sticky (Google and Microsoft)

- **SEO:** Google uses site's speed in ranking

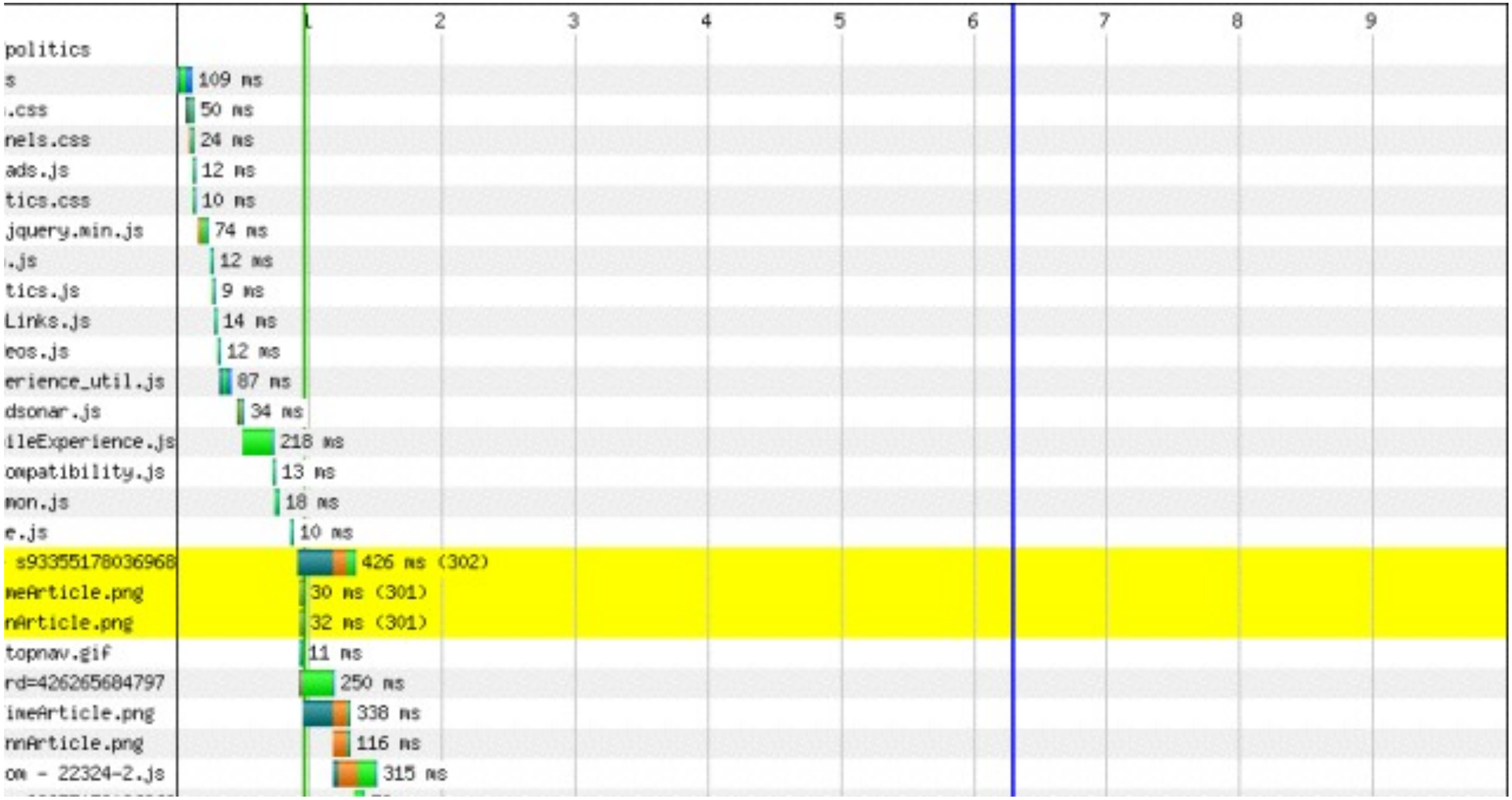
Where to look?

88 requests, **6.344s** only **0.968s** on backend = **just 15%**



Where? **Front end!**

151 requests, 6.3s, only 0.1s on backend - **less then 2%**

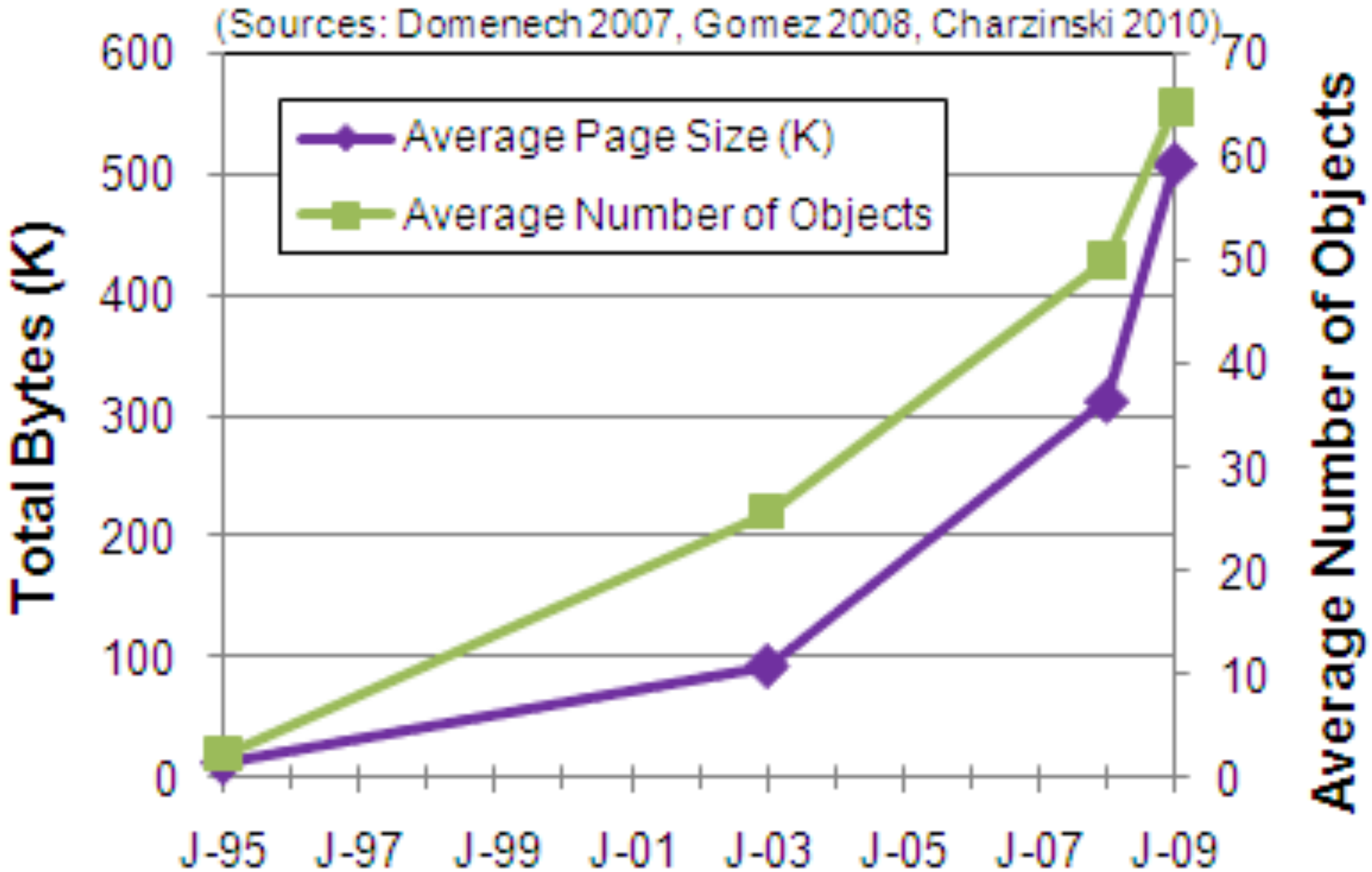


Page Statistics

	2003	2009
Size:	93.7K	**507K**
Objects:	25.7	64.7

Average Web Page Size Quintuples Since 2003
Andrew King (websiteoptimization.com)

Growth of Average Web Page Size and Number of Objects



Average Web Page Size Quintuples Since 2003
Andrew King (websiteoptimization.com)

Page Statistics

- Load Time: **+0.533 s**
- Time to first byte: +0.117 s
- Time to start render: +0.179 s
- Page Size: **+48 KB**
- Requests: +4
- Connections: +1
- DNS Lookups: +1

in 1 year
2009-2010

Are pages getting faster? Patrick Meenan (webpagetest.org)

What to **work on**?

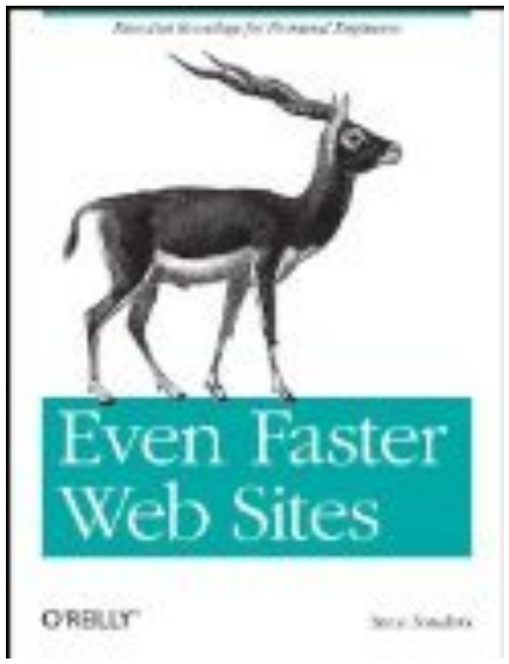
Back-end

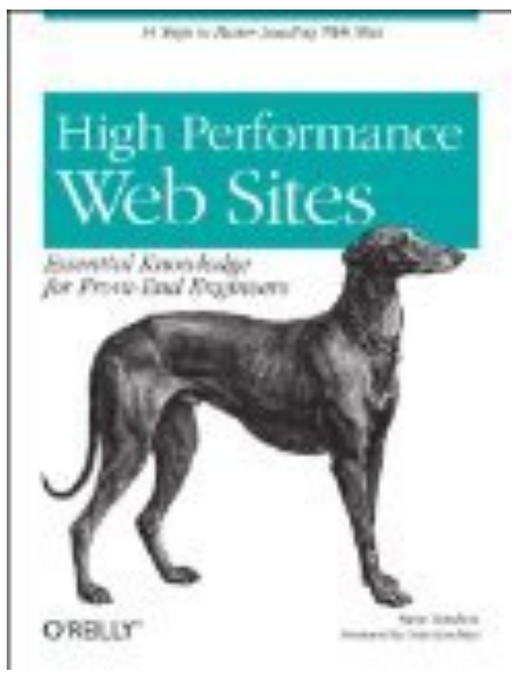
- Cache subsystem & data lifetime policies
- Web farm setup & web server configuration
- Build ("compilation") processes
- (SQL) query optimization for real-time data

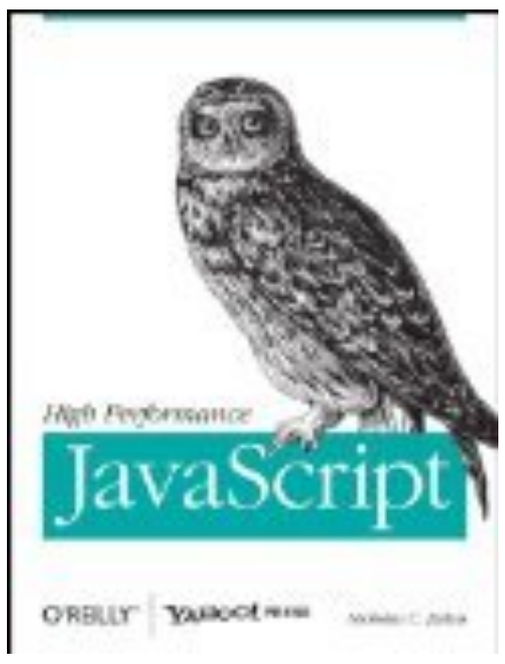
What to **work on**?

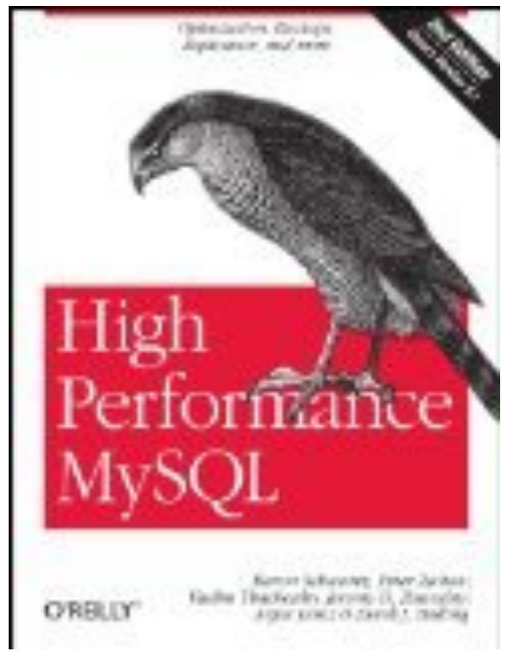
Front-end

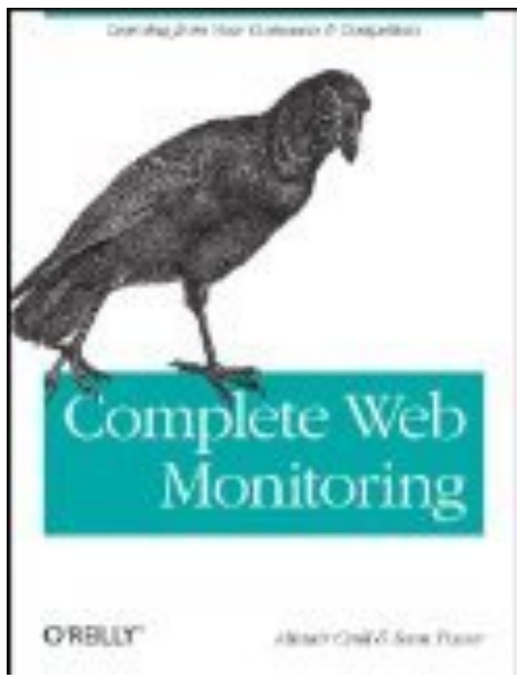
- JavaScript deferral (3rd party and own code)
- Utilizing browser cache
- Payload reduction (fewer & smaller requests)
- Progressive enhancement

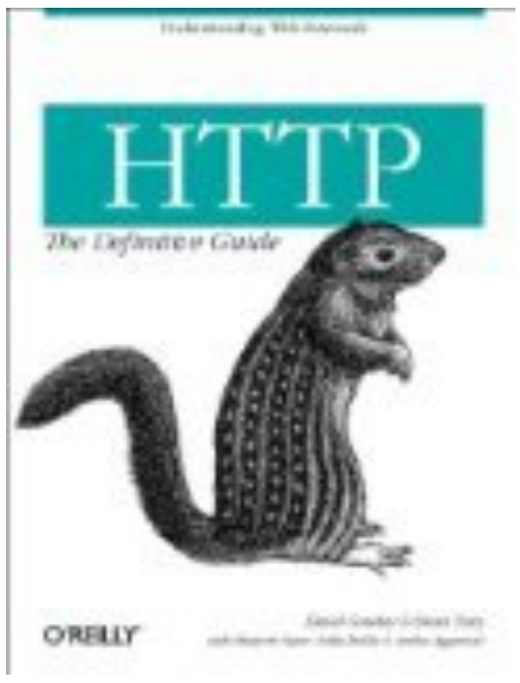












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