AEASEA 2016 - Designing for Performance

Notes from Lara Hogan's presentation on designing webpages for better performance. Presented at An Event Apart Seattle 2016.

by Anne Gibson a year ago

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time for @lara_hogan from Etsy for Designing for Performance. #AEASEA

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Lara is the infrastructure chief of staff, but she sees she can make huge impact just by working on performance #AEASEA

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Performance is the user experience. It's important! #AEASEA

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A 160kb addition to a page raise the bounce rate by 12%. #AEASEA

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#aeasea design for performance 😄 @ Bell Harbor International Conference Center instagram.com/p/BD1oeoHk6jY/

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Making scrolling less janky, people interacted more with the site more #AEASEA

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Performance + aesthetics = the user experience #AEASEA

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Cellular devices must establish a radio channel before it can get/send data, and that's several seconds by itself #AEASEA

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Every time it doesn't happen regularly the channel gets dropped and has to be reestablished #AEASEA

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Average round trip is >300ms on a mobile network #AEASEA

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Webpagetest.org is used for many of these examples #AEASEA

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Optimize for number of requests. More requests takes more time #AEASEA

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Optimize for the size of the requests. Larger files take longer. #AEASEA

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Hold on to your butts. @lara_hogan #aeasea

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Images account for 2/3 of the weight of most web pages. Solving images goes a long way toward improving performance. @lara_hogan #aeasea

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JPG files, best for photos, many colors. Jpegs are lossy. Good at smooth gradients, low contrast. Bad at high contrast areas, edges #AEASEA

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Optimization options: reduce noise & complexity, decrease export quality, blur unimportant areas #AEASEA

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Small images don't show many artifacts, big ones do. #AEASEA

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By blurring unimportant areas (and/or cropping them out) we cut the size of the image significantly #AEASEA

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GIFs were written for CompuServ's file downloading. Best for animations that can't be replaced with CSS #AEASEA

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If you must use them - please don't - adjusting the dithering will help with size #AEASEA

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GIFs don't understand patterns in the vertical direction so horizontal patterns are smaller #AEASEA

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Replace gif animations with CSS, non-animated gifts wth PNG-8s, and movie gifts with asynchronously-loading videos #AEASEA

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PNG-8s understand horizontal and vertical patterns. Best for images with few colors, dither. #AEASEA

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PNG 24s - decrease the noise and the colors to optimize. they have semitransparent pixels and handle transparency better #AEASEA

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PNG24s will be bigger files. If no transparency, use JPG! #AEASEA

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WebP announced by Google in 2010. Both lossless and lossy compression, supports transparency and animation #AEASEA

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WebP is supported only by chrome opera and android browser #AEASEA

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Replace simple images with SVG - XML-based vector image format. Scales beautifully. #AEASEA

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Kill the Adobe bloat in your SVGs. Inlining them kills cacheability though. #aeasea

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Sprites: combine lots of small images into one file so there are fewer requests #AEASEA. #AEASEA

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Take advantage of the responsive images spec. Forces browser to choose the best source of an image for a user #AEASEA

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type attribute tells browser to ignore the image source unless it recognizes file type so they don't load things that can't be used #AEASEA

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Lossless compression can save 20% of file size. Automate it through tools that already exist #AEASEA

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Performance isn't just in speed, it's also affecting the battery life - the less you spend the the better! #AEASEA

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Sloths. All the sloths. #aeasea

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IE 6-8 downloads all @font-face files even if they're not used. Only @import what you absolutely need #AEASEA

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Only download Webfonts on larger screens to speed time (assumes larger screens are not my iPad Pro…) #AEASEA

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Optimize your character subsetting so you can only send what you need. Then DOCUMENT IT. #AEASEA

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"This user has four and a horse stars" - sub setting problem at etsy #aeasea

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Semantics and repurposability: can someone else reuse this pattern? Rename non-semantic elements to be semantic. #AEASEA

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Remove inefficient selectors to speed up CSS.
.wide #sidebar a.search {} is hard to parse! #AEASEA

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Remove divitis #AEASEA

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Create patterns. How many colors are you using? How often? How many fonts, weights, and styles? #AEASEA

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Consistency and clarity in patterns lead to better product and brand alignment #AEASEA

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One font weight for headlines, no more Guardian for body copy. Test and show it to folks. #AEASEA

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Etsy saved 270kb and 5 requests, so performance significantly improved #AEASEA

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If you can, do things mobile first. Make performance part of everyone's workflow. #AEASEA

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Create a performance budget. Be deliberate about loading assets. #AEASEA

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If something takes really long (Twitter, Facebook buttons…) demand they load asyncronously #AEASEA

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An Event Apart Day II closer: Lara Hogan on Web Performance #aeasea

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Automate everything that you can. Including performance tests! #AEASEA

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How can we help content creators have fast pages? CMS dynamically updates user-loaded images and puts them in srcset #AEASEA

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A/B test to measure aesthetics vs performance impact #aeasea

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Who is responsible for performance? Performance cops and janitors don't work. Need a culture of performance #AEASEA

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Culture change is hard. Help people "feel" your site's performance. #AEASEA

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Compare to a competitor, or before and after. Or desktop to mobile. Or domestic to international. #AEASEA

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Videos are crucial to “selling” performance to execs. #AEASEA

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Publish performance reports. Speak PUBLICLY about your #performance problems. This will create a culture of performance. @lara_hogan #aeasea

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Forrest Corbett
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UX performance is everyone's job #aeasea #uxdesign @lara_hogan

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Page load times are not secret - lots of monitoring companies see them now so you might as well be up front #AEASEA

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Performance hero dashboard: a developer (or team) that made a big change? celebrate them with data #AEASEA

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We need to have empathy with our users and our fellow developers and upper management and help them care too #AEASEA

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Good performance is good design. #AEASEA

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All the proceeds from Designing for Performance are donated to coding development groups so buy it :) #AEASEA

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Total page weight under 1mb helps a lot, but A/B test changes to know what the best trade-offs are #AEASEA

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Improving site performance = improving technically + improving how much your company cares about it. @lara_hogan #aeasea

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Retina images: there's a lot of solutions out there but no clear answers. Use SVG for as much as you can #AEASEA

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Anything you do for mobile performance optimization is good for everyone, so the language is less important than the effects #AEASEA

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Important take-away from @lara_hogan's talk: Designing for performance needs to be established into the culture of a team #aeasea #aea16

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I give @lara_hogan 🐴🐴🐴🐴🐴 out of five for that talk. #aeasea

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