#BrightonSEO

Reducing the Speed Impact of Third-Party Tags

Andy Davies · Oct 2020

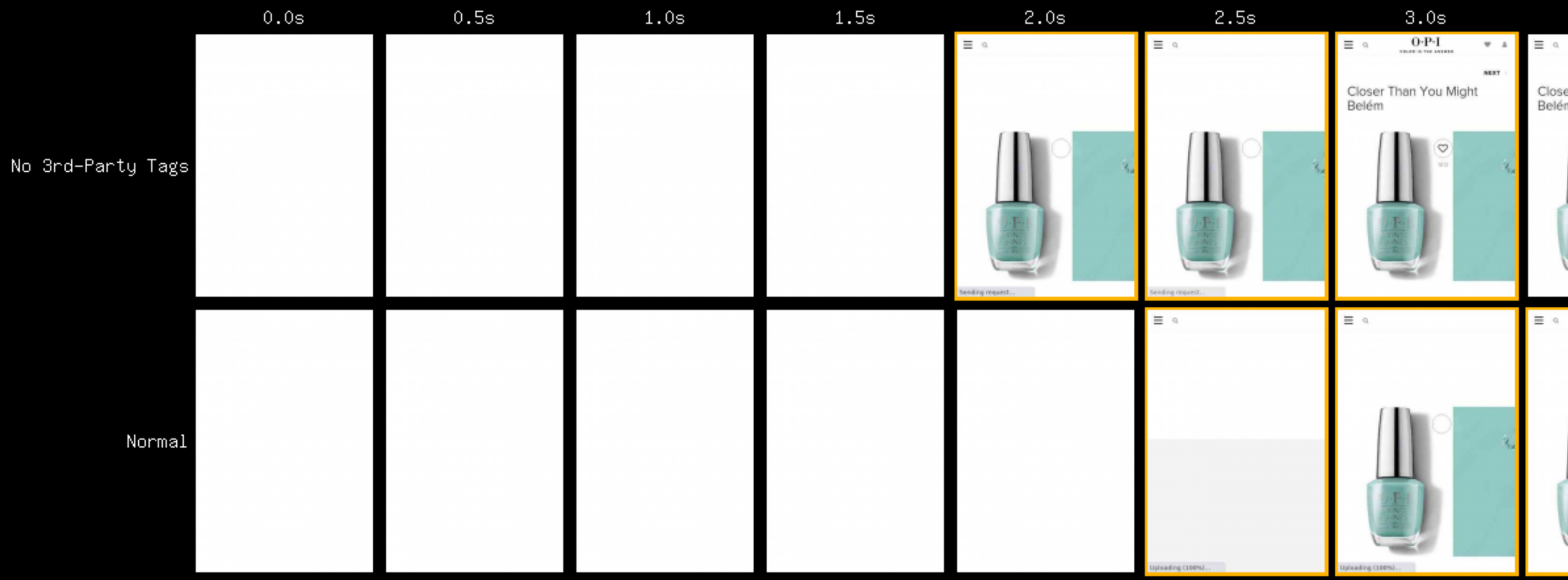
https://www.flickr.com/photos/digitizedchaos/3964206549

Tags compete for network bandwidth and CPU processing time

https://www.flickr.com/photos/39908901@N06/7834345230

@AndyDavies

And slow down our visitors experience



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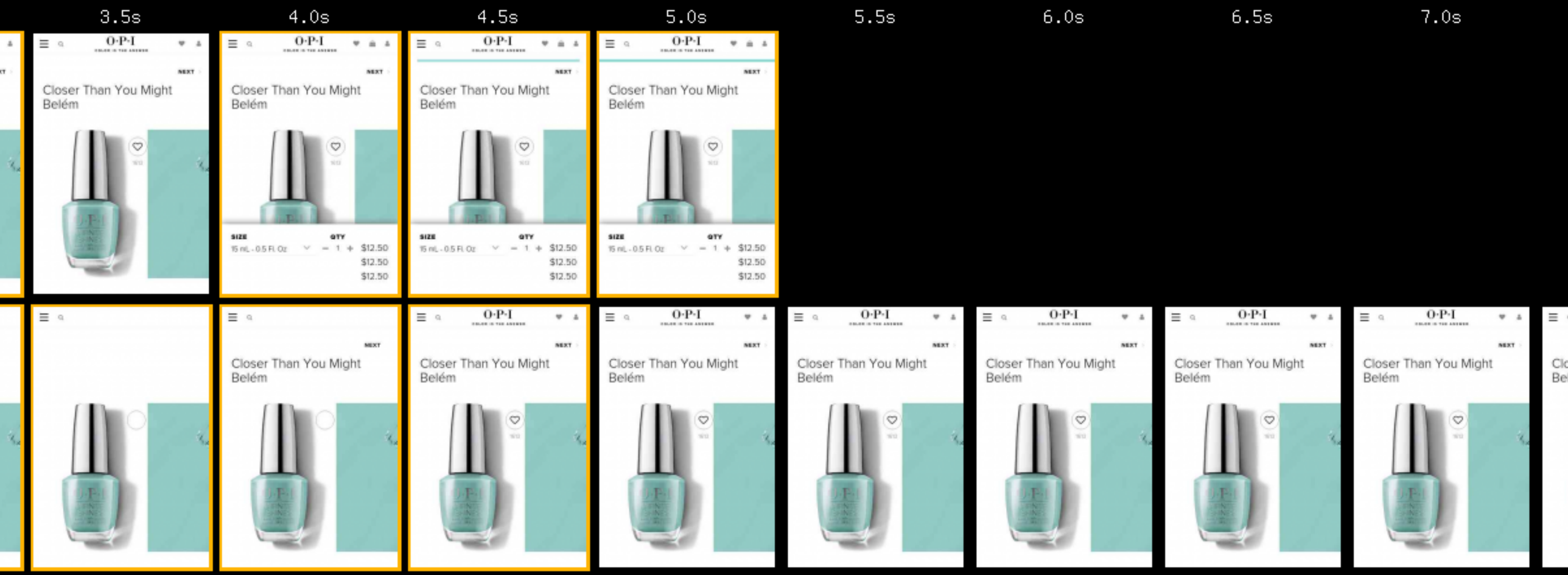

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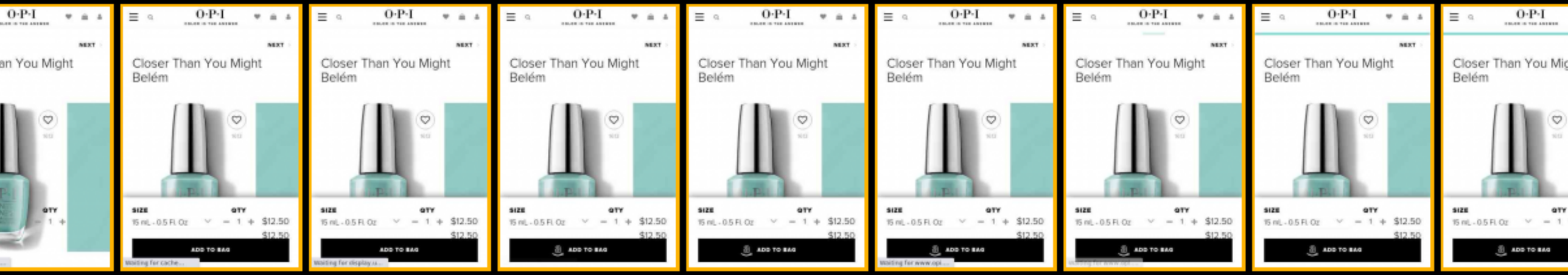
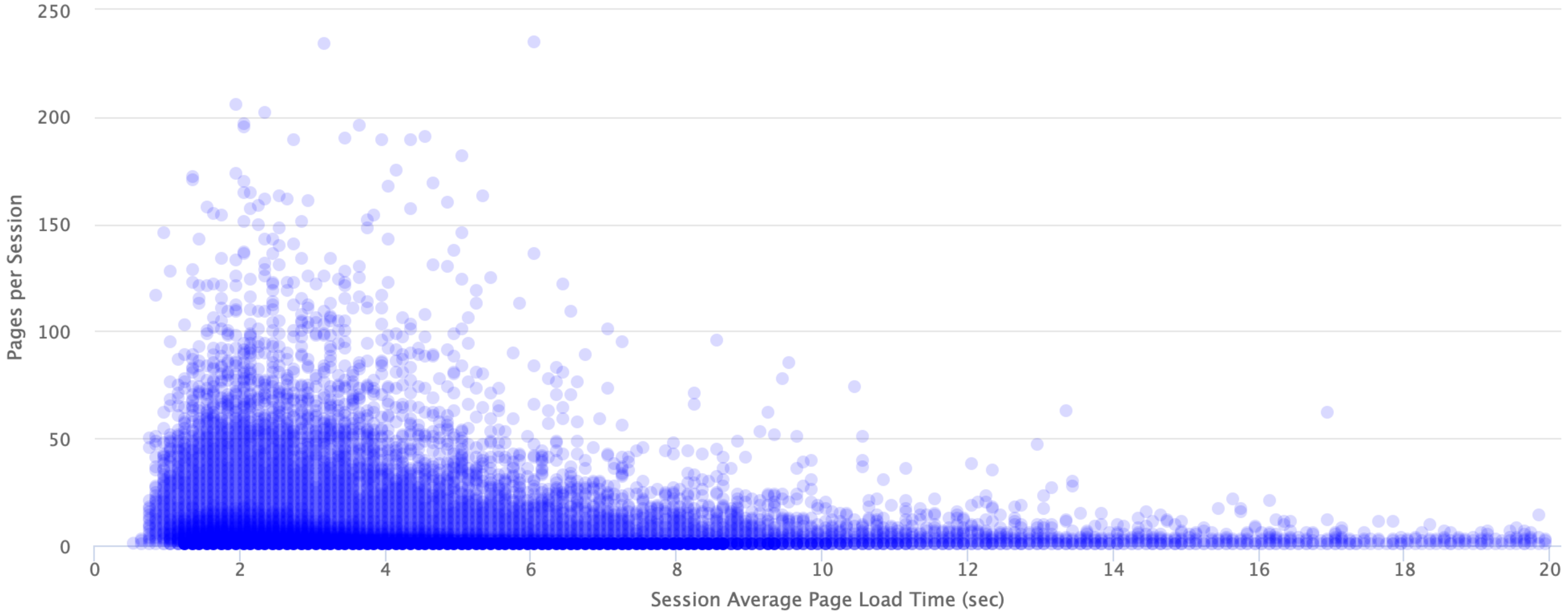
And slow down our visitors experience

8.0s 8.5s 9.0s 9.5s 10.0s 10.5s 11.0s 11.5s 12.0s



Visitor's who have better experiences are more engaged

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How do we balance tags' value versus their impact?
https://www.flickr.com/photos/gilgamesh/183037111

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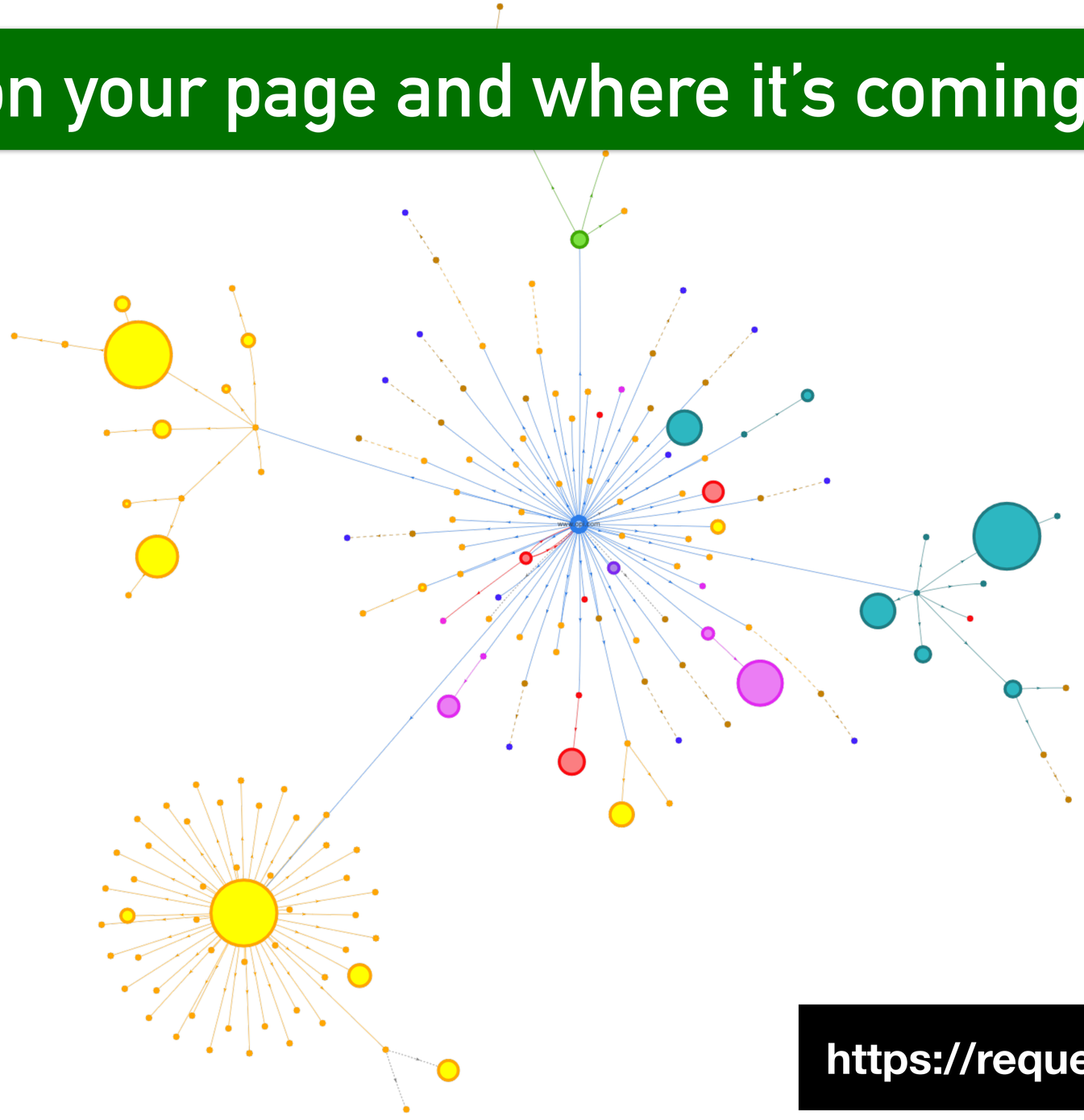
Know what's on your page and where it's coming from



https://requestmap.herokuapp.com

Audit 3rd-Party Tags – Key Questions

Are you still paying for the service?

Does anyone use it?

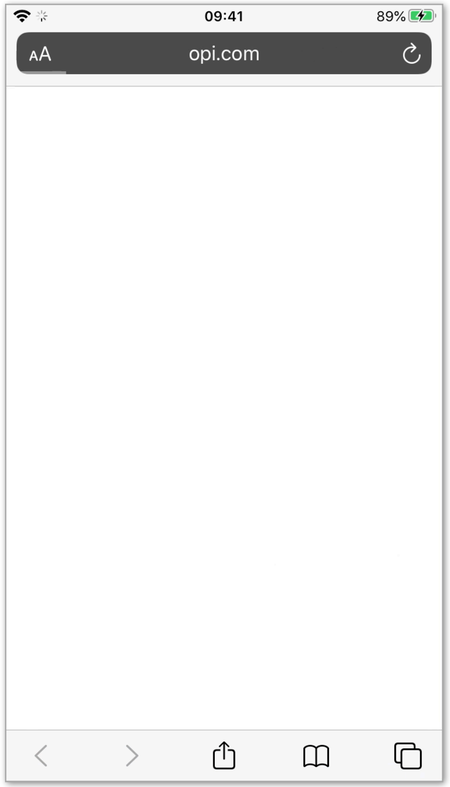
Are there any duplicates?

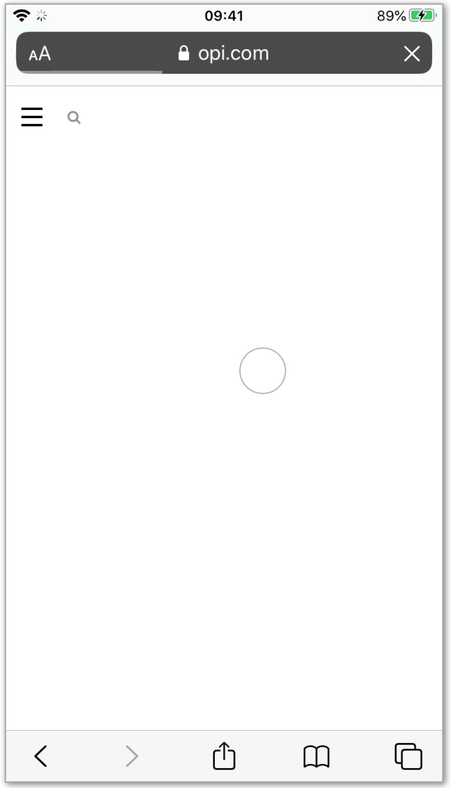
When should it be loaded?

What's its impact on the visitors' experience?

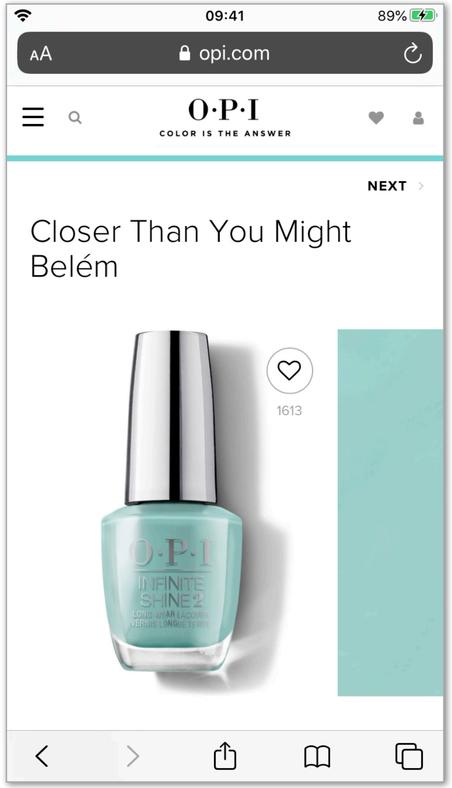
Page load is a journey… with milestones along the way

Working?

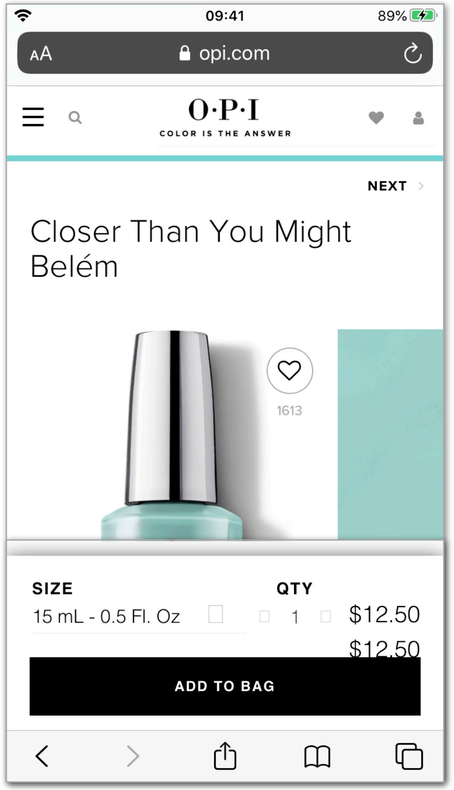




Useful?



Usable?

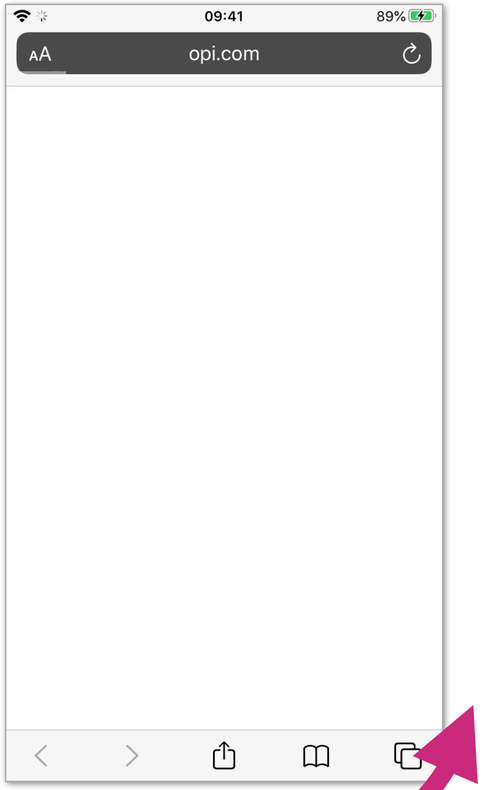


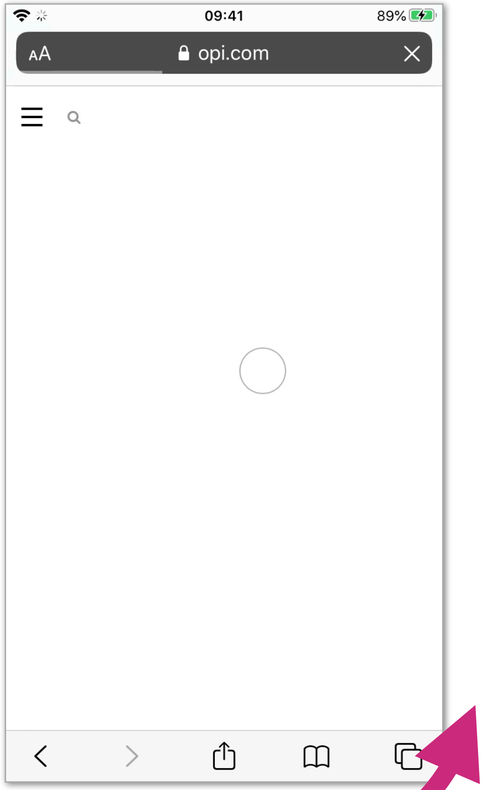
Where do our tags fit into that journey?

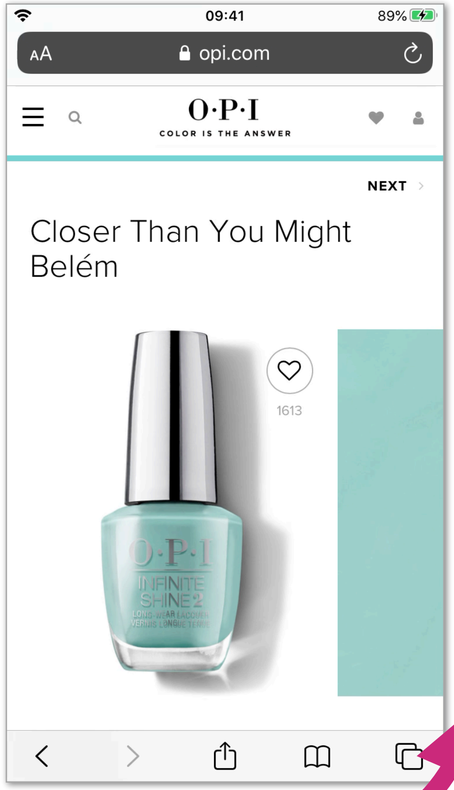
Working?

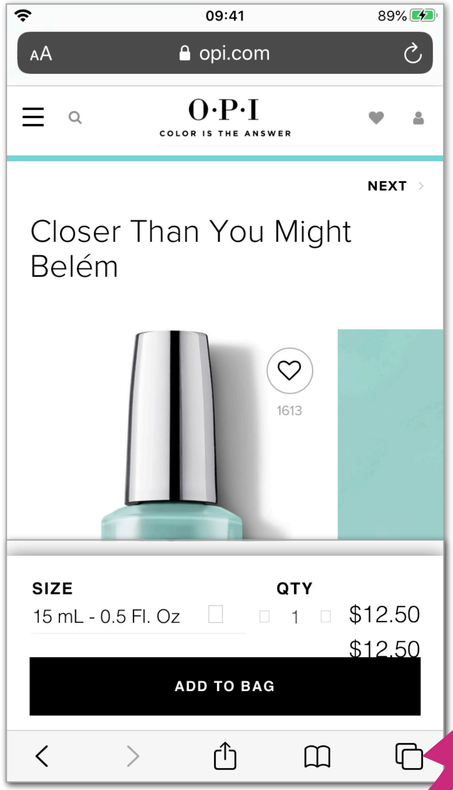
Useful?

Usable?









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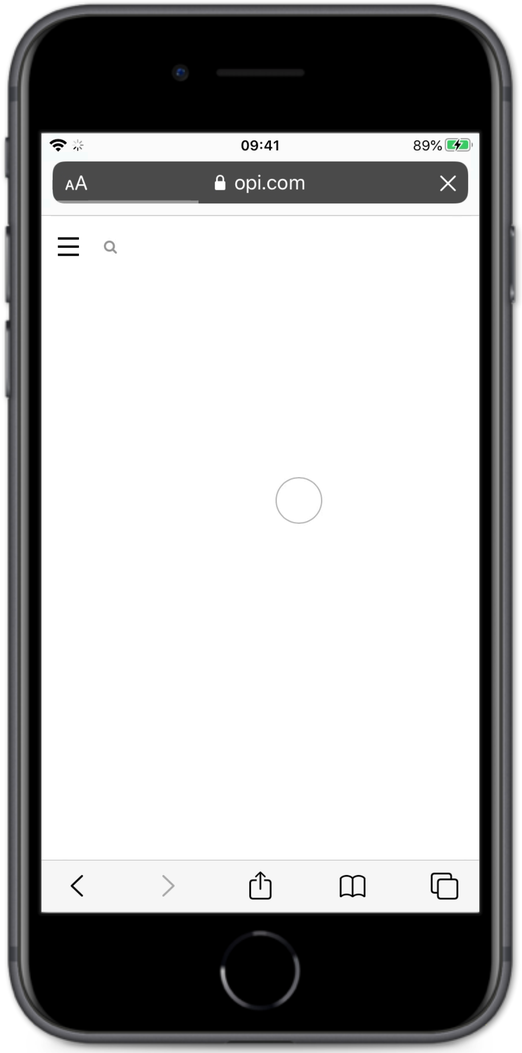
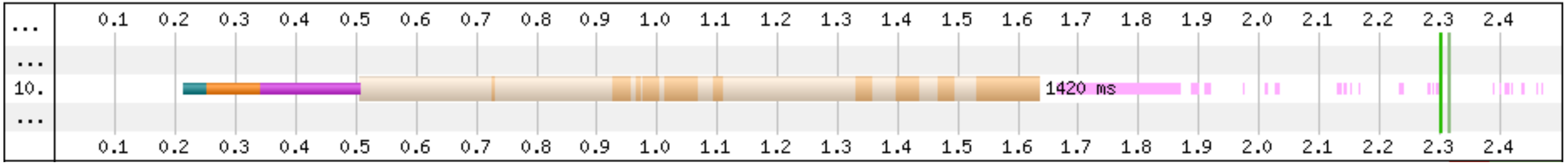
Tags in <head> have an outsized impact

Common Tags:

- Tag Managers
- AB / MV Testing
- Personalisation
- Analytics



In the case of our OPI example…



Make connection

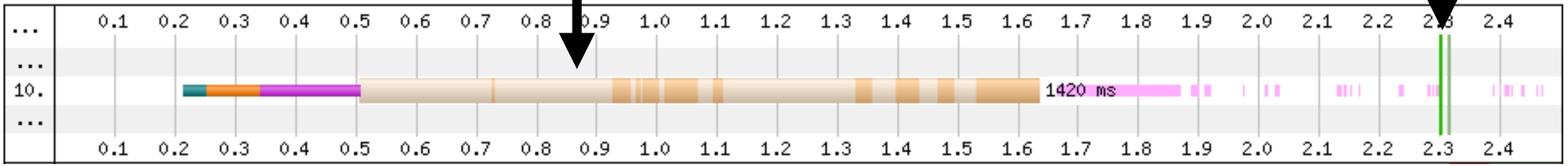
Download script

Execute script

In the case of our OPI example…

In case you're wondering, this is Qubit's script

And it's one reason why visitors wait for over 2s before seeing content



Make connection

Download script

Execute script

Self-hosting the script may trim off some time

How we shaved 1.7 seconds off casper.com by self-hosting Optimizely

Kyle Rush Follow

Aug 28, 2018 · 7 min read

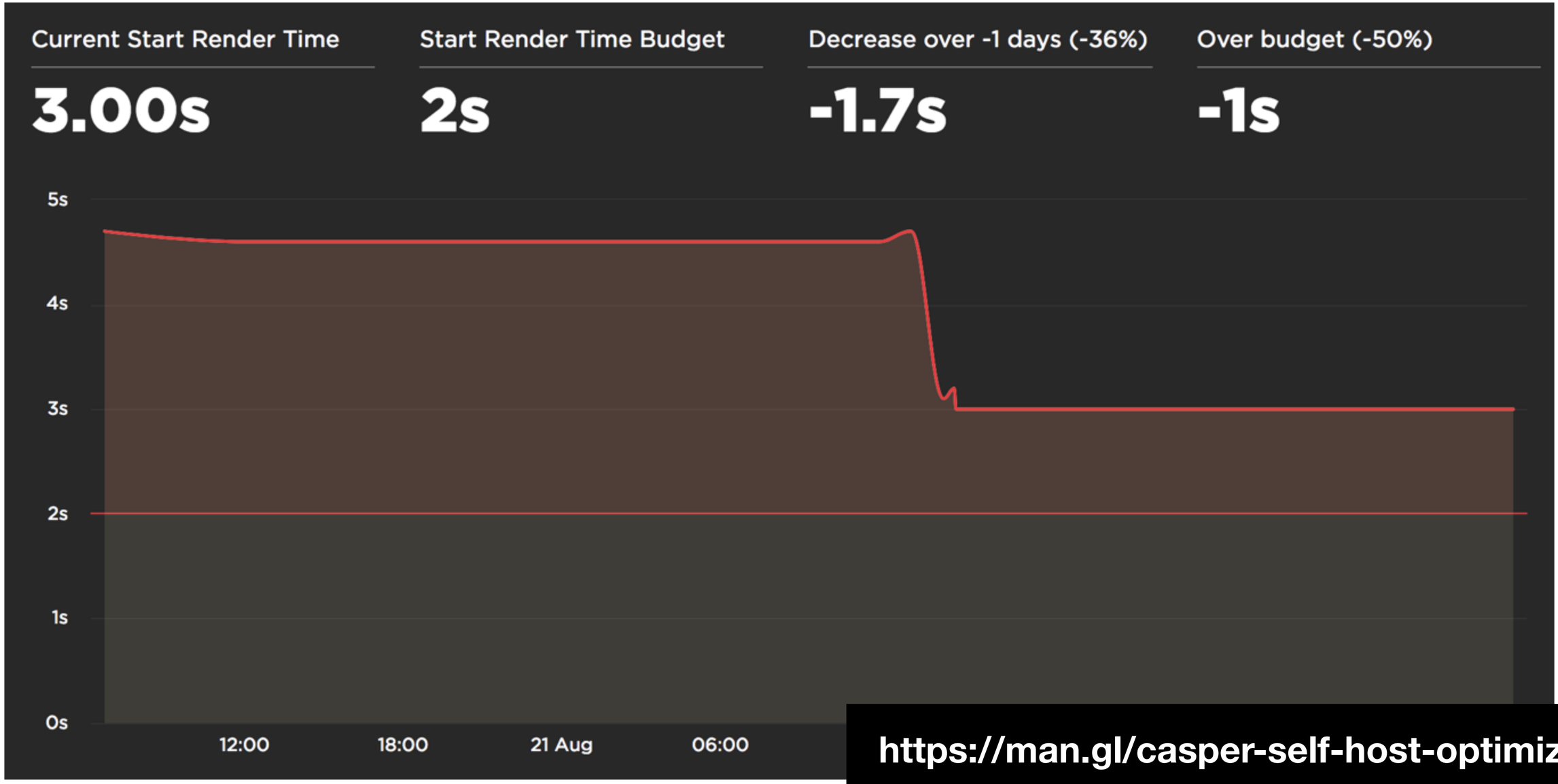
We recently deployed a change to casper.com that loaded a piece of 3rd party JavaScript from our own server instead of the vendor's server. This change shaved 1.7 seconds off of the start render time:

https://man.gl/casper-self-host-optimizely

change shaved 1.7 seconds off of the start render time:

@AndyDavies

Self-hosting the script may trim off some time



https://man.gl/casper-self-host-optimizely

Shrinking the size of tag reduces download and runtime cost

Self-hosting removes network connection time but doesn't improve download or script execution time

But we still have some control over these things:

- Experiments - variants, audiences, URLs etc.
- Tag Managers - number of tags

Optimizely support serving their tags though your own CDN

Content Delivery Networks (CDNs) and Optimizely X

Last updated: Mar 27, 2019

THIS ARTICLE WILL HELP YOU:

- Quickly find information in the Knowledge Base on **CDNs and self-hosting** the Optimizely snippet

Optimizely uses a Content Delivery Network (CDN), a network of web servers located around th
to provide service for the rendering the snippet. This page is intended to act as a hub for our
Knowledge Base articles on CDNs and related topics, like self-hosting the snippet.

Instructions for:

- Akamai
- AWS Cloudfront
- Cloudflare
- Fastly

ks

ely

Self-hosting with CDNs

Content Delivery Networks

- CDN load balancing: How Optimizely affects page load speed

https://man.gl/self-host-optimizely-snippet

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Explore options for moving tags to the edge or server-side

https://www.flickr.com/photos/kewl/8475764430

The most dangerous line of JavaScript?

```
    .
    .
    <script src="https://cdn.example.com/third-party-tag.js">
    .
    .
</head>
```

Browser stops parsing HTML until script has downloaded and executed, the larger the script the longer this takes

If 3rd-party host is unresponsive the browser waits until the connection times out

Prefer non-blocking tags

```
<script src="https://cdn.example.com/third-party-tag.js" async>
```

Browser is no longer blocked on script download, but will be **blocked when script executes**

Scripts injected via a script e.g. a Tag Manager, are generally async by default

(Some Tag Managers use document.write - avoid these!!!)

You'll also see async scripts written like this

```
<script>
    (function(w, d, s, l, i) {
        w[l] = w[l] || [];
        w[l].push({
            'gtm.start': new Date().getTime(),
            event: 'gtm.js'
        });
        var f = d.getElementsByTagName(s)[0],
            j = d.createElement(s),
            dl = l != 'dataLayer' ? '&l=' + l : '';
        j.async = true;
        j.src = 'https://www.googletagmanager.com/gtm.js?id=' + i + dl;
        f.parentNode.insertBefore(j, f);
    })(window, document, 'script', 'dataLayer', 'GTM-XXXX');
</script>
```

Watch out for <noscript> fallbacks in the <head>

```
<script>
    (function(w, d, t, r, u) {
        var f, n, i;
        w[u] = w[u] || [], f = function() {
            var o = { ti: "xxxxxxx"};
            o.q = w[u], w[u] = new UET(o), w[u].push("pageLoad")
        }, n = d.createElement(t), n.src = r, n.async = 1, n.onload = n.onreadystatechang
            var s = this.readyState;
            s && s !== "loaded" && s !== "complete" || (f(), n.onload = n.onreadystatecha
        }, i = d.getElementsByTagName(t)[0], i.parentNode.insertBefore(n, i)
    })(window, document, "script", "https://bat.bing.com/bat.js", "uetq");
</script>
<noscript>
    <img src="https://bat.bing.com/action/0?ti=xxxxxxx&Ver=2" height="0" width="0" style=
</noscript>
```

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Watch out for <noscript> fallbacks in the <head>

```
<noscript>
    <img src="https://bat.bing.com/action/0?ti=xxxxxxx&Ver=2" height="0" width="0" style=
</noscript>
```

Watch out for <noscript> fallbacks in the <head>

Only six HTML elements are valid in the <head> – base, link, title, meta, style, script

If the browser finds any others it will start the <body> at that point

This <noscript> fallback for Bing Ads is an example of this

```
<noscript>
    <img src="https://bat.bing.com/action/0?ti=xxxxxxx&Ver=2" height="0" width="0" style=
</noscript>
```

Tags directly in page vs in a Tag Manager

Directly in page: run as soon as available, may delay important content or interfere with visitor interaction

Tag Manager: more control over when tag runs but must wait for tag manager to load (which might be too late)

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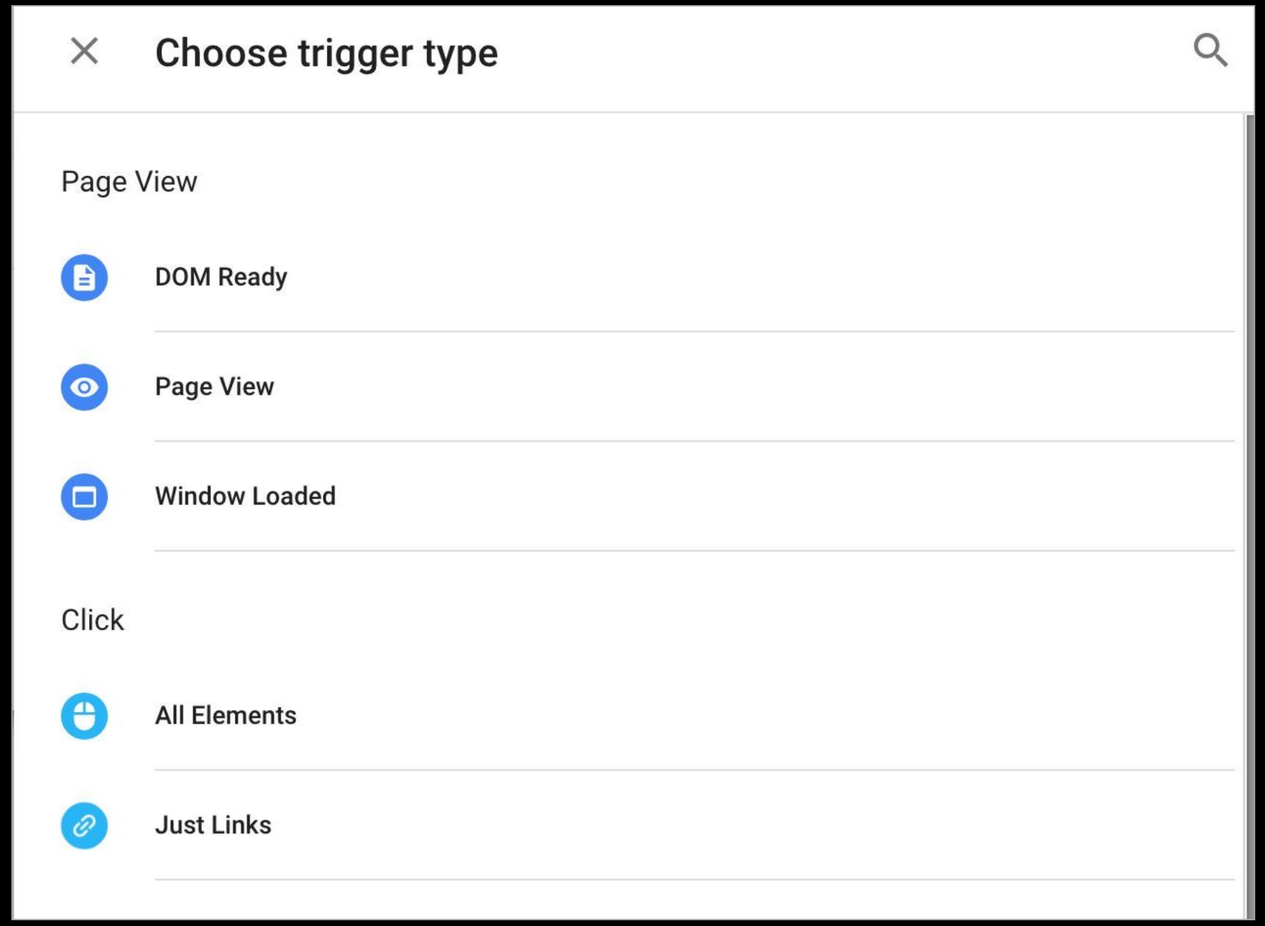
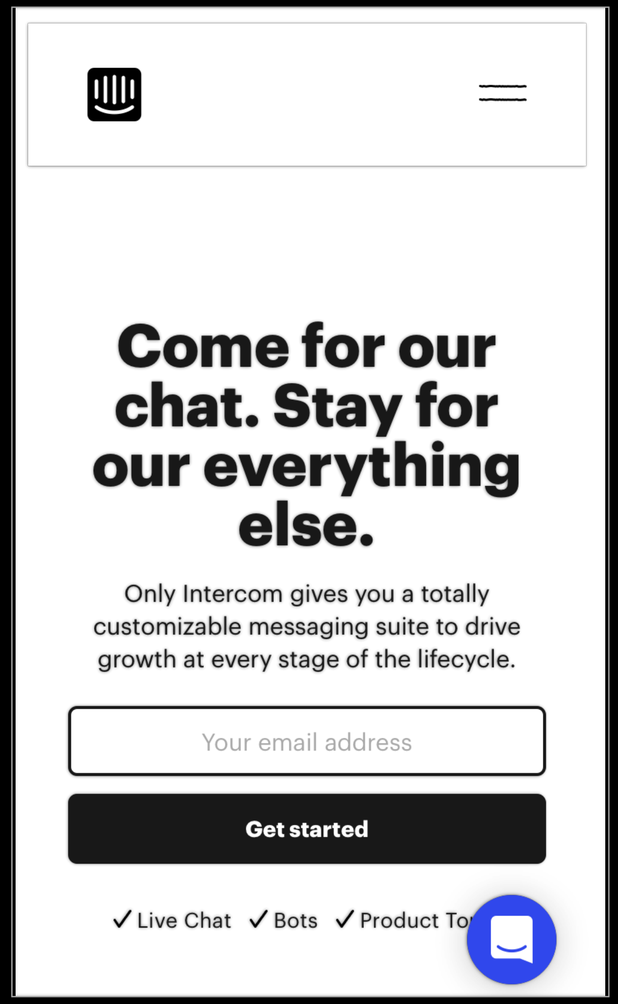
Your Tag Manager is your friend, just don't accept the defaults



If a tag needs visitor interaction delay it's load

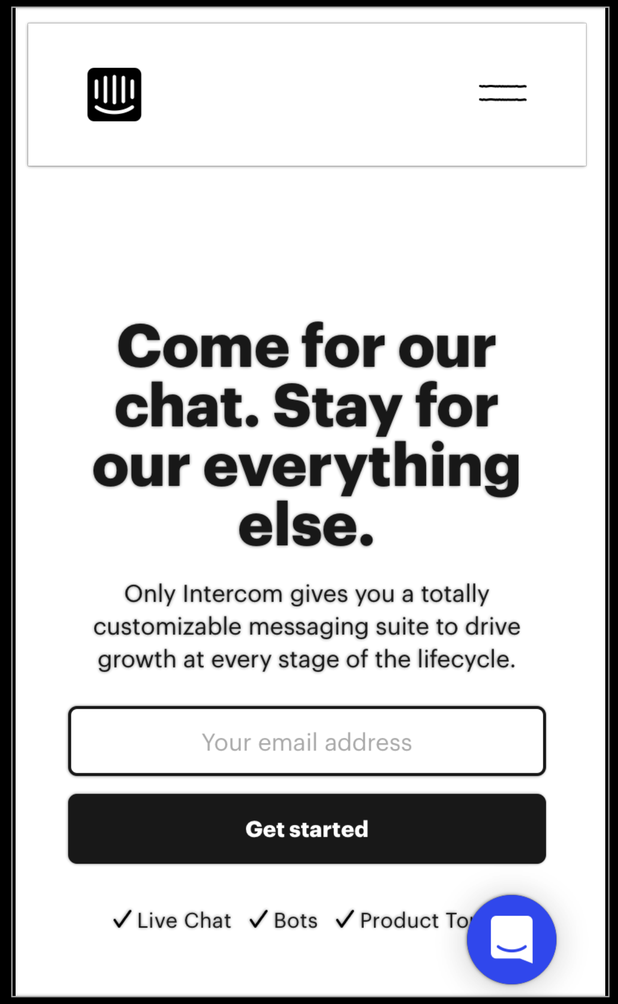


Chat widgets, feedback widgets, session replay etc. only make sense once the page is usable.

So delay load until the page has loaded

Window.loaded in GTM terms

Encourage providers to break up tags



Only the floating action button needs to be loaded quickly

The script that displays the actual chat box can be lazy loaded or perhaps even wait until visitor interaction

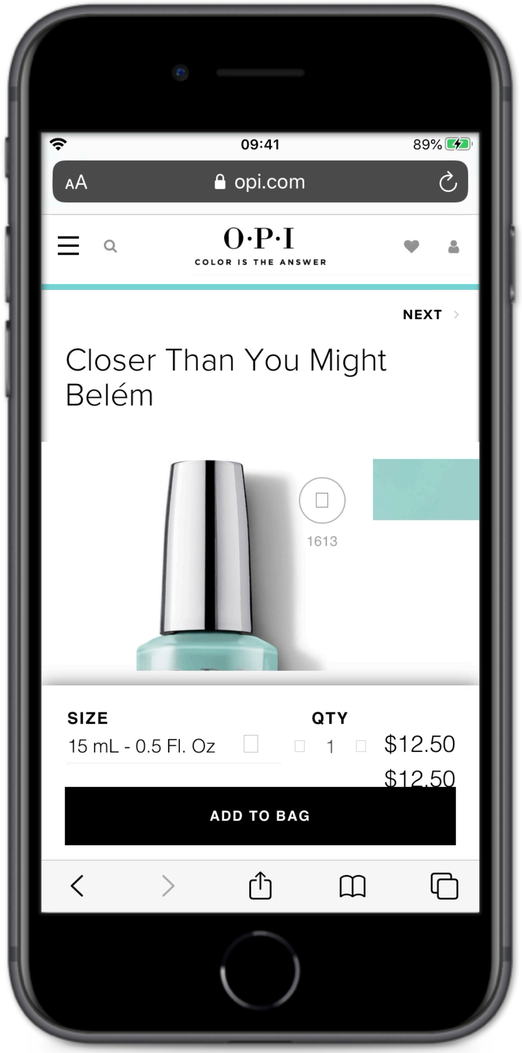
Talked about the start and the end… what about the middle?

This is a fuzzy area…

Does the tag provide content?

How much data loss are you willing allow?

Try not to block the browser



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Do you even need a tag… could you just fire a tracking pixel?

Adding controls to Google Tag Manager

Category: Blog

This page was originally created on 25-May-2019 and last edited on 30-Jul-2019.

Introduction

Google Tag Manager (GTM) is extremely popular and is used by 22% of all websites. As it's name suggests, it allows managing of marketing tags on a website. Marketing departments love these tags as they allow them to track their marketing campaigns and see if they are directing their budgets to the right places. So if they buy a lot of Facebook ads, they like to see how many people come to the site (which can be measured by clicks on the ad) but also crucially if those clicks led to anything: typically purchases or sign ups. This requires linking the click from the ad, to an action on specific pages (e.g. confirmation pages). So this usually requires adding of a piece of JavaScript to the confirmation page. Similarly remarketing tags involve telling an ad agency that someone was looking at a product on your site, and then the ad agency using that information to display ads for that product, or similar ones, to try to entice you back to finish that purchase. This requires a small snippet of JavaScript on the product page which fires off a call to the ad agency and then they take care of showing appropriate ads when it sees the same user on another site.

How to add these JavaScript snippets depends on how the website is set up and what Content Management System (if any) is used to publish the site. Often it requires web developers to release the snippet onto a page, or to fire it on a certain action. And often these snippets change slightly each time they launch a new ad campaign. Rather than having to go to web developers each time they want to add or change tracking tags to their site, the marketing department can ask the web developers to add the GTM JavaScript snippet once to all pages, and then manage the tags in there. GTM allows you then to fire tags based on various triggers so it will only load the appropriate tags at the appropriate time (on page load, when an event occurs, or whatever). So you can fire a Google Adwords snippet if the URL contains "checkout-complete.html" for example, and can even grab hold of the products purchased and send them to Google Adwords.

This all sounds well and good, and frees up web developers to do real web development and allows m
there are some serious downsides to using a tag manager like GTM: in particular security and perfor
scripts and code into the website. JavaScript is a really powerful language and can fire off requests to ad agencies, or change the entire look and feel of the

https://man.gl/barry-pollard-gtm

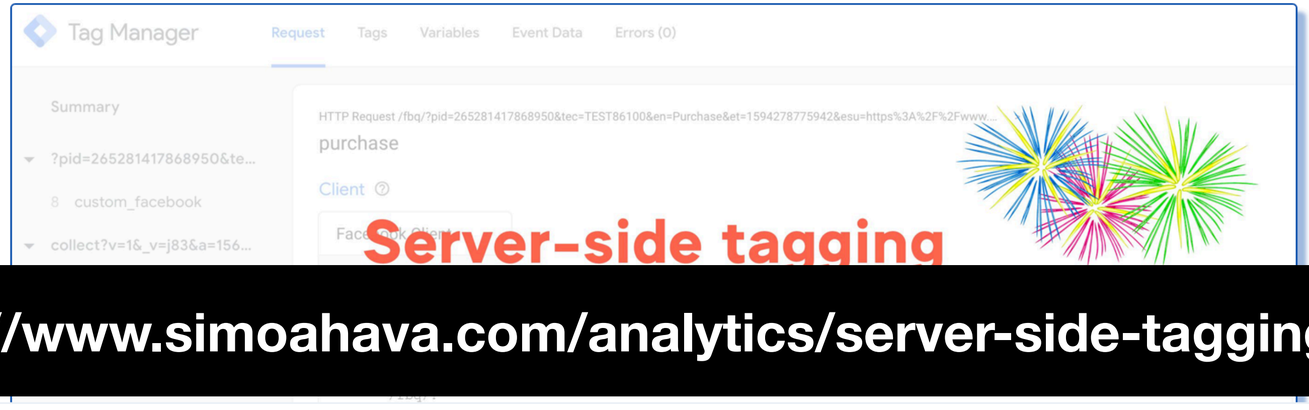
Or use server-side tag management?

Server-side Tagging In Google Tag Manager

August 12, 2020 in Analytics | 33 comments

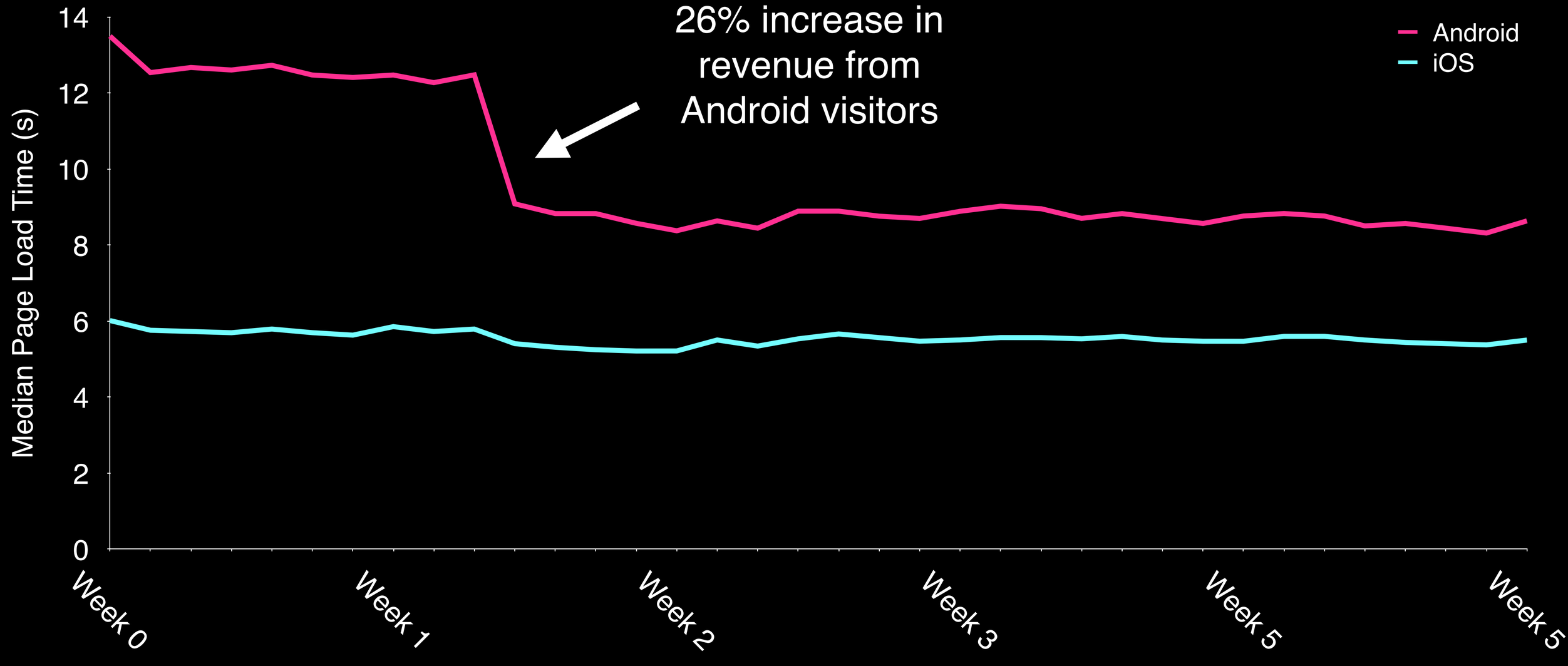
Ever since **Server-side tagging** was publicly announced at SUPERWEEK 2020, Google and the trusted tester community have been hard at work, building something that just might change the landscape of digital analytics for good.

Google Tag Manager has now released Server-side tagging into **public beta**. In this lengthy article, we'll take a look at what Server-side tagging is, how it should (and should not) be used, and what its implications are on the broader digital analytics community.



https://www.simoahava.com/analytics/server-side-tagging-google-tag-manager/

Addressing Third-Party performance pays dividends



Others have shared their experience

Improving third-party web performance at The Telegraph

Gareth Clubb Follow

Apr 30 · 9 min read

At The Telegraph we're currently going through a process of rebuilding our public-facing website. This gives us t

https://man.gl/telegraph-3rd-party-performance

the existing build but also write some of the code from scratch. You can see

In Summary

3rd Party Tags can make or break your visitor experience

Audit tags - remove ones that aren't needed

Don't accept the defaults - choreograph tag loading

Measure their impact on visitor experience

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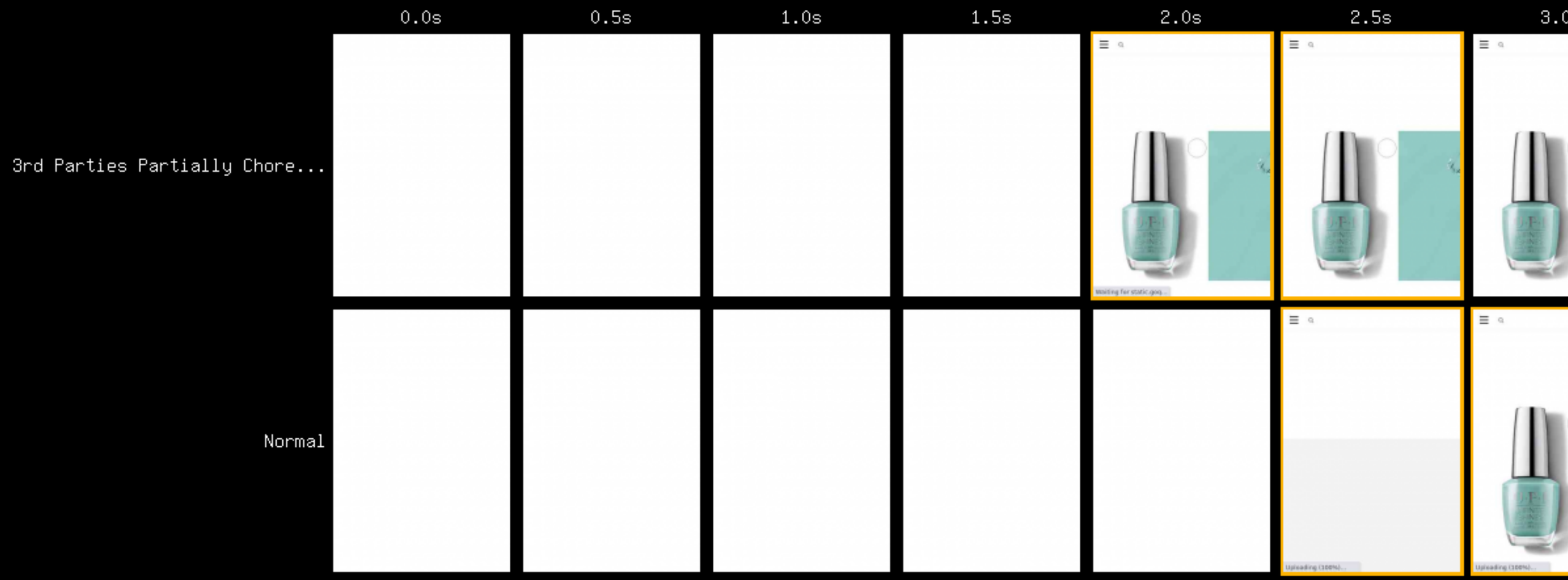
What if we apply some of these techniques OPI?



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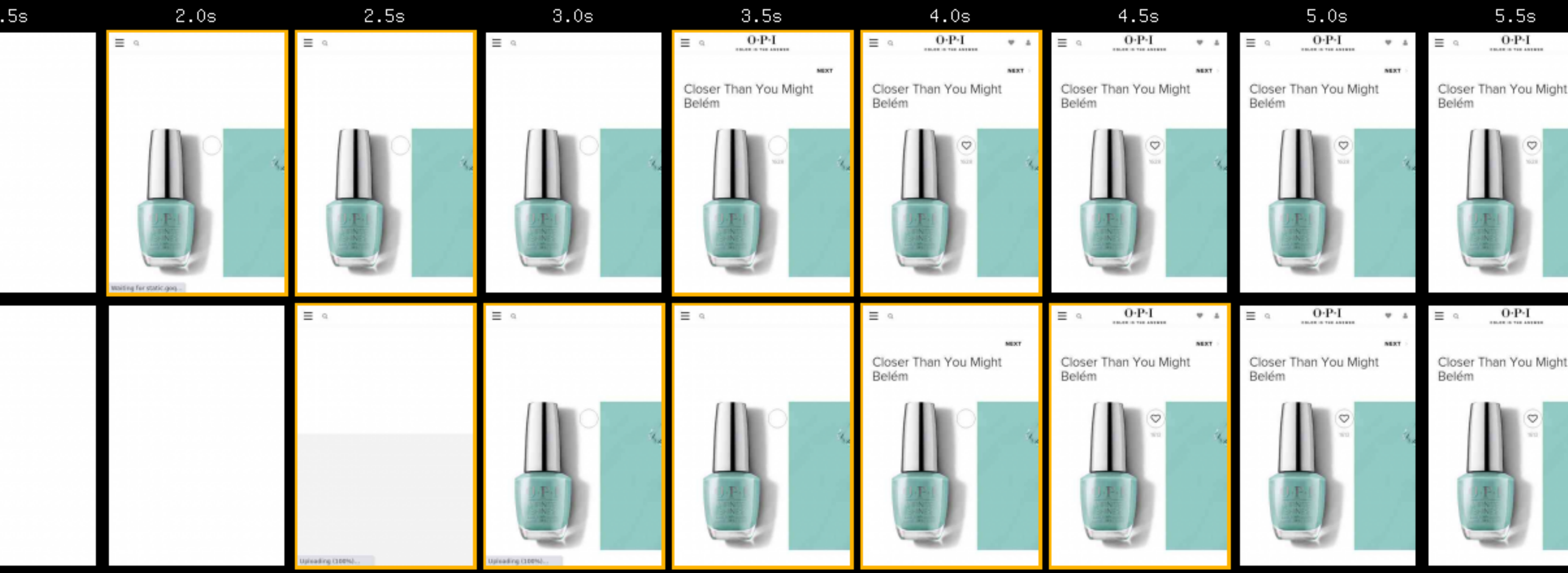

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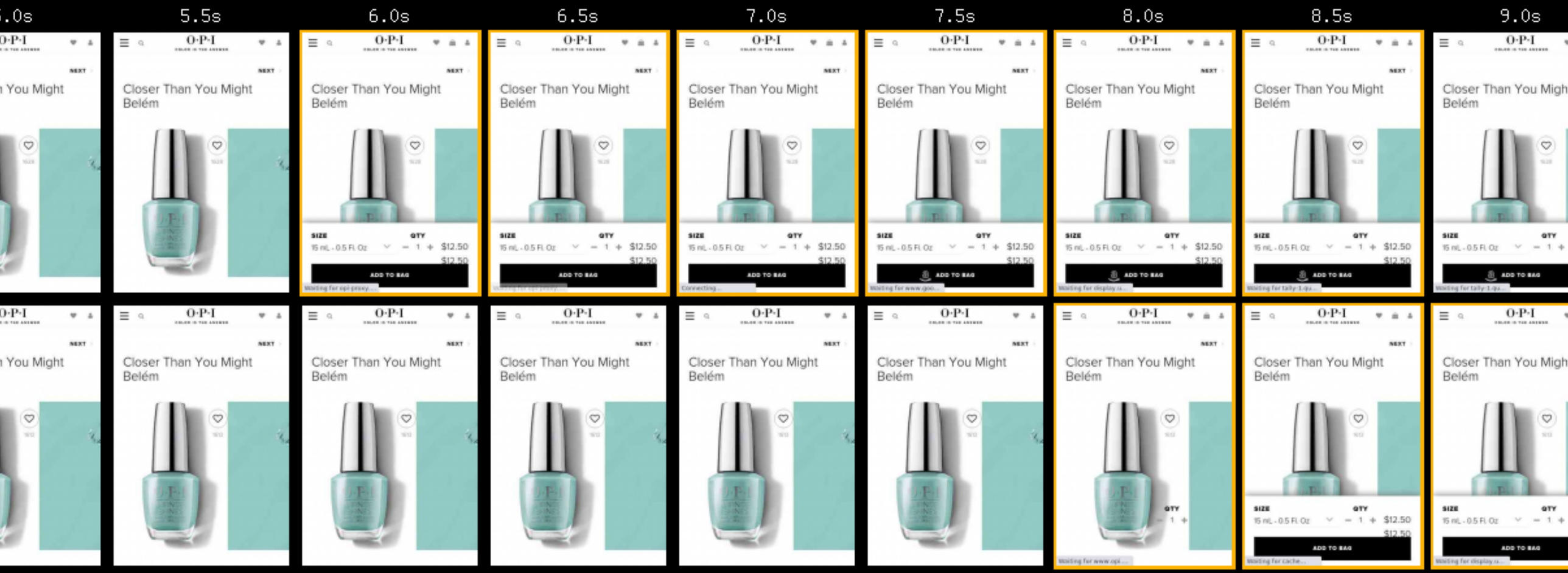

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hello@andydavies.me

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