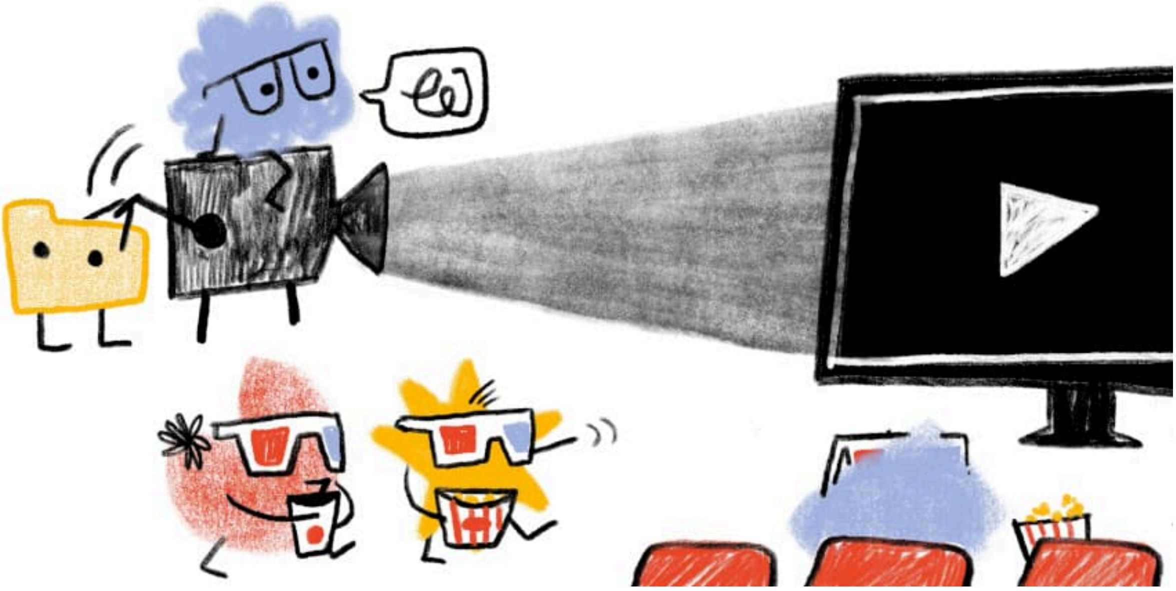
Media 2024



w

Content team

*Hello content team! This is your personal doc to collaborate on and plan the contents of your chapter. Click **Request edit access** above to get started.*

Please add your name and email address below so we can @tag each other in the comments. You can also subscribe to all comments by opening the comment history, clicking the notification bell, and selecting All.

***Authors:** …*
***Reviewers:** …*
***Analysts:** …*

The objective of your chapter is to write a data-driven answer to this big question:

"What is the state of web privacy in 2024?"

Learn more about the chapter lifecycle and refer to your chapter's tracking issue on GitHub for more info. Thank you all for your contributions! Official call

Outline

The purpose of this section is to define the scope of the chapter by creating an ordered list of all of the topics to be explored. You can think of this outline as the chapter's table of contents. This list will become your narrative, so consider how the content should be sequenced and how much additional depth is needed for major topics. You may choose to start with last year's outline and add or remove content as needed. Every chapter must have an introduction and conclusion, but everything in between is up to you.

Every chapter must also be data-driven, so for each topic in the outline below, clearly enumerate which metrics you'll need to substantiate your narrative. Work with your analysts to clarify what data is needed and how the results should be formatted. For example, if you're measuring the usage of a particular HTTP header value, you can measure it as the percentage of pages having that header, as the percentage of headers having that value, as a distribution of values, what the largest value is, etc. Clarify those expectations upfront so that the analysts know how to write the corresponding queries and whether the metrics are even feasible in the dataset.

First meeting to outline the chapter contents by May 1
Custom metrics completed by June 1
HTTP Archive crawl by June 1
Querying all metrics and saving the results by August 15
First draft of chapter by September 15
Reviewing & Editing of chapter by October 1
Publication of chapter (Markdown & PR) by October 15

Media Chapter

Introduction

Images and videos are everywhere on the web; however, the ways they're encoded and embedded on web pages are surprisingly varied, complex, and changing over time. The Web Almanac gives us a chance to take stock of that complexity and how well we're managing it, giving us a zoomed-out, panoramic view of where media on the web is, how far it has come, and – just maybe – where it is going. So, let's go!

Images

We'll kick off with the most common media type — images. How often do you look at a web page without images? For us, it's extremely rare and if there are no images, we're most likely looking at a nerdy developer blog.

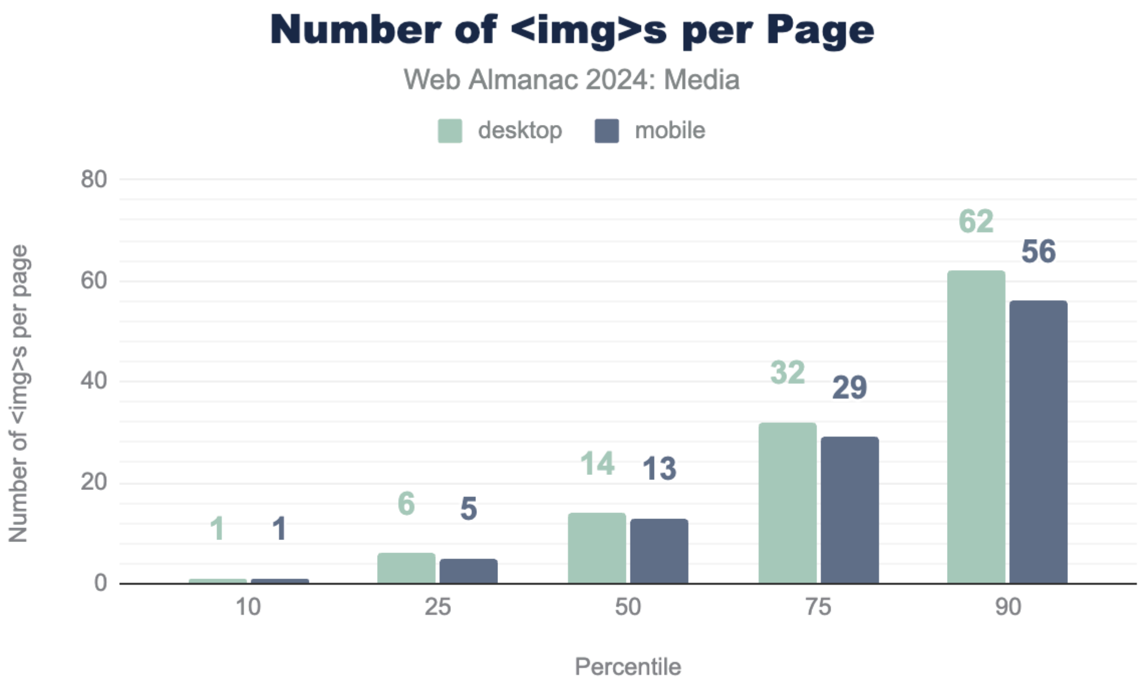
It comes at no surprise that of the more than 10 million scanned and parsed pages, 99.9% requested at least one image.

99.9%

Pages that generated at least one request for an image resource.

Almost every page serves up some kind of an image, even if it's just a background or favicon.

How many images are loaded per page?



The median mobile page loads 13 images per page. And even at the 90th percentile "only" 56 images are loaded per page. Considering the visual nature of today's web, this seems reasonable as long as loading these images follows best practices.

If you now think that 56 images per page is a lot, we probably shouldn't tell you that the page on mobile with the highest image count loaded more than two thousand images.

2,174

Highest image request count on mobile.

Images aren't just pervasive and plentiful. Most of the time they're also a central part of users' experiences. One way to measure that is to see how often images are responsible for pages' Largest Contentful Paint.

68.5%

Mobile pages whose LCP responsible element has an image.

It's hard to overstate the importance of images on the web. So, let's find out what we're dealing with!

Image resources

We'll start with the resources themselves. Most images are made of pixels (let's ignore vector images for a moment). How many pixels do the web's images typically have?

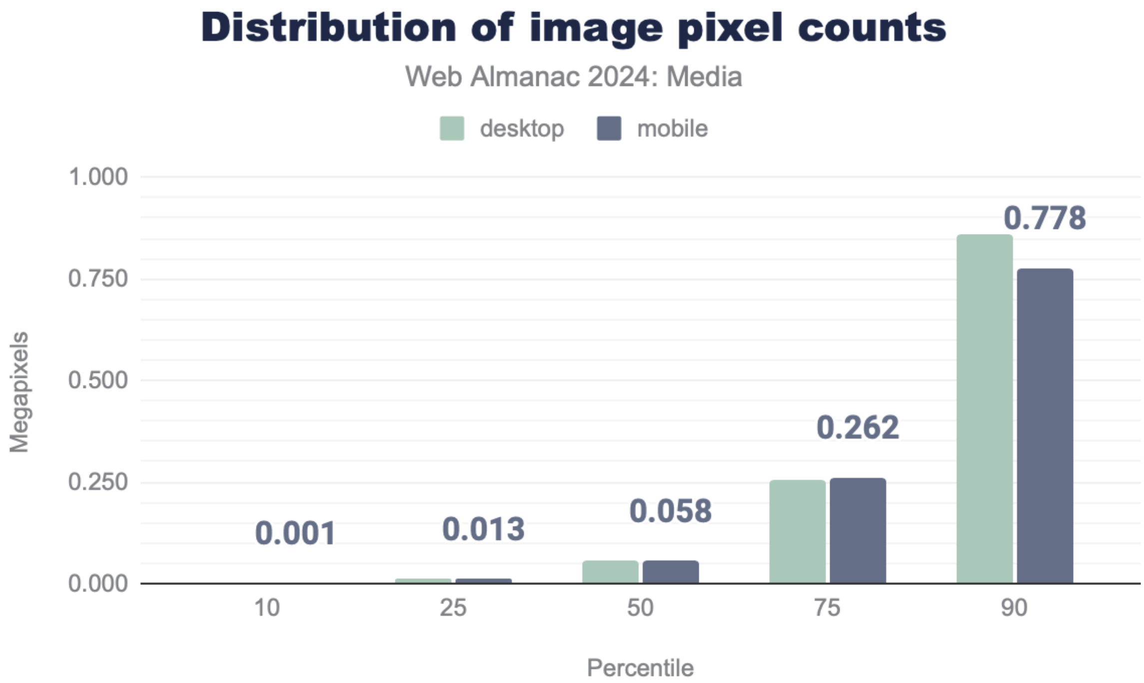
A note on single-pixel images

Client	% 1x1 images
Mobile	6.4%
Desktop	6%

One-by-one pixel images make up roughly 6% of all the captured image requests. These are most likely tracking beacons and spacer Gifs as discovered in last year's Media chapter. And looking back, we're happy to report some good news: the amount of single-pixel images has declined a full percentage point since 2022. So maybe old habits are slowly being replaced with newer and better alternatives.

Image dimensions

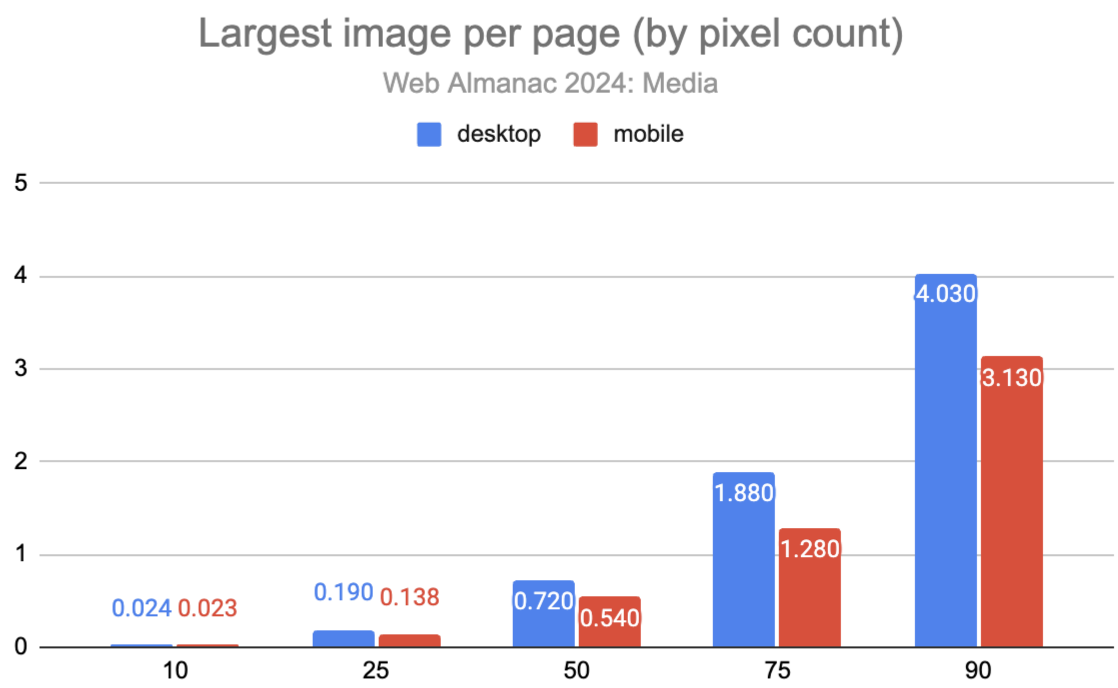
Let's now turn to images that were *larger* than 1x1. How big were they?



(data)

Despite the fact that the Web Almanac’s mobile crawler hasn't grown at all (rendering pages to a 360-px-wide viewport, at a device pixel ratio of 3x), the median image – weighing in at 0.058 megapixels – is about 26% larger than it was [the last time we looked](). For reference, at a square aspect ratio, 0.058 megapixels works out to about 240x240.

However, just like last time, most *pages* have one image that has almost 10 times as many pixels as the median image:



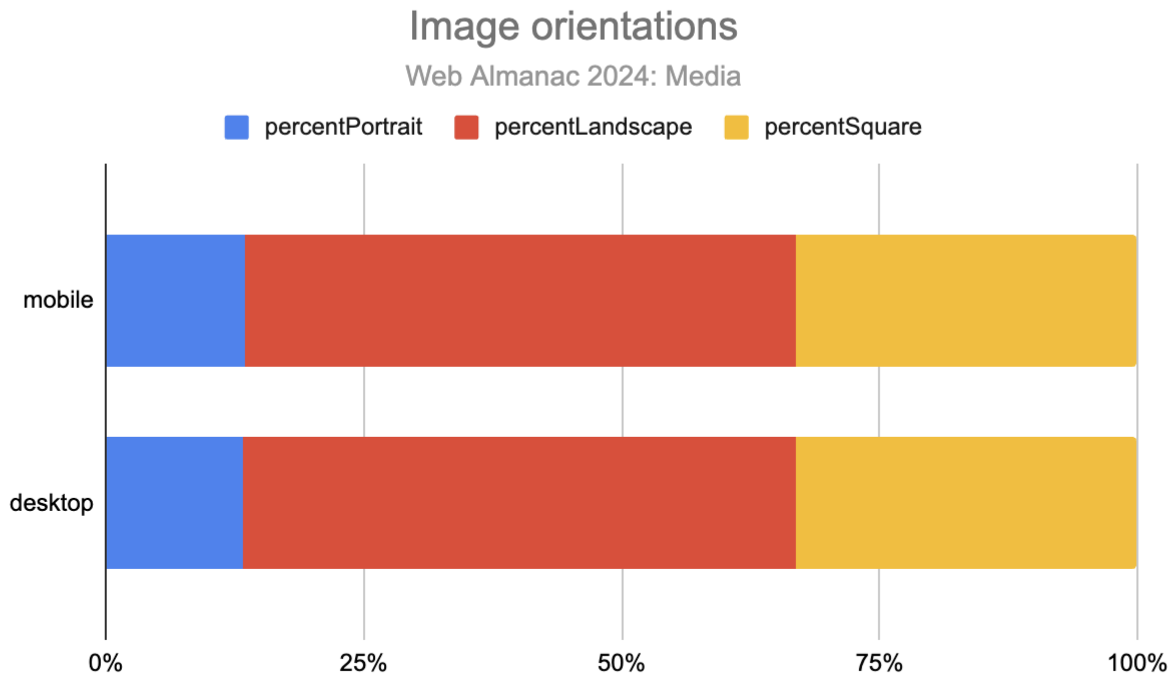
(data)

At a square aspect ratio, 0.54 megapixels works out to 735x735. Given the mobile crawler's viewport and density, it's quite likely that many pages have one "hero" image that is being displayed full-width at high density.

As for the 50% of pages that sent images even larger than that, they are almost certainly sending the mobile crawler more pixels than it can actually display, and could have prevented that waste with some well-written responsive image markup. But more on that later.

Image aspect ratios

Now that we have some sense of how images on the web are *sized*, how are they *shaped?*



(data)

Most images are wider than they are tall; only 1 in 8 are taller than they are wide; and a full one-third are exactly square. Square is by far the most popular exact aspect ratio:

Aspect ratio (width / height)	% of images (mobile)
1	33.2%
1.333	3.5%
1.5	2.9%
2	1.8%
1.778	1.6%
0.75	1.1%
0.667	0.8%
1.667	0.5%
1.499	0.5%

(data)

This data is essentially unchanged from two years ago. This seems to indicate a bias towards desktop-based browsing, and that creators are missing opportunities to fill portrait-oriented mobile screens with big, beautiful, portrait-oriented imagery.

Image color spaces

The range of colors that are possible within a given image is determined by that image's [color space](). The default color space on the web is [sRGB](). Unless images signal that their color data uses a different color space, [browsers will use sRGB]().

The traditional way to explicitly assign a color space to an image is to embed an [ICC profile]() within it. We looked at all of the ICC profiles embedded in all of the images crawled in the dataset.

Here are the top ten:

ICC profile description	sRGB-ish	Wide-gamut	% of images
No ICC profile	✅		87.43%
"sRGB IEC61966-2.1"	✅		3.94%
"c2ci"	✅		3.05%
"sRGB"	✅		1.63%
"uRGB"	✅		0.88%
"Adobe RGB (1998)"		✅	0.70%
"Display P3"		✅	0.63%
"c2"	✅		0.27%
"GIMP built-in sRGB"	✅		0.31%
"Display"			0.33%

The vast majority of the web's images rely on the sRGB default for correct rendering and don't contain any ICC profile at all.

The most common ICC profile is the full, official sRGB color profile. This profile is relatively heavy – it weighs 3kB. Thus, most of the rest of the top 10 are "sRGB-ish" profiles like [Clinton Ingrahm's 424-byte c2ci](), which unambiguously specify that an image uses sRGB but with a minimum of overhead.

Over the last decade, hardware and software are increasingly able to capture and present colors that are outside of the range of colors that are possible within sRGB (aka the sRGB [gamut]()). Adobe RGB (1998) and Display P3 are the only two "wide-gamut" profiles in the top 10. [While Adobe RGB (1998)'s usage ticked down slightly from 2022, Display P3's usage has more than doubled](). However, in absolute terms, wide-gamut ICC profiles are still relatively rare. We found them in 1 in 80 images on the web and 1 in 10 images that have an ICC profile.

One very important caveat here is that in our analysis we were only able to look at ICC profiles. As mentioned, these profiles can be relatively heavy. Modern image formats like AVIF (and recently modernized ones like PNG) allow images to signal their color profile using even more efficient means – using a standard called CICP – which allows common color spaces to be signaled in just four bytes. It stands to reason that modern PNG encoders and any AVIF encoder worth its salt would use CICP instead of ICC to signal a wide gamut color space.

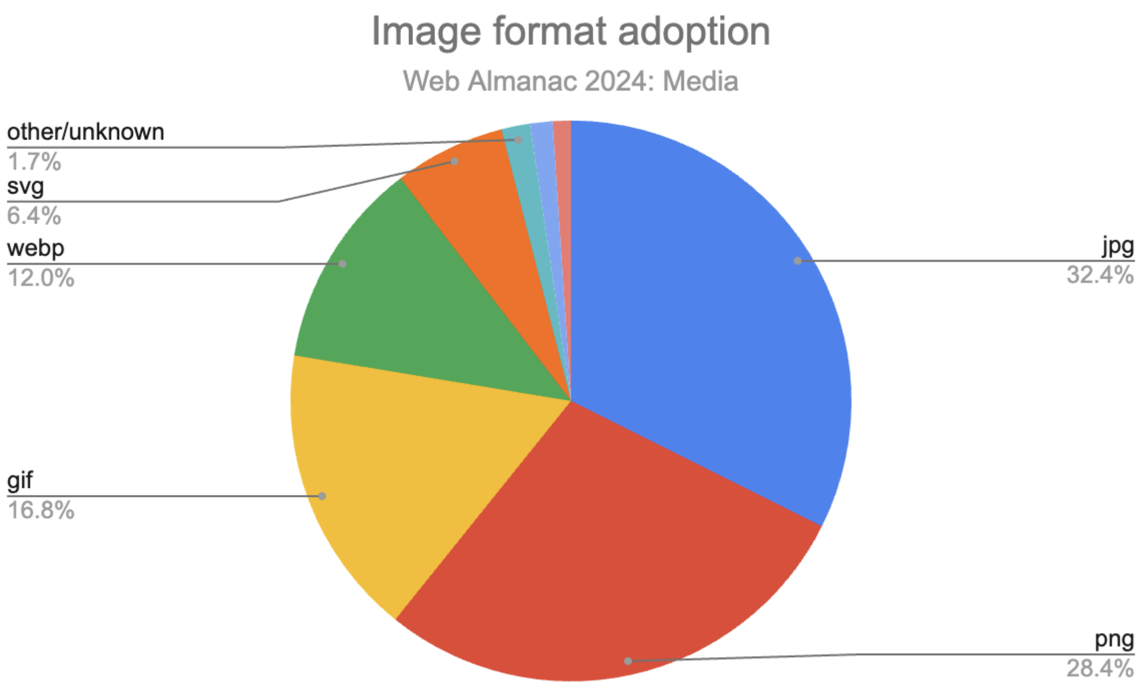
However, in our analysis, images containing CICP are categorized under "No ICC profile." So, our accounting of wide-gamut usage on the web should be seen as a floor, rather than as an estimate of total adoption. In other words, we found that *at least* 1-in-80 images on the web is wide-gamut.

Encoding

Now that we've gleaned a bit about the web's image content, what can we say about how that content is encoded for delivery?

Format adoption

For decades there were just three bitmap formats in common use on the web: JPG, PNG, and GIF. They are still the three most common formats:

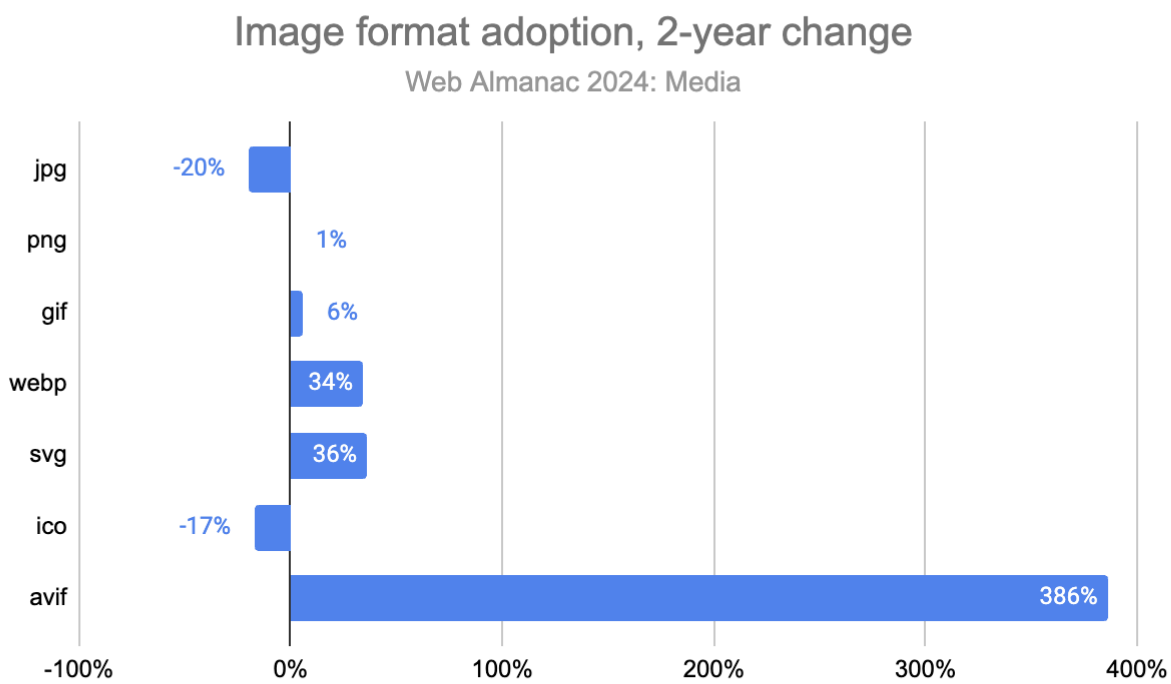


(data)

But we are happy to report that change is happening. The largest single absolute change in usage since 2022 was from JPEG, which fell from 40% of all images in 2022 down eight full percentage points to 32% in 2024. That's a huge loss over two years.

Which formats saw *more* usage to make up the difference? WebP picked up three percentage points, and AVIF and SVG both picked up a little more than a percentage point each. Most surprisingly, the oldest and least efficient format of them all, GIF, picked up a percentage point, too.

And in *relative* terms, AVIF usage is taking off; we found almost four times more AVIFs served up by the crawled pages than we did two years ago.



(data)

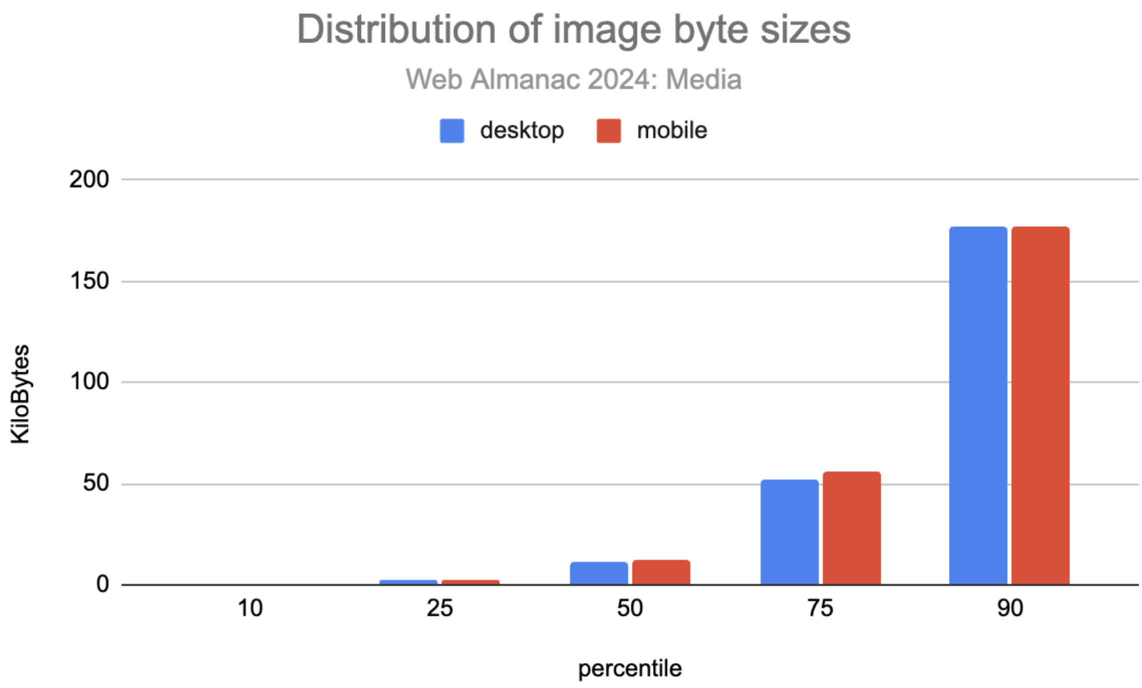
If the crawler had accepted [JPEG-XL](s), we probably would have seen a fair number of them as well. Alas, Chromium-based browsers don't support the format.

Almost all of the JPEGs, PNGs, and GIFs on the web would be better-served using a modern format. WebPs are good, but AVIFs and JPEG XLs are even better. It's nice to see the massive ship that is all-of-the-images-on-the-web slowly but surely turning towards these more efficient formats. And it's nice to see SVG usage tick upwards, too!

Lastly, a few words for the oldest format of the bunch; “Burn All GIFs” was good advice in 1999, and it’s even better advice today. Developers should take Tyler Sticka's advice about how to replace the 37-year-old codec.

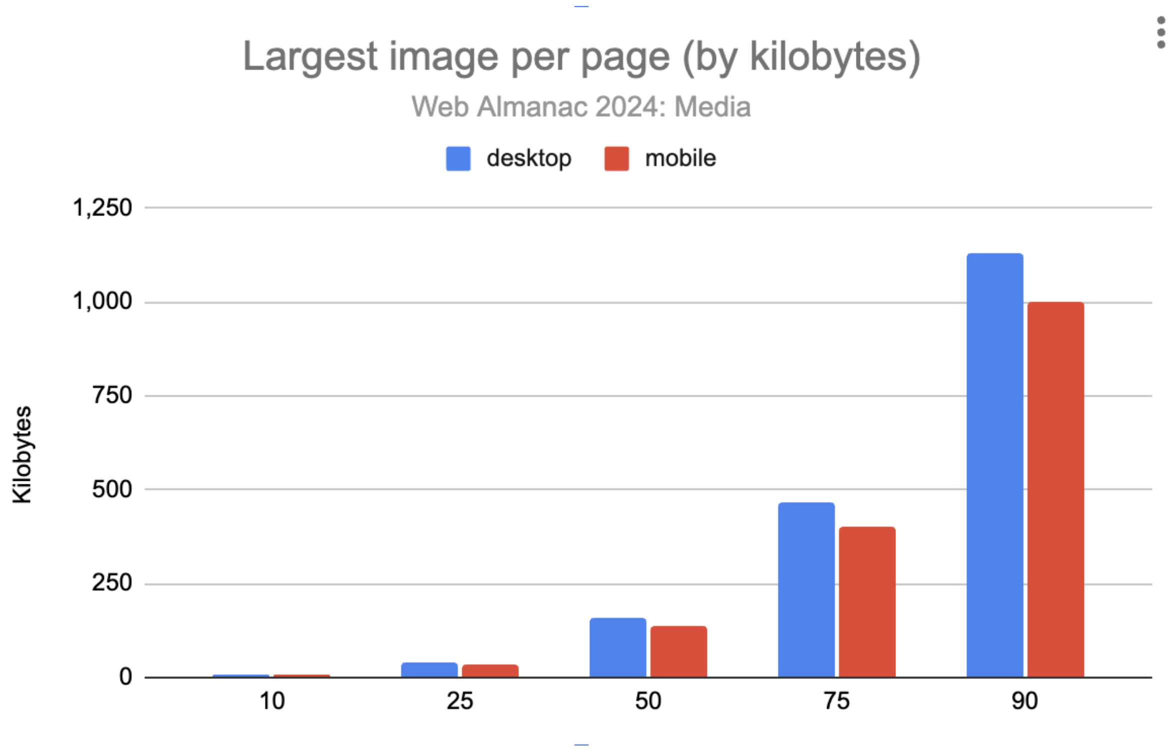
Byte sizes

How heavy is the typical image on the web?



(data)

A median of 12kB might lead one to think, “Eh, that’s not that heavy!” But, just as when we looked at pixel counts, we found that most pages contain many small images, and at least one large one.



(data)

Most mobile pages have one image that's 138kB or more. That's a 9% increase since 2022. And the further up we go in the distribution, the more things are accelerating: the p75 is up 10% and the p90 is up 13% (to almost exactly a megabyte).

Images are getting heavier, and the heaviest images are getting heavier *faster*.

Bits per pixel

Bytes and pixel counts are interesting on their own, but to get a sense of how compressed the web's image data is we need to put bytes and pixels together to calculate bits per pixel. Doing this allows us to make apples-to-apples comparisons of the information density of images, even if those images have different resolutions.

In general, bitmaps on the web decode to eight bits of uncompressed information per channel (per pixel). So, if we have an RGB image with no transparency, we can expect a decoded, uncompressed image to weigh in at 24 bits per pixel.

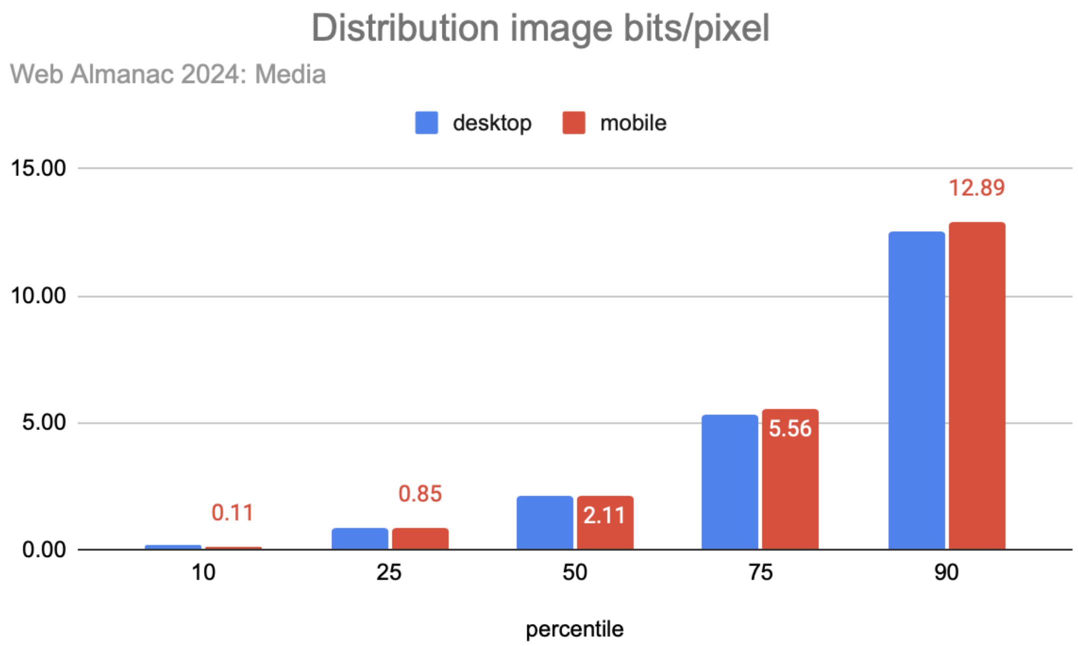
A good rule of thumb for lossless compression is that it should reduce file sizes by a 2:1 ratio (which would work out to 12 bits per pixel for our 8-bit RGB image). The rule of thumb for 1990s-era lossy compression schemes – JPEG and MP3 – was a 10:1 ratio (2.4 bits per pixel).

It should be noted that, depending on image content and encoding settings, these ratios vary widely and modern JPEG encoders like MozJPEG typically outperform this 10:1 target at their default settings.

To summarize:

Type of bitmap data	*Expected compression ratio*	*Bits per pixel*
Uncompressed RGB	*1:1*	*24 bits/pixel*
Losslessly compressed RGB	*~2:1*	*12 bits/pixel*
1990s-era lossy RGB	*~10:1*	*2.4 bits/pixel*

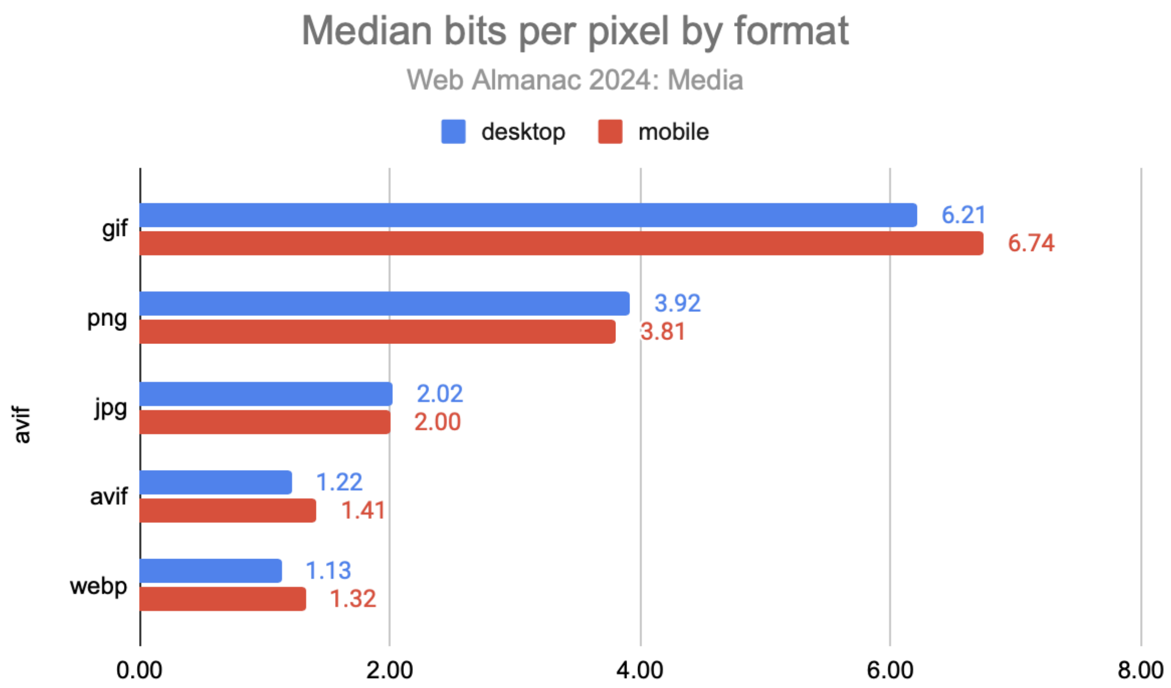
So, with all of that as context, here's how the web's images stack up:



The median image is compressed to 2.1 bits per pixel, a tad better than that 1990s rule of thumb. And, good news, [it's also a tad better than when we last surveyed the web's images in 2022].

When we break these numbers down, we can see that *every* format saw fewer bits spent per pixel in 2024 than they did in 2022 – except for one.

Bit per pixel by format



Compared to 2022, PNGs are compressed about 10% more; WebPs are compressed about 8% more; and JPEGs are compressed around 5% more. It's hard to know exactly what the causes are here, but we hypothesize that it's the result of wider adoption of two things: modern encoders, which provide more bang for the buck, and automated image-processing pipelines, which ensure that every image that makes its way to a user has been well-compressed.

The one format that bucked this trend was AVIF. The median AVIF's bits-per-pixel went up from an even 1.0 in 2022 to 1.4 bits per pixel in 2024 – an *increase* of 40%. Funnily enough, we hypothesize the same root cause. The current, diverse crop of AVIF encoders is likely making different quality/filesize tradeoffs, sacrificing less quality at default settings than AOM's official libavif encoder was two years ago.

We have no idea why GIFs got significantly more efficient, but we do know why they are so much less compressed than all of the other formats. Our query is per pixel, and it does not take animated images into account, though many GIFs are animated!

Gifs, animated and not

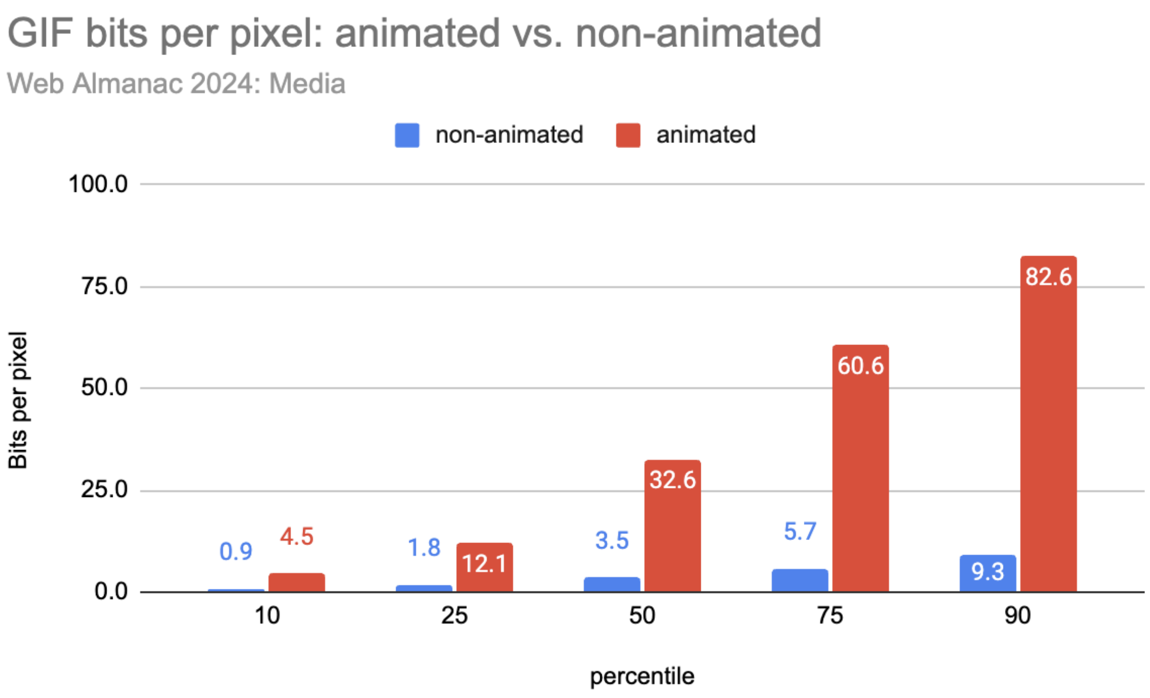
How many GIFs are animated?

28%

Percentage of GIFs that were animated on mobile.

(data)

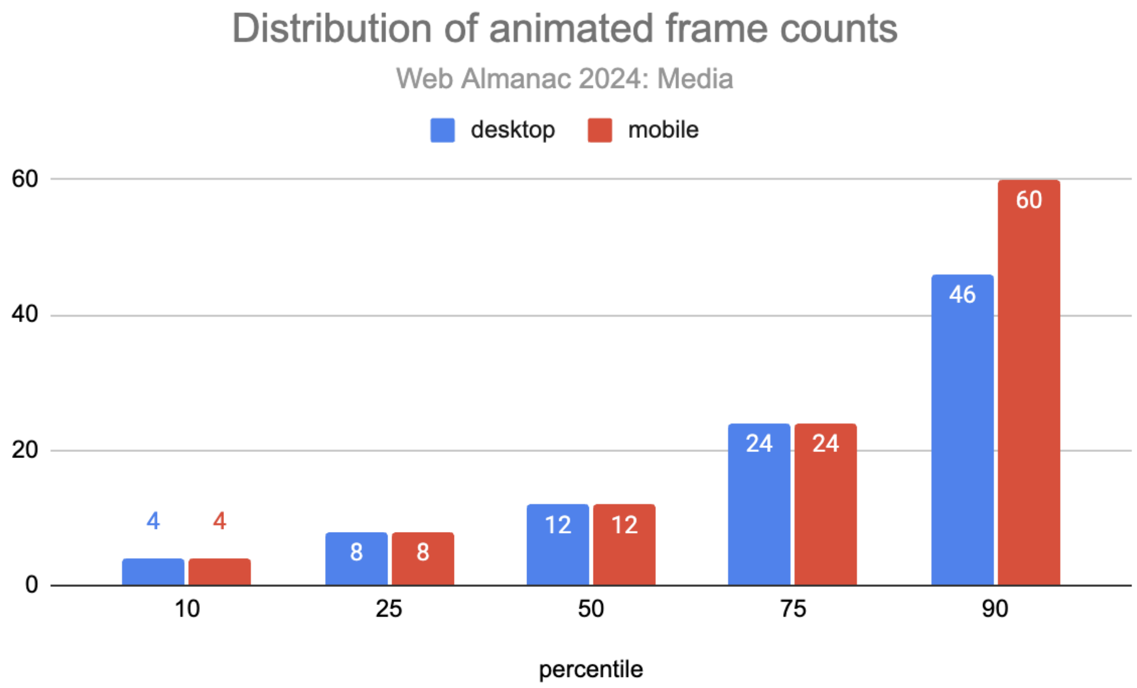
When we separate the animated gifs out from the animated ones, we can see that the median *non*-animated gif is much more reasonably compressed:



(data)

3.5 bits per pixel is even less than PNGs!

Turning to look at the animated GIFs specifically: How many frames do they have?



(data)

Generally: 10 to 20, which is more or less unchanged since 2022, although the longest GIFs have gotten longer, especially on mobile.

Just for fun, we also looked at the GIF with the *most* frames:

54,028

The highest GIF frame count in the data set.

(data)

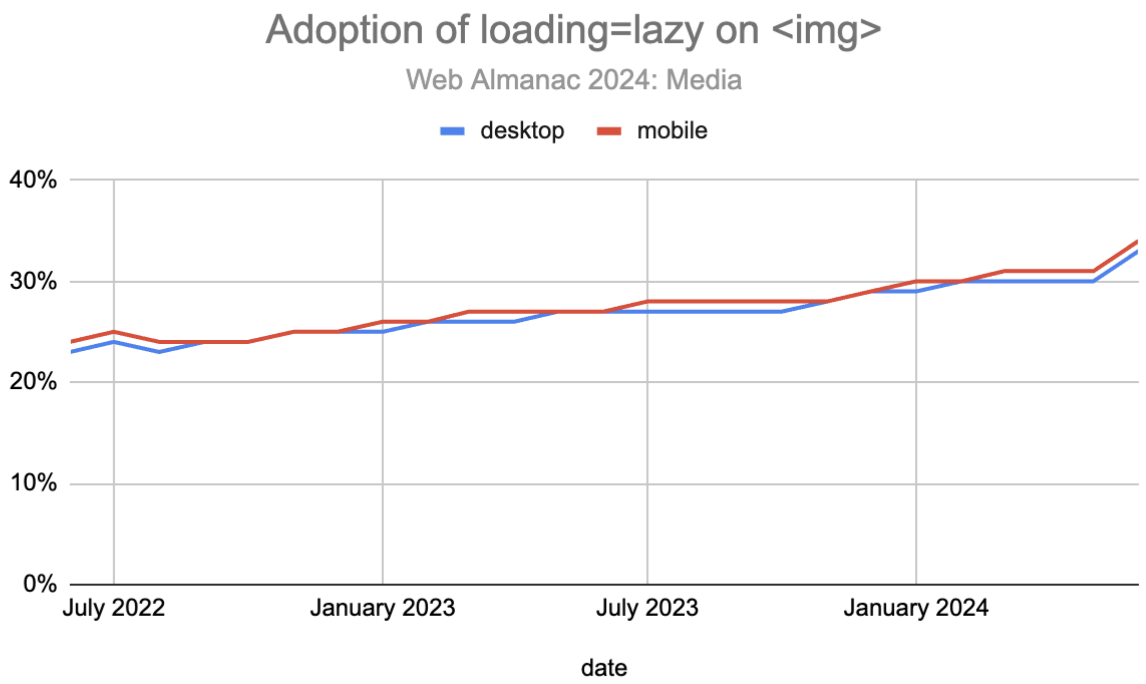
At 24-frames-per-second, that would take more than 37 minutes to play once through before looping. Every animated GIF should probably be a video these days, but this one *definitely* should.

Embedding

Now that we have a sense of how the web's image resources have been encoded, what can we say about how they are embedded on websites?

Lazy-loading

The biggest recent change in how images are embedded on websites has been the rapid adoption of lazy-loading. Lazy-loading was introduced in 2020, and just two years later it was adopted on almost a quarter of websites. Its climb continues, and it's now used on a full one-third of all websites:.



(data)

And, just like last year, it seems pages are using lazy-loading a bit *too* much:

9.5%

Percentage of LCP <img>s that use native lazy-loading on mobile.

(data)

Lazy-loading the LCP responsible element is an anti-pattern that makes pages much slower. While it's disheartening that nearly one-in-ten LCP <img>s are lazy-loaded, we are happy to report that things have improved ever-so-slightly over the last two years. The percentage of offending sites has decreased by 0.3 percentage points since 2022.

`alt` text

Images embedded with <img> elements are supposed to be contentful. That is to say: They're not just decorative, and they should contain something meaningful. According to both WCAG requirements and the HTML spec, most of the time, <img>s elements should have alternative text, and that alternative text should be supplied by the `alt` attribute.

55%

Percentage of images that had a non-blank `alt` attribute.

(data)

Unfortunately, 45 percent of <img>s don't have any `alt` text. Worse, the in-depth analysis from this year's accessibility chapter indicates that many of the <img>s that *do* have alt text aren't all that accessible either since their attributes only contain filenames or other meaningless, short strings.

There has been a one percentage point increase in alt text deployment since 2022, but still we can – and must – do better.

`srcset`

Prior to lazy-loading, the biggest thing to happen to <img>s on the web was a suite of features for "responsive images," which allowed images to tailor themselves to fit within responsive designs. First shipped in 2014, the srcset attribute, the sizes attribute, and the <picture> element are now a decade old. How much and how well are we using them?

Let's start by looking at the srcset attribute, which allows authors to give the browser a menu of resources to choose from, depending on the context.

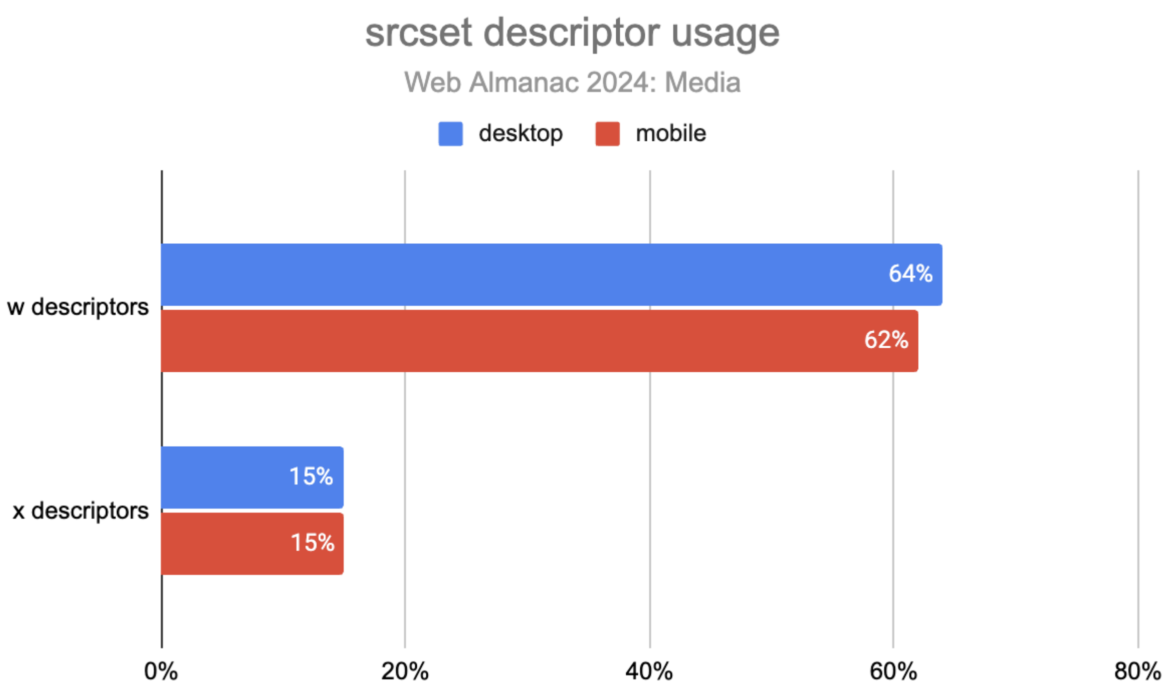
42%

Percentage of pages using the srcset attribute.

(data)

The last time we checked, this number was 34% – an eight percentage point increase over two years is significant and encouraging.

The srcset attribute allows authors to describe resources using one of two descriptors. x descriptors specify the resource's density, allowing browsers to select different resources depending on users' screen densities. w descriptors give the browser the resource's width in pixels. When used in conjunction with the sizes attribute, w descriptors allow browsers to select a resource appropriate for both variable layout widths and variable screen densities.



(data)

x descriptors came first and are simpler to reason about, but w descriptors are more powerful. It's encouraging to see that w descriptors are more common. And while x descriptor adoption has remained constant since 2022, [w descriptor usage is still growing](); w descriptor adoption is up three percentage points on mobile and seven percentage points on desktop.

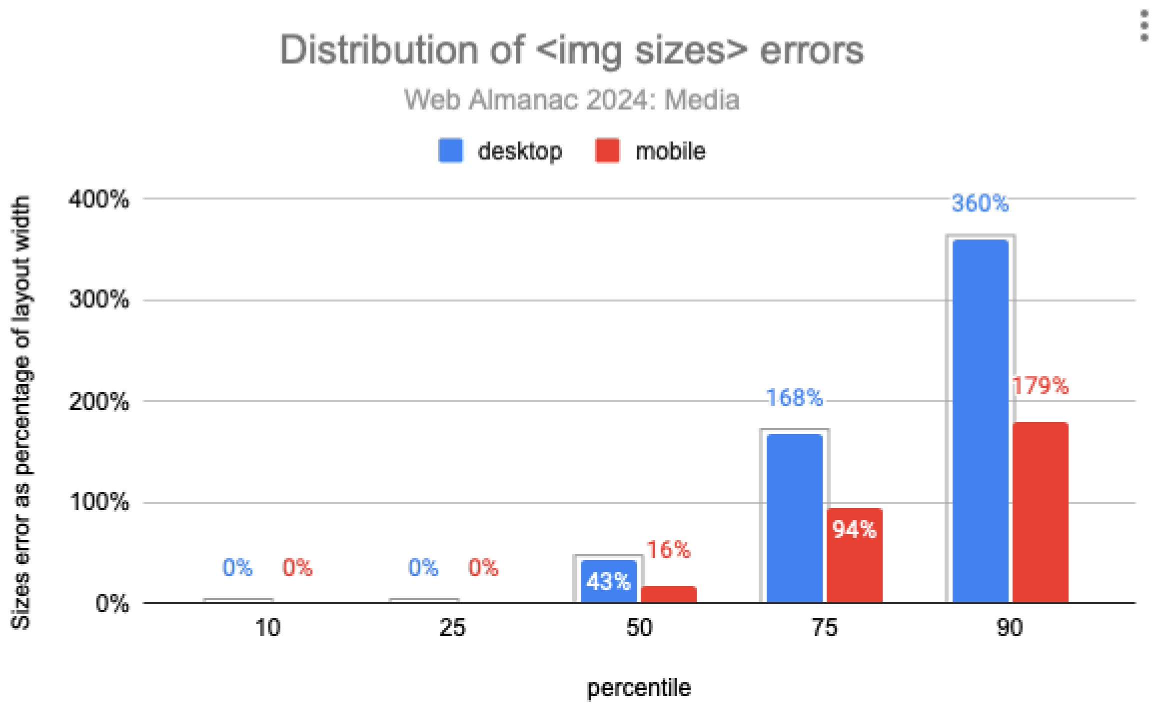
`sizes`

We mentioned earlier that w descriptors should be used in conjunction with sizes attributes. So, how well are we using sizes? Not very well!

The sizes attribute is supposed to be a hint to the browser about the eventual layout size of the image, usually relative to the viewport width. There are many variables that can affect an image's layout width. The sizes attribute is explicitly supposed to be a hint, and so a little inaccuracy is OK and even expected.

But if the sizes attribute is more-than-a-little inaccurate, it can affect resource selection, causing the browser to load an image to fit the sizes width when the actual layout width of the image is significantly different.

So, how accurate are our sizes?



(data)

While many sizes attributes are entirely accurate, the median sizes attribute is 16% too large on mobile and 19% too large on desktop. That might be OK, given the hint-like nature of the feature, but as you can see, the p75 and p90 numbers aren't pretty and [all of these numbers have gotten significantly worse over the past two years]().

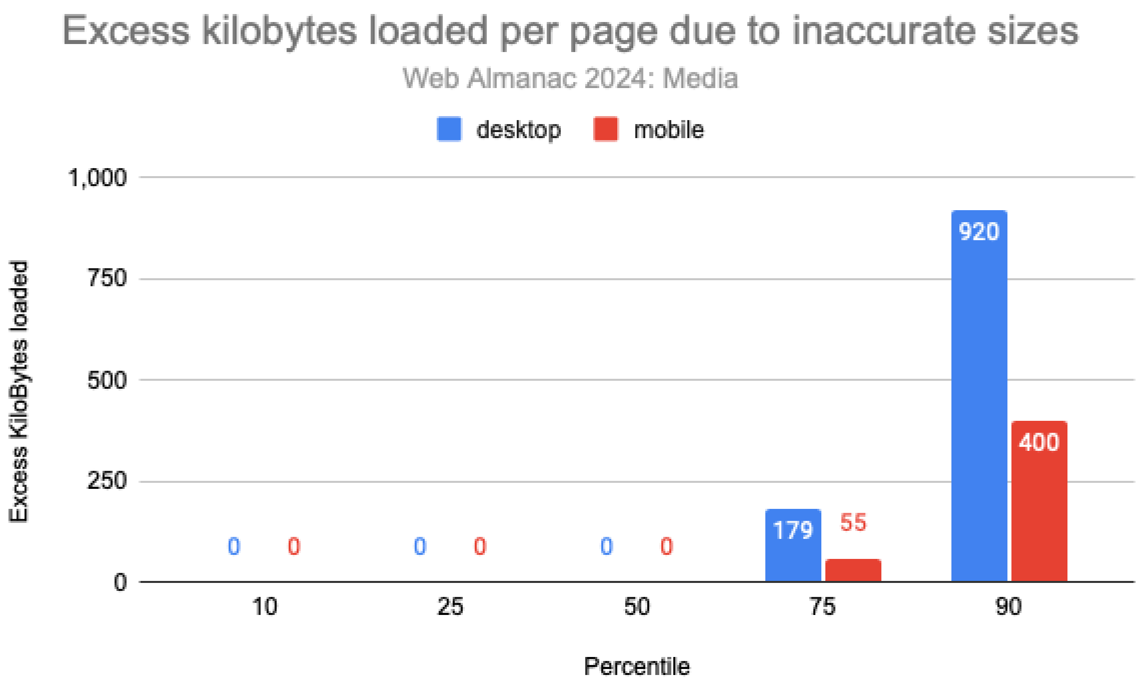
What's the impact of all of this inaccuracy?.

20%

sizes attributes that were inaccurate enough to affect srcset selection on desktop. On mobile, it's 14%.

(data)

On desktop, where the difference between the default sizes value (100vw) and the actual layout width of the image is likely to be larger than on mobile, one-in-five sizes attributes is inaccurate enough to cause browsers to pick a suboptimal resource from the srcset. These errors add up.



(data)

We estimate that a quarter of all desktop pages that use w descriptors are loading 180kb or more of wasted image data, because of their inaccurate sizes attributes. That is to say, a better, smaller resource is there for the picking in the srcset, but because the sizes attribute is so erroneous, the browser doesn't pick it. The worst 10% of desktop pages that use w descriptors load close to a megabyte of excess image data because of bad sizes attributes.

This is quite troubling, but what's worse is that all of these numbers are almost twice as bad as they were just two years ago. Things are bad and getting worse.

Note: Our crawlers didn't actually load the correct resources, so the numbers here are estimates, based in part on the byte sizes of the incorrect resources, which the crawlers actually did load.

There are two solutions here that developers should pursue.

For LCP and other critical images, developers need to fix their sizes attributes. The best tool to audit and repair sizes is RespImageLint, which can help fix a host of other responsive image problems, too.

For below-the-fold and non-critical images, authors should start to adopt sizes=auto. This value can only be used in conjunction with lazy-loading, but it tells the browser to use the actual layout size of the <img> as the sizes value, ensuring that the used value is perfectly accurate.

Auto-sizes is currently only implemented in Chrome, but Safari and Firefox have both expressed support for it. We hope they implement it soon and that developers start rolling it out now (with fallback values).

`<picture>`

The last responsive image feature to land in 2014 was the <picture> element. While srcset hands browsers a menu of resources to choose from, the <picture> element allows authors to take charge, giving browsers an explicit set of instructions about which child <source> element to load a resource from.

The picture element is used far less than srcset:

9.3%

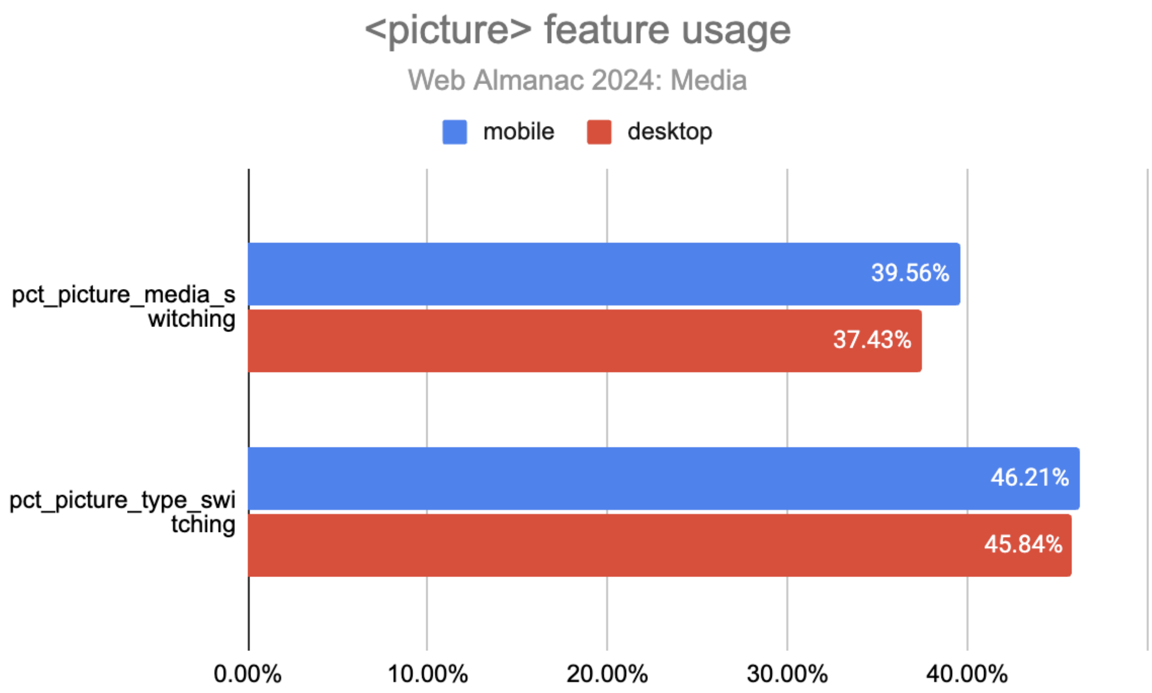
Percentage of mobile using the picture element.

(data)

This is up more than a percentage point and a half from 2022, but the fact that there are more than four pages that use srcset for every one page that uses <picture> suggests that either <picture> use cases are more niche or that it's more difficult to deploy – or both.

What are people using <picture> for?

The <picture> element gives authors two ways to switch between resources. Type-switching allows authors to provide cutting-edge image formats to browsers that support them and fallback formats for everyone else. Media-switching facilitates art direction, allowing authors to switch between various <source>s based on media conditions.



(data)

While usage of the media attribute is down a couple of percentage points from 2022, type-switching usage is up a couple of percentage points. This increase is likely related to the increasing popularity of next-generation image formats, especially JPEG XL which does not yet enjoy universal browser support.

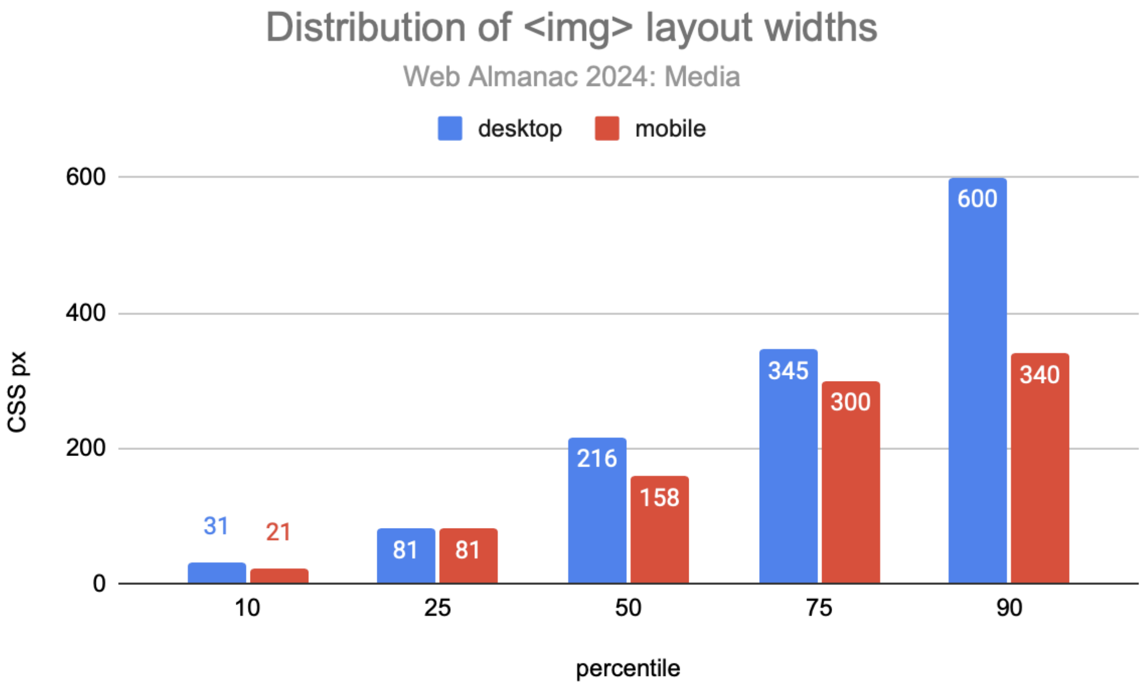
Layout

We already saw how the web's image resources size up. But before they can be shown to a user, embedded images must be placed within a layout and potentially squished or stretched to fit it.

Note: It will be useful to keep in mind the [crawlers' viewports](#) through this analysis. The desktop crawler was 1376px-wide, with a DPR of 1x; the mobile crawler was 360px-wide, with a DPR of 3x.

Layout widths

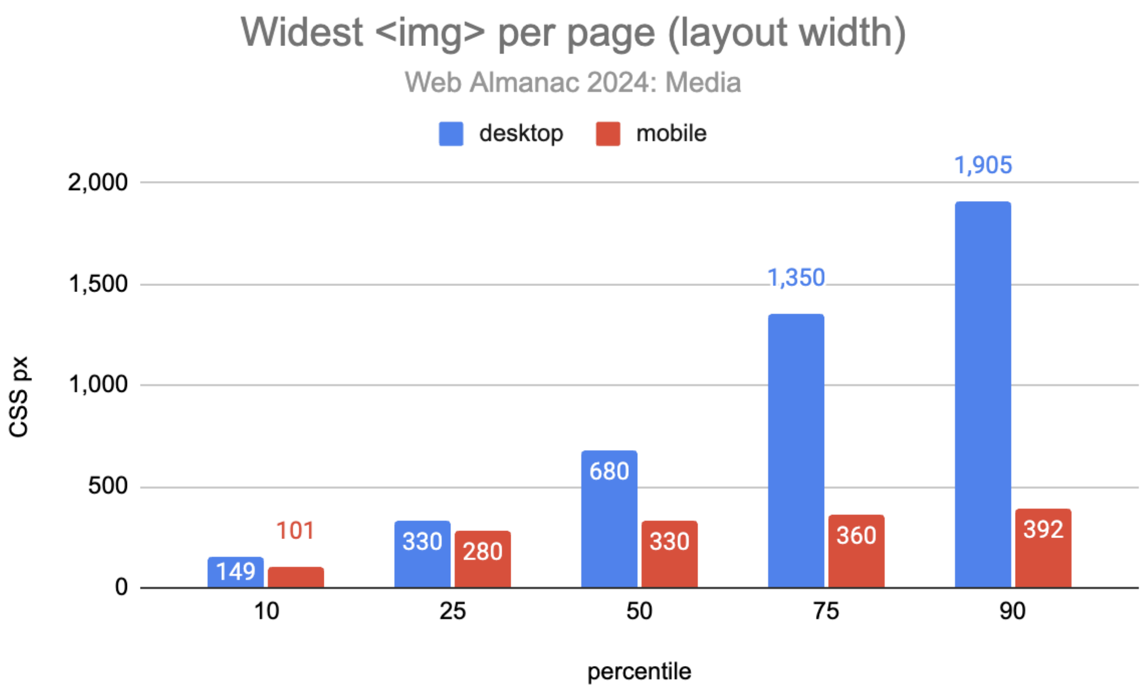
Let's start by asking: How wide do the web's images end up when painted to the page?



(data)

Just like the resources that they embed, most of the web's images end up pretty small within layouts. Interestingly, while most of the mobile layout sizes are essentially unchanged since 2022, the top half of desktop layout sizes have all increased by around 8%.

But while the majority of layout sizes are small, most pages have at least one fairly large <img>.



(data)

Half of all mobile pages have at least one image that takes up approximately the full viewport. At the top end, mobile layouts are doing a good job of containing images so that they don't take up much more than that. You can see the distribution quickly approach the mobile crawlers' viewport width (360px) and then only barely exceed it.

It's interesting to contrast this with the desktop layout widths, which don't top out at all. They just keep growing, hitting full-viewport-width (1360px) at p75 and blowing right past it at p90. Equally interesting, the p50 and p75 layout sizes on desktop have gotten larger than they were two years ago, while the ends of the distribution are essentially unchanged. Large hero images are getting larger.

Intrinsic vs extrinsic sizing

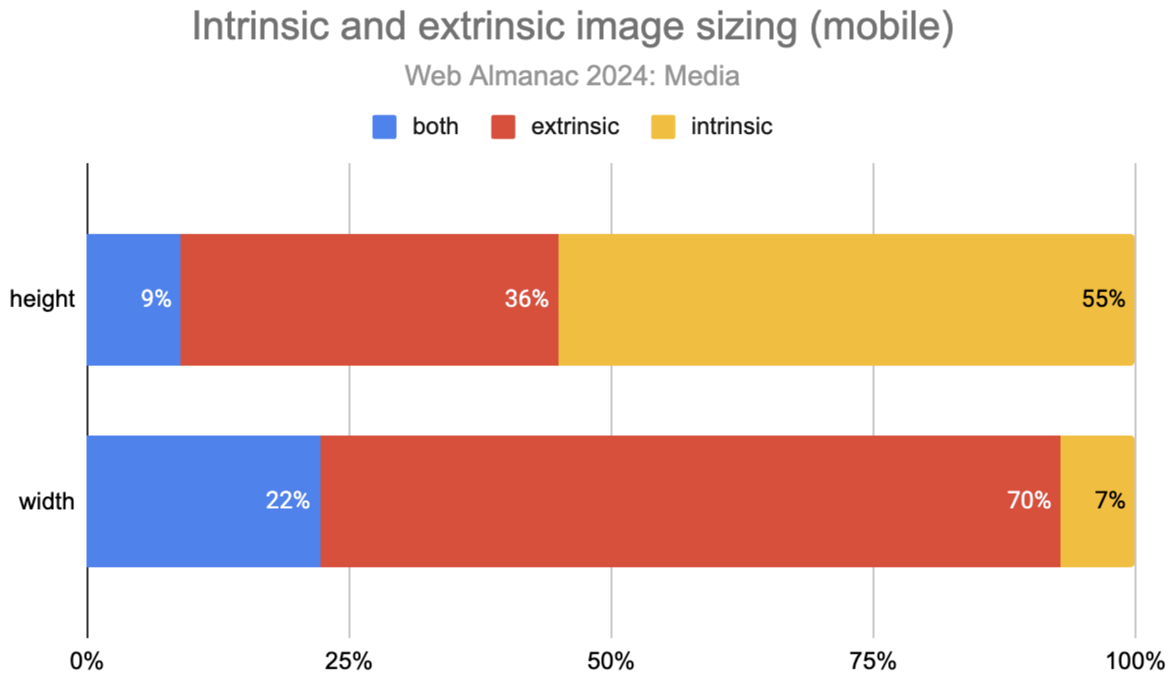
Why do the web's images end up at these layout sizes? There are many ways to scale an image with CSS. But how many images are being scaled with any CSS at all?

Images, like all "replaced elements," have an intrinsic size. By default – in the absence of a srcset controlling their density or any CSS rules controlling their layout width – images on the web display at a density of 1x. Plop a 640×480 image into an <img src> and, by default, that <img> will be laid out with a width of 640 CSS pixels.

Authors may apply extrinsic sizing to an image's height, width, or both. If an image has been extrinsically sized in one dimension (i.e., with a width: 100%; rule), but left to its intrinsic size in the other (height: auto; or no rule at all), it will scale proportionally, using its intrinsic aspect ratio.

Complicating things further, some CSS rules allow <img>s to appear at their intrinsic dimensions, unless they violate some constraint. For instance, an <img> element with a max-width: 100%; rule will be intrinsically sized, unless that intrinsic size is larger than the size of the <img> element's container, in which case it will be extrinsically scaled down to fit.

With all of that explanation out of the way, here's how the web's <img> elements are sized for layout:



(data)

The majority of images have extrinsic widths and intrinsic heights. The “both” category for width – representing images with either a max-width or min-width sizing constraint – is also fairly popular. Leaving images to their intrinsic widths is far less popular and slightly less popular than it was [in 2022](#).

`height`, `width` and cumulative layout shifts

Any <img> whose layout size is dependent on its intrinsic dimensions risks triggering a [Cumulative Layout Shift](#). In essence, such images risk being laid out twice – once when the page’s DOM and CSS have been processed, and then a second time when they finally finish loading and their intrinsic dimensions are known.

As we’ve just seen, extrinsically scaling images to fit a certain width while leaving the height (and aspect ratio) intrinsic is very common. To prevent the resulting plague of layout shifts, [authors should set the width and height attributes on the <img>](#) so that browsers can reserve layout space for the image before it loads.

32%

Percentage of <img> elements on mobile that have both height and width attributes set.

(data)

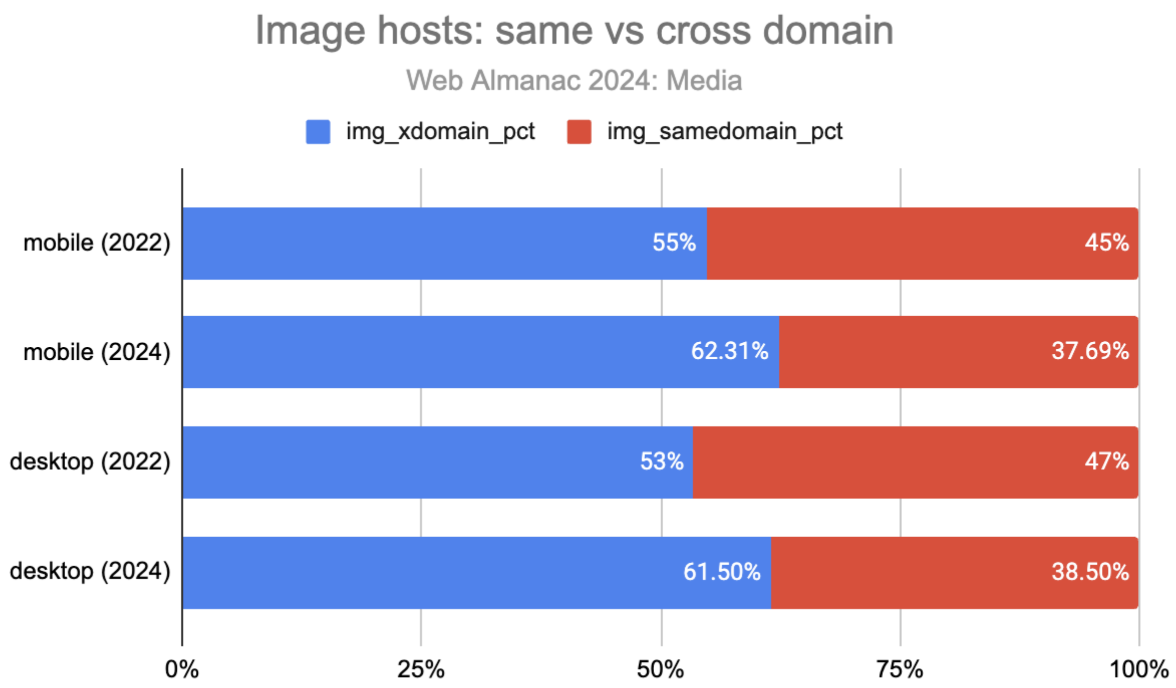
Usage of height and width is up four percentage points from 2022, which is good. But the attributes are still only used on a one-third of images, meaning we have a long way to go.

Delivery

Finally, let's take a look at how images are delivered over the network.

Cross-domain image hosts

How many images are being delivered from a different domain than the document they're embedded on? A growing majority:



(data)

It's hard to disentangle the various potential causes here, but we hypothesize that one factor is just how hard images are to get right. This leads teams to adopt image CDNs, which provide image optimization and delivery as a service.

So, there you have it: a panoramic view of the current state of images on the web. Now let's take a look at where <video> stands in 2024.

Video

The <video> element shipped in 2010, and has been the best and – since the demise of plugins like Flash and Silverlight – only way to embed video content on websites ever since. How are we using it?

Video adoption

Let's start by answering the first and most basic question: How many pages include <video> elements at all?

6.7%

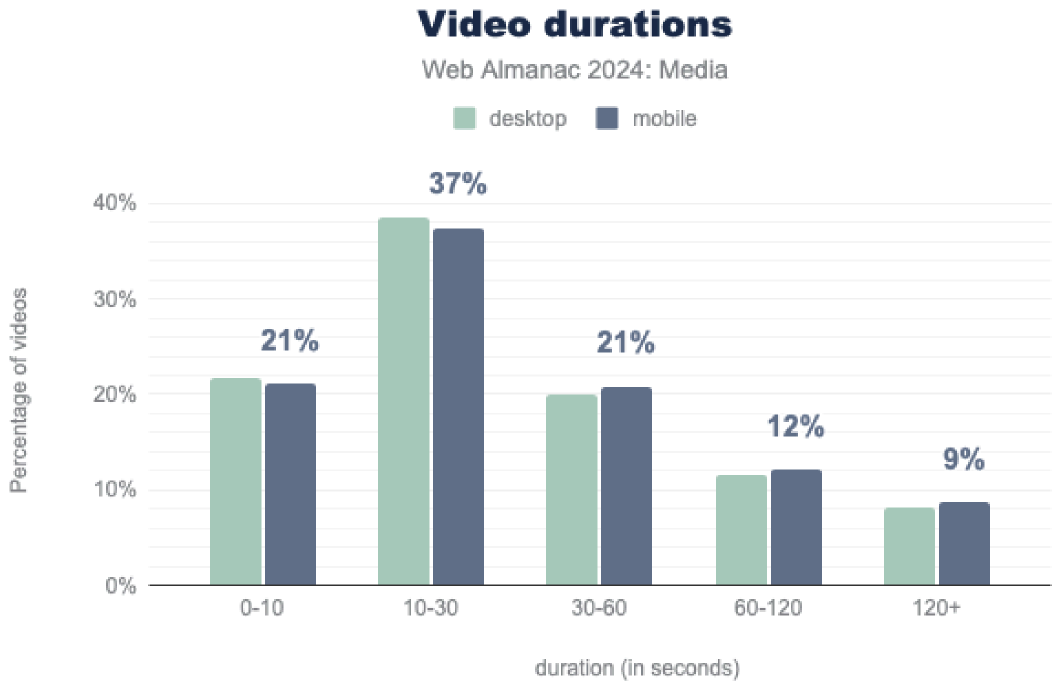
Percentage of mobile pages that include at least one <video> element. On desktop, it's 7.7%

(data)

This is a small fraction of the pages that include <img>s. But even though <video> was introduced 14 years ago, adoption is currently growing fast. The mobile number is up 33% (in relative terms) from 2022.

Video durations

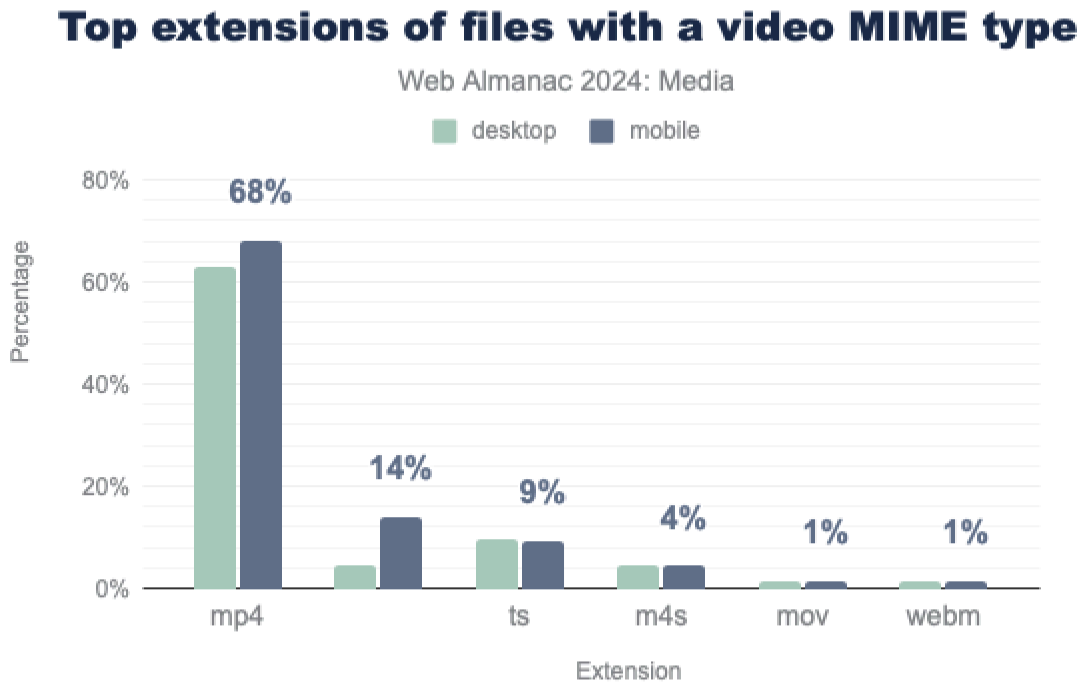
How long are those videos? Not very long!



Nine out of 10 videos are less than two minutes long. More than half are under 30 seconds. And almost one-quarter of videos are under 10 seconds.

Format adoption

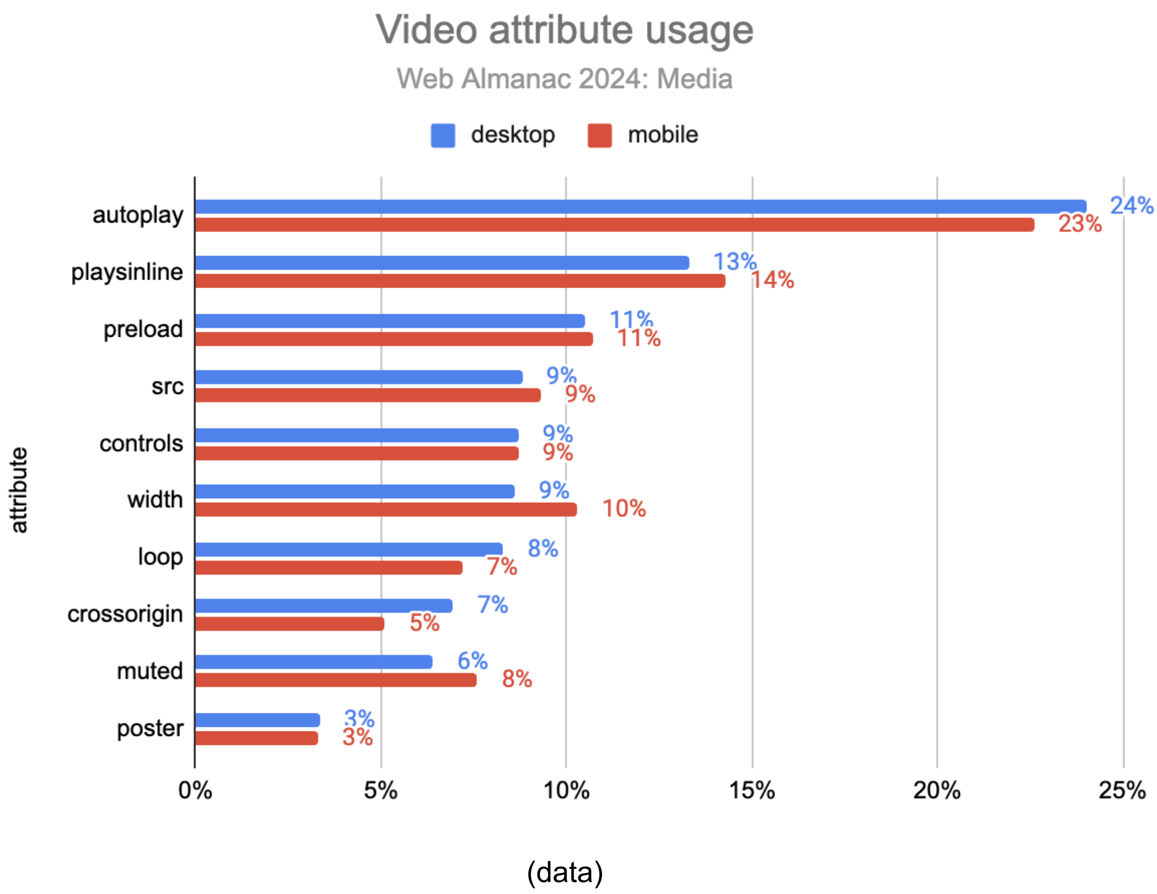
What formats are sites delivering in 2024? MP4, with its [universal support story](), is king:



After .mp4, the three most common extensions are no-extension, .ts, and .m4s. This trio is delivered when a <video> element employs adaptive bitrate streaming using either HLS or MPEG-DASH. Video elements that use anything besides MP4 or adaptive bitrate streaming are rare, accounting for only 4% of the extensions we found.

Embedding

The <video> element offers a number of attributes that allow authors to control how the video will be loaded and presented on the page. Here they are, ranked by usage:

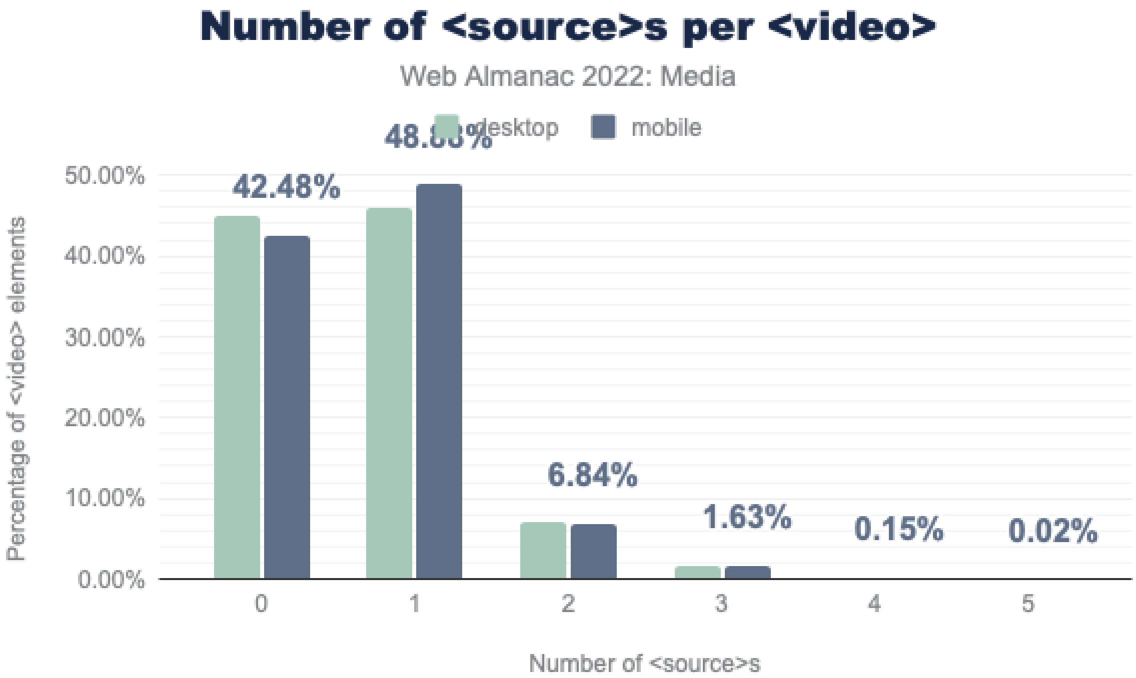


While both playsinline and autoplay are up three percentage points from 2022 – likely representing increased adoption of short inline videos that play the same role as GIFs – the biggest mover over the past few years has been preload, whose usage has decreased six percentage points.

This continues a trend we have seen throughout the 2020s, and our hypothesis about why [remains the same as it was in 2022](). Browsers know more than authors do about end users' contexts. By not including the preload attribute, authors are increasingly getting out of the browser's way.

`src` and `source`

The src attribute is only present on 9% of <video>s on mobile and 12% on desktop. Many of the rest of the <video> elements on the web use <source> children, allowing authors to – in theory – supply multiple, alternate video resources for use in different contexts.



Number of <source>s per <video>

(data)

However most of the <video>s with <source> children only have one; only one in ten <video> elements have multiple <source>s.

Conclusion

So there you have it, a snapshot of the state of media on the web in 2024, along with a look at how things have changed over the last couple of years. We've seen just how ubiquitous and important media is to the user experience of the web, and taken stock of how sites are – and aren't – delivering it effectively.

Some of the most notable *encouraging* things we found in this year's analysis were: the slow-and-steady adoption of next-generation image formats, the first sparks of adoption of wide-gamut color spaces, and the continued rapid adoption of lazy-loading. On the discouraging side, we saw a huge number of <img> elements with no or meaningless alt text, over-usage of lazy-loading leading to a needlessly slow LCP times, a mysterious increase in GIF usage, and sizes accuracy getting even worse than it already was.

Here's to more effective visual communication on the web in 2025!