

# USING BROWSER SETTINGS FOR PERFORMANCE

WebPerfDays Amsterdam 2018

Walter Ebert  
[@walterebert](#)  
[mastodon.social/@walterebert](https://mastodon.social/@walterebert)

Image: <https://flic.kr/p/79eyNM>



# THE BEGINNING: BACKGROUND VIDEOS

```
<video autoplay loop muted playsinline controls>  
  <source src="video.webm" type='video/webm;codecs="vp9,opus"'>  
  <source src="video.mp4" type="video/mp4">  
</video>
```

# MOBILE

```
<video autoplay loop muted playsinline controls>  
<source src="vid.mp4" media="(min-width: 1280px)" type="video/mp4">  
  
</video>
```

# MOBILE

```
<video autoplay loop muted playsinline controls>  
<source src="vid.mp4" media="(min-width: 1280px)" type="video/mp4">  
  
</video>
```

Problem: Video media query support has been removed from Google Chrome 34+

# LOAD WITH JAVASCRIPT

```
<video id="video" preload="none" loop muted playsinline controls
  poster="data:image/svg+xml,%3Csvg%20xmlns%3D%22http%3A%2F%2Fwww.w3.o
  src="small.mp4"
</video>
<script>
var video = document.getElementById('video')
if (is_mobile()) {
  video.setAttribute('poster', 'screenshot.jpg')
} else {
  video.setAttribute('src', 'large.mp4')
  video.play()
}
</script>
```

# IS MOBILE?

```
<script>
function is_mobile() {
  var mobile = true
  if (
    !navigator.userAgent.match(/Mobi/) ||
    window.screen.width > 1599 ||
    window.matchMedia('(min-width: 1280px)').matches
  ) {
    mobile = false
  }
  return mobile
}
</script>
```

# REDUCED MOTION

```
<script>
var autoplay = true
if (window.matchMedia('(prefers-reduced-motion: reduce)').matches) {
  autoplay = false
}
</script>
```

Safari, Firefox

# PROPOSED FOR CSS 5

- `light-level`
- `inverted-colors`
- `prefers-reduced-motion`
- `prefers-reduced-transparency`
- `prefers-contrast`
- `prefers-color-scheme`
- Custom Media Queries

<https://drafts.csswg.org/mediaqueries-5/#mf-user-preferences>



# DO NOT TRACK

HTTP Request Header

DNT: 1

```
<?php
if (empty($_SERVER['HTTP_DNT'])) {
    echo '<script src="trackme.js" async></script>';
}
```

Ignoring DNT is a (potential) GDPR violation

# HIGH CONTRAST MODE (EDGE)

```
<style>
@media screen and (-ms-high-contrast: active) {
  /* All high contrast styling rules */
}
</style>

<script>
if (window.matchMedia('(-ms-high-contrast: active)').matches) {
  // High contrast code
}
</script>
```

<https://msdn.microsoft.com/library/Hh771830>

# DARK MODE (SAFARI)

```
<style>
@media (prefers-color-scheme: dark) {
  // Dark mode code
}
</style>
```

```
<script>
if (window.matchMedia('(prefers-color-scheme: dark)').matches) {
  // Dark mode code
}
</script>
```

# JAVASCRIPT MODULES

```
<script type="module" src="main.mjs"></script>  
<script nomodule src="fallback.js"></script>
```



# JAVASCRIPT MODULES

Or maybe, no JS for old browsers

```
<script type="module" src="main.mjs"></script>
```

# NETWORK INFORMATION API

```
<script>
var connection = navigator.connection || navigator.mozConnection || n
if (
  connection &&
  (
    connection.type === 'ethernet' ||
    connection.type === 'wifi' ||
    connection.type === '4g'
  )
) {
  // Do something
}
</script>
```

#

# Network Information API - UNOFF

Usage

% of all users

Global

32.17% + 31.46% = 63.63%

The Network Information API enables web applications to access information about the network connection in use by the device.

Current aligned Usage relative Date relative Apply filters Show all ?

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Blackberry Browser	Opera
								2.1		
			4-60		10-47			<sup>1</sup> 2.2-4.3		
6-10	12-16	2-62	<sup>4</sup> 61-69	3.1-11.1	<sup>4</sup> 48-55	3.2-11.4		4.4-4.4.4	7	12
11	17	63	<sup>4</sup> 70	12	<sup>4</sup> 56	12	all	67	10	<sup>3</sup>
	18	64-65	<sup>4</sup> 71-73	TP						

Notes

Known issues (0)

Resources (3)

Feedback

<https://caniuse.com/#feat=netinfo>

# CLIENT HINTS

## HTTP Request Headers

Accept: image/webp,image/\*,\*/\*;q=0.8

Accept-CH: DPR, Width

Accept-CH: Viewport-Width

<https://httpwg.org/http-extensions/client-hints.html>

<https://www.smashingmagazine.com/2016/01/leaner-responsive-images-client-hints/>



## # Client Hints: DPR, Width, Viewport-Width - OTHER

Usage % of all users

Global **67.99%**

DPR, Width, and Viewport-Width hints enable proactive content negotiation between client and server, enabling automated delivery of optimized assets - e.g. auto-negotiating image DPR resolution.

Current aligned Usage relative Date relative Apply filters Show all ?

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Blackberry Browser	Opera
			4-45		10-32					
6-10	12-16	2-62	46-69	3.1-11.1	33-55	3.2-11.4		2.1-4.4.4	7	12
11	17	63	70	12	56	12	all	67	10	
	18	64-65	71-73	TP						

Notes

Known issues (0)

Resources (7)

Feedback

<https://caniuse.com/#feat=netinfo>

# QUESTIONS?

[@walterebert](#)

[mastodon.social/@walterebert](https://mastodon.social/@walterebert)

[walter.ebert.engineering](https://walter.ebert.engineering)