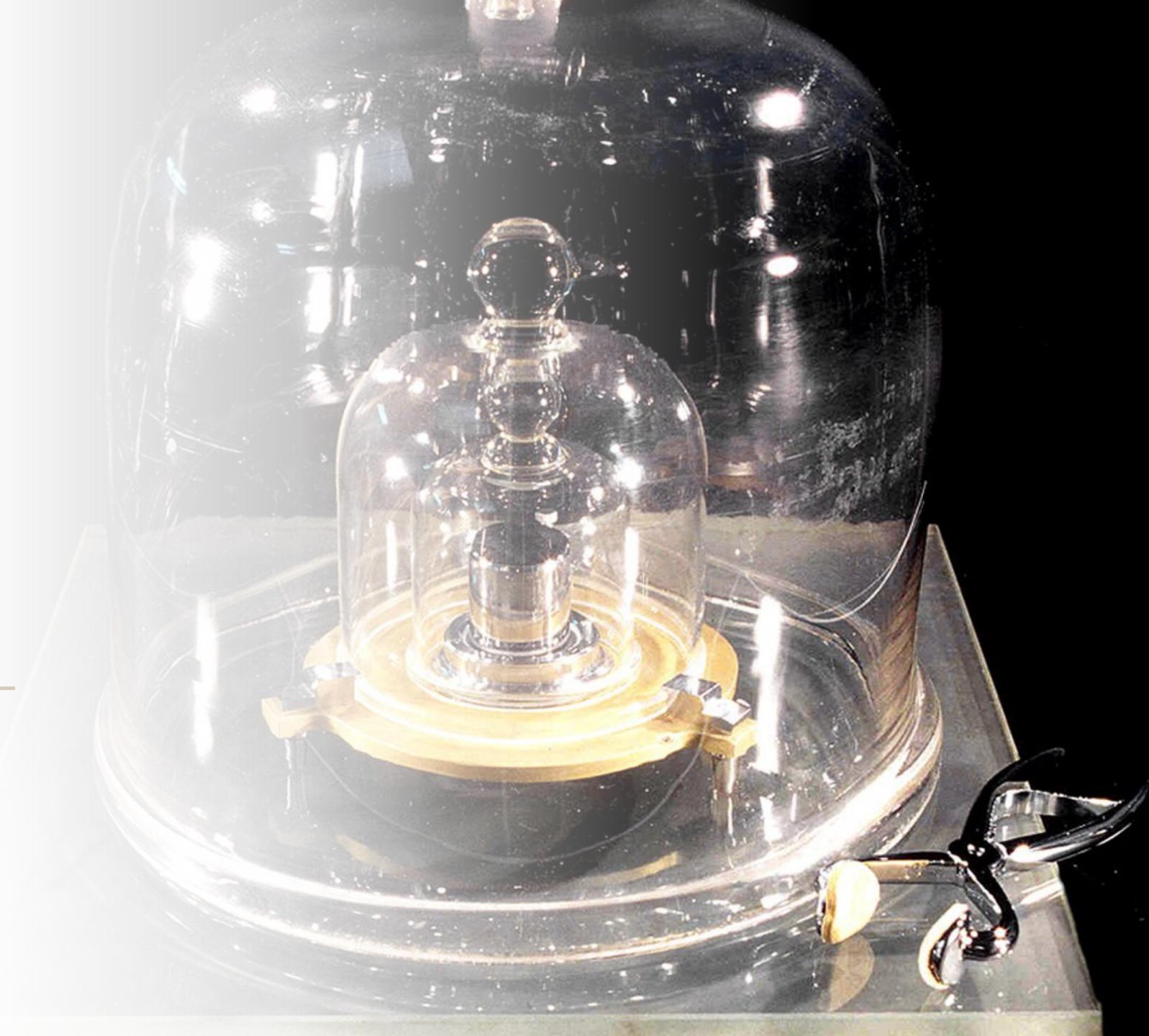


Web Standardisation

Web Development 1



Web Standardisation?



Web standards are the technologies we use to build websites.



These standards exist as long technical documents called specifications



Specifications detail exactly how the technology should work.



These documents are not very useful for learning how to use the technologies they describe

This is why we have sites like MDN Web Docs



They are intended to be used by software engineers to implement these technologies (usually in web browsers).

HTML Living Standard

- For example, the **HTML Living Standard** describes exactly how HTML (all the HTML elements, and their associated APIs, and other surrounding technologies) should be implemented.
- <https://html.spec.whatwg.org/multipage/>

HTML

Living Standard — Last Updated 25 January 2024



[One-Page Version](#)

html.spec.whatwg.org

[Multipage Version](#)

/multipage

[Version for Web Devs](#)

/dev

[PDF Version](#)

/print.pdf

[Translations](#)

日本語・简体中文

[FAQ](#)

on GitHub

[Chat](#)

on Matrix

[Contribute on GitHub](#)

whatwg/html repository

[Commits](#)

on GitHub

[Snapshot](#)

as of this commit

[Twitter Updates](#)

@htmlstandard

[Open Issues](#)

filed on GitHub

[Open an Issue](#)

whatwg.org/newbug

[Tests](#)

web-platform-tests html/

[Issues for Tests](#)

ongoing work

Table of contents

- 1 Introduction
- 2 Common infrastructure
- 3 Semantics, structure, and APIs of HTML documents
- 4 The elements of HTML
- 5 Microdata
- 6 User interaction
- 7 Loading web pages
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- 9 Communication
- 10 Web workers
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- 13 The HTML syntax
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- 16 Obsolete features
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- References
- Acknowledgments
- Intellectual property rights



twitter.com/htmlstandard



Settings

HTML Standard

2,248 posts



Follow

HTML Standard

@htmlstandard

The web platform's kitchen sink.

[html.spec.whatwg.org/multipage/](#) Joined August 2015

5 Following 5,117 Followers

Posts

Replies

Media

Likes



HTML Standard @htmlstandard · Mar 24, 2023

...

Add the <search> element

whatwg/html

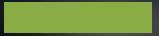
Add the <search> element

186 lines changed +158 -28



domenic committed March 24, 2023 c598ff0





Who owns
this
standard?

Web Hypertext Application Technology Working Group



- WHATWG (WHAT-W-G) is a community of people interested in evolving HTML and related technologies.
- Founded by individuals from Apple Inc., the Mozilla Foundation and Opera Software, leading Web browser vendors in 2004.

Web Hypertext Application Technology Working Group



- WHATWG is responsible for maintaining multiple web-related technical standards, including the specifications for the HyperText Markup Language (HTML) and the Document Object Model (DOM).
- The central organizational membership and control of WHATWG - its "Steering Group" - consists of Apple, Mozilla, Google, and Microsoft.
- WHATWG community members work with the editor of the specifications to ensure correct implementation.

Web Hypertext Application Technology Working Group



- The WHATWG was formed in response to the slow development of World Wide Web Consortium (W3C) Web standards and W3C's decision to abandon HTML in favour of XML-based technologies (XHTML)
- On 28 May 2019, the W3C announced that WHATWG would be the sole publisher of the HTML and DOM standards

Web Hypertext Application Technology Working Group



- The HTML Living Standard
 - Sometimes informally called HTML5.
 - The HTML specification has been a living document without version numbers since 2011. It includes both HTML, the core markup language for the web, and a number of related APIs.
- The DOM Standard
 - defines how the Document Object Model on the web is supposed to work and replaces W3C DOM level 3. For example, it replaces mutation events with mutation observers.
- Fetch Standard
 - "Defines requests, responses, and the process that binds them: fetching."
 - The fetch standard defines the 'fetch' JavaScript API, and supersedes the HTML5 fetch functionality, CORS and the HTTP Origin header semantics.
- The Encoding Standard
 - Defines how character encodings such as Windows-1252 and UTF-8 are handled in web browsers and is intended to replace the IETF encodings registry.
- The MIME type sniffing standard
 - Defines how MIME types are supposed to be sniffed in web browsers.
- The URL standard
 - defines how URLs are supposed to be parsed in web browsers.
- WEB IDL
 - used to describe interfaces that are intended to be implemented in web browsers
- The Streams Standard
 - Provides APIs for creating, composing, and consuming streams of data.

<https://github.com/whatwg/html/commits/main>



Commits

main · All users · All time

- Commits on Jan 25, 2024
 - Fix Location-object navigate parameter declaration** · Verified f406d8a · ADKaster · 5 days ago · 1/1
- Commits on Jan 24, 2024
 - Revert recent changes to rendering of <slot>** · Verified 0c6f327 · dbaron · 5 days ago · 1/1
- Commits on Jan 23, 2024
 - Editorial: reference MathML-Core instead of Full** · Verified 8b404d4 · bkardell · last week · 1/1
- Commits on Jan 18, 2024
 - Editorial: make reference style after sentence consistent** · Verified 6a9aeef0 · foolip · 2 weeks ago · 1/1
- Meta: export "potentially playing" for media elements** · Verified 750dee7 · marcoscaceres · 2 weeks ago · 1/1

Standards & Design Progress Together

2004



MELBOURNE COUNTDOWN

days 65 hrs 09 mins 37 secs 49



2004 Season

News

Results Archive

Gallery

Insight



FORMULA ONE 2004 SEASON REVIEW

Part 3 - Hungary to Brazil



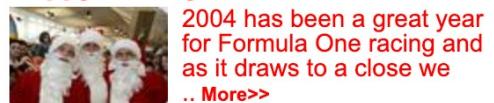
Part 1 - Australia to Monaco

Part 2 - Europe to Germany



24th December 2004

Happy holidays from Formula1.com



2004 has been a great year
for Formula One racing and
as it draws to a close we
[... More>>](#)



Headlines

- 23/12 Albers signs for Minardi
- 23/12 Formula One driver psychology
- 22/12 Rubens Barrichello's finest hour
- 21/12 Mercedes' illustrious racing past
- 20/12 Canada 1995 - Alesi does it at last
- 17/12 The 2005 Formula One calendar
- 17/12 Coulthard secures Red Bull seat



Standards & Design Progress Together

2009



NEWS RACES RESULTS GALLERY TEAMS & DRIVERS INSIDE F1 SERVICES

AUSTRALIA MALAYSIA CHINA BAHRAIN SPAIN MONACO TURKEY GREAT BRITAIN GERMANY HUNGARY EUROPE BELGIUM ITALY SINGAPORE JAPAN BRAZIL ABU DHABI

Rubens Barrichello Q&A: We will be the surprise of 2009 13 Mar 2009



The times set by the new Brawn BGP001 after just four days' running in this week's Barcelona test - the last major session before the season starts - have left the entire paddock reeling and put a smile back on Rubens Barrichello's face.

Four months ago Barrichello's Formula One career looked over. Now, with his fans hailing him a hero once more, the Brazilian is ready to go racing - for victory...

13 Mar 2009 Signed Lewis Hamilton print up for grabs
13 Mar 2009 McLaren: We can make up performance shortfall
13 Mar 2009 Q&A; with McLaren's Martin Whitmarsh and Norbert Haug
13 Mar 2009 Robert Kubica Q&A;: Brawn could be BMW's biggest challenger
13 Mar 2009 Felipe Massa Q&A;: Brawn threat is genuine
12 Mar 2009 Barcelona day four - dazzling Barrichello ends test on a high



Related Items

- » Race Tickets
- » Live Timing
- » SMS Results Service
- » Circuit Map
- » Destination Guide

2008 DRIVER STANDINGS

01 Lewis Hamilton	98
02 Felipe Massa	97
03 Kimi Räikkönen	75
04 Robert Kubica	75
05 Fernando Alonso	61
06 Nick Heidfeld	60
07 Heikki Kovalainen	53
08 Sebastian Vettel	35
09 Jarno Trulli	31
10 Timo Glock	25
11 Mark Webber	21
12 Nelson Piquet	19
13 Nico Rosberg	17
14 Rubens Barrichello	11
15 Kazuki Nakajima	9

[Table in full](#)

VOTE

One was champion in 2007, the other was very nearly champion in 2008. Who will be top dog at Ferrari in 2009?

▶ Kimi Raikkonen

GALLERY

Testing at Barcelona, Spain, 9-12 March 2009

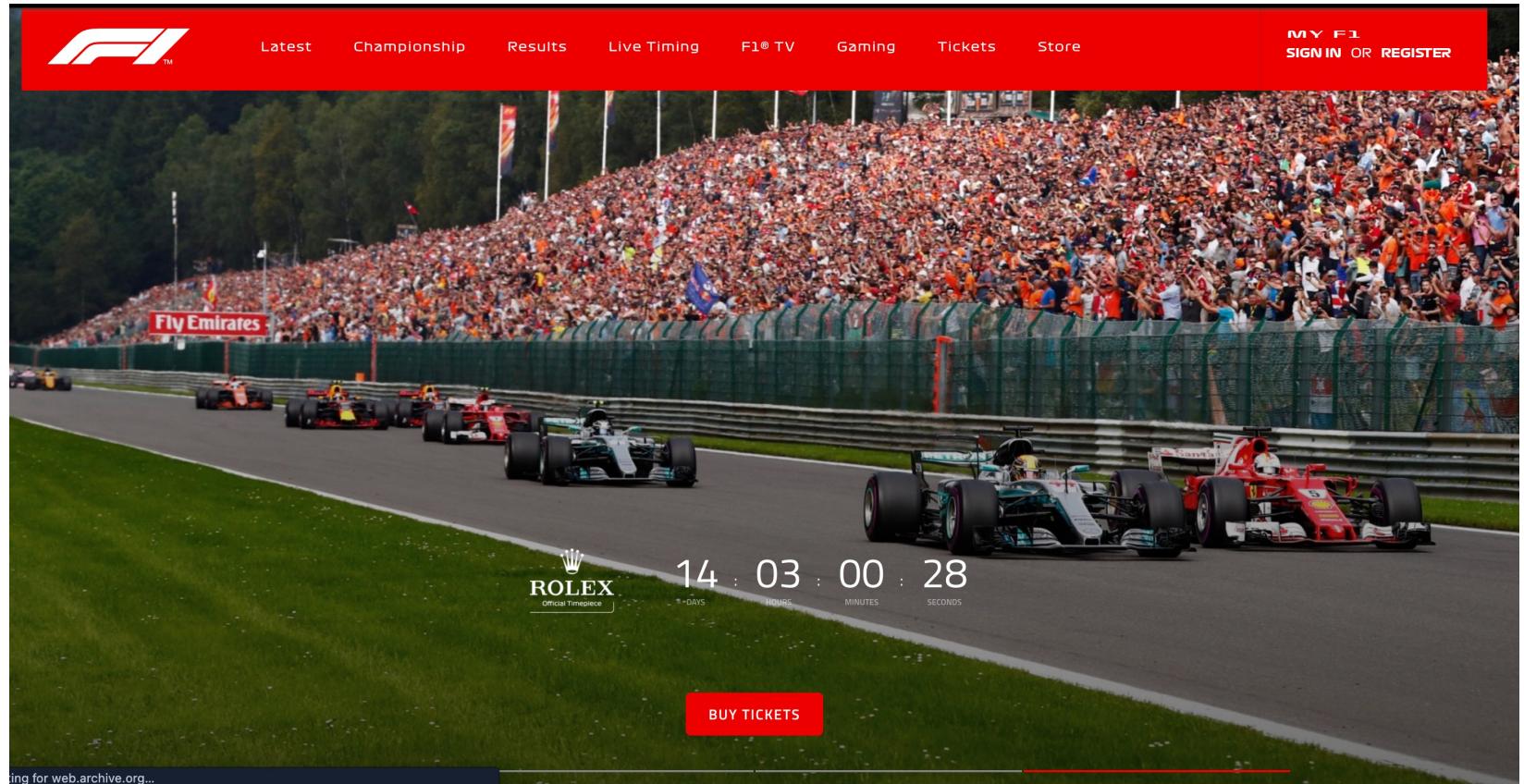


2008 CONSTRUCTOR STANDINGS

01 Ferrari	172
02 McLaren-Mercedes	151
03 BMW Sauber	135
..	..

Standards & Design Progress Together

2018



Standards & Design Progress Together

2024

The image shows a screenshot of the F1 website. At the top, there's a navigation bar with the FIA logo, F1®, F2™, F3™, and F1® ACADEMY links. To the right are links for AUTHENTICS, STORE, TICKETS, HOSPITALITY, EXPERIENCES, F1 TV, SIGN IN, and SUBSCRIBE. Below the navigation is a red header bar with the F1 logo and links for Latest, Video, F1 Unlocked, Schedule, Results, Drivers, Teams, Gaming, and Live Timing.

NEWS
'I'm ready to go against Max' - Norris gives his verdict on when McLaren could fight for wins and titles

A photograph of Christian Horner, Red Bull Racing Team Principal, and Lewis Hamilton, McLaren Driver, engaged in conversation at a Formula 1 event.

FEATURE
Wolff shares his expectations for Mercedes' latest junior F1 prospect after 'immense' rise

A portrait of Toto Wolff, Mercedes-Benz Petronas F1 Team Shareholder and Executive Director, speaking at a podium.

FEATURE
'I'm fully expecting diminishing returns' – Christian Horner on the 3 key challenges facing Red Bull in 2024

A group of Formula 1 team members, including Christian Horner, standing together.

NEWS
BARRETO: The surprising duo who hold the keys to the F1 driver market after Leclerc and Norris's contract extensions

A photograph of Ricardo Barreto, a Formula 1 driver, and other team members.

NEWS
Drive To Survive Season 6 release date announced by Netflix

A photograph of the cast of the Netflix documentary series "Drive To Survive".

[DONATE](#)



Explore more than 863 billion [web pages](#) saved over time

formula1.com

X

Calendar

Collections

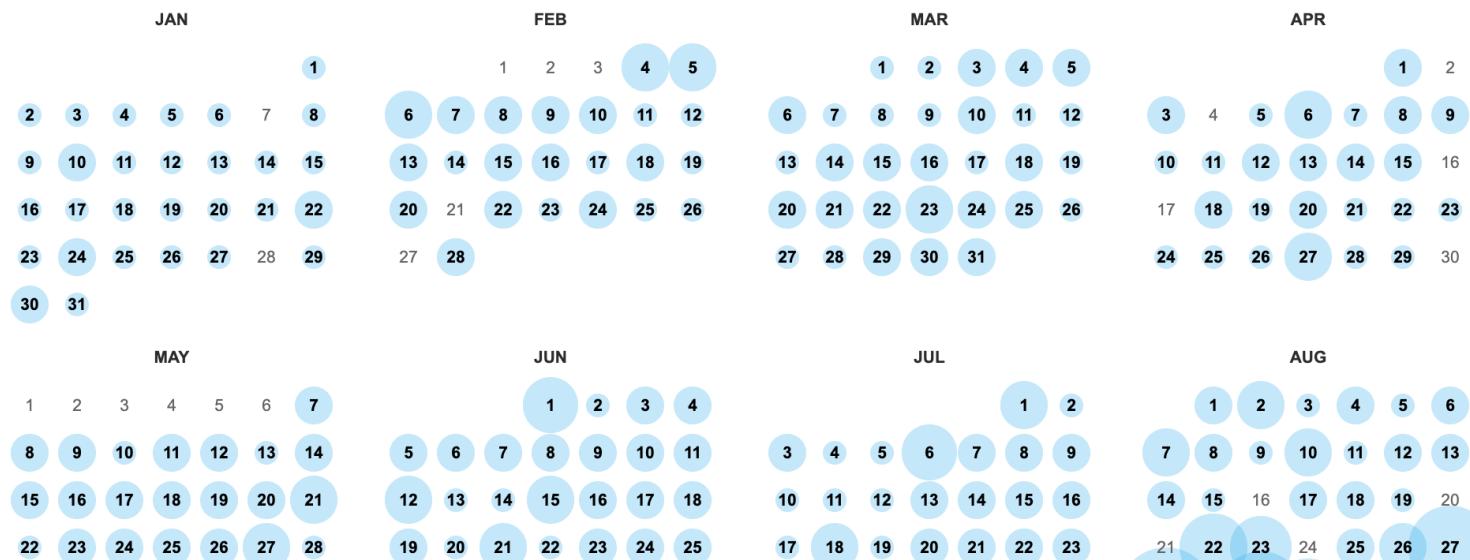
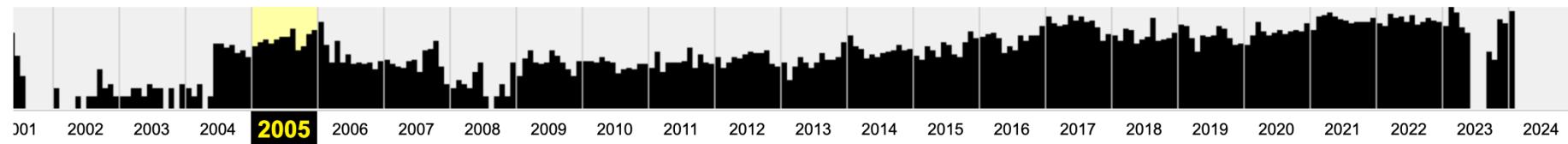
Changes

- **Summary**

- Site Map

URLs

Saved 13,386 times between December 3, 1998 and January 29, 2024.



A close-up photograph of a foosball table. The players are made of plastic and are mounted on metal rods. There are two sets of players: one in red jerseys and white shorts, and another in yellow jerseys and blue shorts. The background is blurred, showing more of the table and the surrounding environment.

The other players....

World Wide Web Consortium

- The World Wide Web Consortium (W3C) is the main international standards organization for the World Wide Web.
- Founded in 1994 and led by Tim Berners-Lee, the consortium is made up of member organizations that maintain full-time staff working together in the development of standards for the World Wide Web.
- As of 5 March 2023, W3C had 462 members.
- W3C also engages in education and outreach, develops software and serves as an open forum for discussion about the Web.



Internet Engineering Task Force

- The Internet Engineering Task Force (IETF) is a standards organization for the Internet and is responsible for the technical standards that make up the Internet protocol suite (TCP/IP).
- It has no formal membership roster or requirements and all its participants are volunteers.
- Their work is usually funded by employers or other sponsors.
- The IETF was initially supported by the federal government of the United States but since 1993 has operated under the auspices of the Internet Society, a non-profit organization with local chapters around the world.



HTML Timeline

HTML 2

November 24, 1995

HTML 2.0 was published as [RFC 1866](#). Supplemental [RFCs](#) added capabilities:

- November 25, 1995: [RFC 1867](#) (form-based file upload)
- May 1996: [RFC 1942](#) (tables)
- August 1996: [RFC 1980](#) (client-side image maps)
- January 1997: [RFC 2070](#) ([internationalization](#))

HTML 3

January 14, 1997

HTML 3.2^[15] was published as a [W3C Recommendation](#). It was the first version developed and standardized exclusively by the W3C, as the IETF had closed its HTML Working Group on September 12, 1996.^[16]

Initially code-named "Wilbur",^[17] HTML 3.2 dropped math formulas entirely, reconciled overlap among various proprietary extensions and adopted most of [Netscape's](#) visual markup tags. Netscape's [blink element](#) and Microsoft's [marquee element](#) were omitted due to a mutual agreement between the two companies.^[18] A markup for mathematical formulas similar to that of HTML was standardized 14 months later in [MathML](#).

HTML Timeline

HTML 4

December 18, 1997

HTML 4.0^[18] was published as a W3C Recommendation. It offers three variations:

- Strict, in which deprecated elements are forbidden
- Transitional, in which deprecated elements are allowed
- Frameset, in which mostly only `frame` related elements are allowed.

Initially code-named "Cougar",^[17] HTML 4.0 adopted many browser-specific element types and attributes, but also sought to phase out Netscape's visual markup features by marking them as [deprecated](#) in favor of style sheets. HTML 4 is an SGML application conforming to ISO 8879 – SGML.^[19]

April 24, 1998

HTML 4.0^[20] was reissued with minor edits without incrementing the version number.

December 24, 1999

HTML 4.01^[21] was published as a W3C Recommendation. It offers the same three variations as HTML 4.0 and its last errata^[22] were published on May 12, 2001.

May 2000

ISO/IEC 15445:2000^[23] ("ISO HTML", based on HTML 4.01 Strict) was published as an ISO/IEC international standard.^[24] In the ISO, this standard is in the domain of the [ISO/IEC JTC 1/SC 34](#) (ISO/IEC Joint Technical Committee 1, Subcommittee 34 – Document description and processing languages).^[23]

After HTML 4.01, there were no new versions of HTML for many years, as the development of the parallel, XML-based language XHTML occupied the W3C's HTML Working Group.

HTML Timeline

HTML 5

Main article: [HTML5](#)

October 28, 2014

HTML5^[25] was published as a W3C Recommendation.^[26]

November 1, 2016

HTML 5.1^[27] was published as a W3C Recommendation.^{[28][29]}

December 14, 2017

HTML 5.2^[30] was published as a W3C Recommendation.^{[31][32]}

<https://en.wikipedia.org/wiki/HTML>

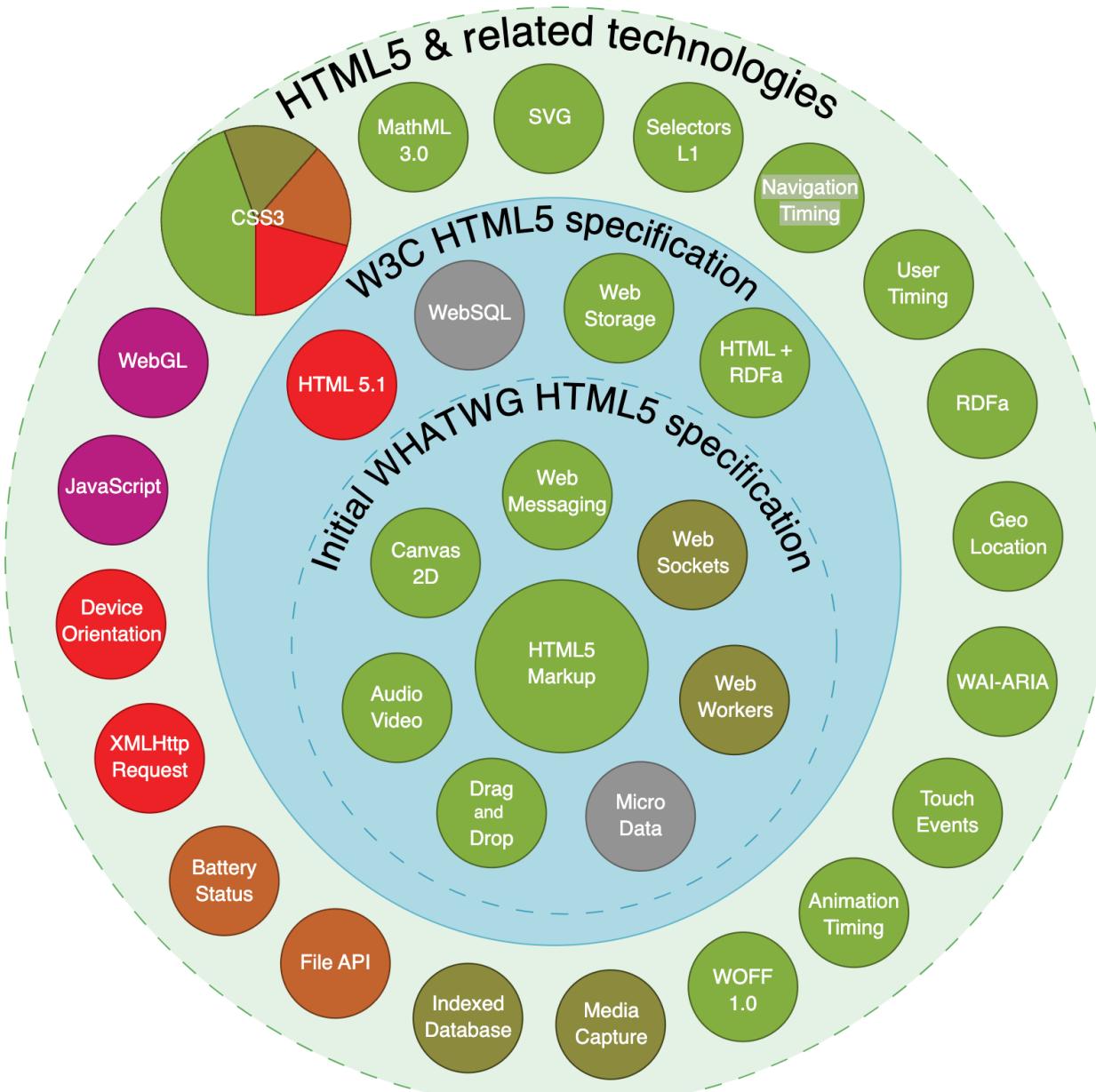
When will there be a HTML6?

- HTML5 was Retired on 27 March 2018
- Additionally, the retirement included HTML 4.0, HTML 4.01, XHTML 1.0, and XHTML 1.1.
- HTML 5.1, HTML 5.2 and HTML 5.3 were all retired on 28 January 2021, in favour of the **HTML living standard**.
- <https://html.spec.whatwg.org/multipage/>

HTML5

Taxonomy & Status (October 2014)

- Recommendation/Proposed
- Candidate Recommendation
- Last Call
- Working Draft
- Non-W3C Specifications
- Deprecated or inactive



CSS 3 & 4?

- CSS 3 is divided into several separate documents called "modules".
- Each module adds new capabilities or extends features defined in CSS 2, preserving backward compatibility.
- Work on CSS level 3 started around the time of publication of the original CSS 2 recommendation.
- The earliest CSS 3 drafts were published in June 1999.
- Due to the modularization, different modules have different stability and statuses
- There is no single, integrated CSS4 specification, because the specification has been split into many separate modules which level independently.

CSS 3

Summary of main module-specifications^[52]

Module	Specification title	Status	Date
css3-background	CSS Backgrounds and Borders Module Level 3	<i>Candidate Rec.</i>	Feb 2023
css-box-3	CSS Box Model Module Level 3	<i>Recommendation</i>	Apr 2023
css-cascade-3	CSS Cascading and Inheritance Level 3	<i>Recommendation</i>	Feb 2021
css-color-3	CSS Color Module Level 3	<i>Recommendation</i>	Jan 2022
css3-content	CSS Generated Content Module Level 3	<i>Working Draft</i>	Aug 2019
css-fonts-3	CSS Fonts Module Level 3	<i>Recommendation</i>	Sep 2018
css3-gcpm	CSS Generated Content for Paged Media Module	<i>Working Draft</i>	May 2014
css3-layout	CSS Template Layout Module	<i>Note</i>	Mar 2015
css3-mediaqueries	Media Queries	<i>Recommendation</i>	Jun 2012
mediaqueries-4	Media Queries Level 4	<i>Candidate Rec.</i>	Dec 2021
css3-multicol	Multi-column Layout Module Level 1	<i>Candidate Rec.</i>	Oct 2021
css3-page	CSS Paged Media Module Level 3	<i>Working Draft, and part migrated to css3-break</i>	Oct 2018
css3-break	CSS Fragmentation Module Level 3	<i>Candidate Rec.</i>	Dec 2018
selectors-3	Selectors Level 3	<i>Recommendation</i>	Nov 2018
selectors-4	Selectors Level 4	<i>Working Draft</i>	Nov 2022
css3-ui	CSS Basic User Interface Module Level 3 (CSS3 UI)	<i>Recommendation</i>	Jun 2018

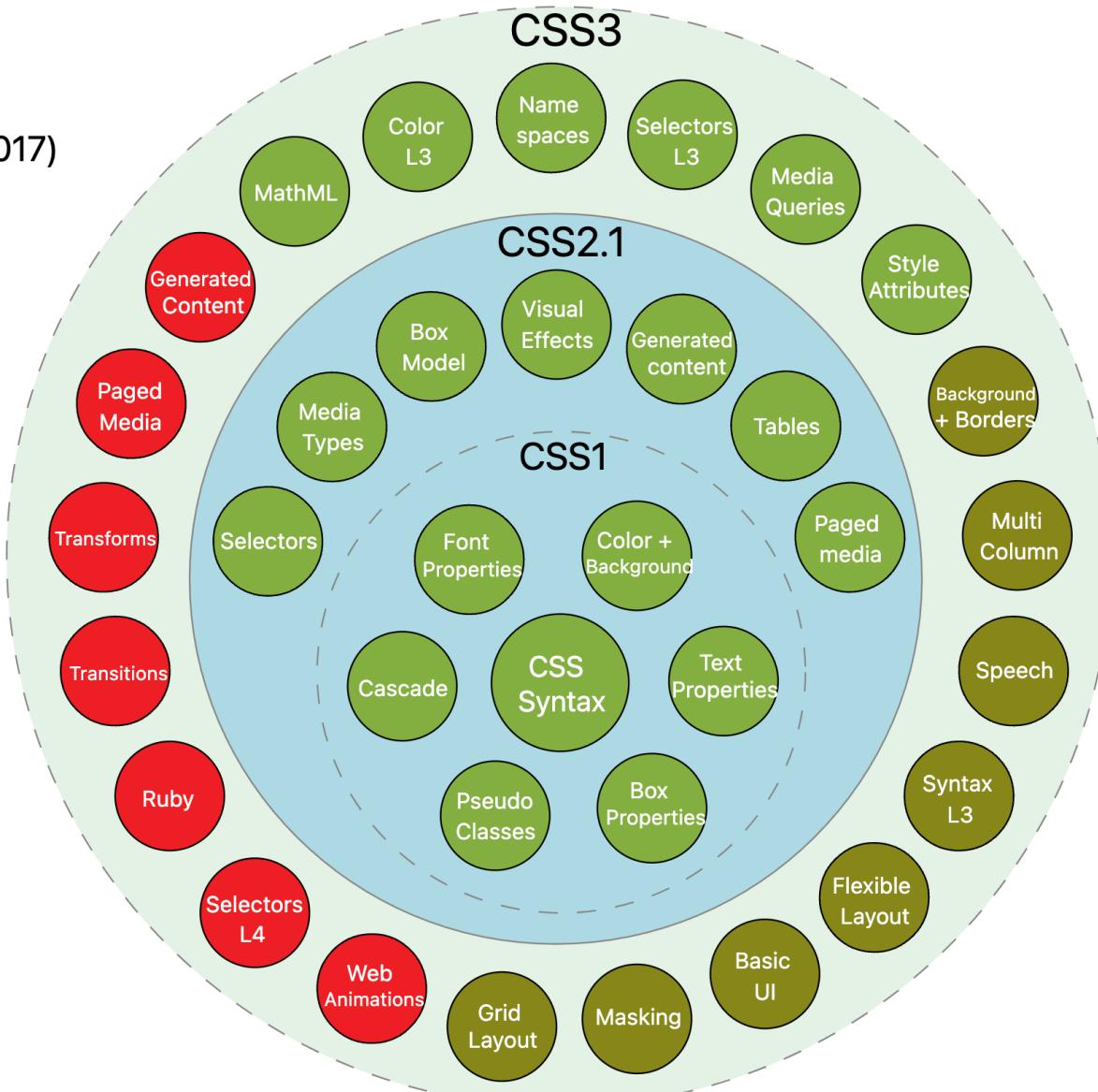
Selectors

- Selectors Level 3
 - <https://www.w3.org/TR/selectors-3/>
- Selectors Level 4
 - <https://www.w3.org/TR/selectors-4/>

CSS3

Taxonomy & Status (September 2017)

- W3C Recommendation
- Candidate Recommendation
- Last Call
- Working Draft
- Obsolete or inactive



ECMA and JavaScript?

- ECMA?
 - European Computer Manufacturers Association
- JavaScript
 - ECMAScript is a standard for scripting languages, including JavaScript, JScript, and ActionScript. It is best known as a JavaScript standard intended to ensure the interoperability of web pages across different web browsers. It is standardized by Ecma International in the document ECMA-262.