

# **DIY Browsers**

By Adrian Cochrane

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# W3C web "recommendations"

Are longer than:

- C11
- C++17
- UEFI
- USB3.2
- POSIX
- Intel x86
- IETF RFCs
- Longest novels listed by Wikipedia

<https://drewdevault.com/2020/03/18/Reckless-limitless-scope.html>

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0. Freedom to use
  1. Freedom to modify
  2. Freedom to share
  3. Freedom to share modifications

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# WebKit Linecounts

## WebKit

18m

## Tests

10m

## Source

7.3m

## JavascriptCore

0.6m

## 3rd Party

4m

## libwebrtc

2.7m

**WebCore**

1.6m

**WebDriver**

6.8k

**WebGPU**

29k

**WebInspectorUI**

0.25m

**WebKit**

0.5m

**WebKit Legacy**

0.13m

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## WebCore

1.6m

**bridge + platform + PAL**

0.67m

**dom + domjit + html + mathml + svg + xml +  
editing + history + page**

0.30m

**css + cssjit + animation + display + layout +  
rendering + style**

0.26m

**bindings + crypto + fileapi + storage + workers  
+ worklets**

0.12m

**loader + contentextensions**

41k

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```
gemiני.circumlunar.space:1965
> gemiני://gemiני.circumlunar.space/
< 20 text/gemiני
< # Project Gemiני
< # Overview
< Gemiני is a new internet protocol which:
< * Is heavier than gopher
< * Is lighter than the web
< * Will not replace either
< * Strives for maximum power to weight ratio
< * Takes user privacy very seriously
< # Resources
< => news/ Official Project Gemiני news
```

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**Hypertext is universal**



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## **Rhapsode**

Voice browser

## **Amphiarao**

Webpage debugger

## **Haphaestus**

TV browser

The *Argonaut Stack!*

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**Source code simplicity is  
important  
Inclusivity is vital!**

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# Mechanism

1. **HURL**
2. http-client-tls
3. html-conduit
4. **html-conduit-stylist**
5. **Haskell Stylist**
6. **CatTrap + Balkon**
7. **Mondrian + Typograffiti**

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- Harfbuzz
  - LibICU
  - Fontconfig
  - FreeType

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# **Live Demo**

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- Contribute code
  - Build your own!
  - Use latest HTML & CSS
  - Progressively enhance, especially regarding JavaScript use
  - Proxy silos (e.g. Invidious, Nitter, Scribe)
  - Build native (GTK? Qt?) standards-based apps
  - Keep making the web great!

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- <https://haphaestus.org/>
  - <https://rhapsode-web.org/> 9.4kLoC
  - <https://argonaut-constellation.org/>
  - NLnet-funded

Questions?