

FOSDEM 2025

## Who am I

Jelle Raaijmakers

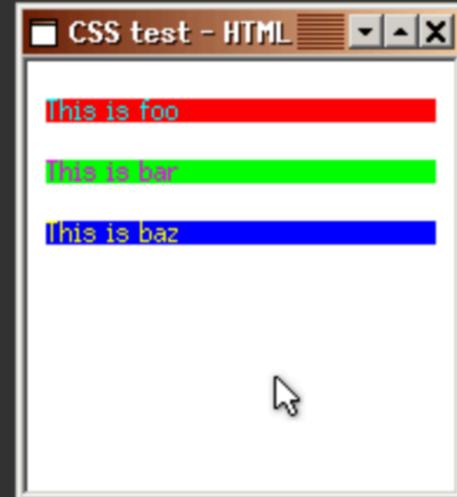
Operations & developer at the Ladybird Browser Initiative

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# Origins: SerenityOS

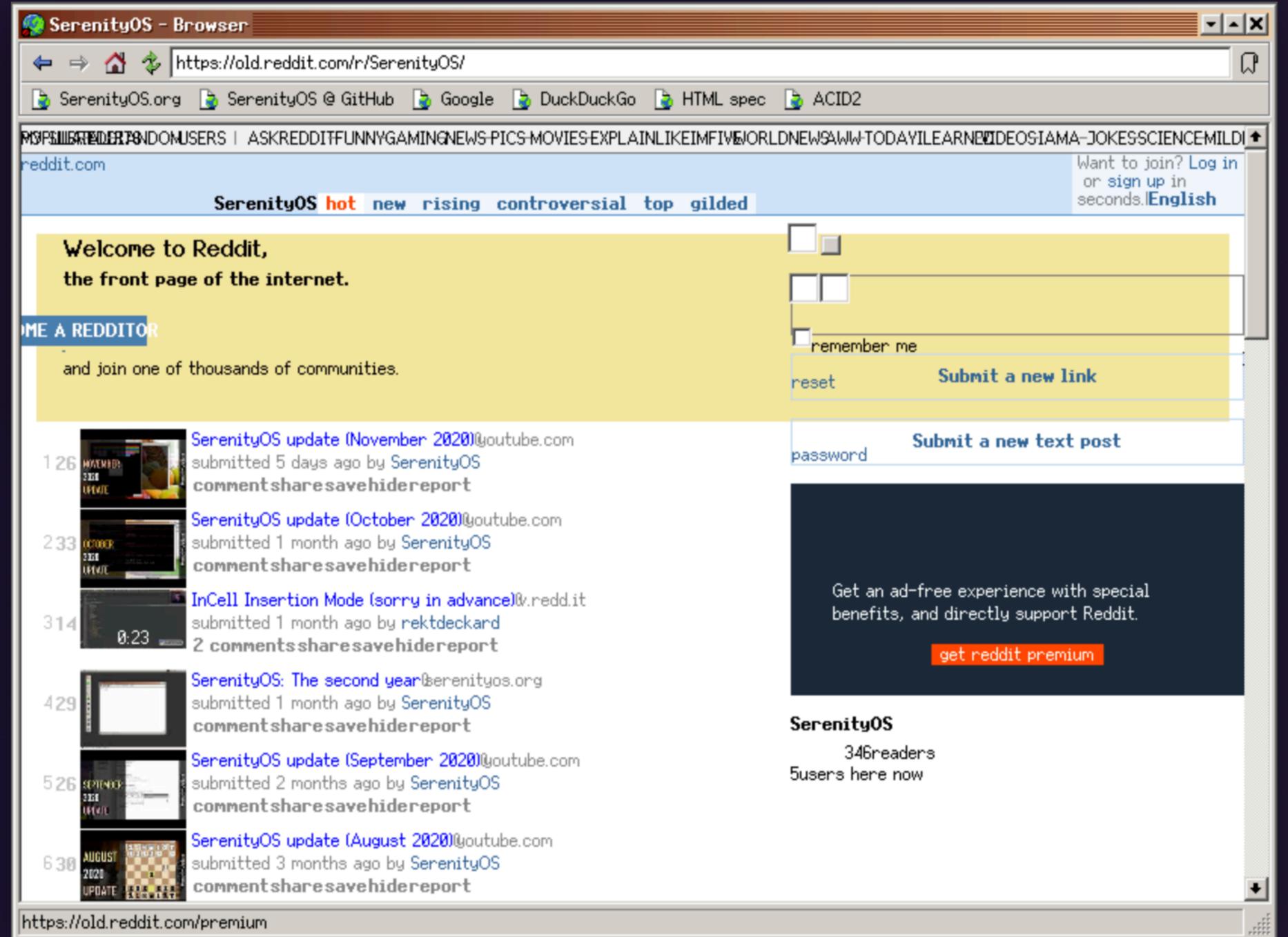
2018-2019: from zero to HTML



```
Text Editor: /home/anon/css.html
1 <html>
2   <head>
3     <title>CSS test</title>
4     <style type="text/css">
5       #foo {
6         background-color: #ff0000;
7         color: #00ffff;
8       }
9       #bar {
10        background-color: #00ff00;
11        color: #ff00ff;
12      }
13      #baz {
14        background-color: #0000ff;
15        color: #ffff00;
16      }
17    </style>
18  </head>
19  <body>
20    <div id="foo">This is foo</div>
21    <div id="bar">This is bar</div>
22    <div id="baz">This is baz</div>
23  </body>
24 </html>
25
Line: 20, Column: 27
```

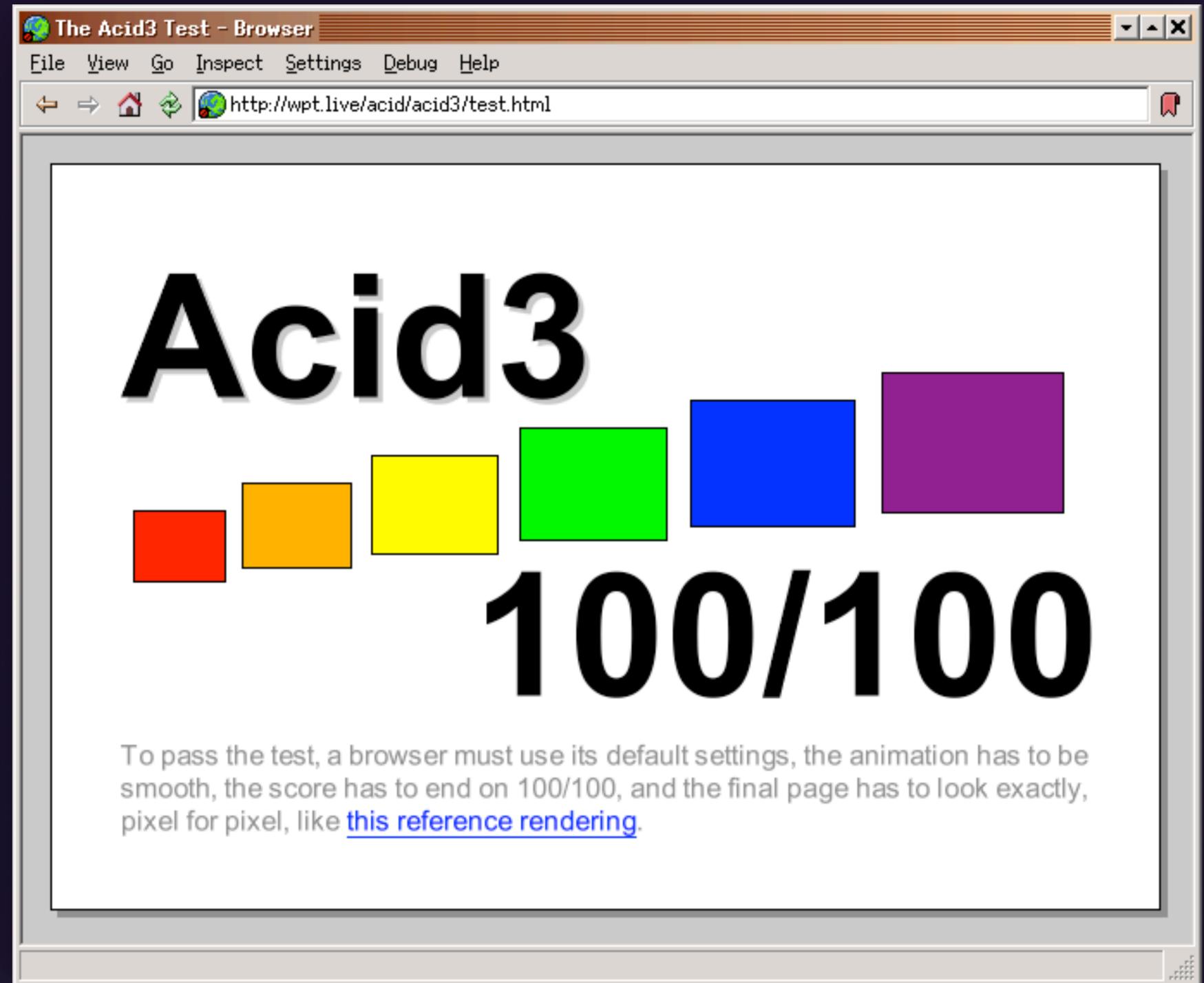
# Origins: SerenityOS

2020: "real" websites begin to work; start of multiprocess



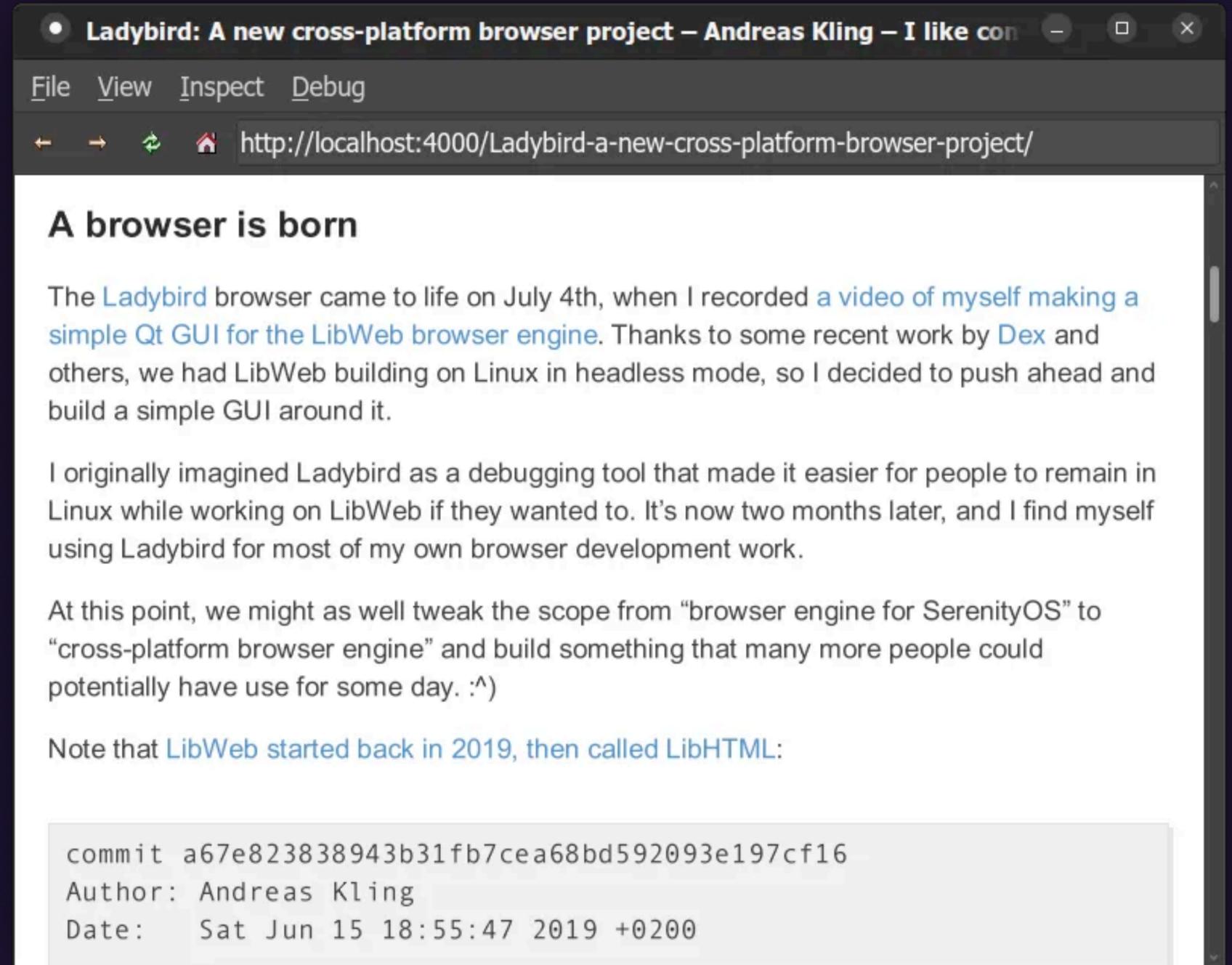
# Origins: SerenityOS

2022: Acid3 conquered



# Origins: Ladybird

2022: A separate project with a Qt chrome



**2024: the initiative**

Andreas Kling | Mon, 01 Jul 2024

# **Announcing the Ladybird Browser Initiative**

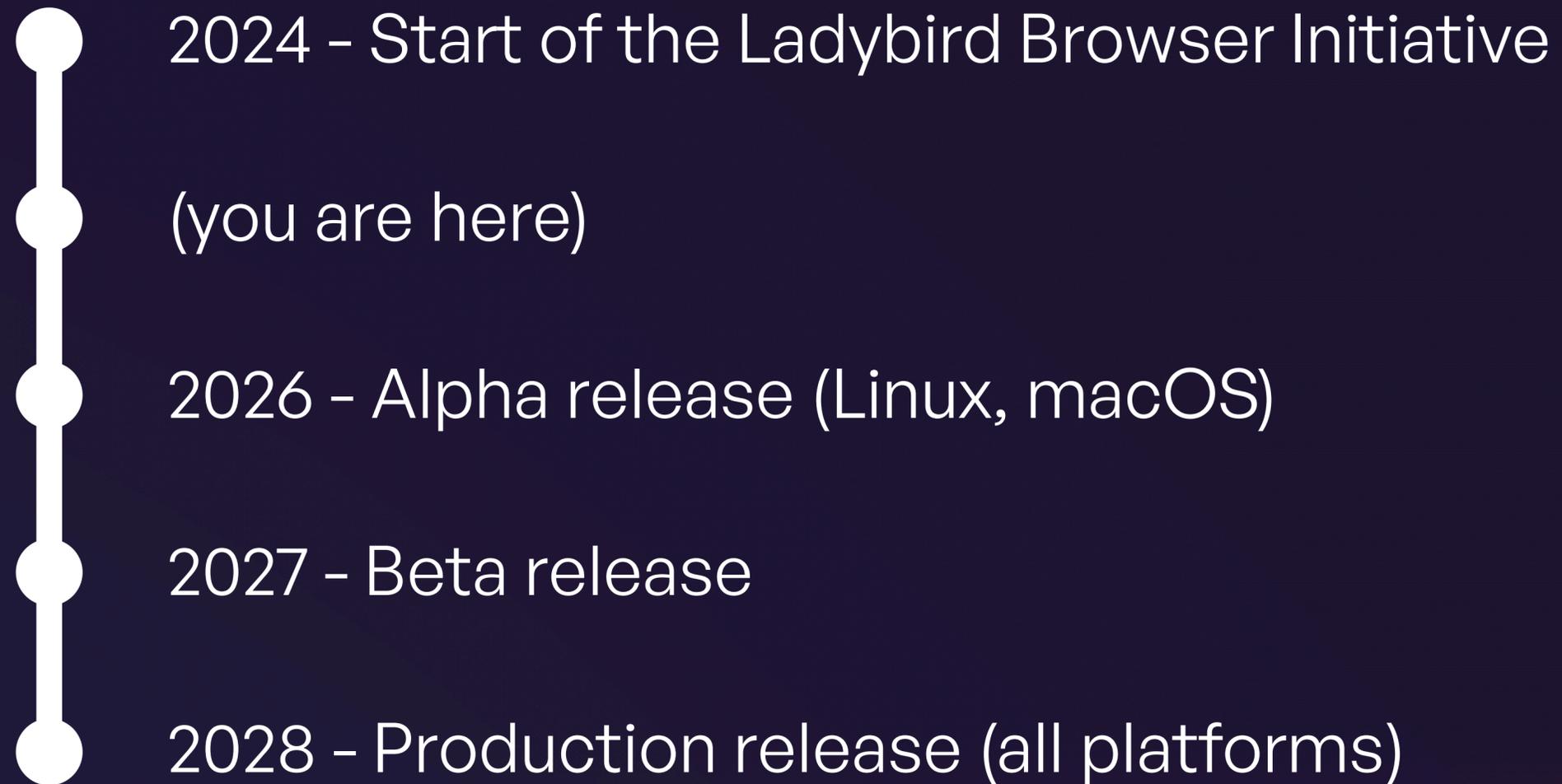
## **Principles behind Ladybird**

- A new web engine based on web standards
- No monetization of user data, no default search deals, etc.
- Independent; donations and sponsorships are no strings attached

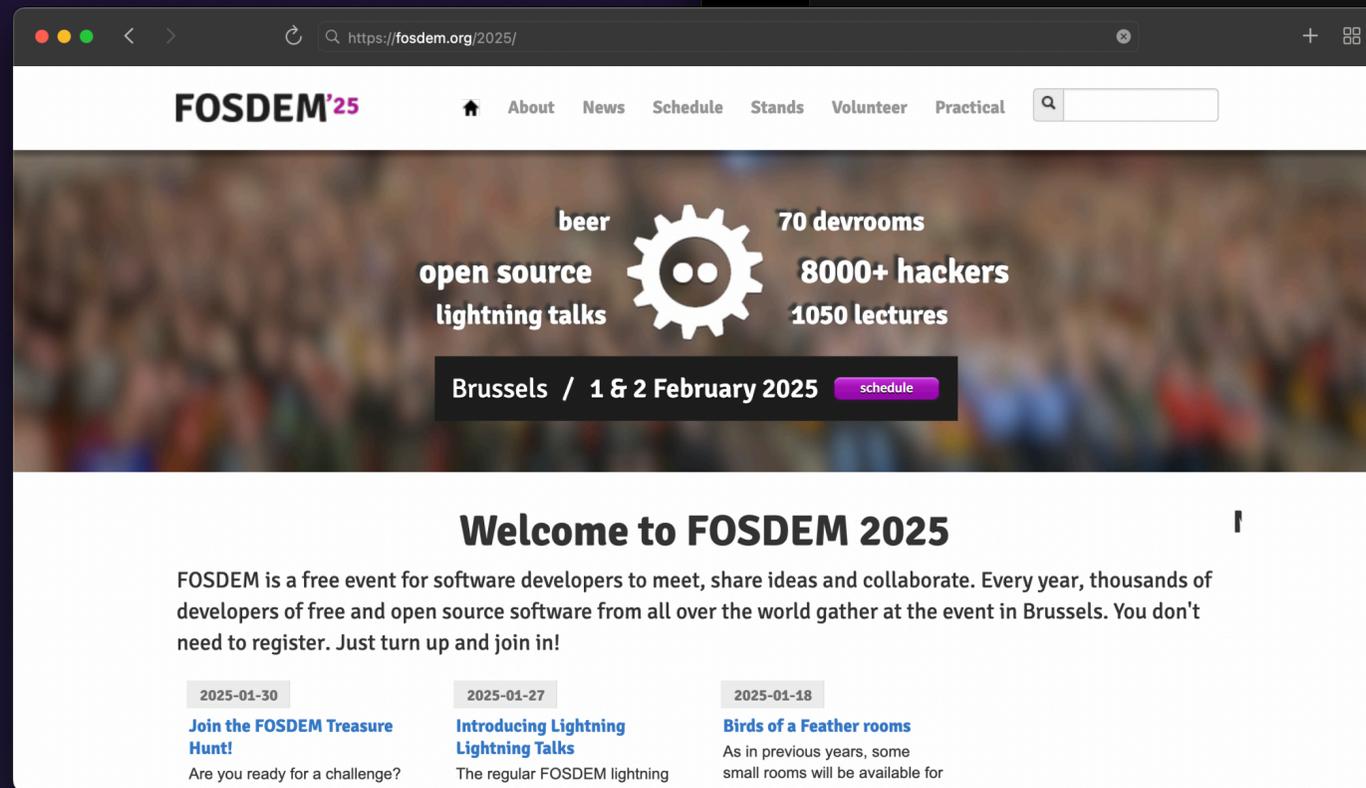
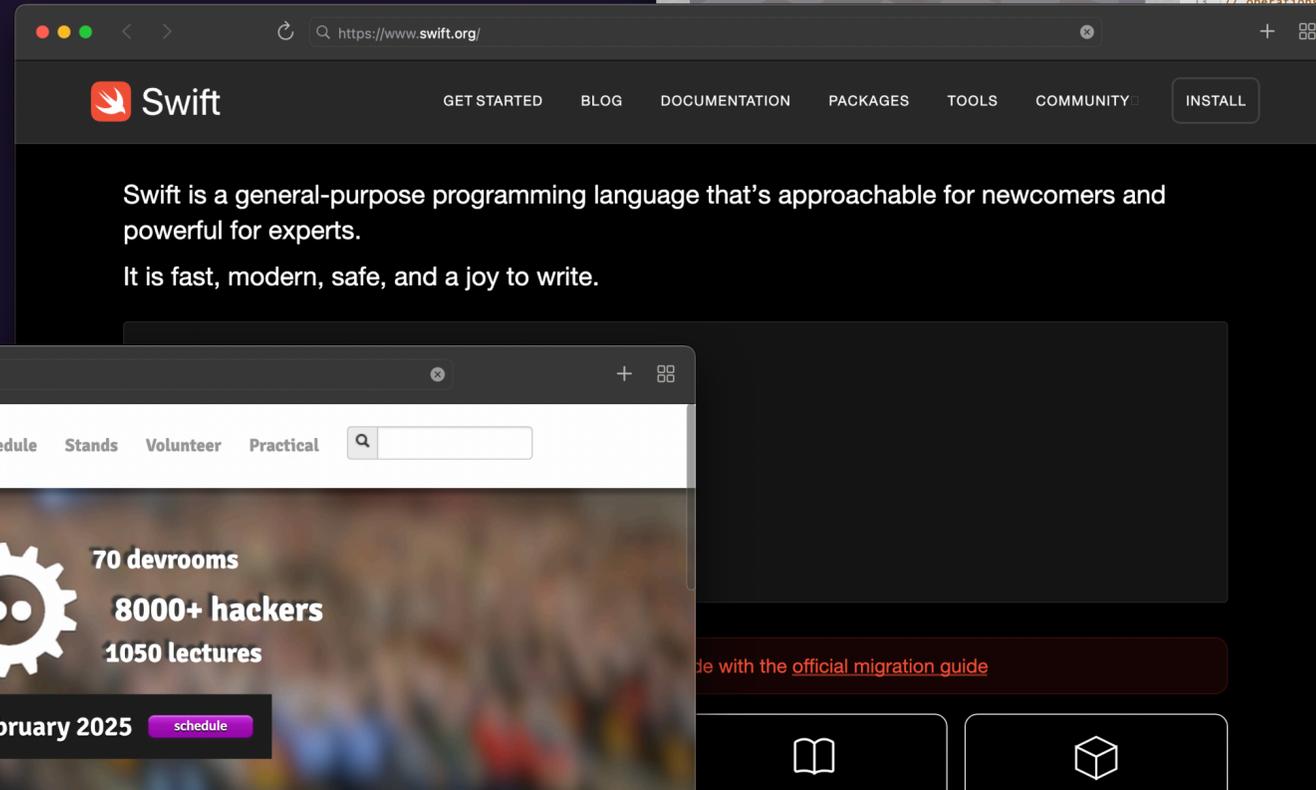
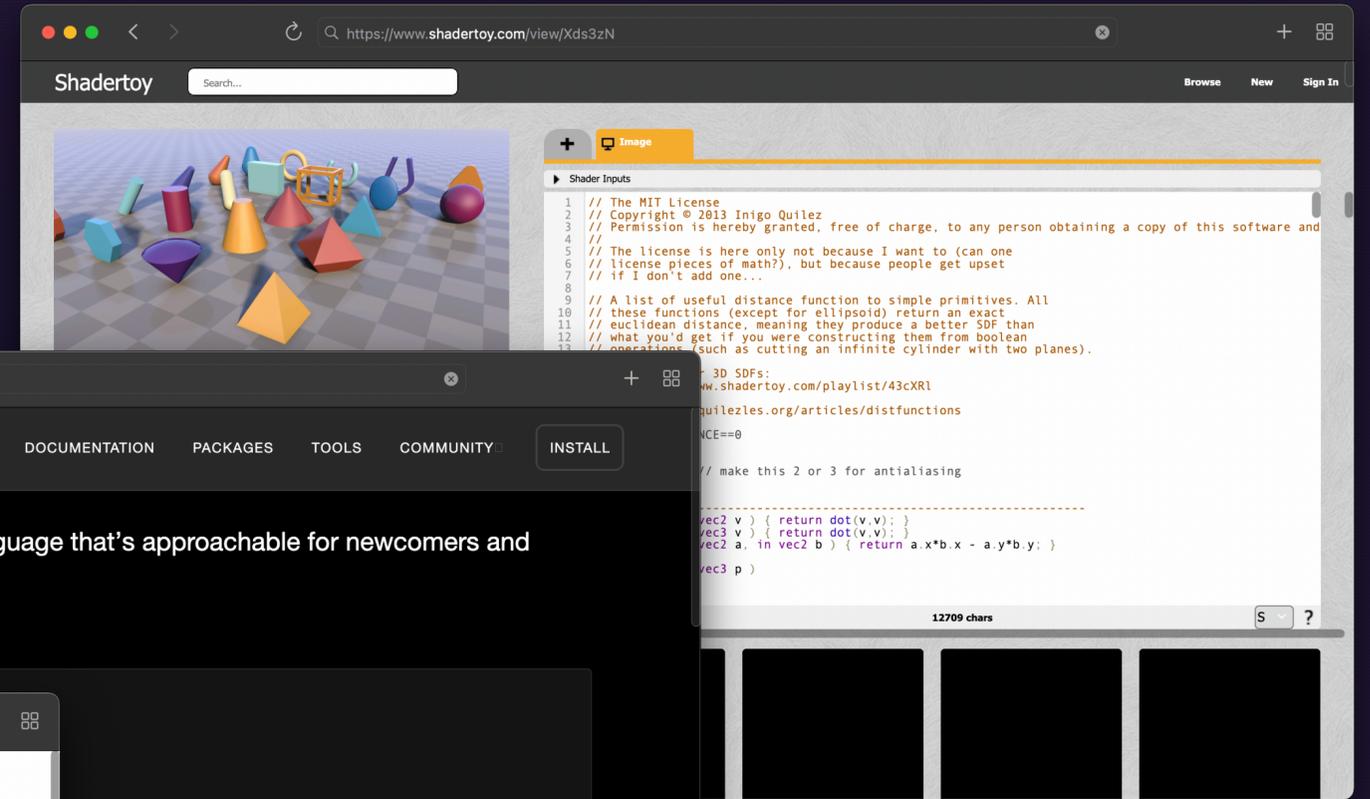
## **Ladybird's goals**

- Render the actual web with acceptable stability, security and performance
- Advance the web platform by implementing and improving web specs
- Increase web engine diversity
- Have a lot of fun while doing so!

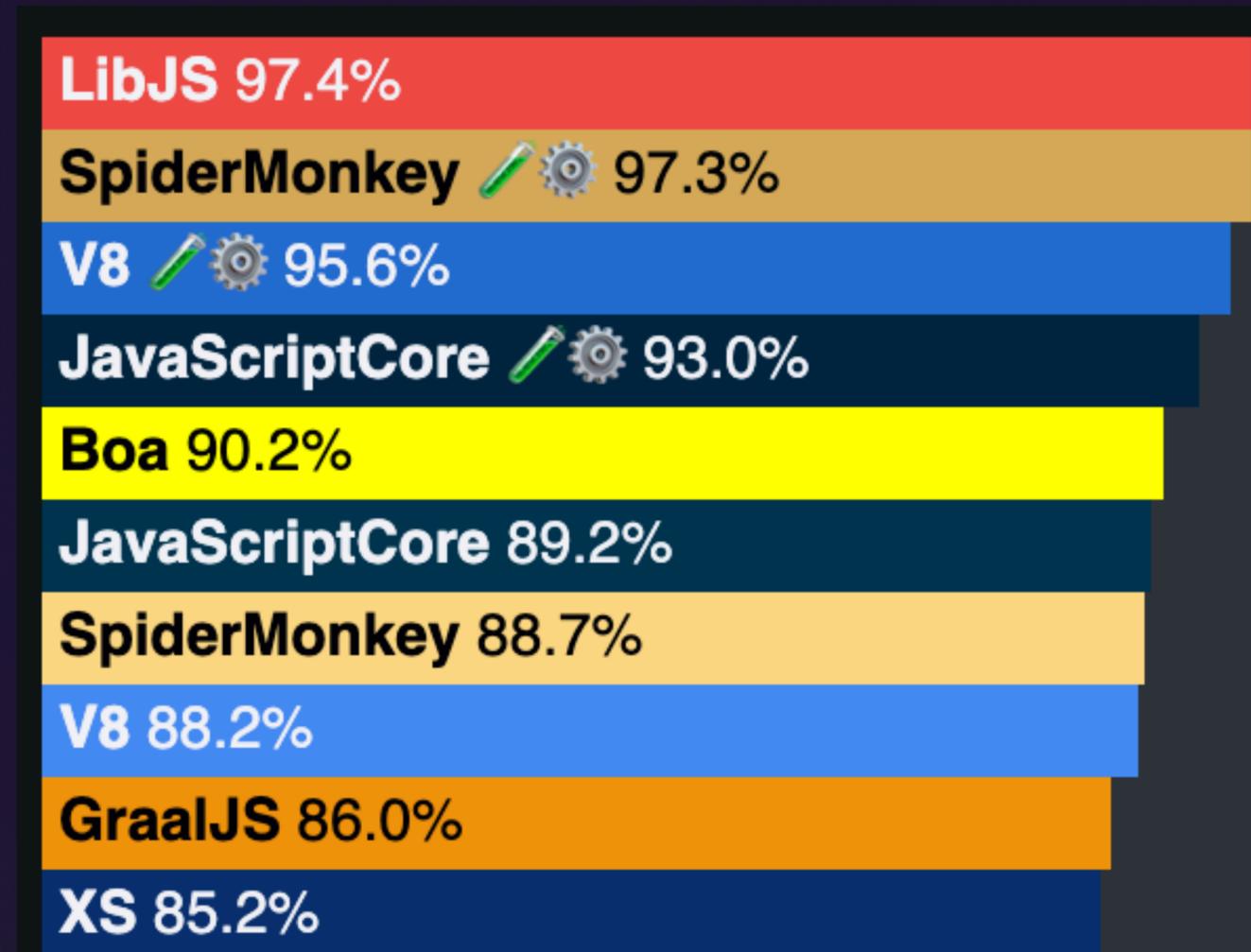
# Timeline



# Status quo



# LibJS: Pretty amazing



Results from 2025-02-01

<https://test262.fyi>

# Web platform tests

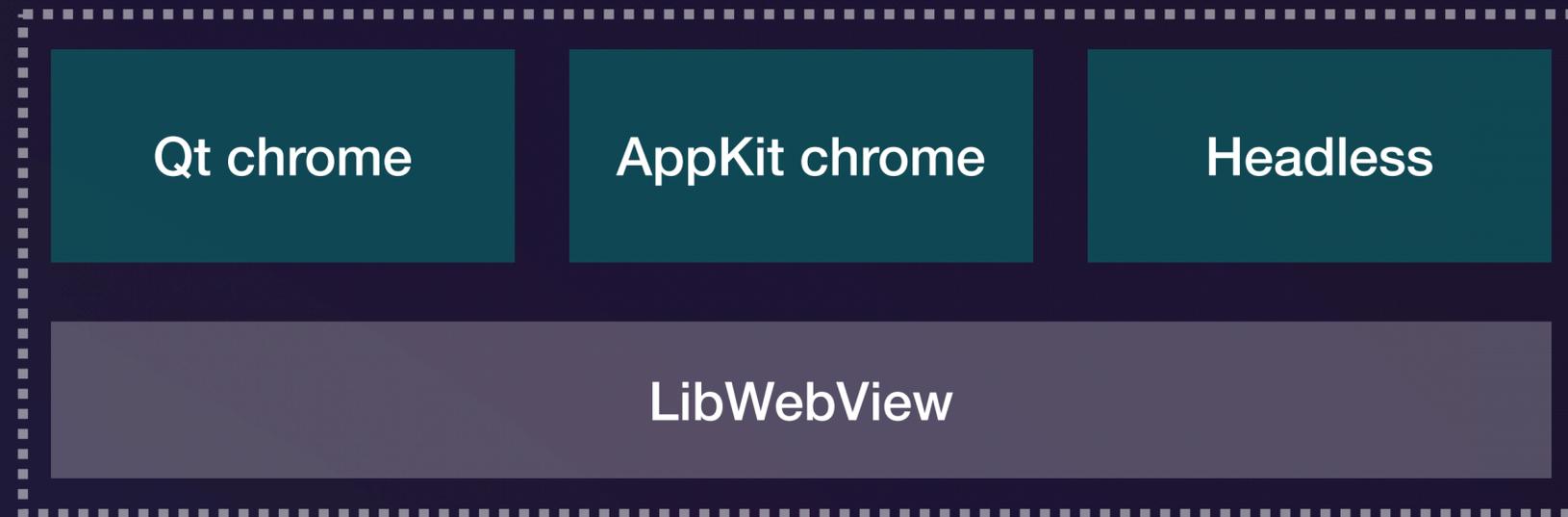


<https://linegoup.lol>  
Results from 2025-02-01

# Overview

- Full-stack browser & engine written in C++
- Licensed under 2-Clause BSD
- Web tech written from scratch using spec-driven development
- 3<sup>rd</sup> party libraries used for non-web tech (e.g. rasterization, audio, image decoding)
- Runs on Linux and macOS

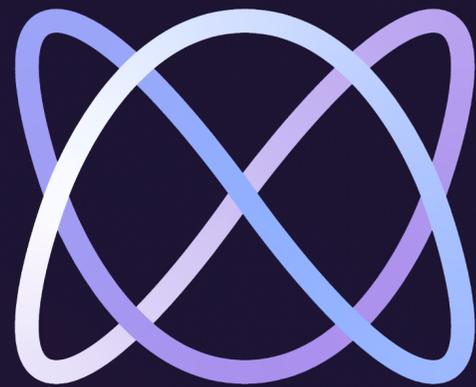
# Multi-process architecture



## Future work

- Writing new code in Swift, C++ interop with GC;
- Support for Encrypted Media Extensions (DRM);
- Security model and fingerprinting prevention;
- Lots and lots of performance improvements;
- Staying on top of ever-moving (proposals for) specifications.

**Thank you!**



Ladybird

<https://ladybird.org>