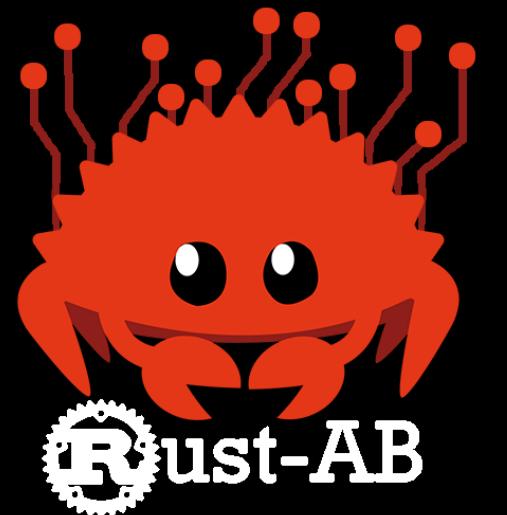




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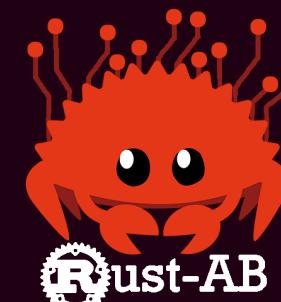


Rust AB: Graphics Update & Distributed Flockers

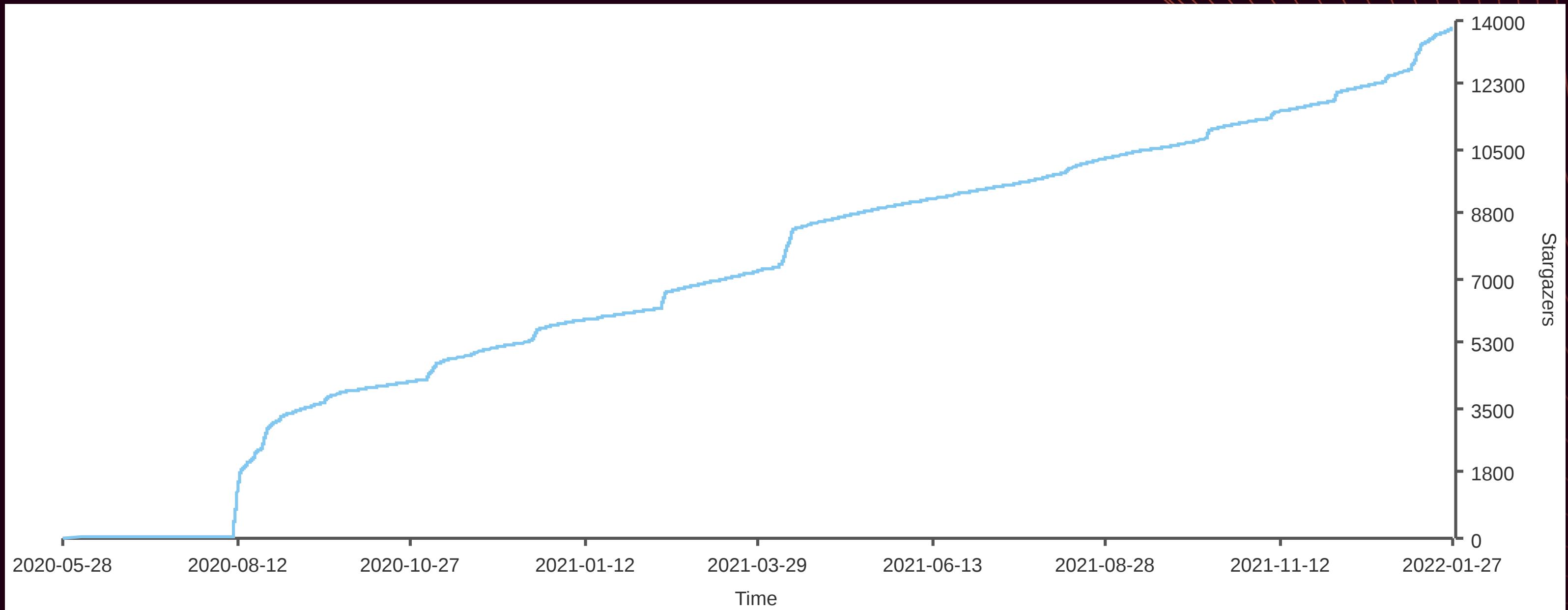
Speaker:
Pasquale Caramante
Francesco Foglia



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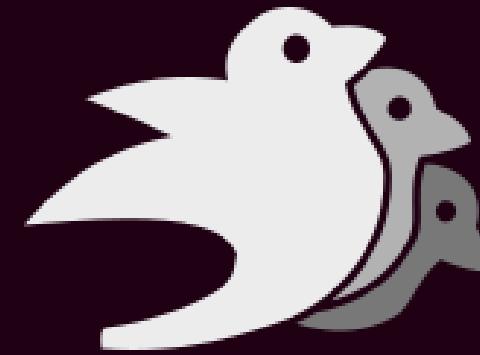
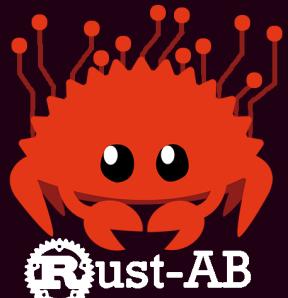


One of the most popular open
source game engine on GitHub





ISISLab



BEVY

Update 0.6

What has changed?

01

New renderer

02

Ergonomics

03

Optimizations

New renderer



01 Pipelined rendering

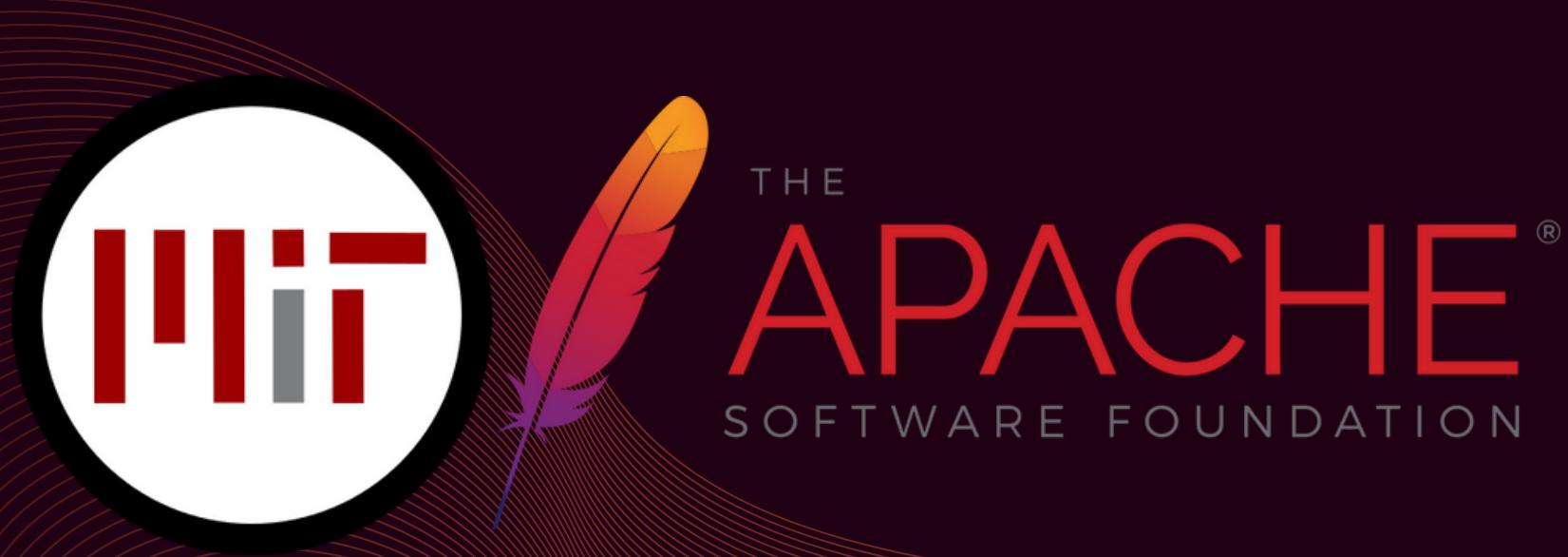
02 Render subgraphs

03 Removal of the HAL between Bevy and
wgpu

04 WGSL and compute shaders support

05 Native WebGL support

Ergonomics

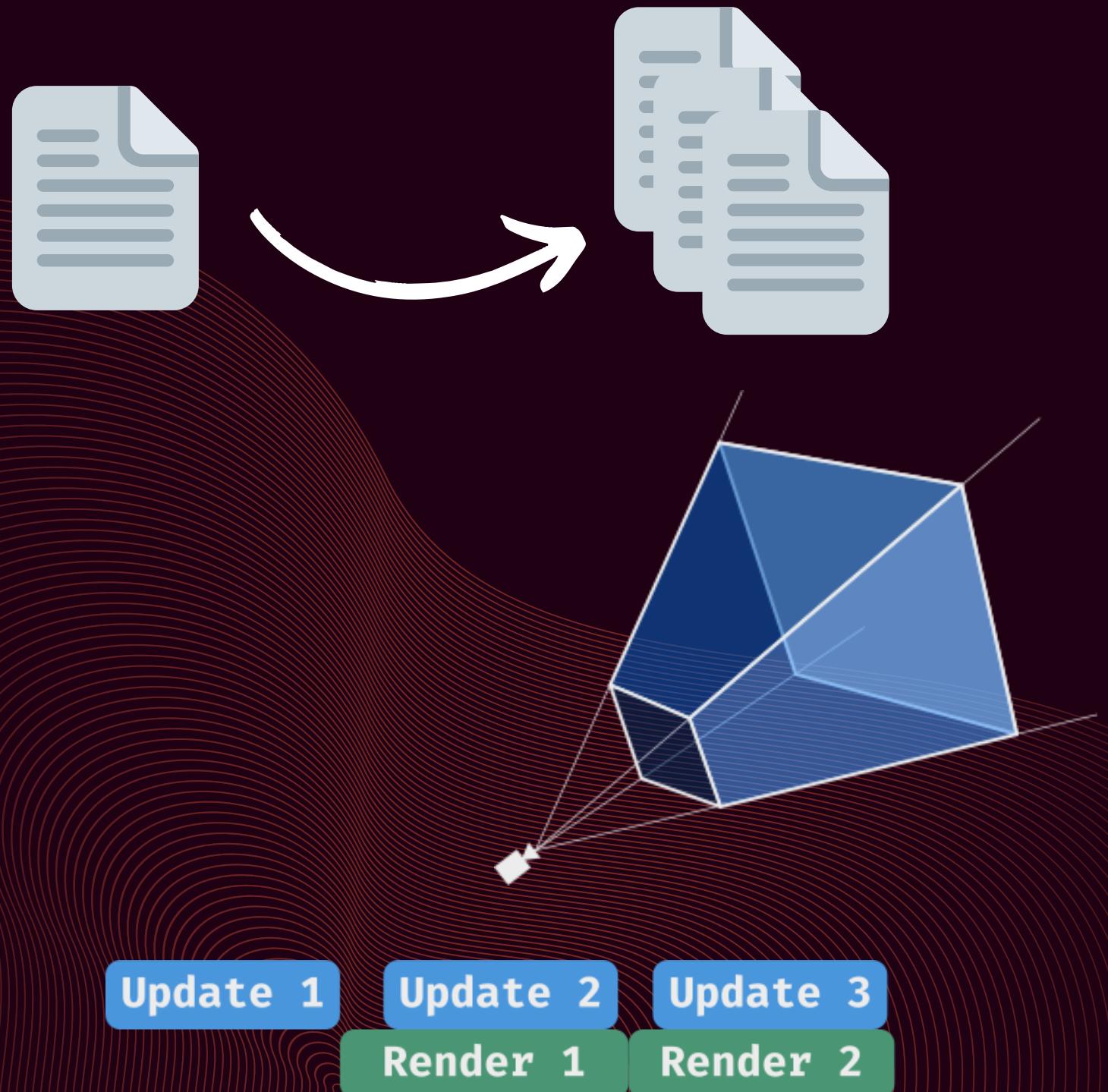


01 License: MIT -> Dual MIT/Apache-2.0

02 Smaller release schedule

03 Component trait

Optimizations



01 Sprite batching

02 Frustum culling

03 Parallel pipelined rendering (under development)



How did this affect Rust-AB?

Sprite batching

Benchmark Hardware:

PC: Dell G3 15

CPU: Intel(R) Core(TM) i5-10300H CPU @ 2.50GHz
2.50 GHz

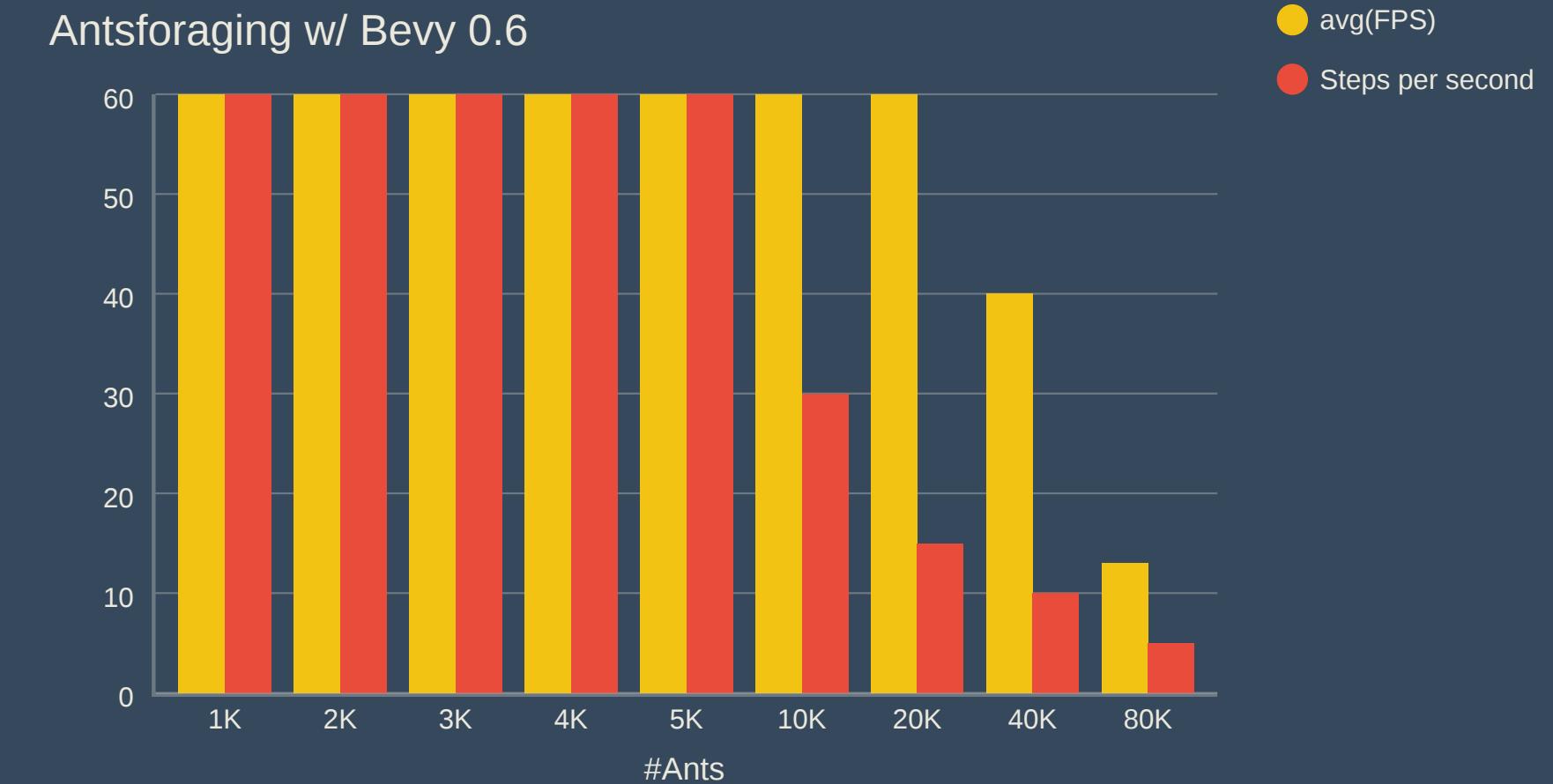
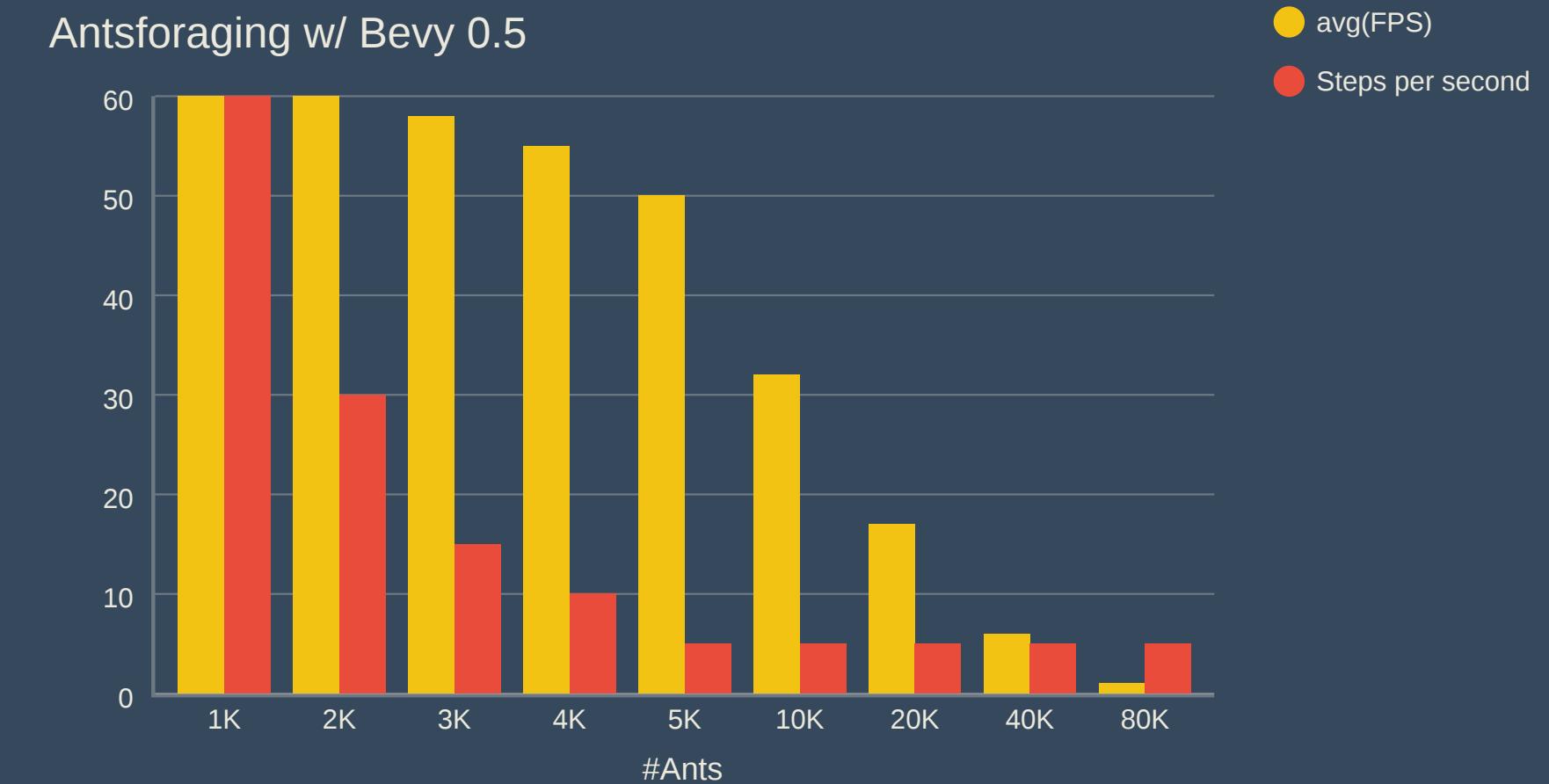
GPU: NVIDIA GeForce GTX 1650 4 GB GDDR6

RAM: 8,00 GB

OS: Windows 10 Pro

Rust: rustc 1.57.0 (f1edd0429 2021-11-29)

Execution command: cargo make --profile release run



— Bevy_canvas

— Bevy_webgl2

+

Bevy_prototype_lyon

+

Native WebGL back-end



Steps per seconds controller



Future plans

To do



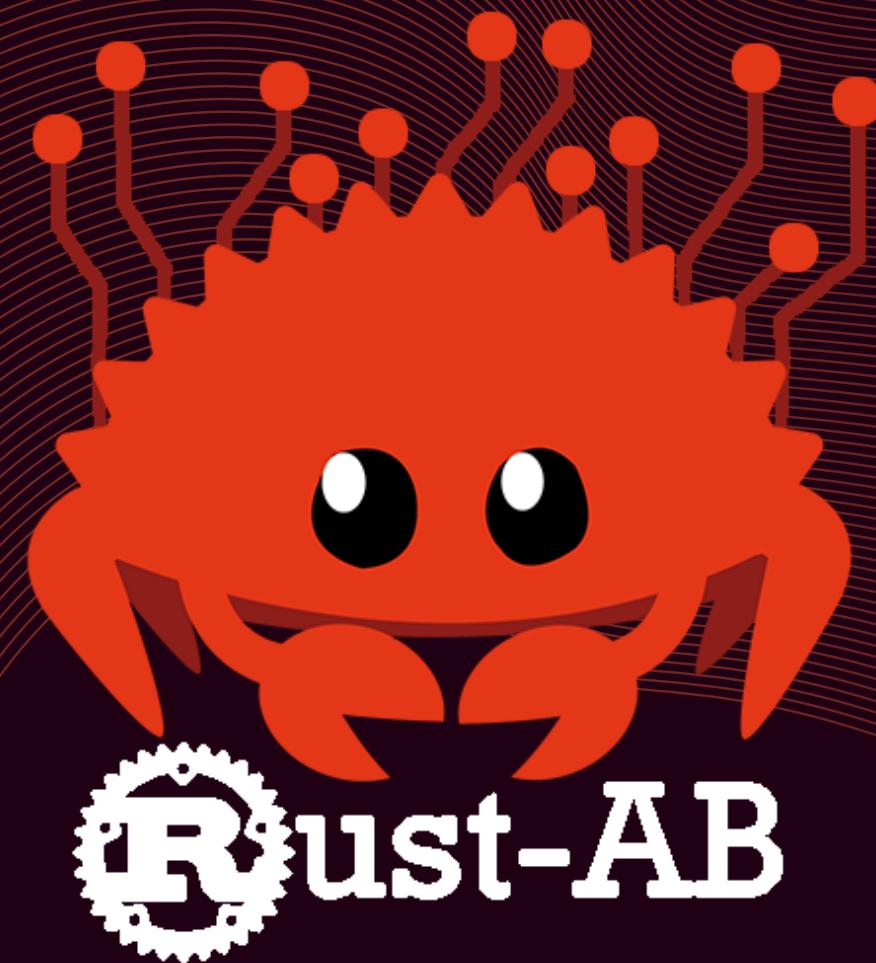
Plotting: possibly made easier by the 0.6 Bevy update



Simulation parameter configuration from the UI



More fields, such as OpenStreetMap



Thank you!

Landing page: <https://rust-ab.github.io/>
GitHub: <https://github.com/rust-ab/rust-ab>
Bevy 0.6 branch: visualization-bevy-0.6 (will
soon be merged on main)