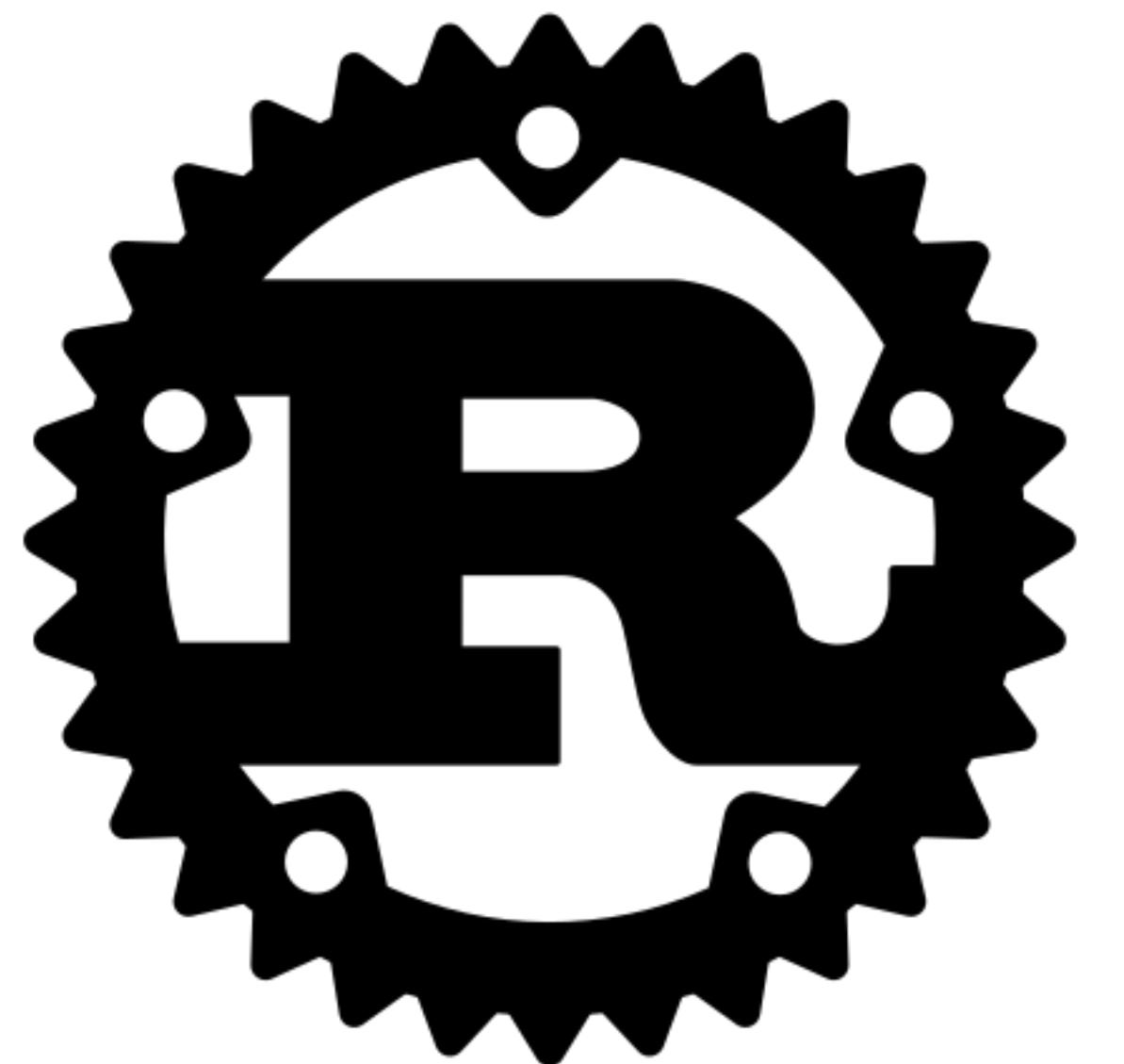


Rust



+

Wayland







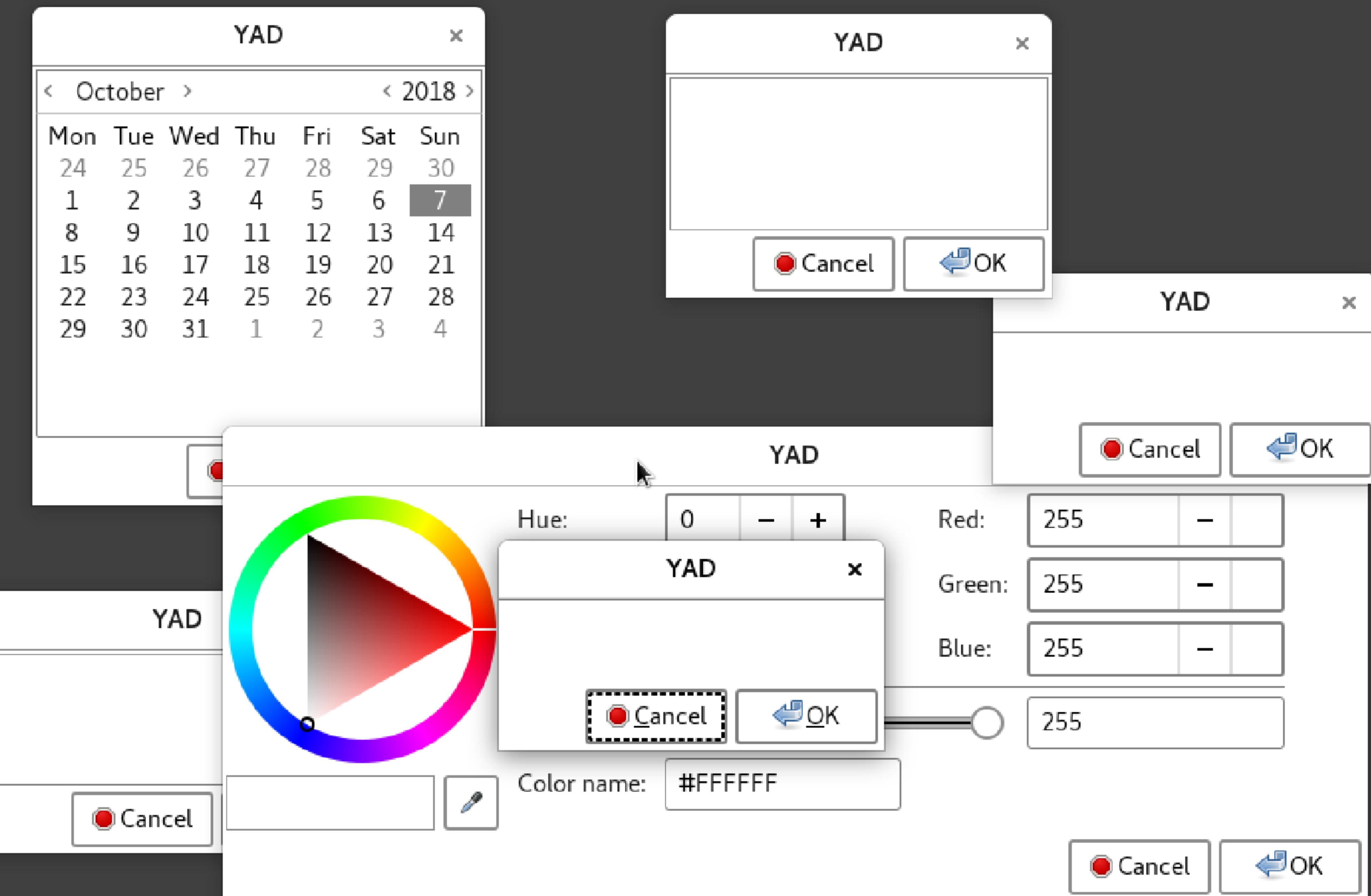
Wayland is intended as a simpler replacement for X,
easier to develop and maintain.

Wayland is a protocol for a compositor to talk to its clients
as well as a C library implementation of that protocol.

– wayland.freedesktop.org



Wayland



Unlike X, the Wayland input stack doesn't allow applications to snoop on the input of other programs (preserving confidentiality), to generate input events that appear to come from the user (preserving input integrity), or to capture all the input events to the exclusion of the user's application (preserving availability).

– <https://lwn.net/Articles/589147/>



Wayland

wl_seat
wl_keyboard
wl_shell
zxdg_output_manager_v1
zwp_tablet_manager_v2
gamma_control_manager
orbital_screengrapher
zwp_idle_inhibit_manager_v1
zwp_input_method_manager_v2
zxdg_decoration_manager_v1
zwp_pointer_constraints_v1



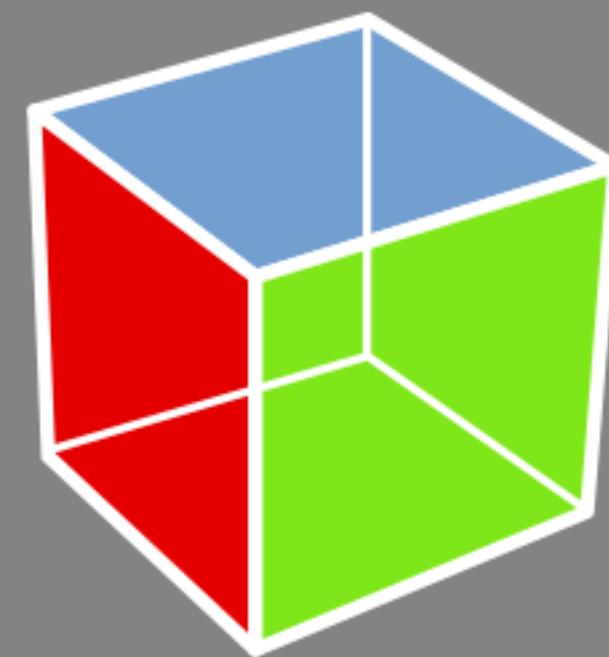
Wayland

Weston



Wayland

Weston



GTK+ 3



Qt 5



Wayland

Weston
Gnome-shell
Sway

Way-cooler

Rustland Fireplace



Rust



GTK+ 3



Qt 5



Wayland

But wait,
why?



Rust



Purism

We believe people should have secure devices that protect them rather than exploit them. To that purpose, we provide everything people need in a convenient hardware and software product. We offer high-quality privacy, security, and freedom focused computers and software.

What should a window manager be?

Reliable

Fast

Smooth

Quick to build



Rust

What should a window manager be?

Reliable

Fast

Smooth

Quick to build

Type system

Zero-cost abstractions

Concurrency?

Ergonomics, libs?



Rust

Libraries?

smithay
client toolkit

wayland-client

wayland-client

Fireplace

smithay

wayland-server

wayland-server

Way-cooler

wlroots-rs **wlc-rs**

wlroots

wlc



Rust

perceptia & skylane

Mesa links to the wayland C libs and expects the client to give it pointers to C structs from this lib to initialize an OpenGL context. As such, if you want to support OpenGL, both client-side and server-side, you need to use the official C libraries.

– levanfsg on Reddit



Rust

Let's get down to business!



Rust