Graphics beyond the main compositor
“Happy Place”

- no complex hardware
- trivial software rendering
- no external vendor libraries
- no timing issues
“Happy Place”

- no complex hardware
- trivial software rendering
- no external vendor libraries
- no timing issues

..so I was told.
Desktop Environment

Login Manager

systemd-logind

Kernel

Firmware

System Console
Hide!
Functionality vs. Eye-candy
- "Branding" / eye-candy
- Passwords / Options
- Debugging / Error handling
Branding

- Distraction, not attraction
Branding

- Distraction, not attraction
- Branding is crucial
Debugging / Error-Handling

- Universal Console + System-log
Debugging / Error-Handling

- Universal Console + System-log
  - drmlog
- Multi-column
- Integer scaling
- Atomic modesetting
Debugging / Error-Handling

- Universal Console + System-log
  - drmlog
  - systemd-emergencyd
  - systemd-consoled
User-Interaction

- polkit et. al.
User-Interaction

- polkit et. al.
  - SAK
Challenges
“Every frame is perfect”
(wayland style)
“Every frame is perfect”
(wayland style)
software-rendering
hardware-handover
Multi GPU
Internationalization and Accessibility
Internationalization and Accessibility
Global Hotkeys
Global Hotkeys BROKEN
Non KMS?