

Moving the Linux Desktop to another Reality

xrdesktop

Christoph Haag

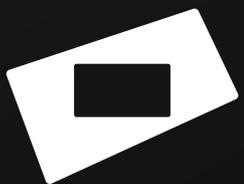


COLLABORA



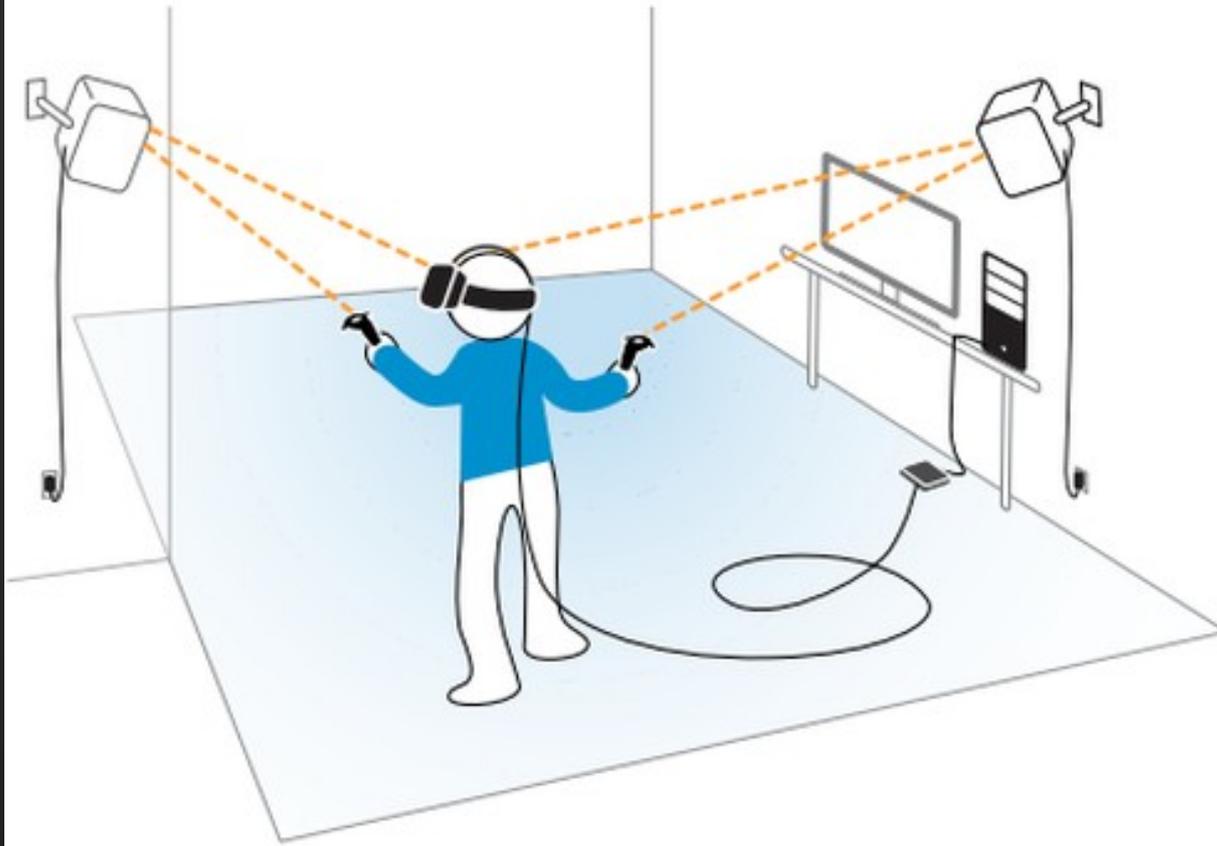
2D Display and Input

- Monitor: rectangle(s), non-specific position
- X11/Wayland compositor handles rendering
- Keyboard: 101-105 digital buttons
- Mouse: 3-7 digital buttons, analog 2D
- libinput + X11/Wayland handles input



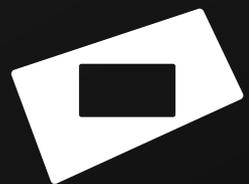
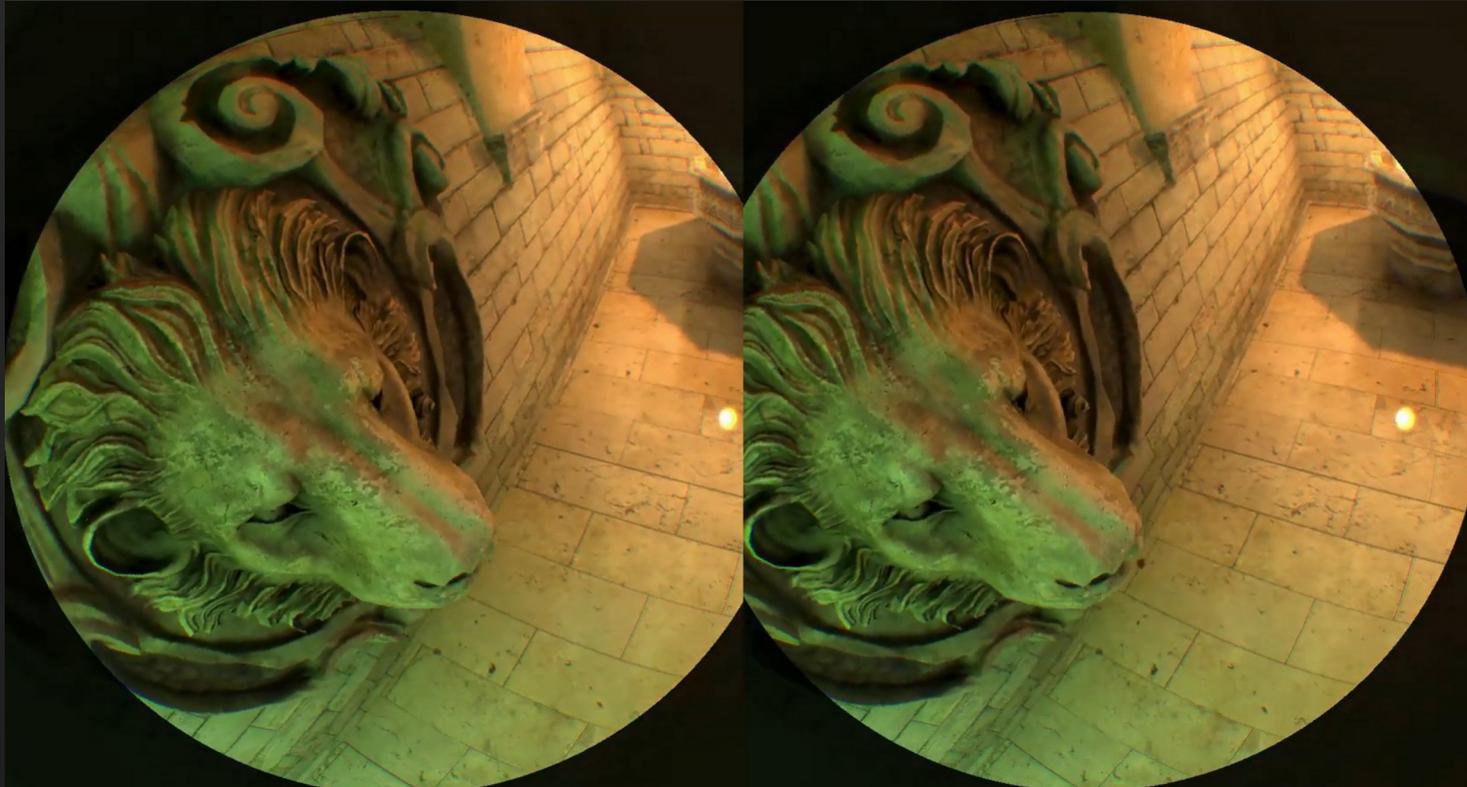
XR Tracked Input

- Tracking usually done on PC
 - Computer Vision



XR Rendering

- Perspective
- 1 perspective per eye
- Lens distortion
- Direct Mode (`VK_EXT_acquire_xlib_display`)



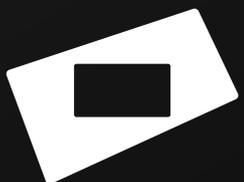
XR runtime

- Handles Rendering & Input
 - Like libinput/X11/Wayland
- Many proprietary APIs
- Khronos: OpenXR

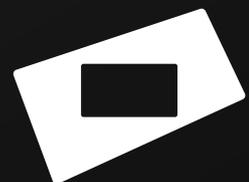
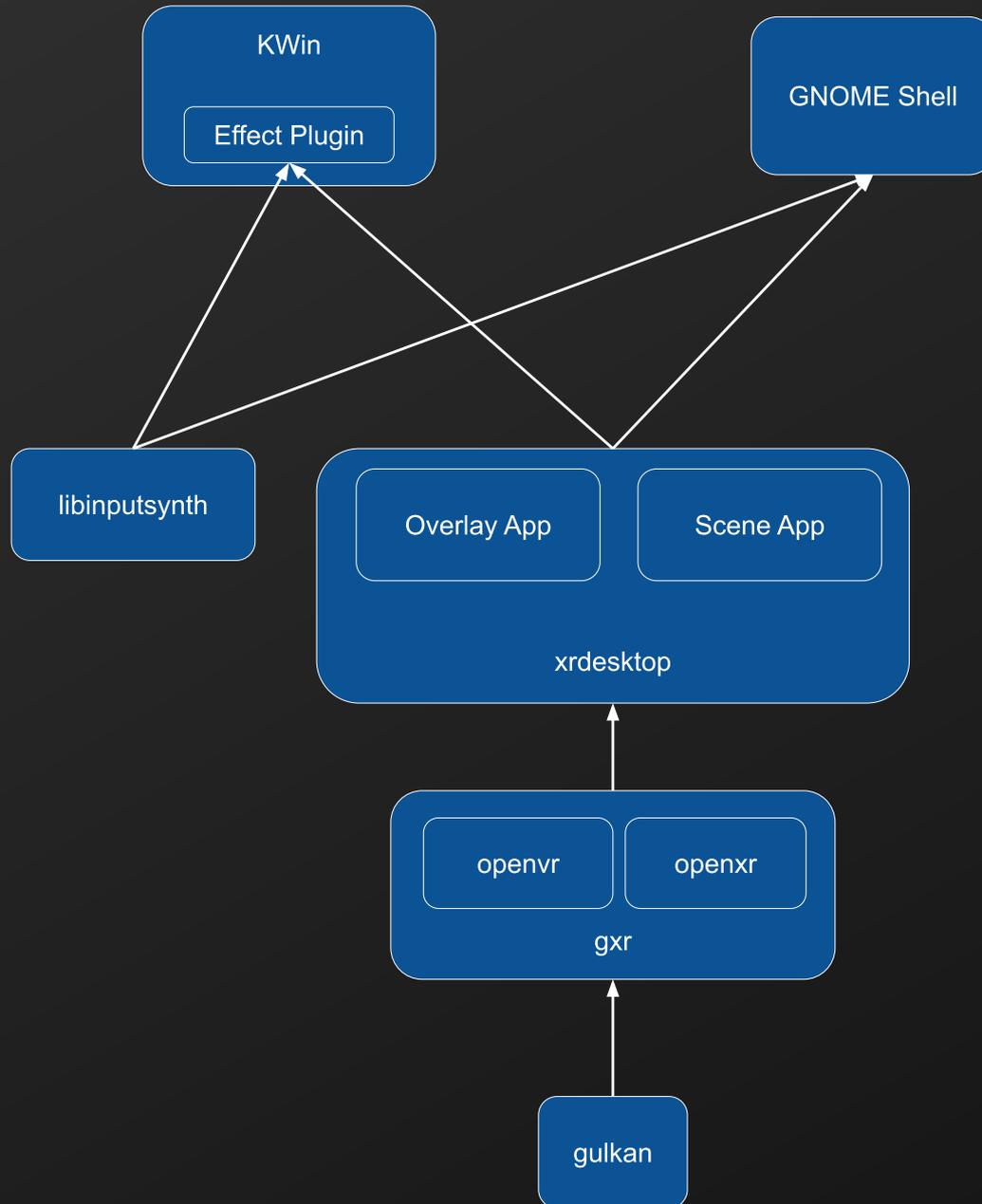
Monado: Open Source Augmented & Virtual Reality

 3 Oct 2019, 09:00

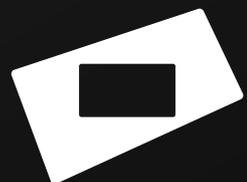
 45m



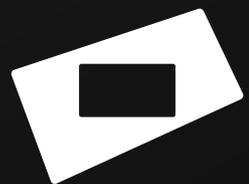
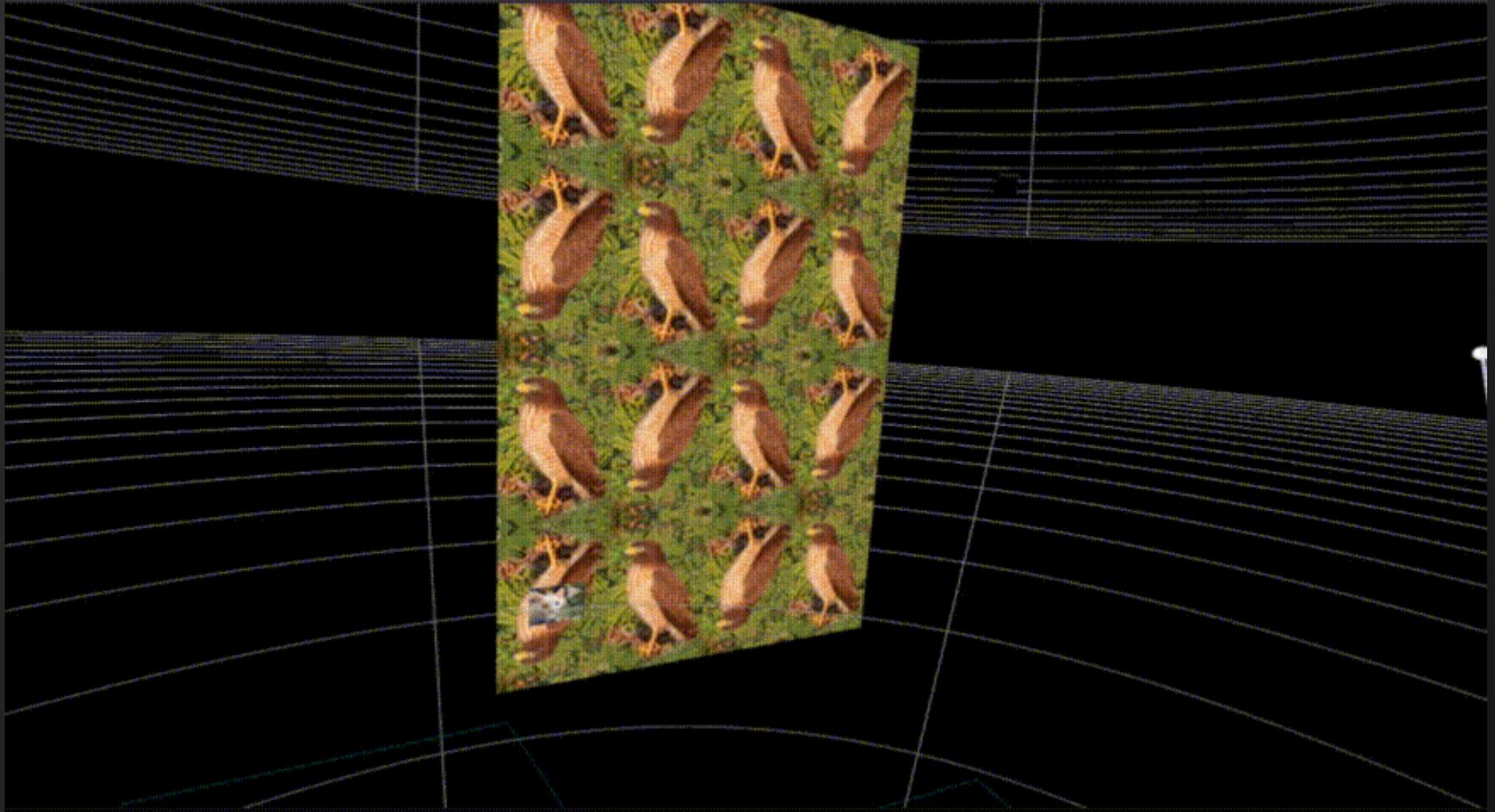
Mirroring windows to XR



Interaction example: Push / Pull

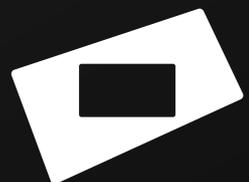


Interaction Example: Arrangement



Get Involved

- Chat with us!
#xrdesktop on Freenode or Discord.
- Gitlab on freedesktop.
- Hands on demo Thursday
- <https://fossxr.dev>



Notable FOSS Tracking Projects

- OpenHMD
- libsurvive
- Maplab (SLAM)
- Others: Lighthouse Redox, PSMoveService, OpenPSVR, OSVR, OpenTrack, openvslam

