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# VR

Open Source and Open Standards



Jakob Bornecrantz

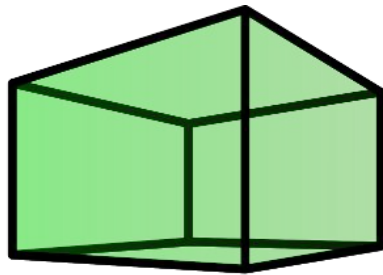
Open First

# Jakob Bornecrantz

- Studied at Chalmers
- FOSS GFX since 2006
- Now also does VR
- Hobbies
  - [Volt Programming Language](#)
  - FPGA and FOSS
  - Retro, SNES, Amiga
  - Voxels
  - FOSS and society
- [@Wallbraker](#) [GitHub](#)
- [jakob@collabora.com](mailto:jakob@collabora.com)



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# *OpenHMD*

Open Source drivers for immersive technology



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# History

- Created here in Gothenburg
- First consumer VR driver for Linux
- Oculus DK1 support in 2013
- Now builds and runs on many platforms
  - Linux
  - Windows
  - OS X
  - Android
  - FreeBSD

# Hardware Support

- Generic Android IMU
- DePoon
- HTC Vive
- Nolo
- Oculus Rift DK1, DK2, CV1
- Playstation VR
- WIP Microsoft MR headsets

# Features

- Lightweight C
- Cross platform HID capture through hidapi
- IMU Support for all devices
- Initial external tracking work for Lighthouse and Oculus
- Initial work for controller support
- Generic lens distortion shaders
- Language bindings (Java, .NET, Python, Perl)
- Platform bindings (OpenVR, OSVR)
- Native integration in Blender

# Community

- VR Enthusiasts
- Want to improve Open Source VR in their free time
- Create drivers for all Headsets they have access to
- Regular Hackfests
- Friendly Boost Licence
- <http://openhmd.net>



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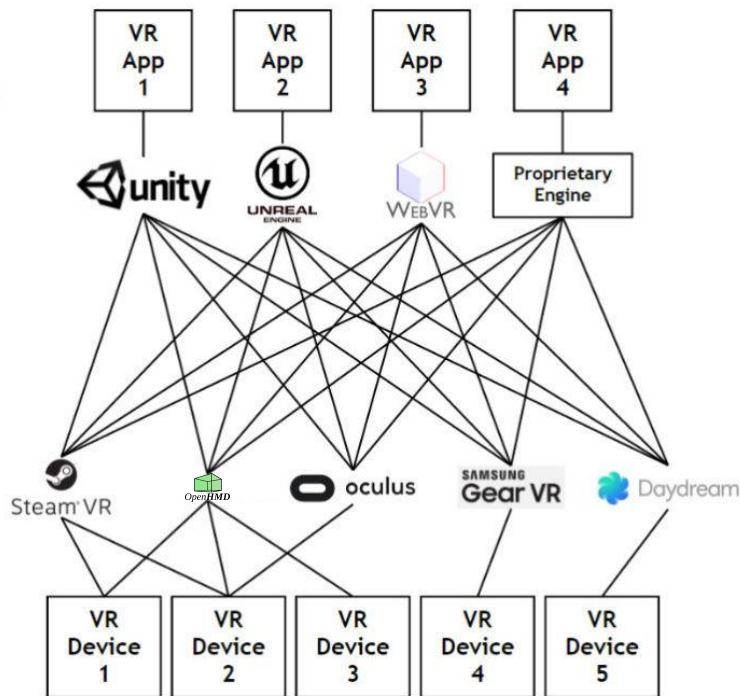
Open standard for Virtual Reality and Augmented Reality



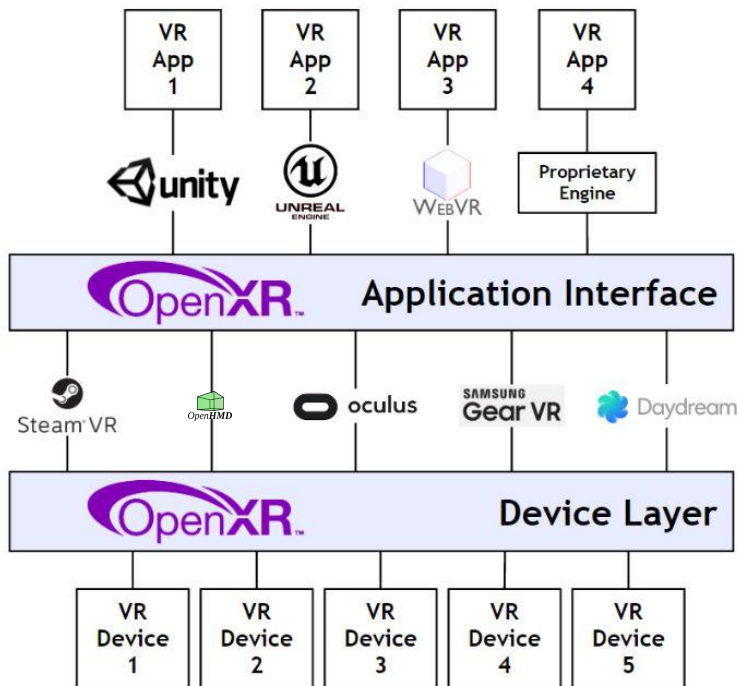
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# The problem



# The solution



# Participating members



# Participating members



# The API

- Device enumeration
- Frame timing
- Sensor fusion
- Input remapping
- [OpenXR Talk @ GDC](#)

# The working group

- Weekly meeting
- Producing a spec
- Patent grants
- NDA



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**KHRONOS**  
GROUP

**Jakob Bornecrantz**  
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# Bonus

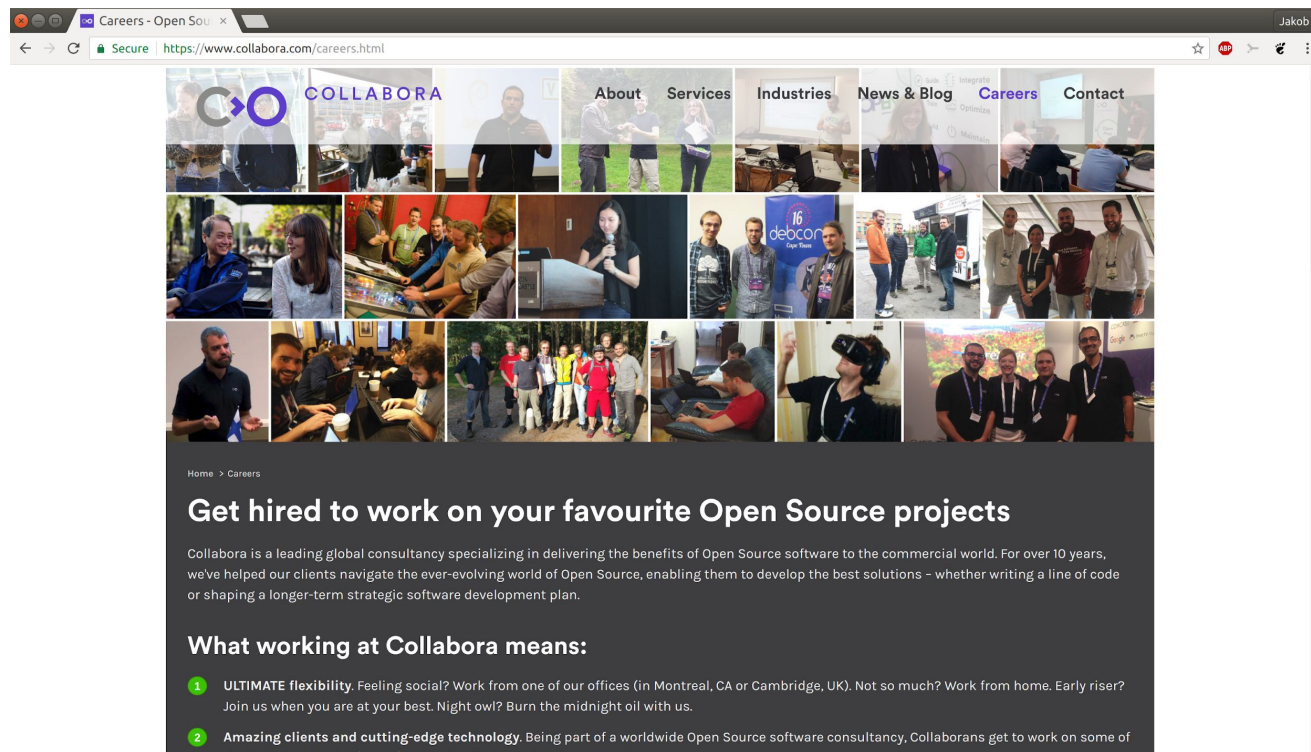
One more thing...



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# We are hiring



The screenshot shows a web browser window with the URL <https://www.collabora.com/careers.html>. The page features a navigation bar with links: About, Services, Industries, News & Blog, Careers, and Contact. Below the navigation bar is a large grid of 18 small images showing various people working in different settings, including office environments, conferences, and team photos. The main content area has a dark background with the following text:

Home > Careers

## Get hired to work on your favourite Open Source projects

Collabora is a leading global consultancy specializing in delivering the benefits of Open Source software to the commercial world. For over 10 years, we've helped our clients navigate the ever-evolving world of Open Source, enabling them to develop the best solutions – whether writing a line of code or shaping a longer-term strategic software development plan.

### What working at Collabora means:

- 1 ULTIMATE flexibility.** Feeling social? Work from one of our offices (in Montreal, CA or Cambridge, UK). Not so much? Work from home. Early riser? Join us when you are at your best. Night owl? Burn the midnight oil with us.
- 2 Amazing clients and cutting-edge technology.** Being part of a worldwide Open Source software consultancy, Collaborans get to work on some of the most fascinating / game-changing technologies and projects out there.

# Questions for you?

- Open source course at Uni?
- How is Open Source used at Uni?
- How do we break the mold of FOSS developers?

# Questions?

- Finally done