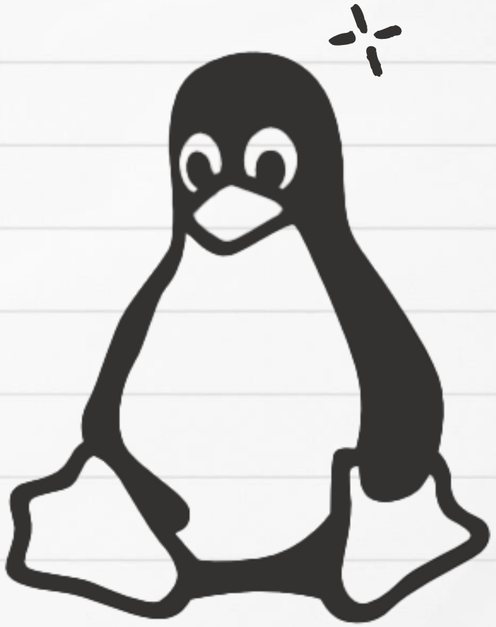
Linux & Gaming



Shirin Manzari

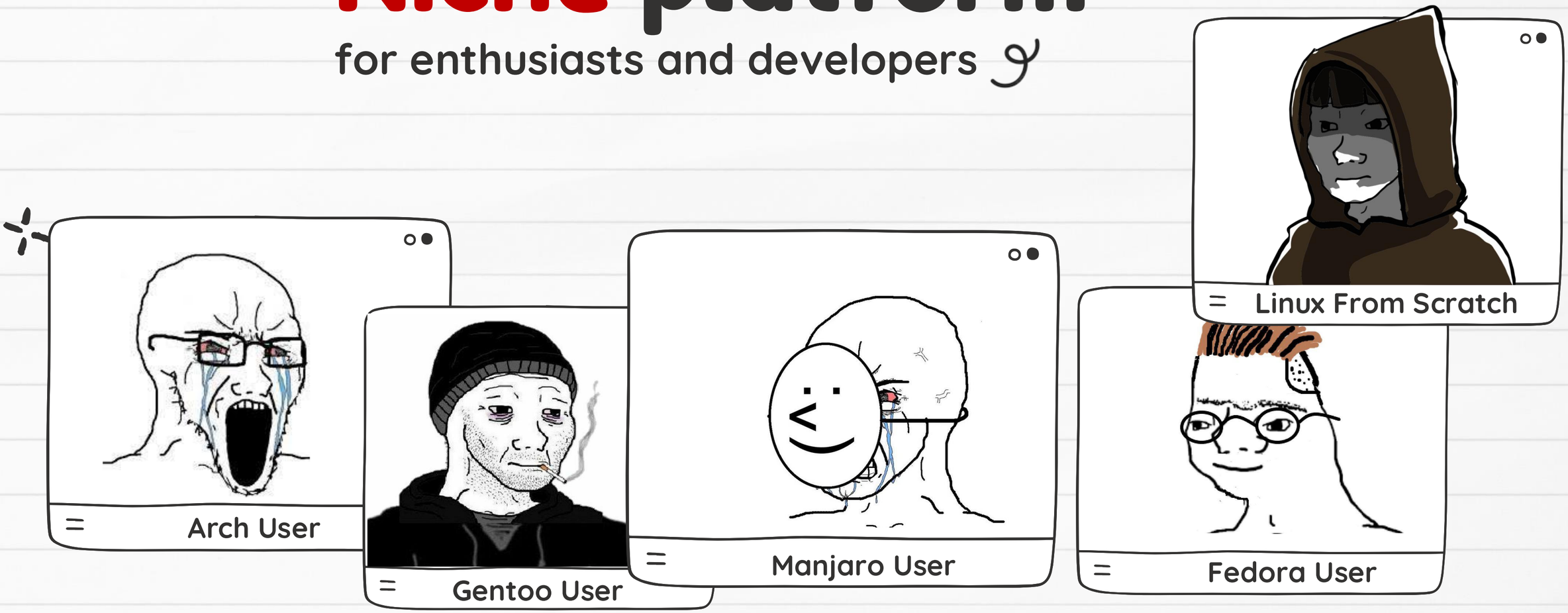
Speaking from personal experience...

Grand Theft Auto: San Andreas

I couldn’t get my favorite game to run.

Niche platform

for enthusiasts and developers



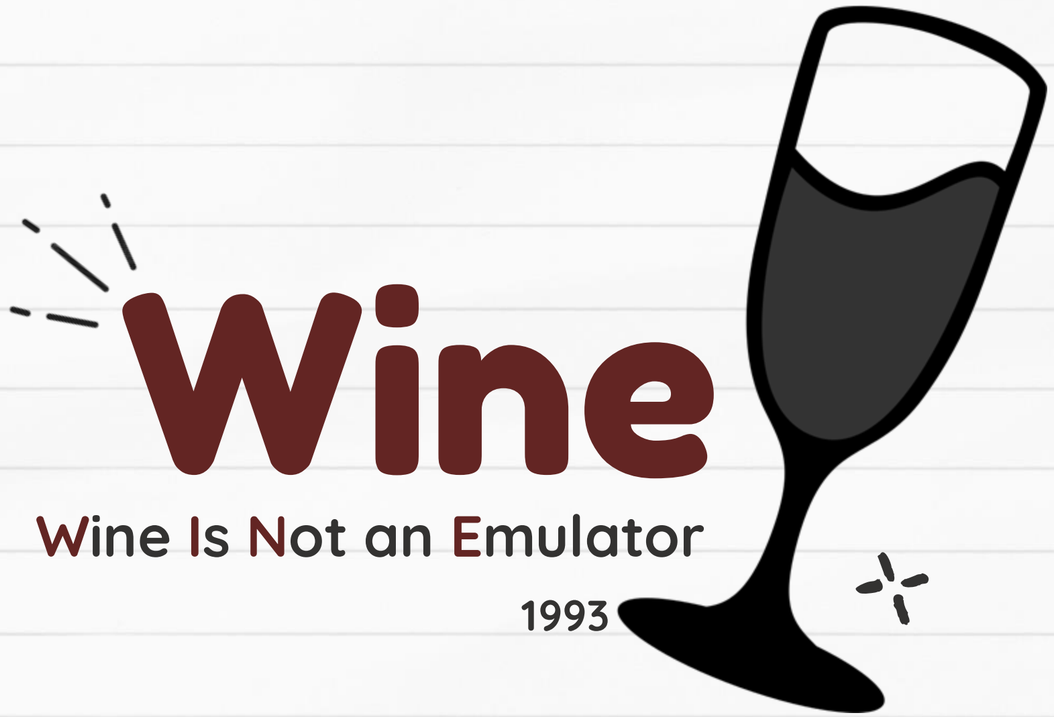
Driven by community passion

Early days

Text based Games

Primordial Unix Games

SimCity 1989 (Don Hopkins)


Wine
Wine Is Not an Emulator
1993

Birth of the modern Linux game industry

Early 2000

Founded by Scott Draeker

- Port 19 commercial titles
- Developed free software tools, Loki installer
- supported the development of the SDL
- Starting the OpenAL audio library project

BUT

Gabe Newell

Linux and open source are the future of gaming.

Gabe Newell, 2013 LinuxCon

Steam for Linux

2012

57 games available natively

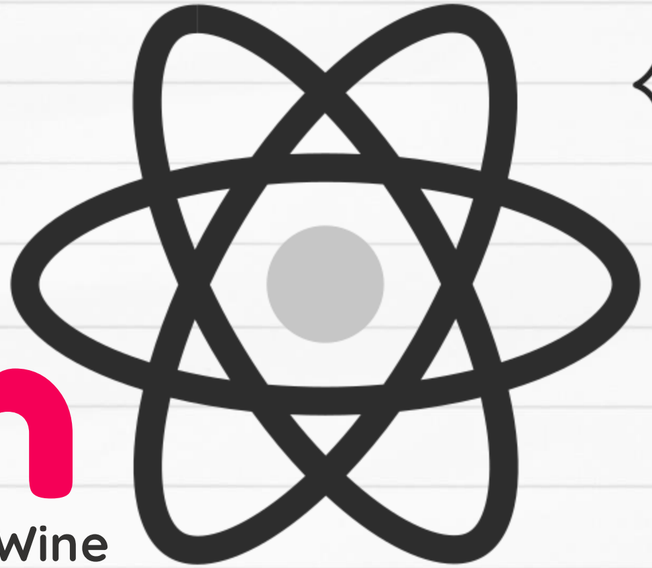
Debian-based

Steam OS & Steam Machines

2013

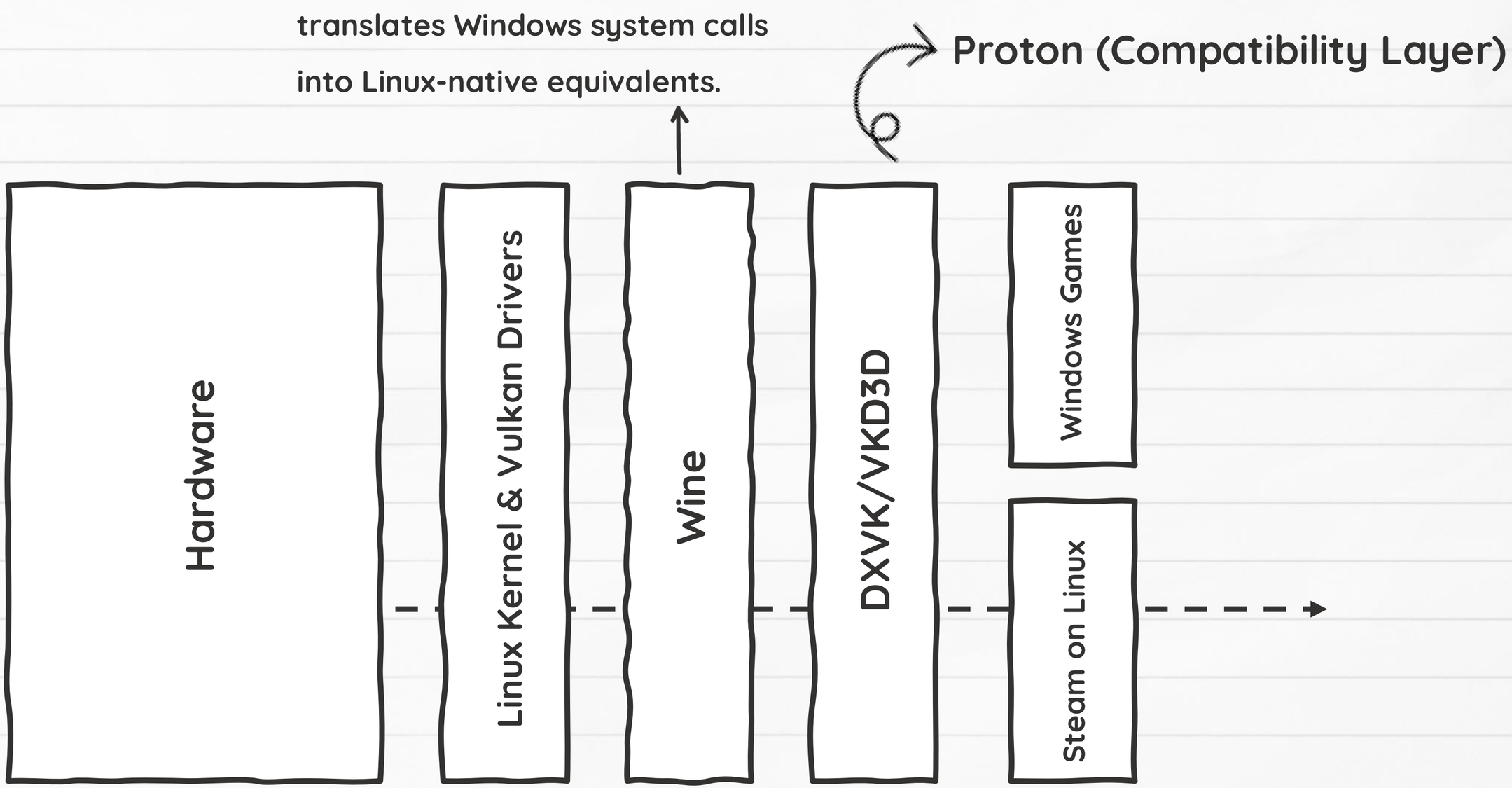
- Encouraged Linux driver development
- Pushed NVIDIA and AMD to improve Linux GPU support
- Investment in Linux-native tools and middleware

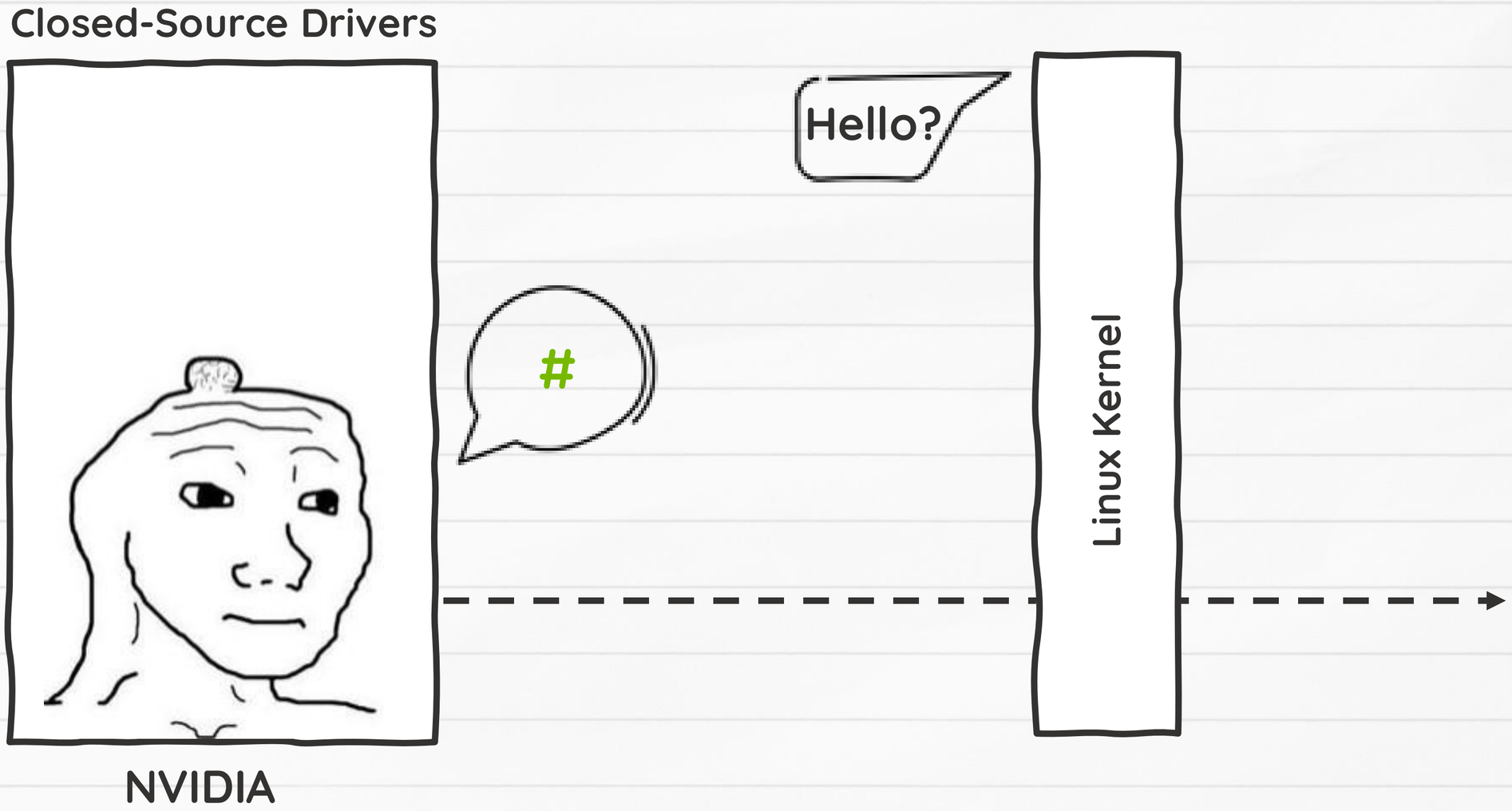
Proton



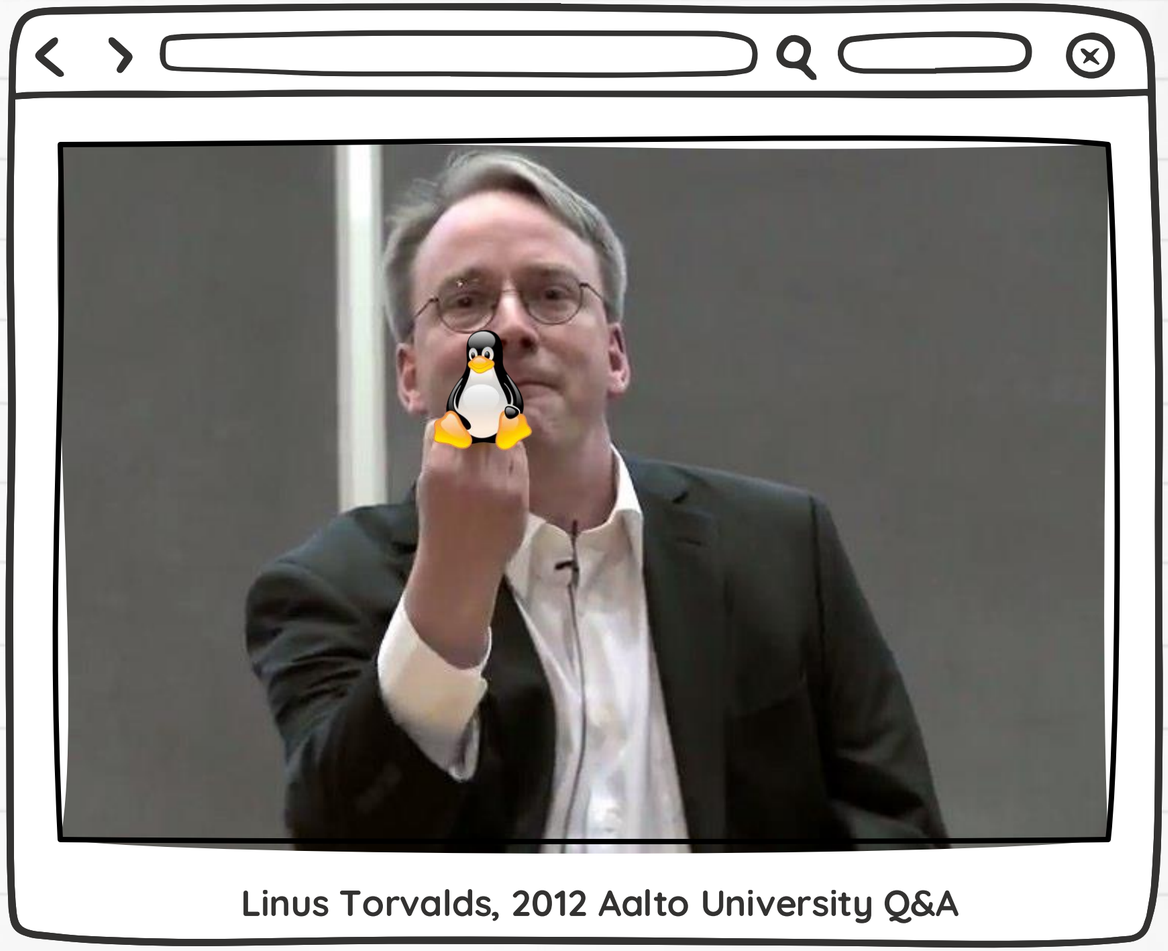
Valve's customized version of Wine

2018

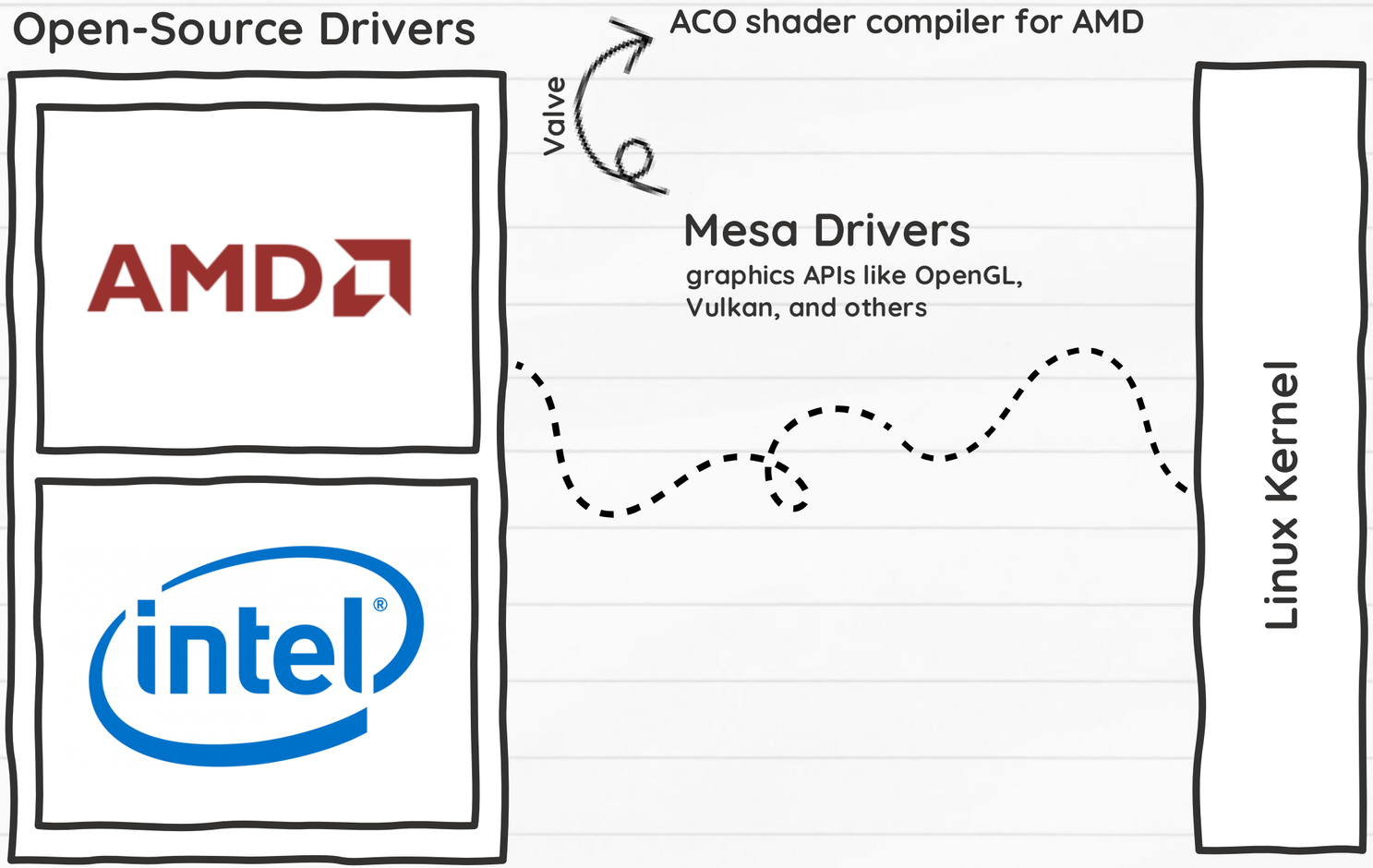

translates Windows system calls
into Linux-native equivalents.
Proton (Compatibility Layer)
Hardware
Linux Kernel & Vulkan Drivers
Wine
DXVK/VKD3D
Windows Games
Steam on Linux


Closed-Source Drivers
Hello?
#
Linux Kernel
NVIDIA

NVIDIA, f*ck you!



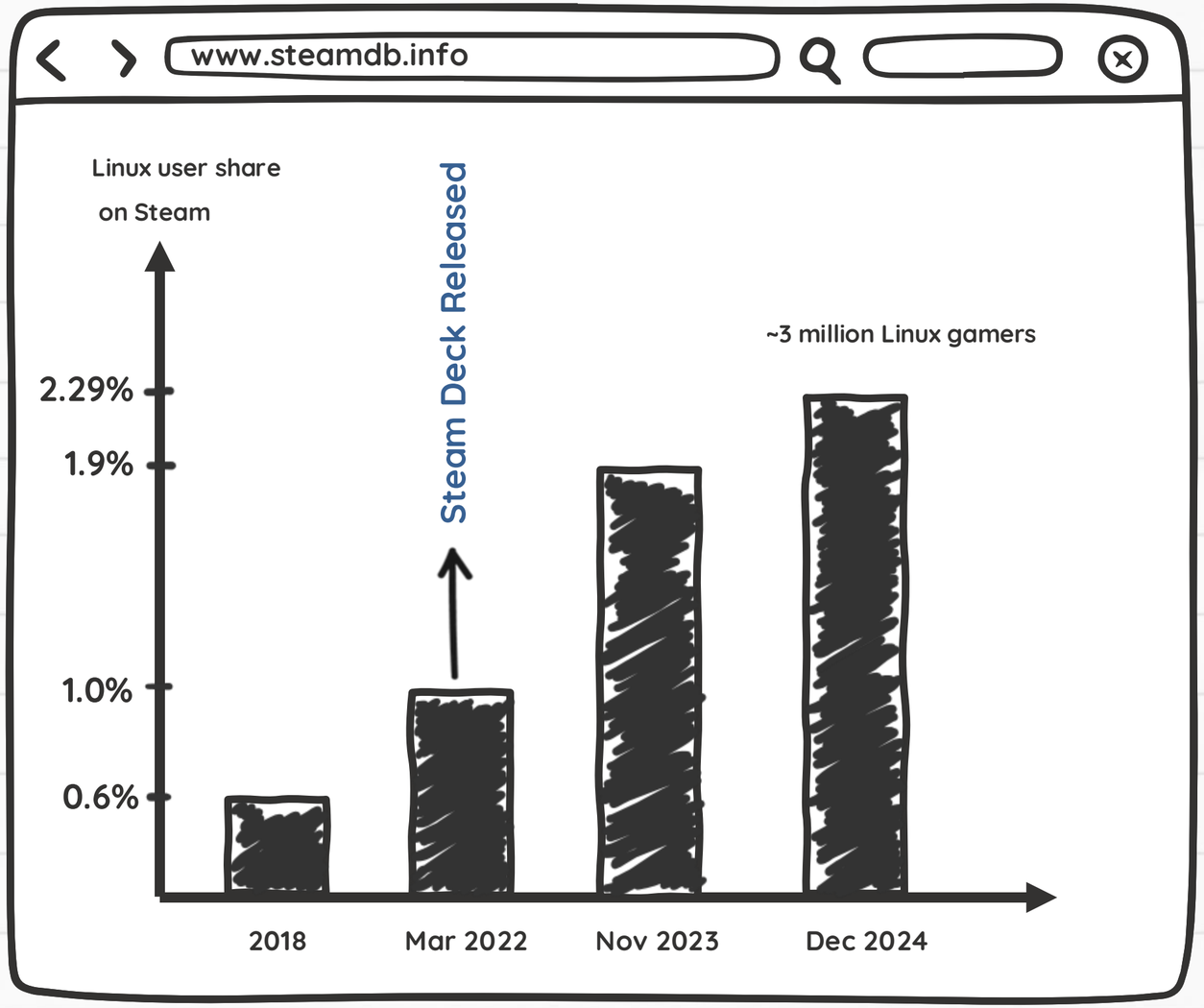
Linus Torvalds, 2012 Aalto University Q&A


Open-Source Drivers
AMD
intel
Valve
ACO shader compiler for AMD
Mesa Drivers
graphics APIs like OpenGL,
Vulkan, and others
Linux Kernel

Steam Deck

The Steam Deck might be the best thing to ever happen to Linux gaming

Linus Sebastian, Steam Deck review 2022



over 18,000 games

- Verified: 6,012 games
- Playable: 11,989 games
- Unsupported: 4,593 games

approximately 72% of the tested games on Steam are either fully compatible or playable with minor adjustments on Linux-based systems like the Steam Deck.

- Vastly improved
- Easy setup
- Huge compatibility

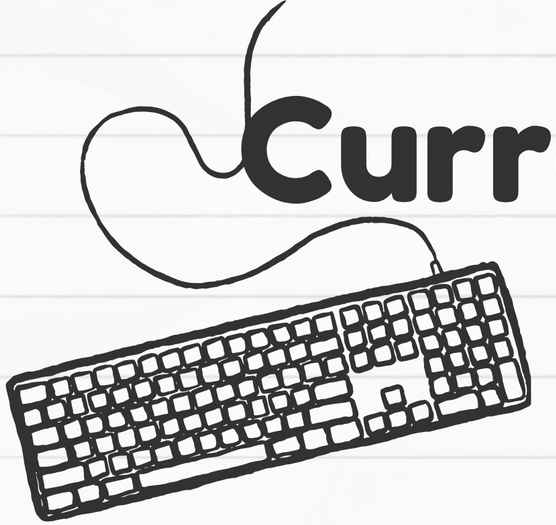
BUT,

Anti Cheat & DRM

The Problem with Online Gaming on Linux

- 2021 did Epic announce Linux/Steam-Deck compatibility for EAC via their SDK
- Proprietary launchers (Battle.net, Ubisoft Connect, Epic Store) still have no native Linux clients
- Riot Vanguard is a kernel-level anti-cheat system with no compatibility on Linux systems because of krenal level conflict

Current State of Linux Gaming



- Massive Game Compatibility Growth
- Steam Deck Effect
- Growing Developer Support
- Community and Pro users

- Fragmentation leads to Inconsistent support
- Market Share Challenges
- DRM and Anti-Cheat Barriers
- Delays in AAA Title Support
- Lack of True Native Support

What about Future

- Shift in game industry: less platform-specific focus & Cloud gaming blurs OS lines
- AI upscaling (e.g., FSR 3.0) + ProtonDB = faster compatibility improvements
- SteamOS 3 & Proton updates are narrowing the Linux–Windows gap
- Steam Deck 2 will push more Linux game optimization
- AMD leads in open-source GPU drivers & Nvidia’s open-source shift is slow but ongoing
- Linux Steam share may reach 3–5% & Linux gaming becoming mainstream

Thank You