



X11 → Wayland

Lessons learned



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Open Source Summit 2018

First impression: 2008

Wayland flowers, over the wall of Kristians cube in the Red Hat office



Another impression: 2013

A meeting at Kristians place to discuss the steps to get to “Wayland by default”.



Third impression: today

- 10 years since that first sighting
- Wayland is successful
- Multiple compositors
- Default in a few linux distros
- Competition has come and gone

What have we learned?

Know why

Know why

- Every frame is perfect

Ubuntu Start Page - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://start.ubuntu.com/10.04/Google/

Quality A... | Bugs in U... | Bug #30... | Bug #48... | Bug #15... | Bug Writi... | Ubu... x

ubuntu


Google

Search

Ubuntu help > | Ubuntu shop > | Ubuntu community >

Done

Settings



System Information

Operating System:	Linux-x86_64
NVIDIA Driver Version:	195.36.24

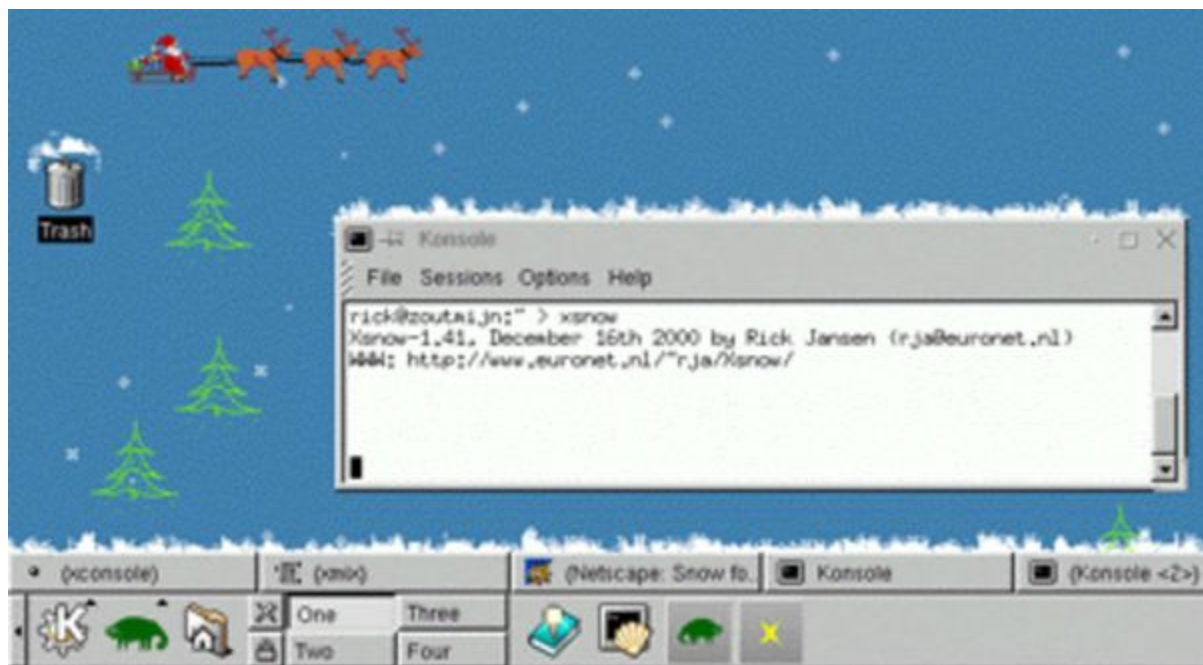
X Server Information

Display Name:	ubuntu:0
Server Version Number:	11.0
Server Vendor String:	The X.Org Foundation
Server Vendor Version:	1.7.6 (10706000)
NV-CONTROL Version:	1.22
Screens:	1

Help | Quit

Know why

- Every frame is perfect
- Clients are isolated



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- No global coordinates

Know why

- Every frame is perfect
- Clients are isolated
- No global coordinates
- Do it client-side

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- Replacing a graphics system is no walk in the park
- Long tail of features: multi-monitor, a11y, middle-click, ...
- Need to bring the apps along
- Backwards compatibility: XWayland
- Proprietary drivers make things much harder
- Easier to replace something if it is dead

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“Why X is Not Our Ideal Window System”

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Middle-click paste

There will be mistakes

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Middle-click paste

Client-side key repeat

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Window positioning

Know why
Take your time
There will be mistakes

Know why
Take your time
There will be mistakes
Join us and work on Wayland!

References

Thanks to Kristian, Owen, Jonas, Adam and Christian for their input

<https://wayland.freedesktop.org/>

<https://wiki.gnome.org/Initiatives/Wayland>

<https://fedoraproject.org/wiki/Changes/WaylandByDefault>

<http://www.std.org/~msm/common/WhyX.pdf>

