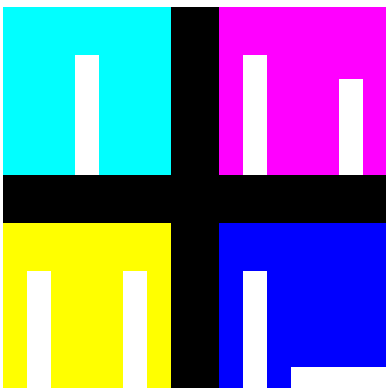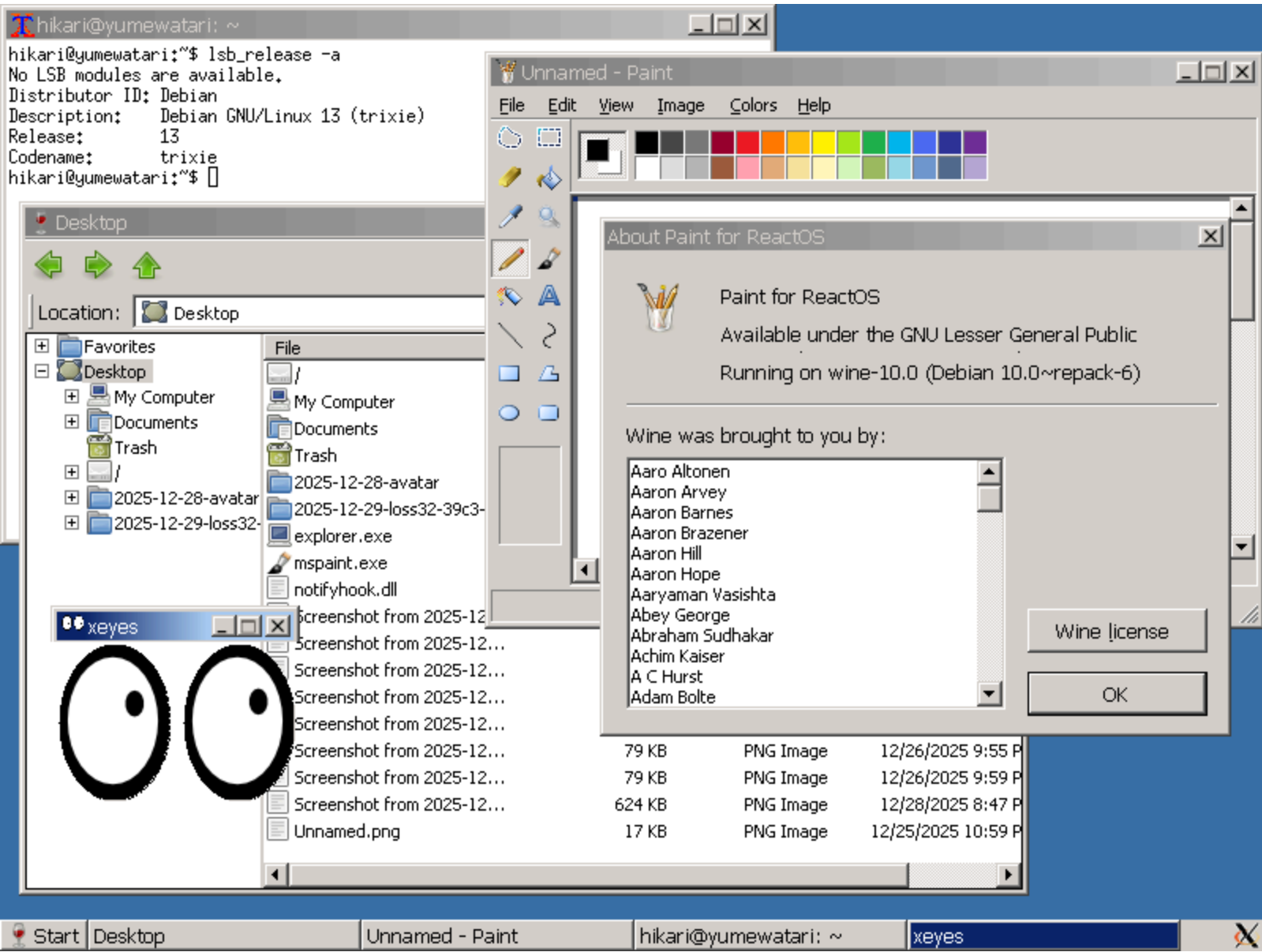# loss32: let's build a Win32/Linux

The future of the Linux desktop can look like this:

Let's build it!

Win32/Linux?

I'd just like to interject for a moment. What you're referring to as Linux, is in fact, Win32/Linux, or as I've recently taken to calling it, !loss32 Win32 plus Linux. Linux is not an operating system unto itself, but rather another free component of a fully functioning system made useful by WINE, the ReactOS userland, and other vital system components comprising a full OS as defined by Microsoft.

Okay, but seriously what is this?

A dream of a Linux distribution where the entire desktop environment is Win32 software running under WINE. A completely free and open-source OS where you can just download `.exe` files and run them, for the power user who isn't necessarily a Unixhead, or just for someone who thinks this sounds fun.

Isn't this just ReactOS?

ReactOS tries to reimplement the Windows NT kernel, and that has always been its Achilles heel, holding it back from a hardware compatibility and stability standpoint. The loss32 concept is to achieve a similar-feeling end result to ReactOS, but built on a more usable foundation, using components known to work well (the Linux kernel, WINE, everything that glues those together, and a sprinkling of ReactOS userland niceties). As a bonus, the OS would still technically be a Linux distro, so it would be possible to run Linux software when necessary, something ReactOS can't do.

Are you really going to replace the entire userland with WINE?

As much as possible.

Why build this?

- The late-90's-to-early-2010's PC desktop experience was great for power users, especially creative users. Let's keep the dream alive.
- WINE has a lot of unfortunate rough edges that people only tolerate because they use WINE as a last resort. A desktop environment where everything runs in WINE will stimulate making WINE better for everyone, whether they're going to use this project or not.
- Win32 is the stable Linux ABI!
- Because we can.

Win32 is the stable Linux ABI?!

Yes. I can't tell you how many times the ability to just download a goddamn `.exe` file and run it in WINE has saved my ass. Seemingly every creative project I undertake eventually requires downloading *some* piece of software which is either impossible or impractical to rebuild myself, and whose Linux and macOS ports no longer work or never existed. There's more than three decades of Win32 software — `.exe` files! — that can run in WINE or (of course) on Windows. No other ABI has that kind of compatibility record. WINE can even run Win16 stuff too.

The really cool thing about Win32 is it's also the *world's* stable ABI. There's lots of fields of software where the GNU/Linux and POSIX-y offerings available are quite limited and generally poor in quality, e.g. creative software and games. Win32 gives you access to a much larger slice of humanity's cultural inheritance.

Is that a real screenshot?

Yes! That's just stable WINE running on Debian 13. There's a lot of rough edges you can't see in the screenshot that make it somewhat uncomfortable for use for the time being. The goal of the project is to fix many of the rough edges and package up this environment in an easily installable form.

How do I help?

Thanks for asking! This website was written by hikari_no_yume on 2025-12-29 while at 39C3, and last updated 2025-12-30. You can email me, or you can lurk in #loss32 on `irc.libera.chat`. I'd especially like to hear from you if you know things about or would be willing to help with:

- Wayland compositors that don't impose a desktop environment on you (currently I'm using the standalone version of mutter) and gluing them to WINE better
- WINE, especially its version of explorer.exe, shell32.dll stuff, HiDPI scaling, packaging, …
- ReactOS, epecially its version of explorer.exe, shell32.dll stuff, incompatibilities between the ReactOS userland and WINE's, …
- Gnarly details of the GNU/Linux desktop stack generally

(This list may be updated from time to time.)

When will I be able to download it?

A full realisation of the vision? God only knows. But sometime in January 2026 there will be an initial proof-of-concept that you can add to your `/etc/apt/sources.list` and `sudo apt install…` and it will be accompanied by a long list of missing and broken things, and we can iterate from there.