



BSD (Unix) vs. GNU/Linux

A brief history about two Operating Systems, what makes them different and what makes them similar.

What are BSD (Unix) & GNU/Linux?

An event driven program that handles system resources efficiently and creates an environment for programs to run.

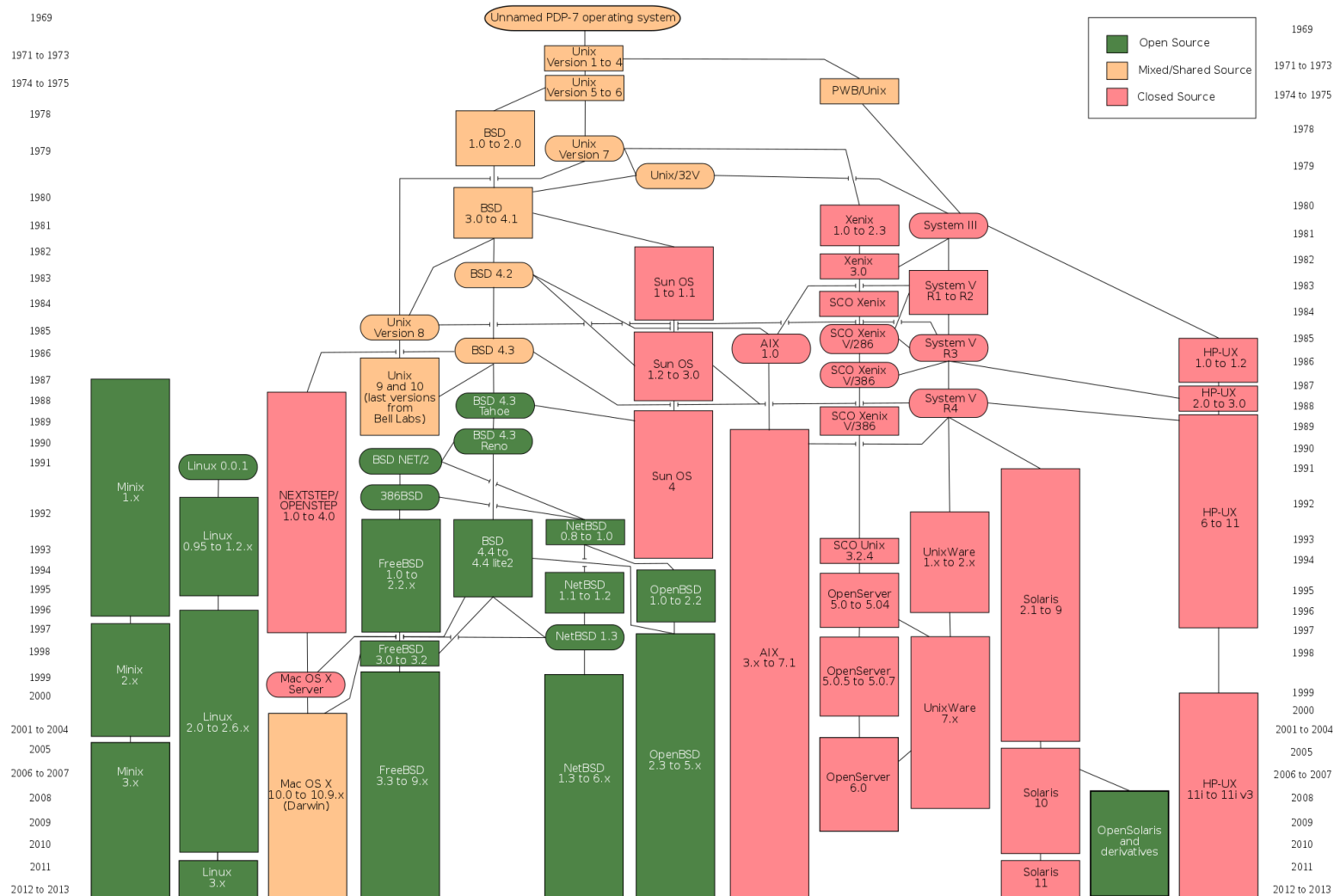
But... are based on Unix philosophy

- **New OS called AT&T Unix created in the 1970s at Bell Labs, a research facility that at the time was owned by AT&T**
- **Was originally intended to be used on Bell Systems to connect telephones across the United States**
- **Was closed-sources and licenses were sold to companies and universities by AT&T**

Unix Philosophies

- **Created by Ken Thompson and supported by Dennis Ritchie**
- **Was designed to be portable, multi-tasking and multi-user**
- **Stored data in plain-text**
- **Had a hierarchical file system**
- **Programs communicated via IPC**
- **Large amount of specific programs that followed stdin/stdout and can be chained together**

Visual Guide to Unix History



More about BSD

- **BSD is a direct Unix operating system**
- **Created by University of California, Berkeley**
- **Originally developed for University's "workstation-class" systems**
- **Now largely developed by community via various Free-Software distros like FreeBSD, OpenBSD, NetBSD, TrueOS, etc..**
- **Licensed under "BSD License"**

More about GNU/Linux

- **GNU/Linux is a Unix-like operating system**
- **Created by Linus Torvalds**
- **Originally developed for personal computers, specifically Intel x86**
- **Holds title of “Largest collaborative project in human history”**
 - Spawn other influential software like Git
- **Linux kernel collaboratively developed by community and fortune 500 companies**
- **Back-bone for Linux ditros like Fedora, RHEL, Debian, Ubuntu, OpenSUSE, Gentoo, etc..**
- **Originally licensed under non-commercial license, until Linus switched to GPL license; making it easier to ship GNU tools with the Linux kernel like a compiler and command line interpreter**

Becoming (GNU/)Linux

- **GNU Foundation developed many Free-Software programs for Unix compatible systems**
- **In the 1990s GNU was working on a Unix-like kernel called GNU Hurd, but it wasn't moving**
- **Needed something written from scratch that could be licensed under a permissive license like the GNU GPL**
- **Linux seemed promising but wasn't Free-Software**

Licensing

BSD License

Permissions

- Commercial use
- Distribution
- Modification
- Place Warranty

Conditions

- Include Copyright
- Include License

Limitations

- Use Trademark
- Hold Liable

GNU GPL

Permissions

- Commercial use
- Distribution
- Modification
- Place Warranty
- Use Patent Claims

Conditions

- Include Original
- Disclose source
- State Changes
- Include Copyright
- Include License
- Include install instructions

Limitations

- Sublicense
- Hold Liable

Attributions

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