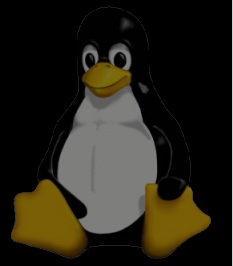
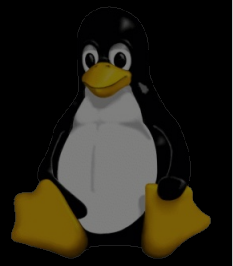


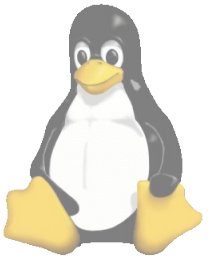
History of GNU/Linux

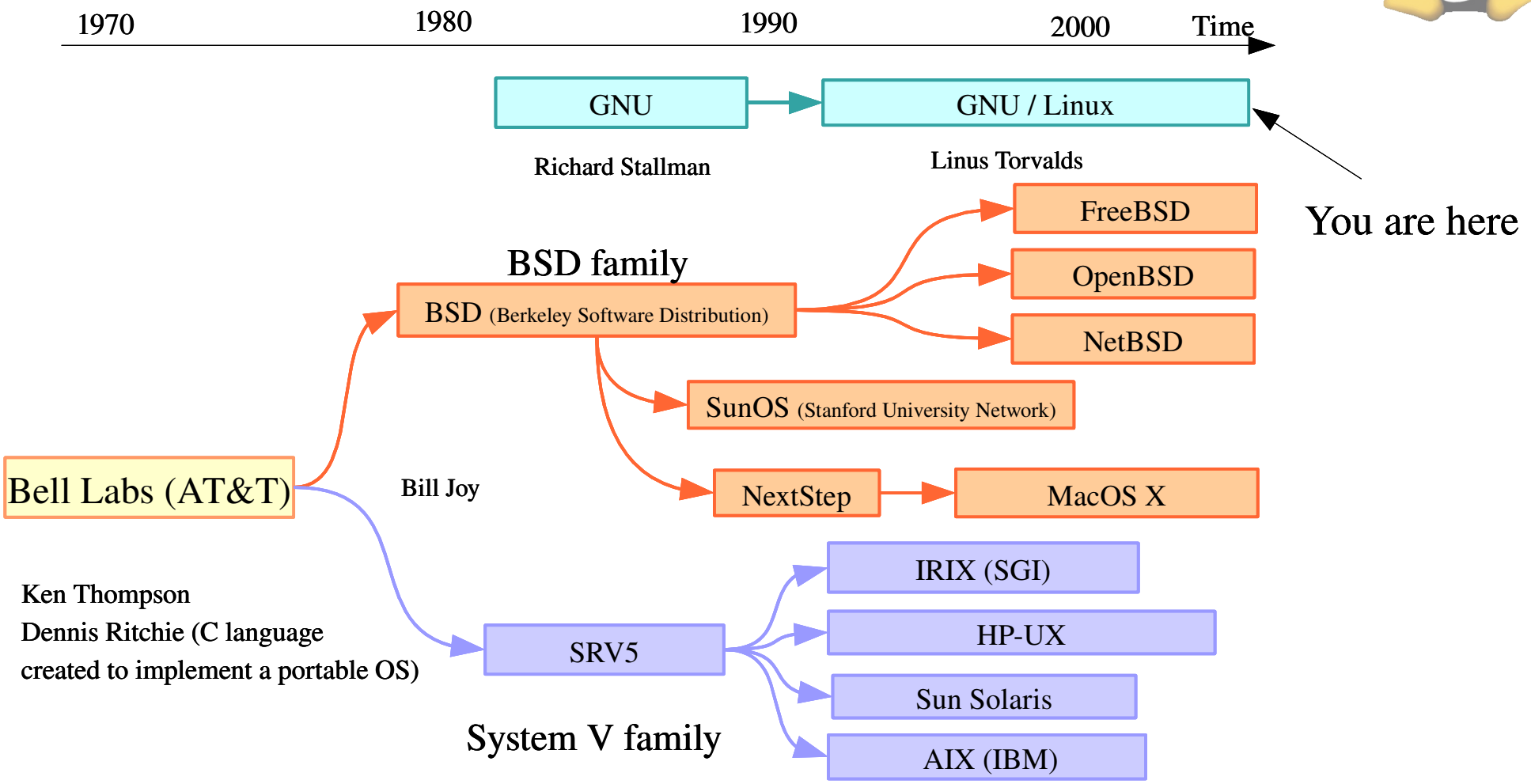
Operating Systems



- DOS
- UNIX
- Macintosh
- Windows
- GNU/Linux

Unix family Tree



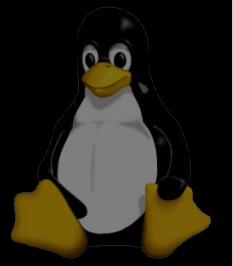


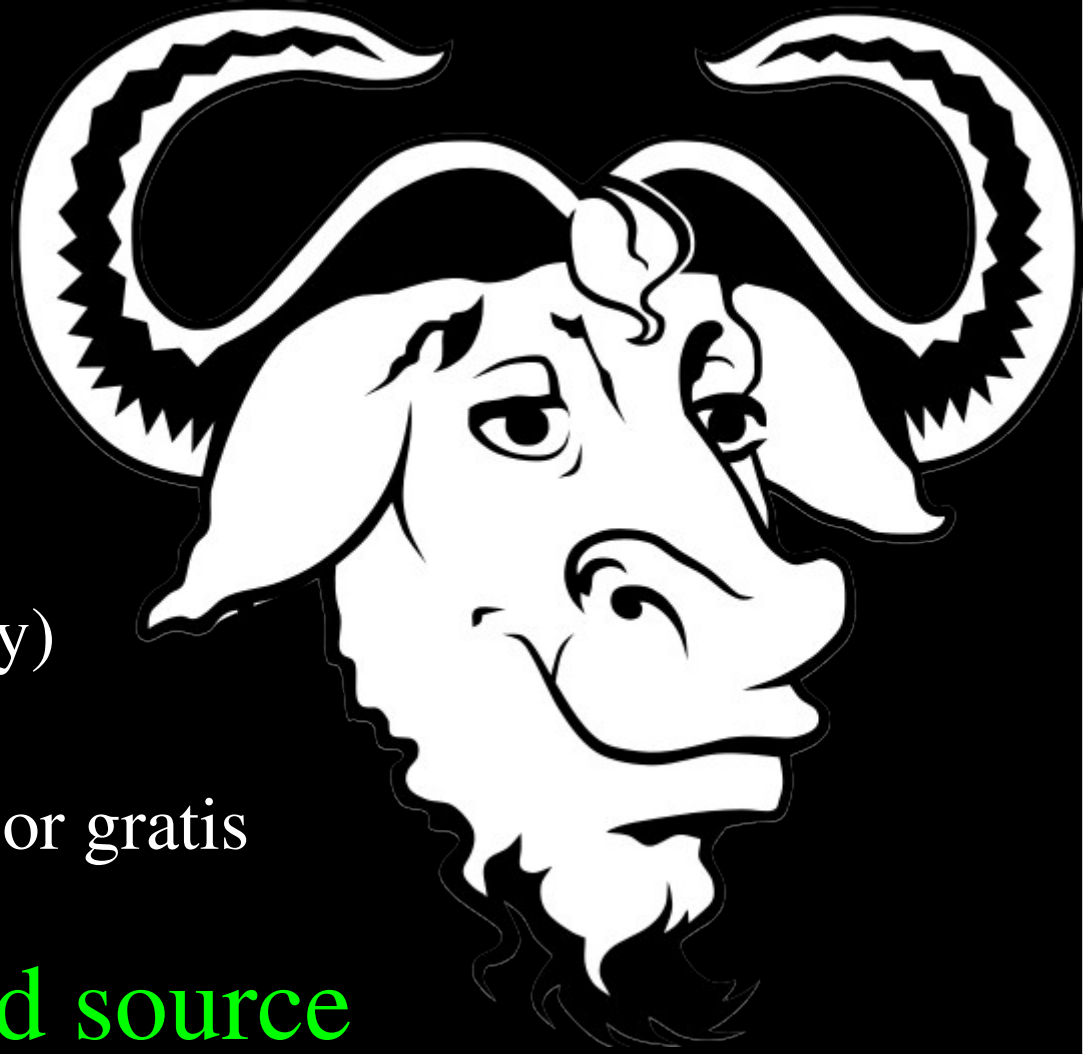
GNU

- Richard M Stallman (RMS) MIT AI Lab (1980s)
  - Printer problem. Program to send error message
  - New Xerox Printer donated. Same problems
  - Xerox refuses to give source code
  - RMS decides to fight for Software Freedom

Http//www.stallman.org/

GNU = Gnu Not Unix





Ensures 4 freedoms

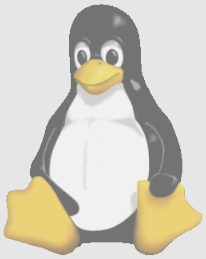
0 **Use** for any purpose

1 **Study** and adapt(modify)

2 **Distribute** either free or gratis

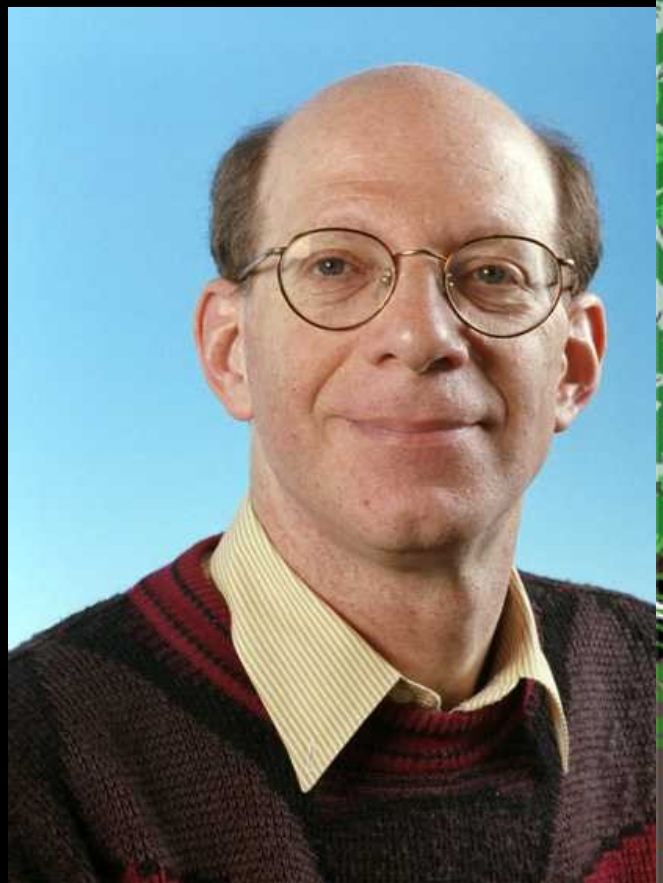
3 Distribute the **modified source**

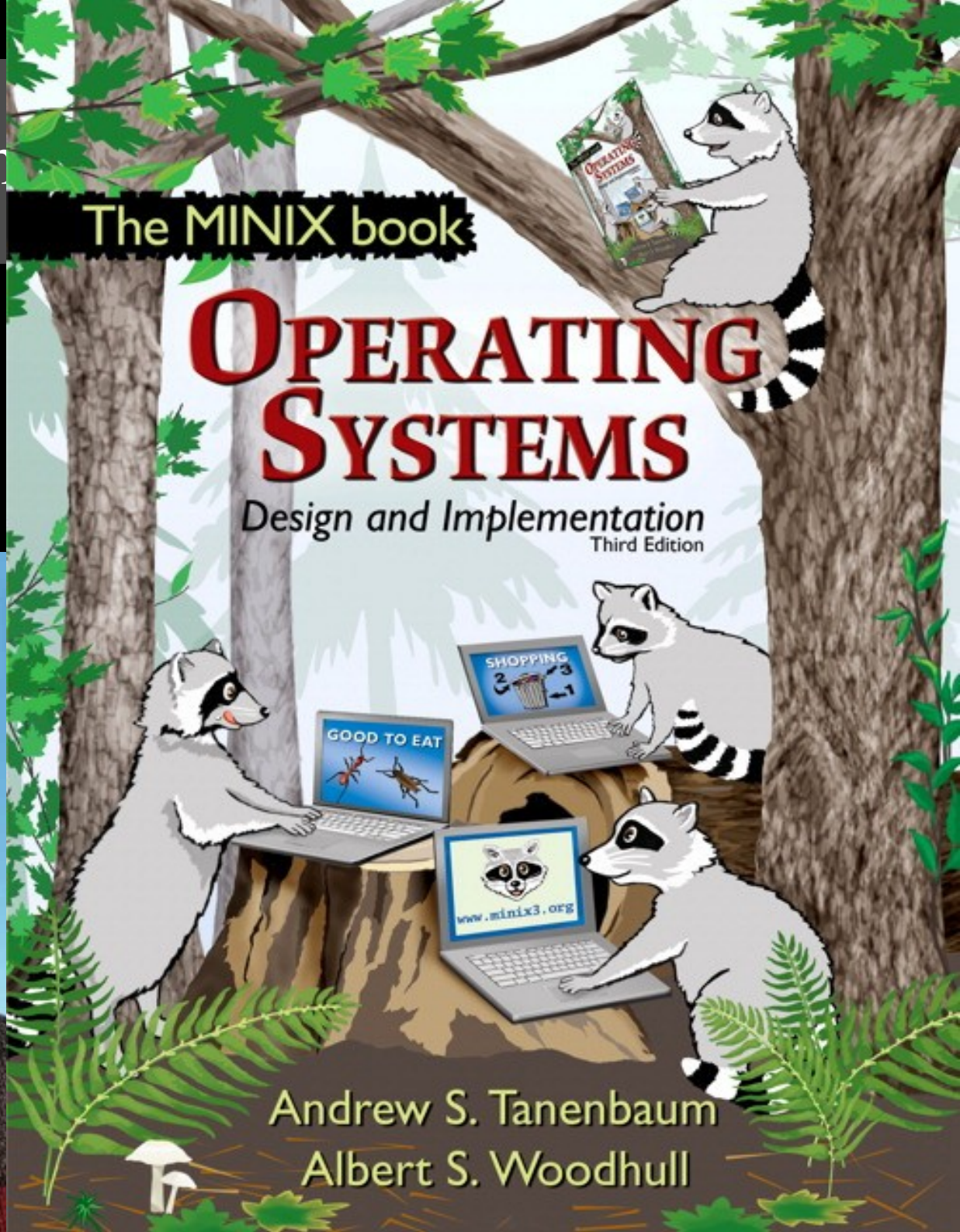
GNU Software



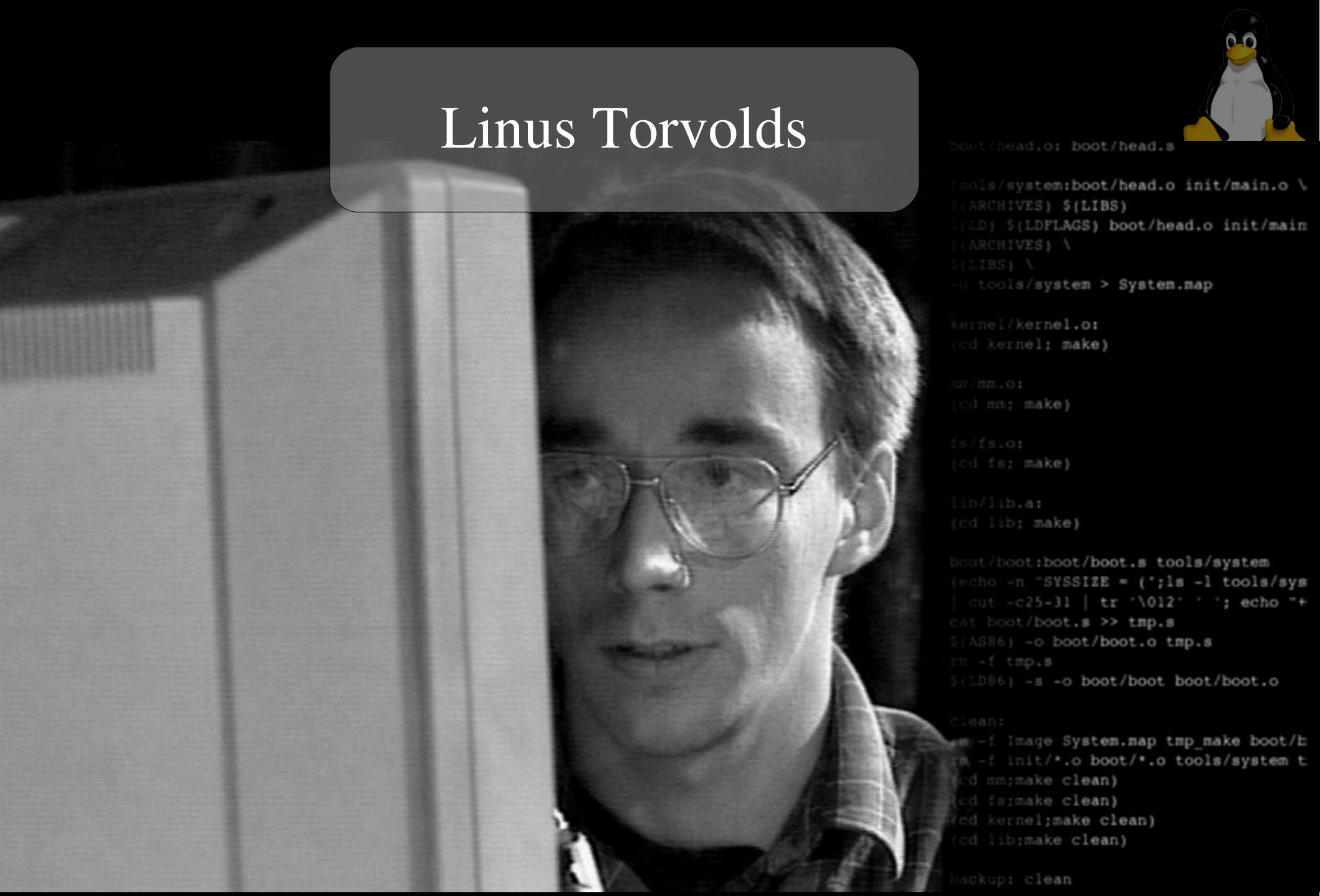
- Compilers
- Editors
- Languages
- Network Tools
- Servers
- Databases
- Device drivers
- Desktop Utilities
- Multimedia Apps
- Games
- Office Applications
- and more

Andrew S. Tanenbaum

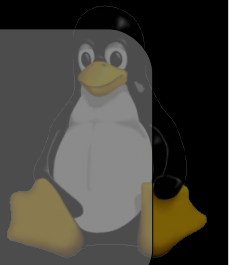




Linus Torvolds



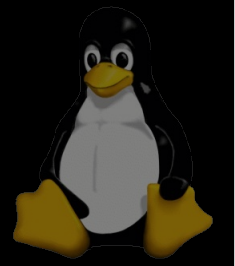
Linux Kernel



Decides to develop a kernel based on AST's Minix for his project work

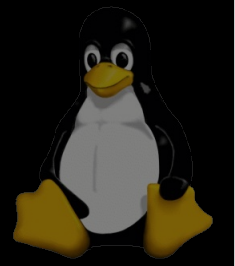
- Leaves it on net for others to use/modify
- Releases it under GPL license
- Linux is typically used along with GNU
- GNU/Linux

Timeline



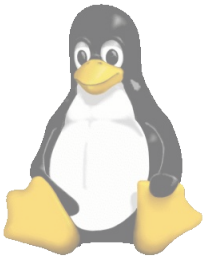
- 1971 : First edition of UNIX comes out
- 1972 : Dennis Richie re-writes B and calls it C
- 1975 : Bourne shell is born
- 1977 : Berkeley Software Design releases BSD
- 1984 : Richard Stallman kicks off the GNU project
- 1985 : Richard Stallman starts Free Software Foundation
- 1989 : Release of GNU
- 1989 : Release of GNU GPL Version 1
- 1991 : Linus Torvalds announces the release of Linux Kernel

Timeline



- 10/1991 : v0.02 - first usable Linux
- 01/1992 : v0.12 - first 'actually working' version, under GPL
- 03/1992 : comp.os.linux
- 04/1992 : v0.95 - capable of using X
- 09/1992 : Linux stops being Minix-like and becomes UNIX-like
- 03/1994 : 1.0
- 06/1996 : 2.0.0
- 12/2003 : 2.6.0

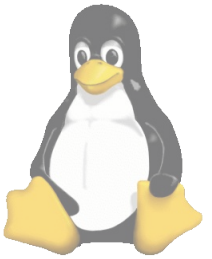
GNU/Linux



- Linux kernel + GNU apps = GNU/Linux

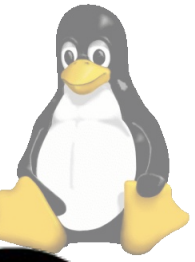
- Tons of applications
- Packaged into CDs/DVDs
- Freely Downloaded from internet

GNU/Linux distributions



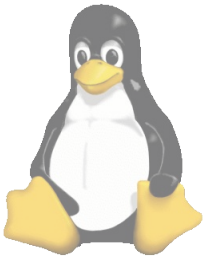
- Take care of releasing a compatible set of kernel, C library, compilers and tools... A lot of work indeed!
- Tools available in *packages* which can be easily installed, removed or upgraded. Tool version dependencies are automatically managed.
- Commercial distributions: include support. Sources are free but usually not binaries.
- Community distributions: both sources and binaries are free. No support by default.

GNU/Linux distributions



- Fedora Core: http://fedora.redhat.com/
  Stable, secure, user friendly, easy to install. Frequent full releases.
- Ubuntu Linux: http://ubuntu-linux.org/
  The growing community distribution. Debian based but stable releases every 6 months. User friendly. Great for beginners.

- Debian: http://debian.org/
  Very stable and safe, but more difficult to configure and install. Developer but no user friendly yet. Stable releases not frequent enough (every 2 or 3 years). Great for servers, but not for beginners!

- Mandriva Community: http://mandrivalinux.com/
  Easy to install, secure, user friendly, frequent full releases, but less stable (not enough testing and taking user feedback into account).

- More than 200 Distributions