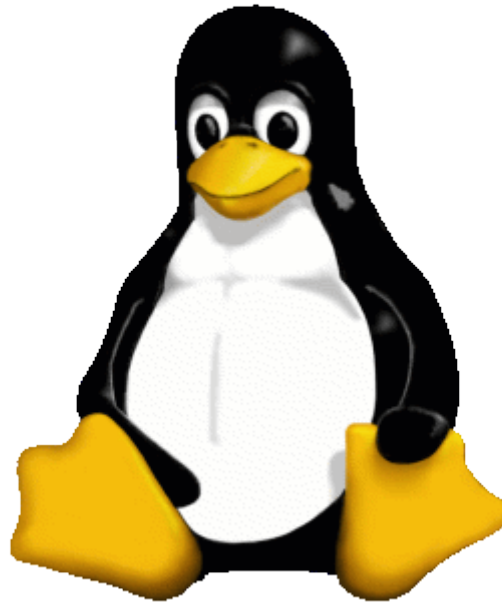# Introduction to Linux

SkillSwap presentation

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Contents

- Overview
- Linux as a desktop
- Hands-on: the KDE desktop
- Linux as a server
- Hands-on: the command line
- Conclusions, Q&A

What is Linux?

- Technically: Linux is Unix
- Philosophically: Linux is GNU
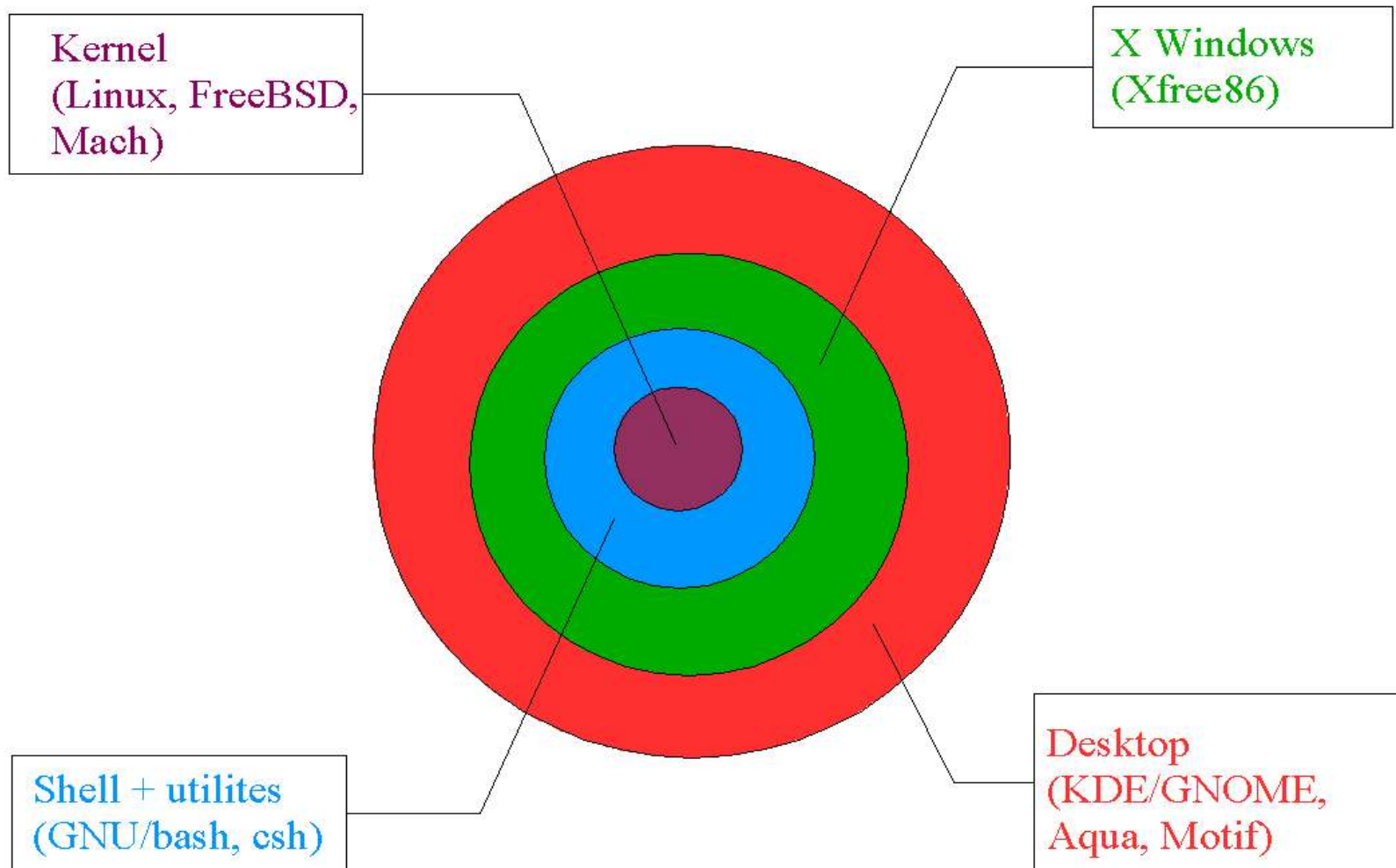- GNU project started 1984
- Linux kernel started 1991

Free, Libre, Open Source Software (FLOSS)

- What can you do?
  - Freedom to use
  - Freedom to examine
  - Freedom to redistribute
  - Freedom to modify

- What can't you do?
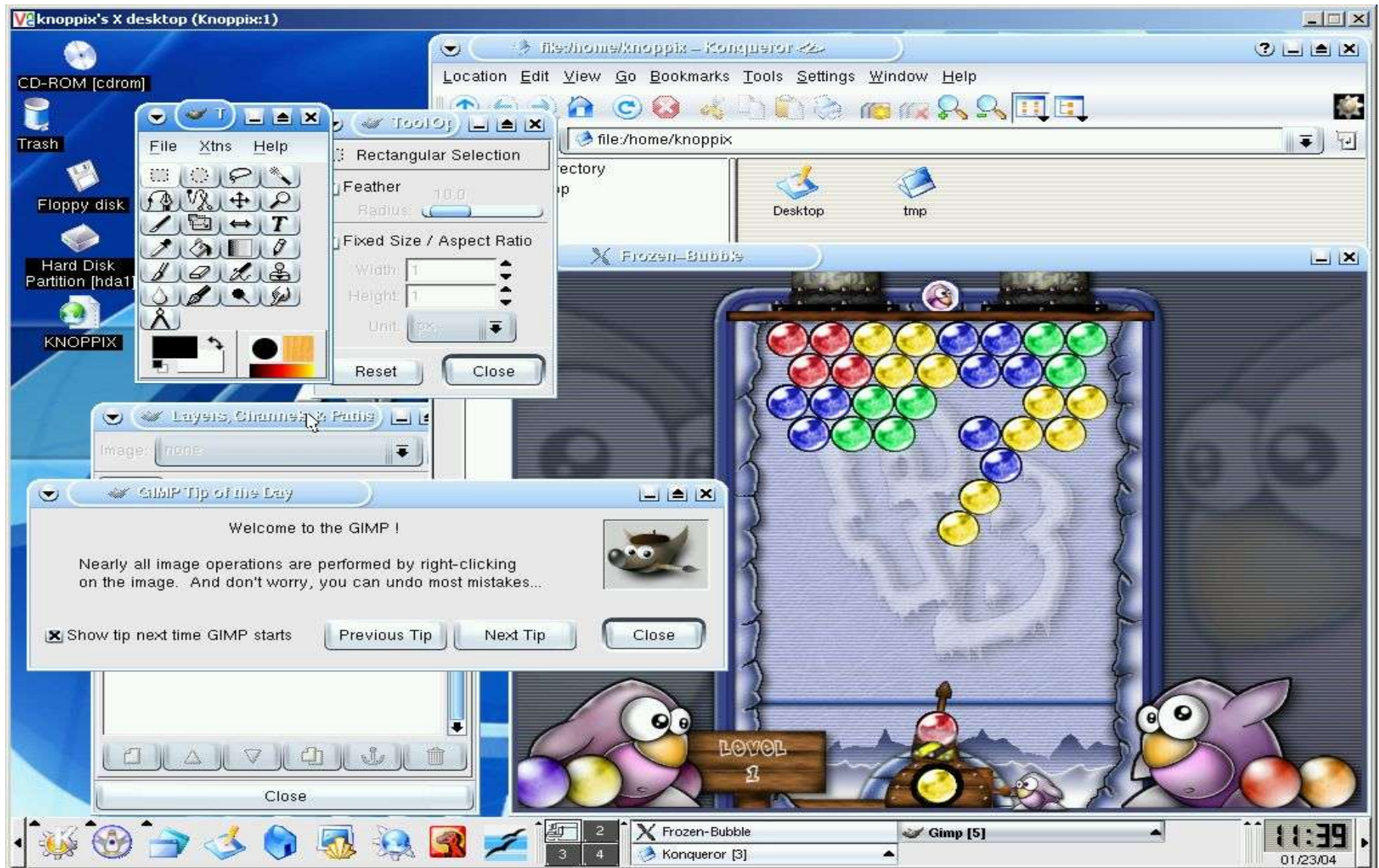 - Deny these freedoms to anyone else

Why use Linux?

- Reliability
- Scalability
- Flexibility
- Security
- Price

The Unix 'onion'

Kernel
(Linux, FreeBSD, Mach)

X Windows
(Xfree86)

Shell + utilites
(GNU/bash, csh)

Desktop
(KDE/GNOME, Aqua, Motif)

The KDE Desktop

Desktop applications

- Word processing (OpenOffice, AbiWord)
- Programming (C, C++, Perl, Python, Java, PHP)
- Graphics (GIMP, ImageMagick)
- Web browsers (Mozilla, Konquerer)
- Email (Evolution, Mozilla, KMail)
- Audio (XMMS, Audacity)
- Games (MAME)

Suggestions

- Designers: create an image
- HTMLers: check your sites in Mozilla/Konquerer
- Programmers: create a GUI
- Project managers: create a spreadsheet
- PHBs: create a slideshow presentation
- Musicians: remix an Ogg track
- Slackers: play games

Linux Distributions

- RedHat/Fedora

  - Market leader. Licensing changes mean this is a less obvious choice than before.

- SuSE

  - Well-equiped. Recently acquired by Novell.

- Mandrake

  - Friendly, slick.

- Debian

  - Non-commercial, community-maintained. Tricky but powerful

Dealing with legacy applications

- Same machine:

  - Dual-boot

  - Virtual machine (VMWare)

  - WINE, MOL

- Different machines:

  - VNC

  - rdesktop

Desktop questions?

- Otherwise, we'll stop for a break…

Server applications

- Web servers (Apache, Tomcat)
- Web programming (PHP, Perl, Zope, Java, etc.)
- Databases (MySQL, PostgreSQL, Oracle)
- File server (NFS, Samba)
- Email server (sendmail, POP, IMAP)
- Other (LDAP, newsgroups, terminal server)

The command line

Common tasks

(see separate sheet)

- file stuff: ls -l, pwd, cd, cp, mv
- user stuff: su, chmod, chown
- text stuff: less, tail, grep, editing (vi, emacs, joe)
- other: lynx, ncftp, scp

Suggestions

- Copy the file /etc/passwd to your home directory

- Edit it and save changes

- Change ownership of the file to the superuser ('root')

- Try to edit it again

- Switch user to become the superuser

- View the last 10 lines of the file / etc/passwd

- Switch back to your normal user

Help and Support

- RTFM (distro documentation)
- Brighton Linux Users Group
- Google(!)
- Mailing lists (and archives)
- www.linuxnewbies.org
- Commercial support (e.g. LinuxIT)
- Magazines (e.g. Linux Magazine)

Uses for a Linux PC

- Arcade machine: AdvanceMAME (CD)
- Radio station: Dynebolic (CD)
- Edutainment: Freeduc (CD)
- PVR: MythTV (install/CD)
- SME office server: eSmith (install)
- Firewall: SmoothWall (install)
- Terminal server: LTSP (install)
- (n.b. 'Linux' on Windows: cygwin, TheOpenCD)

Questions?

www.roddis.org/linux