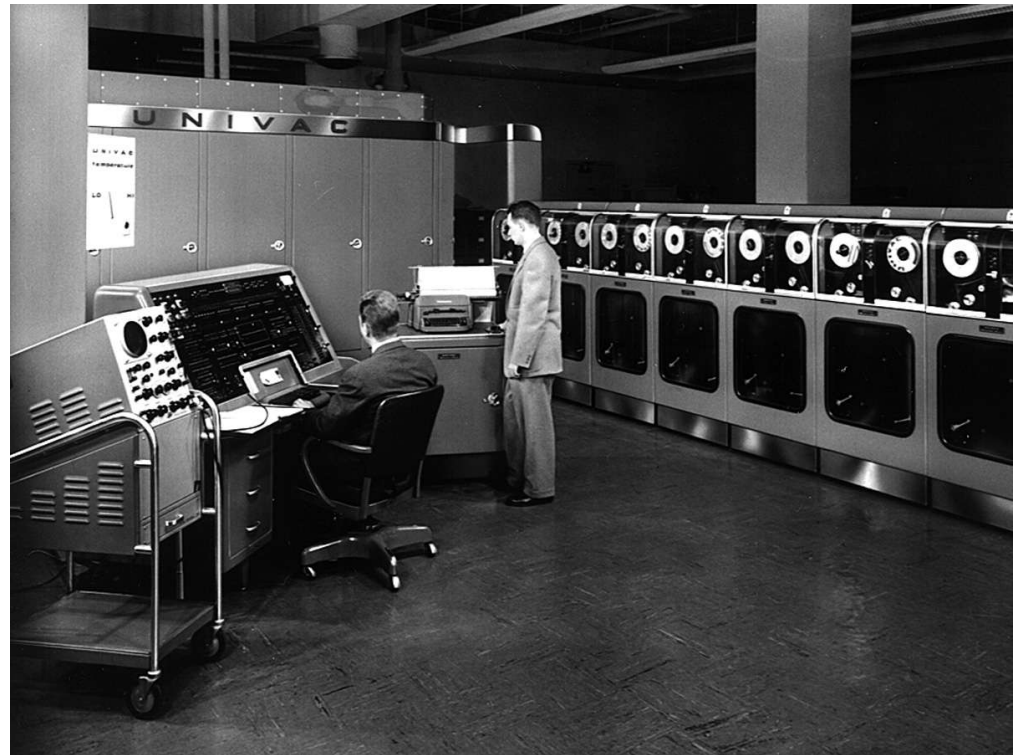Good news:
Computers are now free!

0.0 Wayback when

50's/60's Mainframe:

- Big is beautiful
- $1,000,000.00 (1968)
- $5,532,978.31(2005)
- Crap games
- Buzzcuts

0.1 Wayback when

**1970's
Minicomputers**

- Smaller
- Better
- Faster
- Stronger
- *Adventure, Spacewar*
- Beards

0.2 Wayback when

1980's PC Revolution
- Homebrew
- *Apple //*
- BASIC
- BBSs
- 10 year olds

0.3 Wayback when

Loss of Innocence
- Closed architecture
- Forced obsolescence
- Sad hackers

0.4 Wayback when

**Hackers Respond
With Acronyms (HRWA)**
- Richard Stallman (RMS)
- GNU's Not UNIX (GNU)
- Free Software Foundation (FSF)
- General Public License (GPL)

1.0 Demand PC Freedom

The ambiguity of freedom

- *Free as in Freedom*

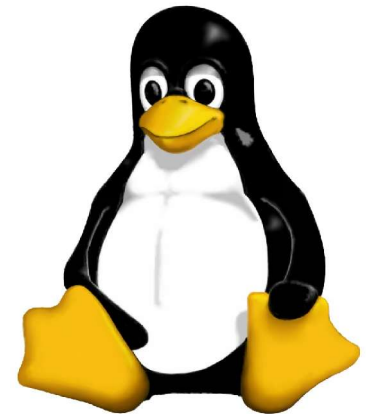- Free software / Free Beer
- Free Beer / Free Computers

1.1 Demand PC Freedom

Winter is cold in Finland

- There exists no UNIX variant for 386
- Hacker sees a need
- "Linux" kernel is born

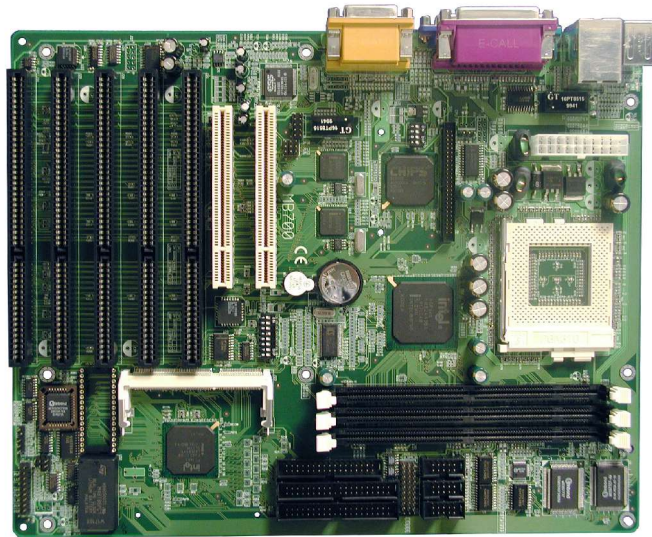# 1.2 Demand PC Freedom

Linux x86 Kernel

+

GNU Software

==

GNU/Linux

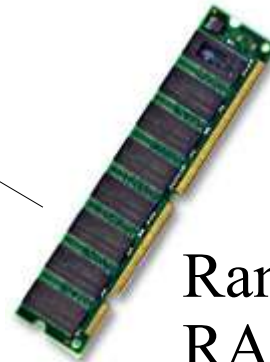*Free Operating System!*

2.0 Inside the Beige Box: Chips

Processor
CPU (Pentium)

CPU Fan

Motherboard
ATX

Random Access Memory
RAM (SDRAM)
Look out for EDO RAM

2.1 Inside the Beige Box: Disk Drives

DHH IDE接続内臓タイプ
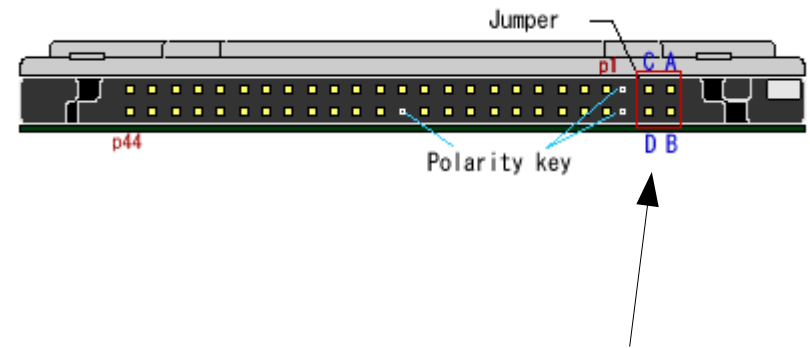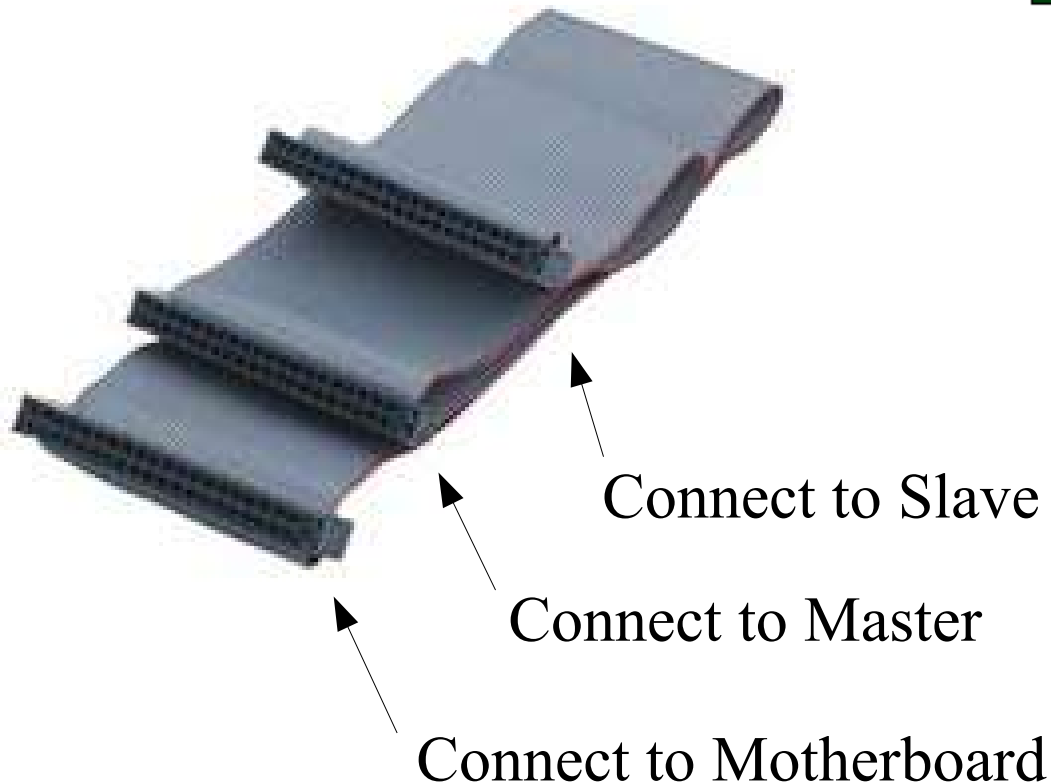
電源コネクタ
ジャパピン設定
IDIインターフェイス

Hard Disk Drive
HDD (IDE)

52X MAX

CD Drive
CD-ROM (IDE)

2.1.1 Inside the Beige Box:
IDE Ribbon/ BDSM

Setting Jumper Pins
Look for a little diagram
Use tweezers and
be careful not to
bend the pins!

Connect to Slave

Connect to Master

Connect to Motherboard

2.1.2 Inside the Beige Box: Power Supply

Don't Mess With This!

The power supply should
be attached to your case.
Just leave it be.
If it's dead, find a new case.
Beige is beige is beige.

Connect these dudes to your
various devices (HDD,
CDROM, Floppy, etc.)
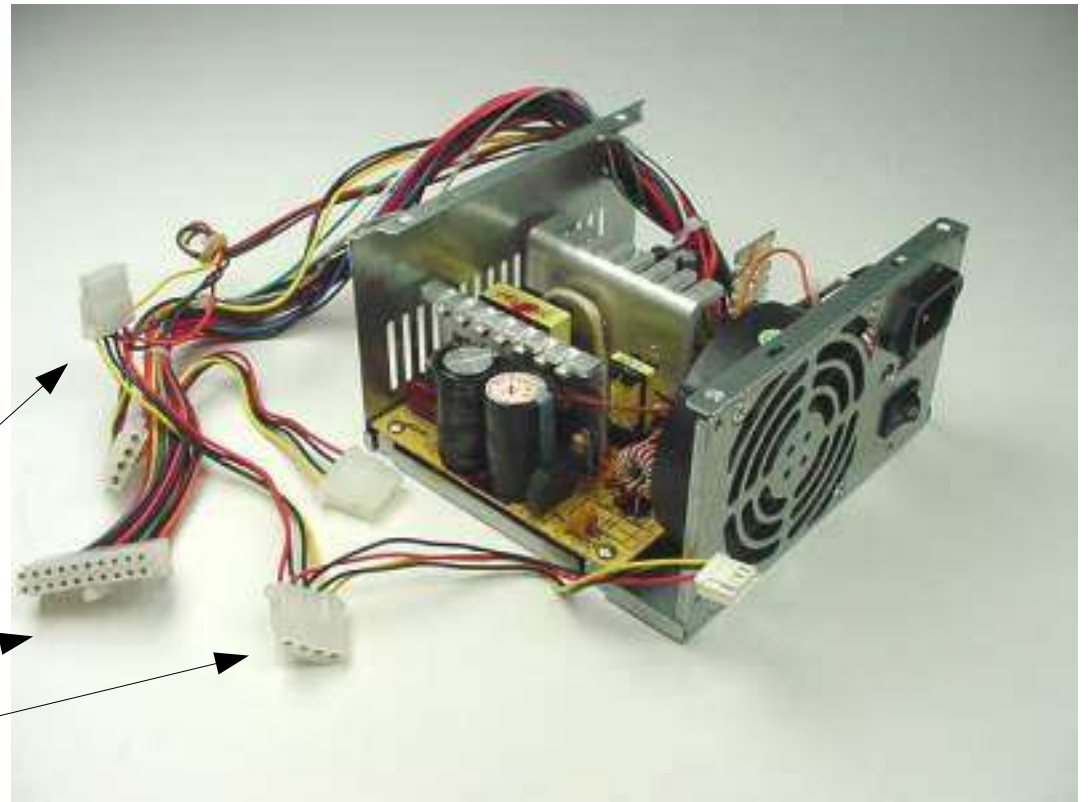
2.2 Inside the Beige Box: Network Cards

Ethernet Card
NIC Card
(PCI)

Ethernet Card
NIC Card
(ISA)

3.0 On your desk:
Input Devices

Mouse (PS/2)
*Look out for USB
and Serial mice*

Keyboard (QWERTY)
*Avoid creepy extra keys
(often made by Compaq)*

3.1 On your desk: Adapters

PS/2
about half the size

For a mouse

Serial
9-pin

PC AT
Looks like MIDI

PS/2

For a keyboard

3.2 On your desk:
Display, Monitor, Screen

You will be able to get more monitors than you can handle.

Just try them all.

Use Google plus whatever info you can find about the model. This will tell you what you can expect with regard to performance.

4.0 Extras you may find

Nicer video card

CD-R, CD-RW, DVD-ROM

Webcam

Nicer sound card

Epson Scanner

5.0 Finding a Free Computer: What is it for?

1. Browse the web
2. Listen to mp3s
3. Chat on IM
4. Use email
5. Word processing
6. Programming
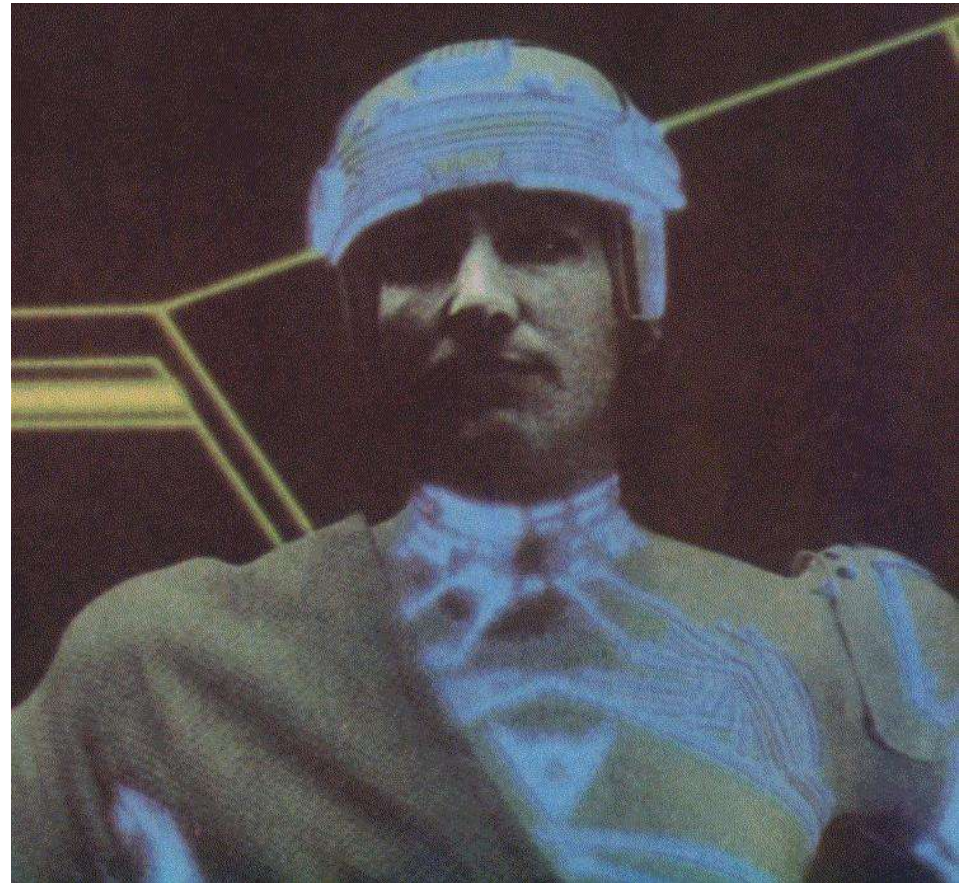7. Make presentations
8. Much more!

5.1 Finding a Free Computer: Minimum Requirements

Processor: 400mhz+

RAM: 128mb (pref 256mb)

HDD: 5gig+

This describes almost all of the PCs produced this century!

5.2 Finding a Free Computer: Where to get the stuff!

Give yourself about a month

- Ask your friends and family
- Look around at work
- **craigstlist.org**
- Message boards
- Want ads

Collect <u>everything</u> you can find!

6.0 Putting it all together: You are Dr. Frankenstein

6.1 Putting it all together: Checklist

Must-haves:
- Case
- Power supply
- Motherboard
- IDE Ribbon(s)
- HDD
- CD-ROM
- RAM
- Display
- Keyboard
- Mouse
- Ethernet card

Optional extras:
- CD-R
- DVD-ROM
- Floppy drive
- Video card
- Sound card
- Printer
- Scanner
- Webcam

6.2 Putting it all together: Hot Tips

- Try everything out to see if it works

- At first, keep each case, motherboard, CPU, and power supply together

- Pair up similar RAM

- K.I.S.S.

Keep It Simple, Stupid!

6.3 Putting it all together: Solving Mysteries

- **RAM**: Put the DIMM in the motherboard alone and start the machine. Listen for a buzzing sound or flipping numbers memory check.

- **Watch the start-up** screen to see BIOS / CMOS information.

- **Google** any weird combination of numbers or letters you find printed on hardware.

- **Plug it in** to a working system and see what happens!

Save all weird components until AFTER you have a running system.

7.0 The Softer Side: Operating System

- **Freedom:** There is copious information available online concerning the various "flavors" of GNU/Linux. For beginning users, seek **Ubuntu**, **Mandrake**, or **Fedora**.

- **Boredom:** Pirate someone's copy of Windows 98.

- **AVOID:** Windows ME, Windows 95, Windows 3.1

PS: Many other options exist for adventurous hackers to explore!!

7.1 The Softer Side: WWW Resources, Part 0

The Open CD is a collection of high-quality free and open-source software for Windows users.
http://www.theopencd.org/

Open Office: office software suite
http://www.openoffice.org/

Mozilla Firefox: web browser
http://www.mozilla.org/firefox/

Azureus: BitTorrent client
http://azureus.sourceforge.net/

Operating Systems:
http://ubuntulinux.org/
http://ubuntuguide.org/
http://fedora.redhat.com/
http://www.mandrakelinux.com/

Craig's List: community bulletin board systems, look for free stuff!
http://www.craigslist.org/

Pricewatch: rapid-fire online discount hardware aggregator
http://www.pricewatch.com/

7.1.1 The Softer Side: WWW Resources, Part 1

Free as in Freedom, by Sam Williams.
http://www.oreilly.com/openbook/freedom/

GNU Project:
http://www.gnu.org/
Free Software Foundation:
http://www.fsf.org/

Python: powerful, easy to learn programming language
http://python.org/
http://www.ibiblio.org/obp/thinkCSpy/
http://www.ibiblio.org/obp/pyBiblio/pythonvideo.php

The Cathedral and the Bazaar, by Eric S. Raymond
http://www.catb.org/~esr/writings/cathedral-bazaar/

Good news:
Computers are now free!