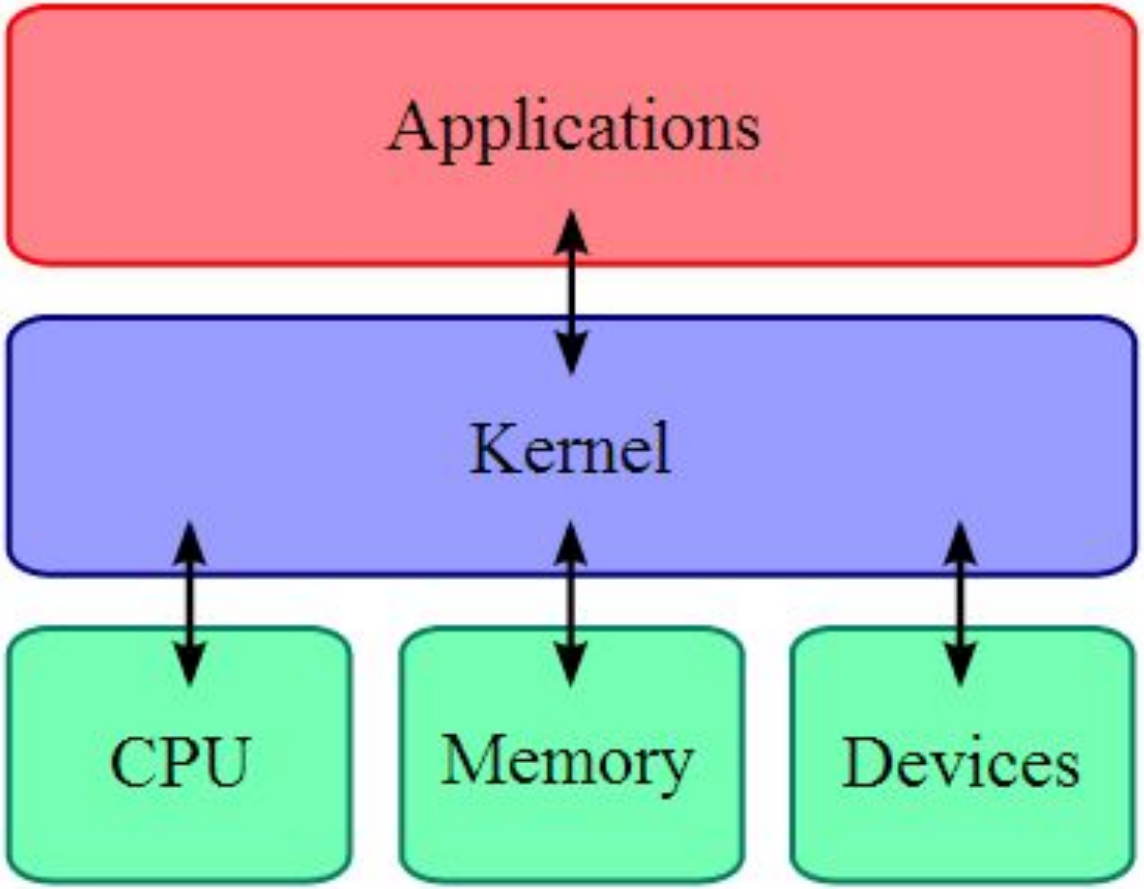
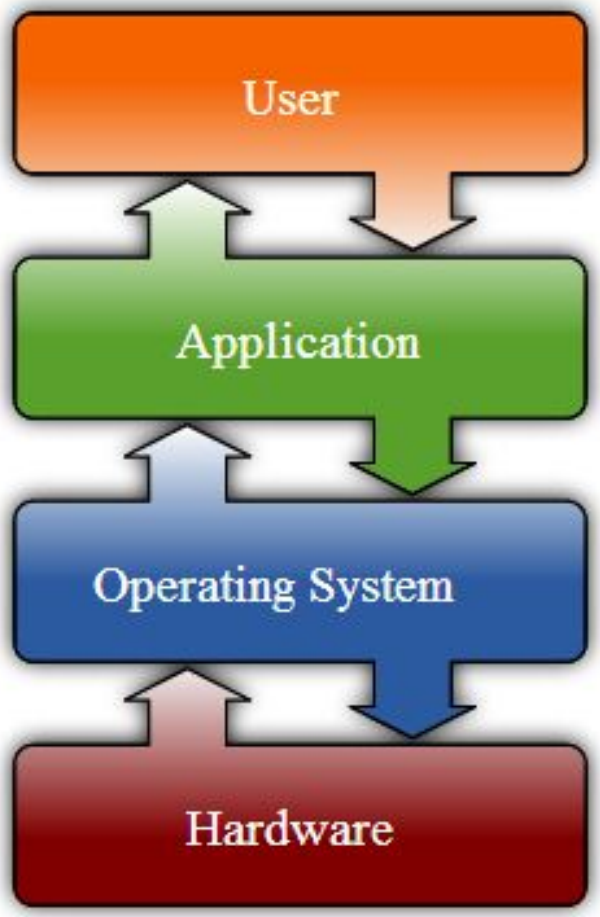
Operation Systems

Types of operating systems

- Real-time
- Multi-user
- Multi-tasking
- Distributed
- Embedded

Basic principles of OS

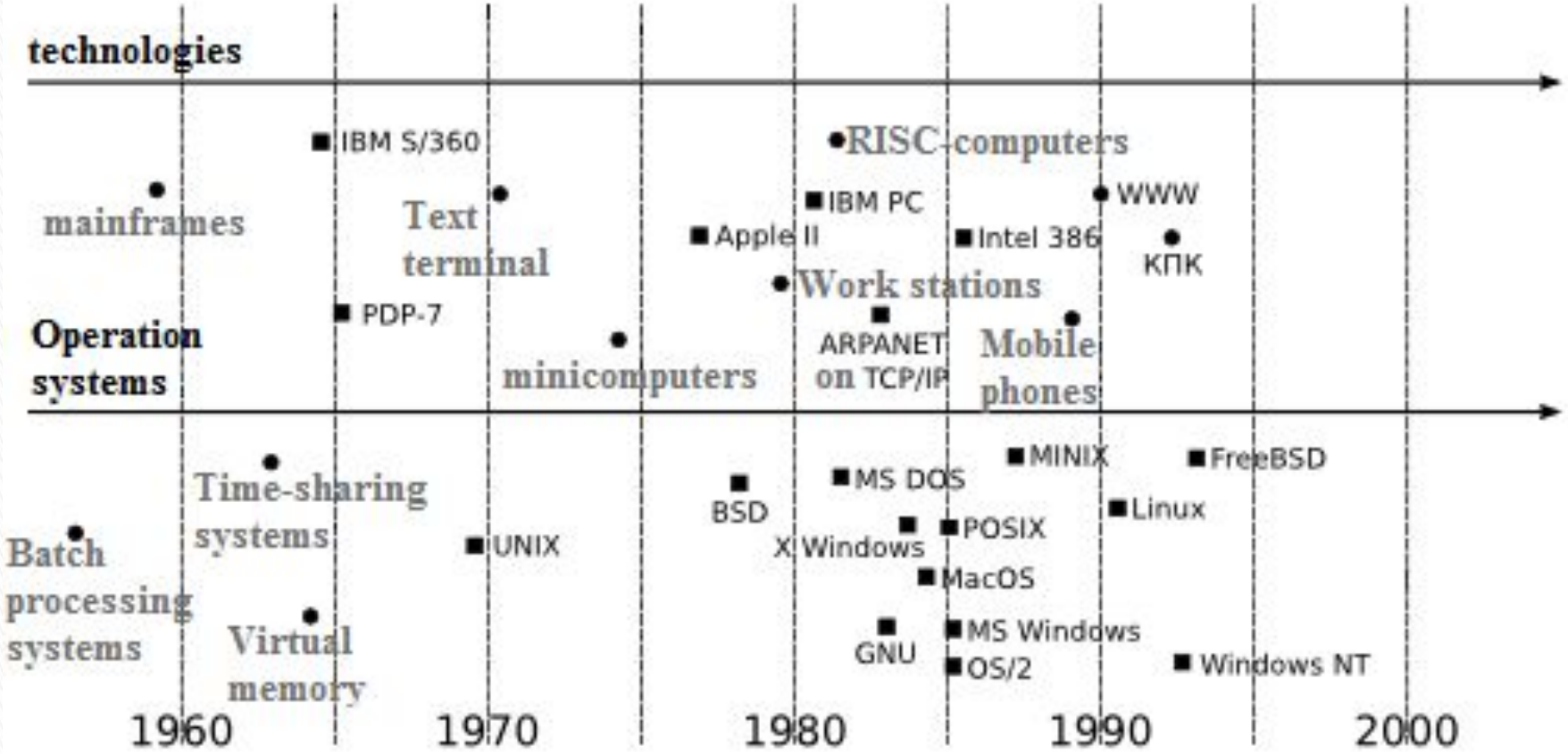




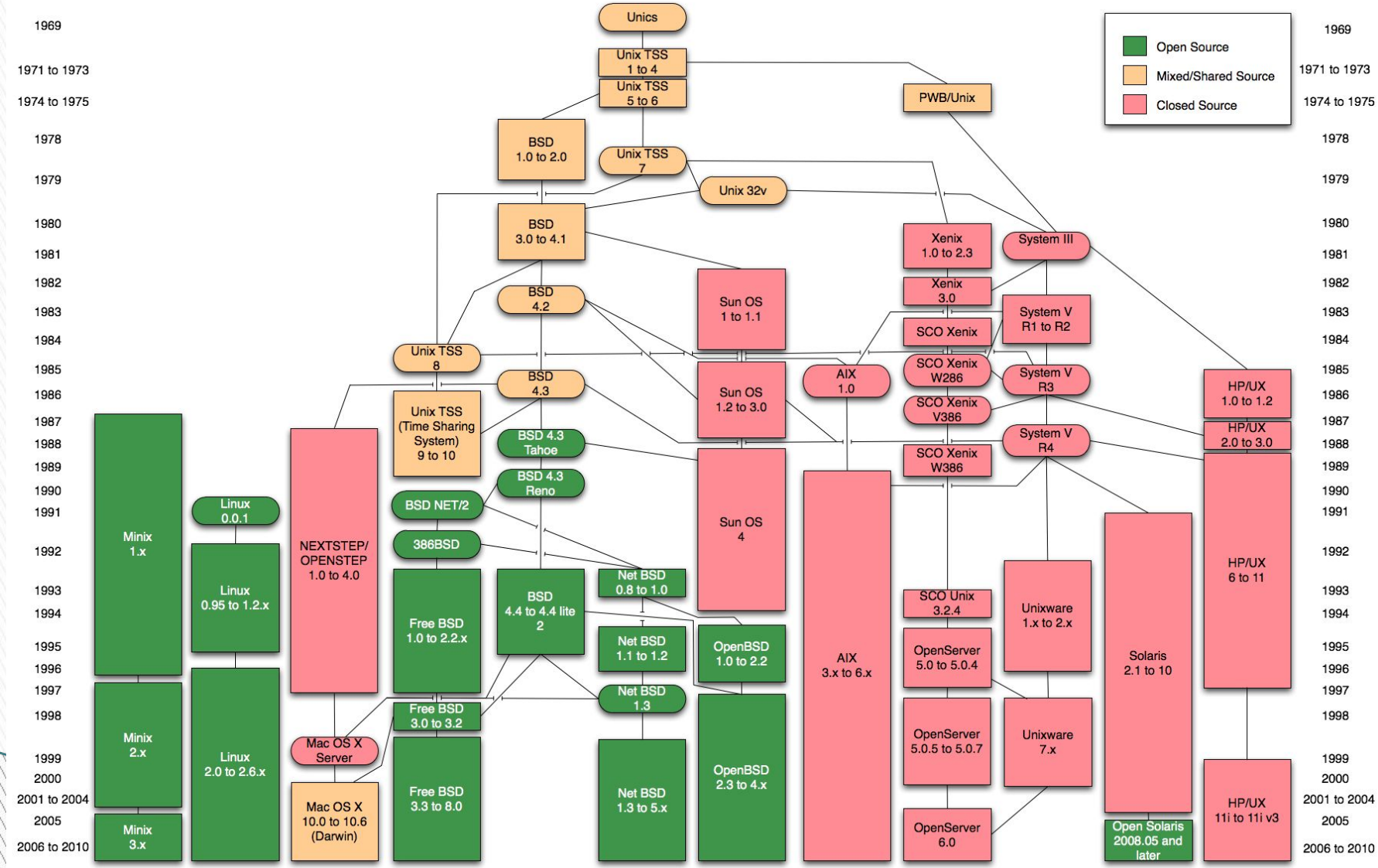
Functionality. Algorithm of working

- OS tasks are divided into 6 categories:
  1) Trolling processor – the division of tasks into manageable pieces and distributing them by priority before sending for processing in the CPU.
  2) Memory management - coordinating the flow of data to (from) RAM and requesting space in the virtual memory.
  3) Device management - connection between each peripherals devices.
  4) Data Management – send data to hard disks, flash drives etc. to store for a long time.
  5) The application interface - providing standard communication and data exchange between programs and computers.
  6) User Interface - providing ways for user to communicate and interact with the computer.

The history of operation systems



UNIX and next generations OS



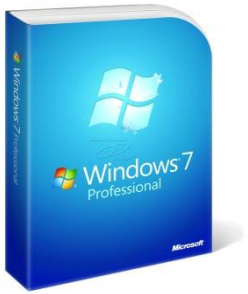
Vulnerability of OS

- Windows
  1) Remote hacking through NetBIOS
  2) Passwords in Windows NT, and the likes, use SAM (Security Accounts Manager), which puts all the information in the database of the same name. If you open SAM in the special soft, you could get all passwords.

- Unix (Linux, Mac OS)
  1) Penetration of the service, a pending request (TCP / UDP)
  2) Using as a base of UNIX, ensure safety of two or more networks.
  3) The use of methods of remote hacking, implying a hidden user involvement (created with criminal intent a special Web-site and e-mail with an attached "Trojan horse", etc.).

First GUIs

Modern GUIs



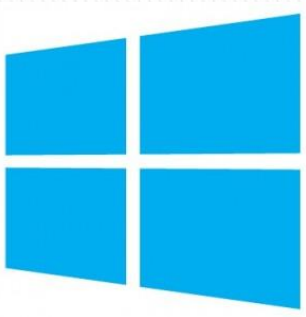
- Based on DOS
- Used on all types of computers
- Less safety
- Better for business
- Less responsive to increase of calculations

- Based on UNIX
- Used only on Apple computers
- More safety
- Better for multimedia and graphics
- More responsive to increase of calculations

Windows

Macintosh

Return to compare



- Based on MS DOS
- Command Line don't have permission to operate the OS
- Drivers could be installed from Internet, Disk or manually
- A lot of proprietary and free software

Windows

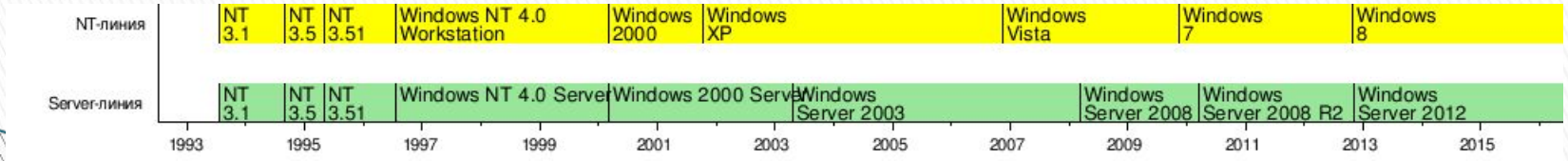
- Based on UNIX
- Command Line let user operate the OS
- Drivers often installed automatically
- Lots of free software, but not commercials

Linux

Return to compare

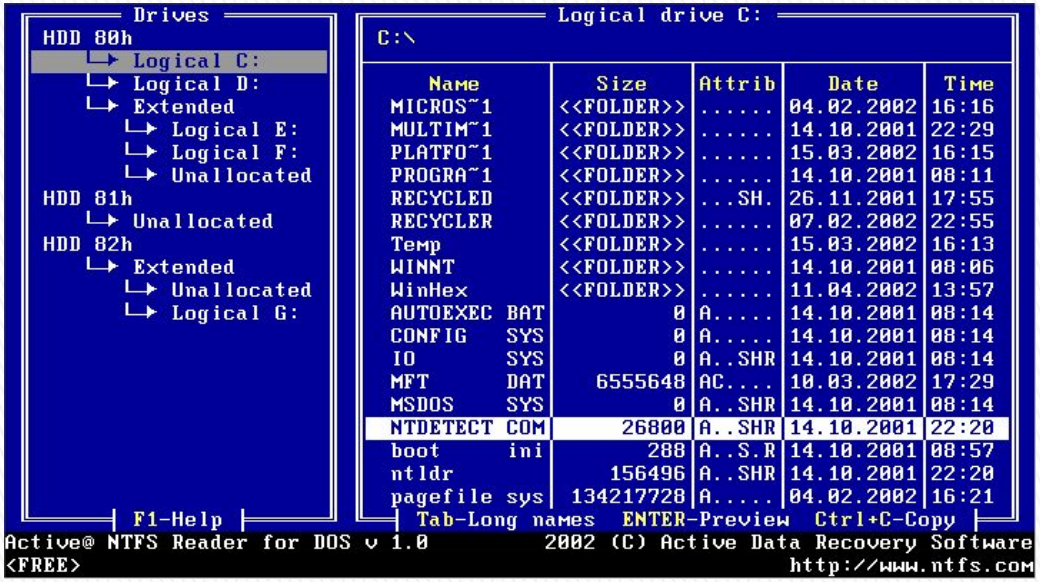
Features of different OS

- Windows is also used as server – line
- Linux is an OS that depends on what module is plugged-in
- Mac OS has a Time Machine backup, which let you to recover previous versions of individual files or even the entire system.

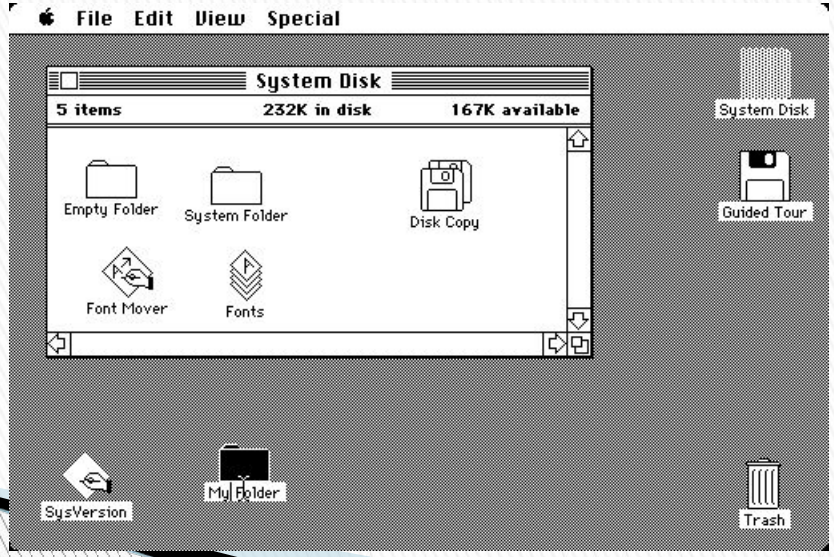


Return to compare

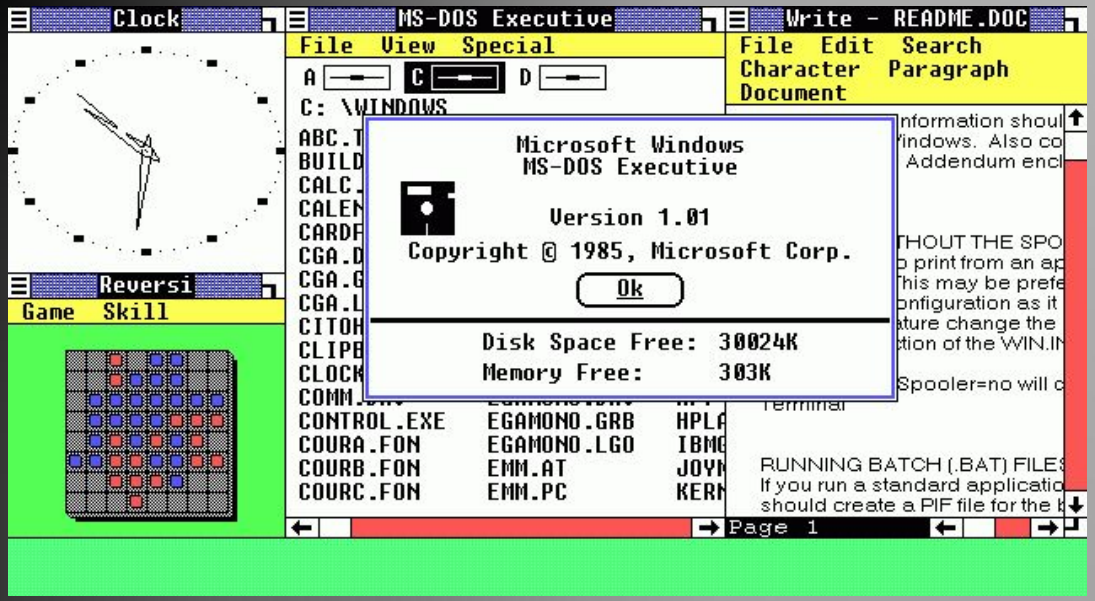
First GUIs



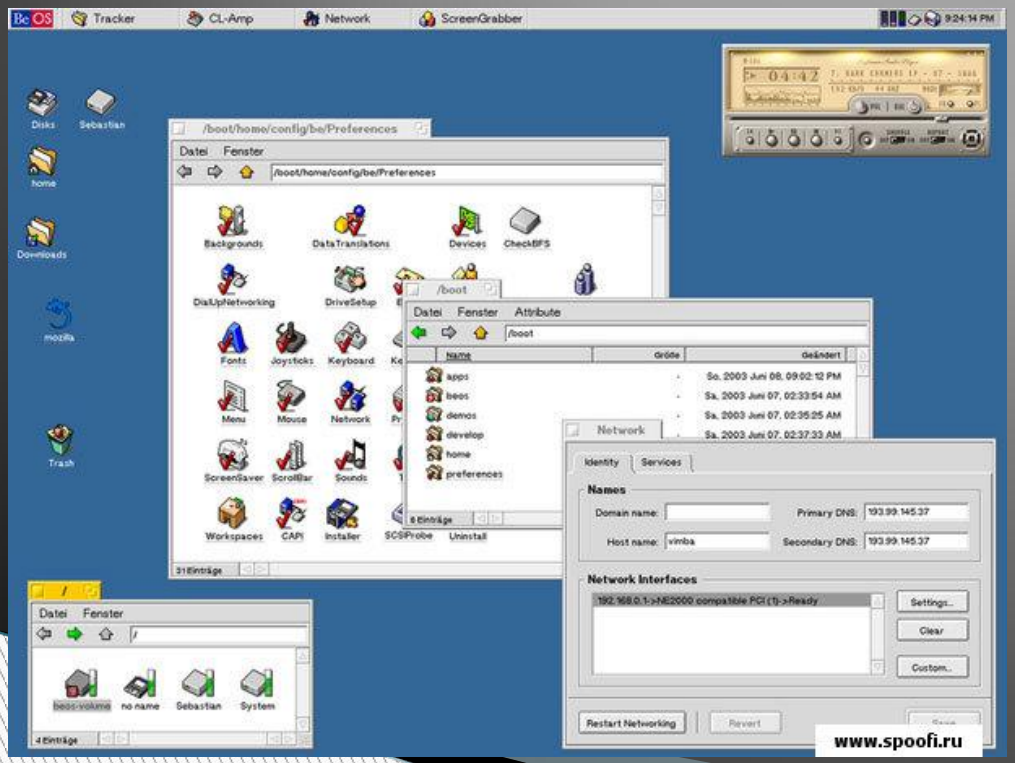
← Ms Dos 1.0



← Mac OS 1.0



← Windows 1.0



← One of the ancient Linux

Return to compare

Start

Windows 8

Daniel
Robinson


Start
free: 1250 MB
08.10.
22:21:46
Files
XFE
Drives
Autostart
Write
Calc
Calendar
Help
Xlock
Trash
Internet
Burn
Disk Free
Windows
Email
Install
Console
MuppyBackup
Connect
Setup
Minisys
Arbre du Ténéré
The most isolated tree on Earth
Puppy Linux 3.01
floppy
home
dvd
VLADSTUDIO
1
2


Finder Файл Правка Вид Переход Окно Справка
14:04
MacOS X Lion

The descendants of the old OS

- IOS is an OS that is used in

I-Phones, I-Pads etc. This OS based on MacOS.

- Android is the most popular OS

for smartphones and tablet PCs.

This OS based on Linux.

- Kolibri OS is the first OS that is written on Assembler.

THANKS FOR PAYING ATTENTION