

EDI II

**Todas las herramientas
que los profesionales IT
deben conocer**

EDI II

Algunas
~~Todas las~~ herramientas
que los profesionales IT
deben conocer

CLI

CLI



COOL LIONS INCORPORATED?

CLI

Command-Line Interface
(Interfaz de línea de comandos)



YES, YES

**LET THE COMMAND LINE FLOW THROUGH
YOU**

interface /'ɪntəfeɪs/

noun

1. A point where two systems, subjects, organizations, etc. meet and interact.

"the interface between accountancy and the law"

2. **COMPUTING:** a device or program enabling a user to communicate with a computer.

"a graphical user interface"

verb

1. Interact with (another system, person, etc.).

"you will interface with counterparts from sister companies"

2. **COMPUTING:** connect with (another computer or piece of equipment) by an interface.

"the hotel's computer system can interface automatically with the booking system"

GUI Graphical User
Interface

CLI Command-Line
Interface

API Application
Programming
Interface


```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

foneiamone@ACER-NITRO-5
-----
OS: Windows 10 Pro [64-bit]
Host: Acer Nitro AN515-51
Kernel: 10.0.19043.0
Motherboard: KBL Freed_HLS
Uptime: 41 minutes
Shell: PowerShell v5.1.19041.1202
Resolution: 1536x864
Terminal: Windows Terminal
CPU: Intel(R) Core(TM) i5-7300HQ CPU
GPU: NVIDIA GeForce GTX 1050 Ti Inte
Memory: 6.27 GiB / 15.89 GiB (39%)
Disk (C:): 56 GiB / 232 GiB (24%)

Loading personal and system pro
PS C:\Users\foneiamone>
```

```
sohan — -zsh — 80x23

[sohan@box ~ % neofetch

      'c.
      ,xNMM.
      .OMMMMo
      OMMM0,
      .;loddo:' loolloddol;.
      cKMMMMMMMMMMNWMMMMMMMMMM0:
      .KMMMMMMMMMMMMMMMMMMMMMMWd.
      XMMMMMMMMMMMMMMMMMMMMMMX.
      ;MMMMMMMMMMMMMMMMMMMMMMM:
      ;MMMMMMMMMMMMMMMMMMMMMMM:
      .MMMMMMMMMMMMMMMMMMMMMMX.
      kMMMMMMMMMMMMMMMMMMMMMwd.
      .XMMMMMMMMMMMMMMMMMMMMMMk.
      .XMMMMMMMMMMMMMMMMMMMMMK.
      kMMMMMMMMMMMMMMMMMMMMMd
      ;KMMMMMMMWXXWMMMMMMMMk.
      .cooc,. .,coo:.

sohan@box.local
-----
OS: macOS Big Sur 11.0.1 20B29 x86_64
Host: Macmini9,1
Kernel: 20.1.0
Uptime: 1 day, 17 hours, 44 mins
Packages: 35 (brew)
Shell: zsh 5.8
Resolution: 3008x1692
DE: Aqua
WM: Quartz Compositor
WM Theme: Blue (Light)
Terminal: Apple_Terminal
Terminal Font: SFMono-Regular
CPU: VirtualApple (8) @ 2.50GHz processor
GPU: Apple M1
Memory: 2350MiB / 16384MiB
```

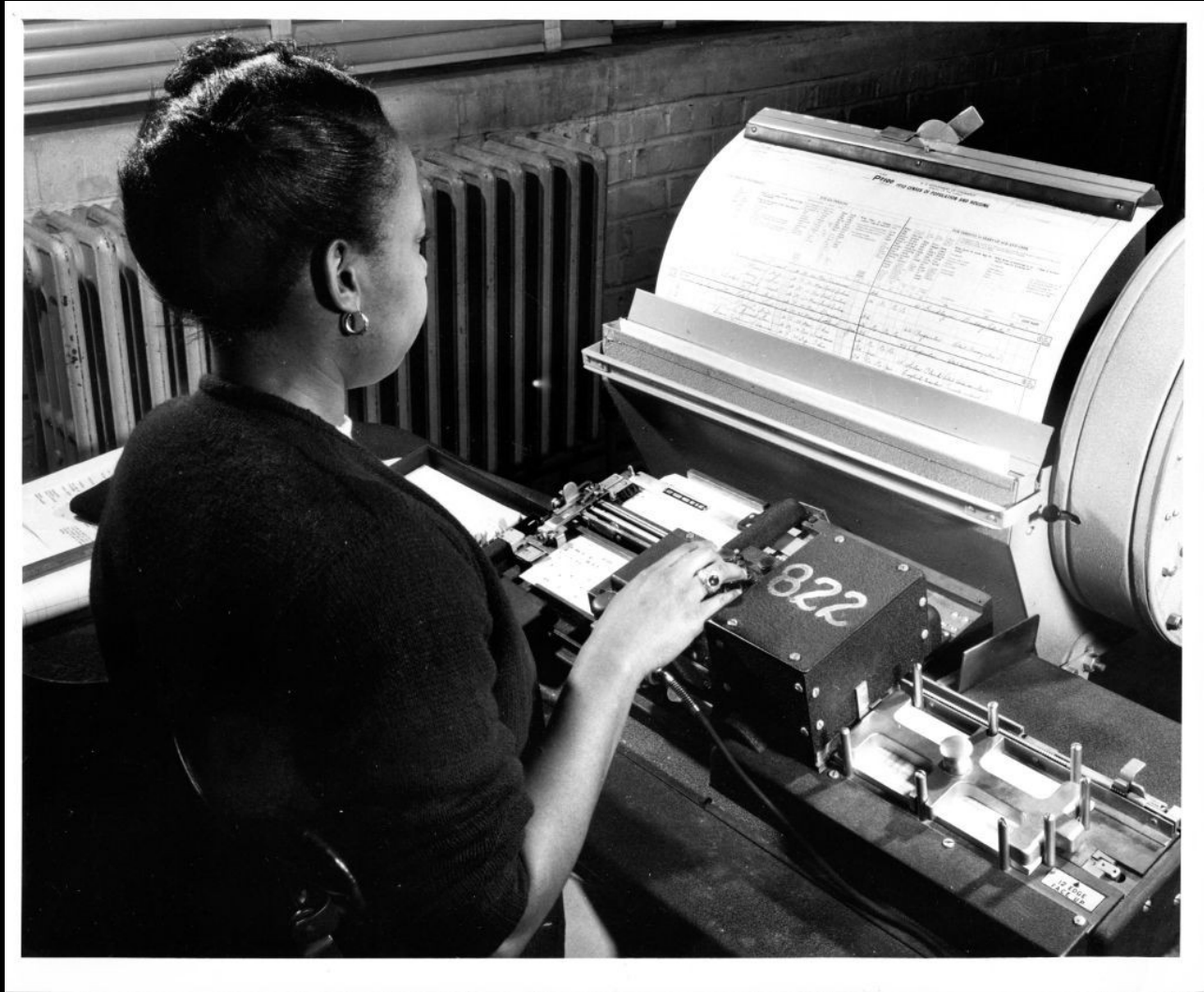
```
anirban@anirban-pc: ~
anirban@anirban-pc:~$ neofetch

.-/+00ssssso+/-.
':+SSSSSSSSSSSSSSSS+:
-+SSSSSSSSSSSSSSSSyySSSS+-
.OSSSSSSSSSSSSSSSSdMMMNySSSSO.
/SSSSSSSSSSSShdmmNNmyNMMMMhSSSSS/
+SSSSSSSSshmydMMMMMMNdddySSSSSSS+
/SSSSSSSShNMMMyhyyyyhNMMMMNhSSSSSSS/
.SSSSSSSdMMMNhSSSSSSSSShNMMMdSSSSSSS.
+SSSSShhyNMMNySSSSSSSSSSyNMMMySSSSSSS+
OssyNMMMNyMMhSSSSSSSSSSShmmNhSSSSSSSO
OssyNMMMNyMMhSSSSSSSSSSShmmNhSSSSSSSO
+SSSSShhyNMMNySSSSSSSSSSyNMMMySSSSSSS+
.SSSSSSSdMMMNhSSSSSSSSShNMMMdSSSSSSS.
/SSSSSSSShNMMMyhyyyyhNMMMMNhSSSSSSS/
+SSSSSSSSdmydMMMMMMNdddySSSSSSS+
/SSSSSSSSSSSShdmmNNNnyNMMMMhSSSSSS/
.OSSSSSSSSSSSSSSSSdMMMNySSSSO.
-+SSSSSSSSSSSSSSSSyySSSS+-
':+SSSSSSSSSSSSSSSS+:
.-/+00ssssso+/-.

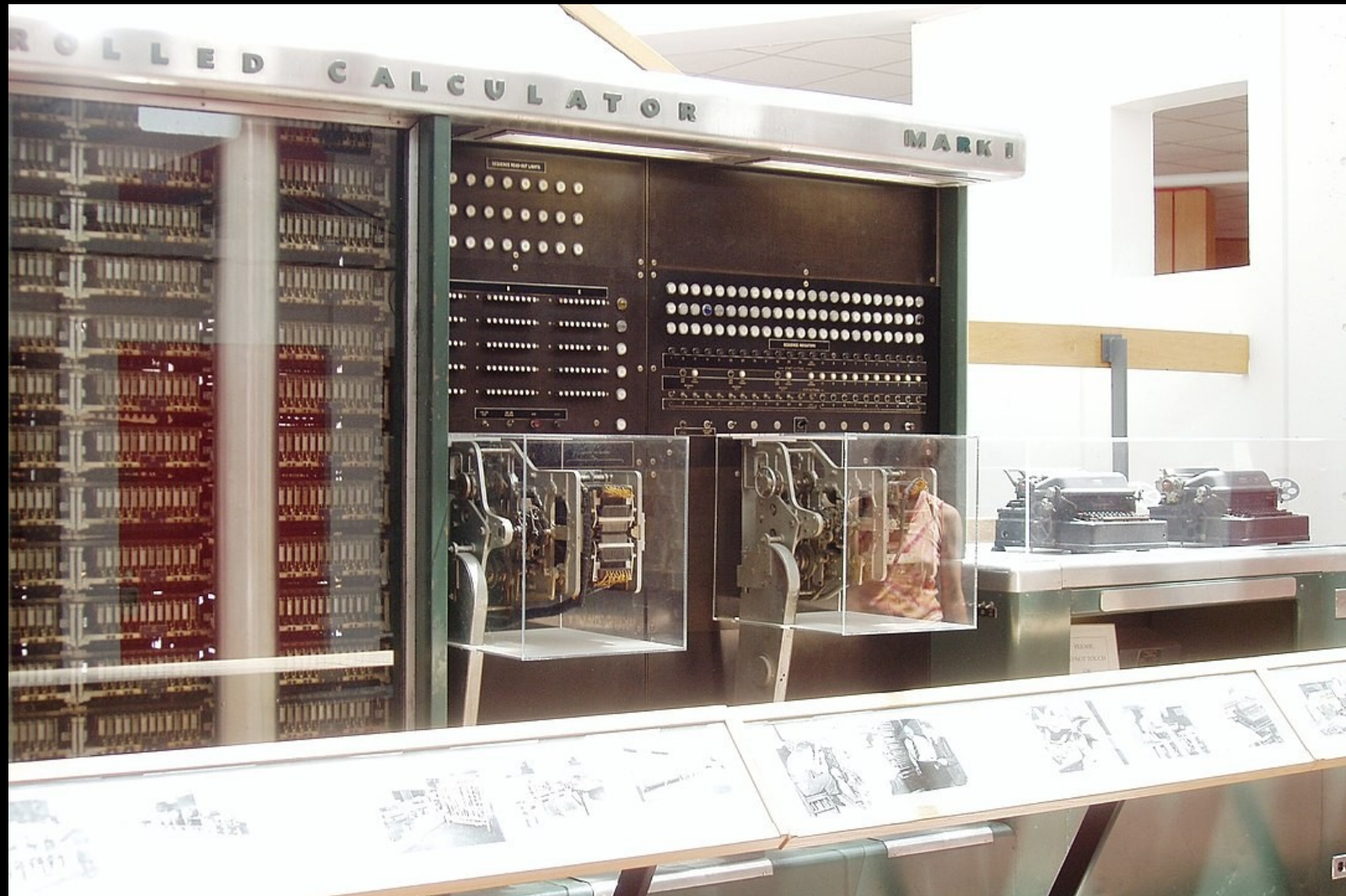
anirban@anirban-pc
-----
OS: Ubuntu 22.04 LTS x86_64
Host: KVM/QEMU (Standard PC (i440FX
Kernel: 5.15.0-25-generic
Uptime: 1 hour, 17 mins
Packages: 1746 (dpkg), 9 (snap)
Shell: bash 5.1.16
Resolution: 1920x1001
DE: GNOME 42.0
WM: Mutter
WM Theme: Adwaita
Theme: Yaru [GTK2/3]
Icons: Yaru [GTK2/3]
Terminal: gnome-terminal
CPU: Intel i5-6200U (4) @ 2.399GHz
GPU: 00:02.0 Red Hat, Inc. QXL parav
Memory: 1083MiB / 6236MiB
```



Tabuladora
1889 - Herman Hollerith (IBM)



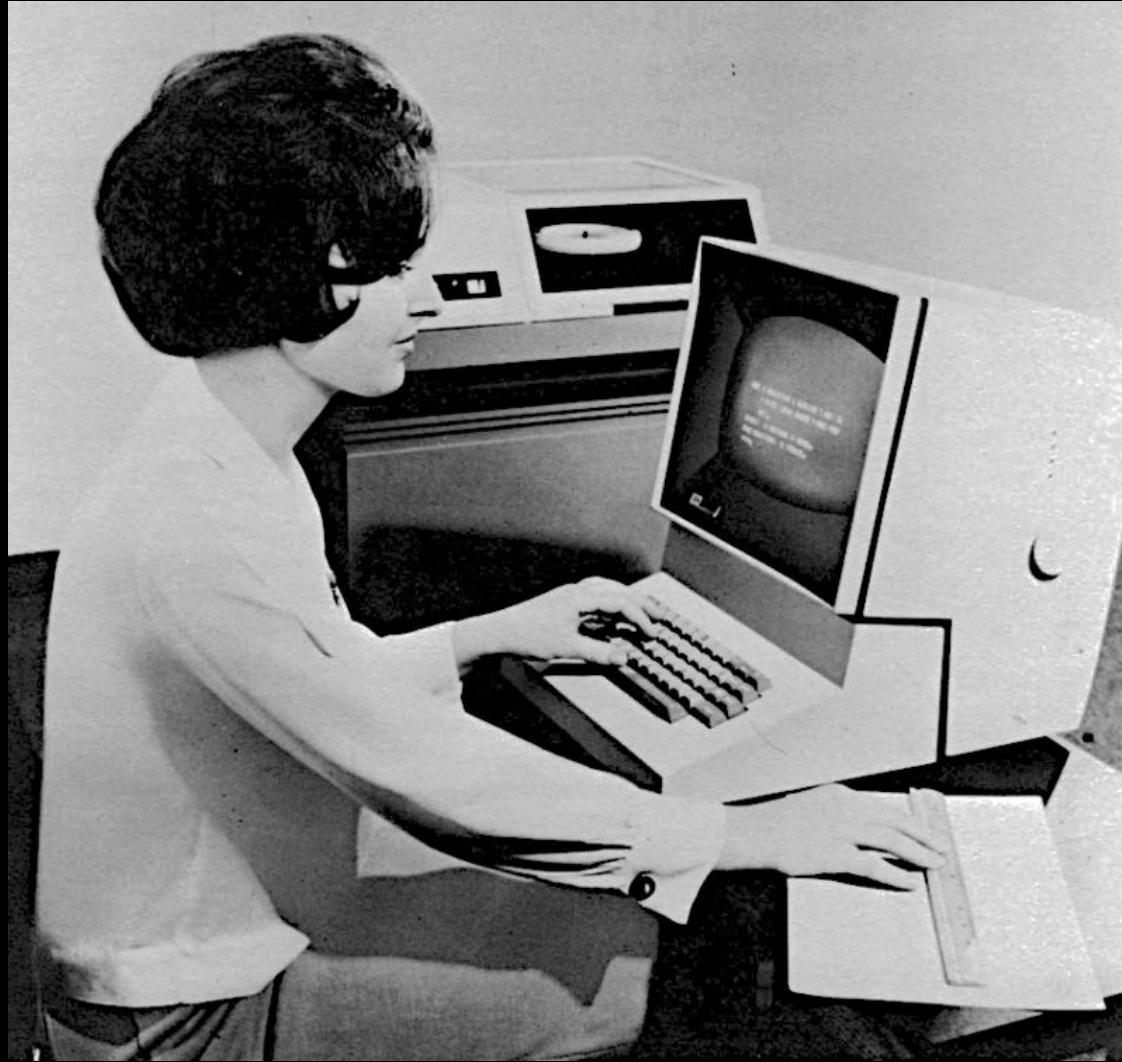
1905 a 1955 - Tarjetas Perforadas



Mark I
1944 - IBM y Harvard



1940 a 1980 - Teletipo / Teleprinter
(TeleTYpewriter, Teletype, or TTY)



1960 a 2000 - Video Display Units

Terminal

- Dispositivo físico o software para comunicarse con una computadora.
- Computadora local o remota.
- Usa una interfaz de texto.

Consola

- Tipo especial de terminal.
- Conectada directamente al sistema.
- Principal interfaz para administración y mantenimiento.
- Permite configuraciones de bajo nivel (bios, boot loader, kernel, etc).

Shell

- Shell: Interprete de comandos.
- Llamado así (caparazón) por ser la capa extrema del OS.
- Programa que expone los servicios del OS a personas u otros programas.
- Normalmente los shell de los OS son CLI o GUI.

Shell

- sh (Bourne SHell)
- **bash** (**Bourne-Again SHell**)
- ksh (KornSHell)
- zsh (Z SHell)
- fish (Friendly Interactive SHell)
- pwsh (PoWerSHell)

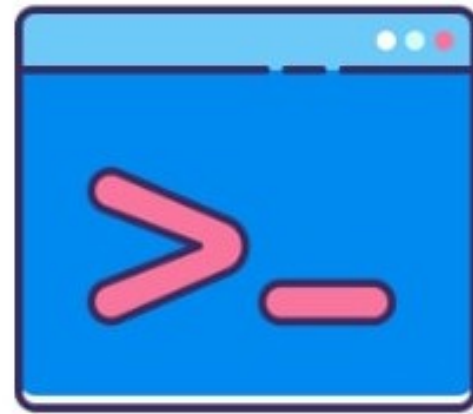
Funcionamiento

PROMPT COMMAND [PARAM-1 ... PARAM-N]



GUI

VS.



CLI

COMMAND LINE USER

**LOOKING AT GUI USER
MAKING 100 FOLDERS WITH MOUSE**

imgflip.com

```
mkdir dir_{001..100}
```

```
mkdir -p dir1/dir2/dir3
```

Lecciones de Mecanografía

<https://is.gd/kesota>

(15 minutos por día)

AN ENGINEER HELPING A DESIGNER




```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

foneiamone@ACER-NITRO-5
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Loading personal and system pr
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```

```
sohan — -zsh — 80x23

[sohan@box ~ % neofetch

      'c.
      ,xNMM.
      .OMMMMo
      OMMM0,
      .;loddo:' loolloddol;.
      cKMMMMMMMMMMNWMMMMMMMMMM0:
      .KMMMMMMMMMMMMMMMMMMMMMMWd.
      XMMMMMMMMMMMMMMMMMMMMMMX.
      ;MMMMMMMMMMMMMMMMMMMMMMM:
      ;MMMMMMMMMMMMMMMMMMMMMMM:
      .MMMMMMMMMMMMMMMMMMMMMMX.
      kMMMMMMMMMMMMMMMMMMMMMMWd.
      .XMMMMMMMMMMMMMMMMMMMMMMK.
      .XMMMMMMMMMMMMMMMMMMMMMK.
      kMMMMMMMMMMMMMMMMMMMd
      ;KMMMMMMMWXXWMMMMMMMMk.

sohan@box.local
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OS: macOS Big Sur 11.0.1 20B29 x86_64
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Terminal Font: SFMono-Regular
CPU: VirtualApple (8) @ 2.50GHz processor
GPU: Apple M1
Memory: 8550MiB / 16384MiB
```

```
anirban@anirban-pc: ~
anirban@anirban-pc:~$ neofetch

.-/+00ssssss+/-.
':+SSSSSSSSSSSSSSSSSS+:
-+SSSSSSSSSSSSSSSSSSyySSSS+-
.OSSSSSSSSSSSSSSSSSSdMMMNySSSSO.
/SSSSSSSSSSSShdmmNNmyNMMMMhSSSSS/
+SSSSSSSSshmydMMMMMMNdddySSSSSSS+
/SSSSSSSShNMMMyhhyyyyhNMMMMNhSSSSSSS/
.SSSSSSSSdMMMNhSSSSSSSSShNMMMdSSSSSSS.
+SSSSShhyNMMNySSSSSSSSSSyNMMMySSSSSSS+
OssyNMMMNyMMhSSSSSSSSSSShmmNhSSSSSSSO
OssyNMMMNyMMhSSSSSSSSSSShmmNhSSSSSSSO
+SSSSShhyNMMNySSSSSSSSSSyNMMMySSSSSSS+
.SSSSSSSSdMMMNhSSSSSSSSShNMMMdSSSSSSS.
/SSSSSSSShNMMMyhhyyyyhNMMMMNhSSSSSSS/
+SSSSSSSSdmydMMMMMMNdddySSSSSSS+
/SSSSSSSSSShdmmNNNnyNMMMMhSSSSSSS/
.OSSSSSSSSSSSSSSSSSSdMMMNySSSSO.
-+SSSSSSSSSSSSSSSSSSyySSSS+-
':+SSSSSSSSSSSSSSSSSS+:
.-/+00ssssss+/-.

anirban@anirban-pc
-----
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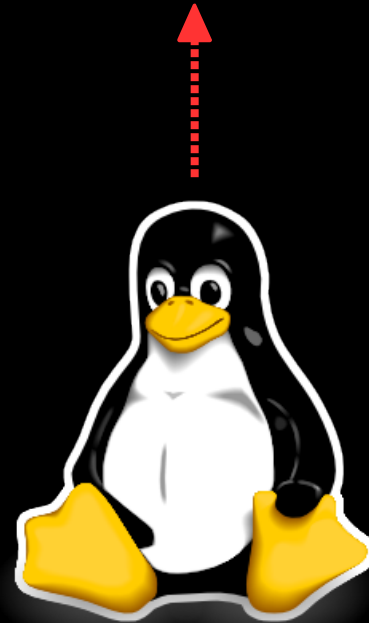
Sistema Operativo (OS)

Conjunto de software de sistema que administra los recursos (de software y hardware) y provee de servicios al software de aplicación.





Debian es una
distribución de
Linux



Linux

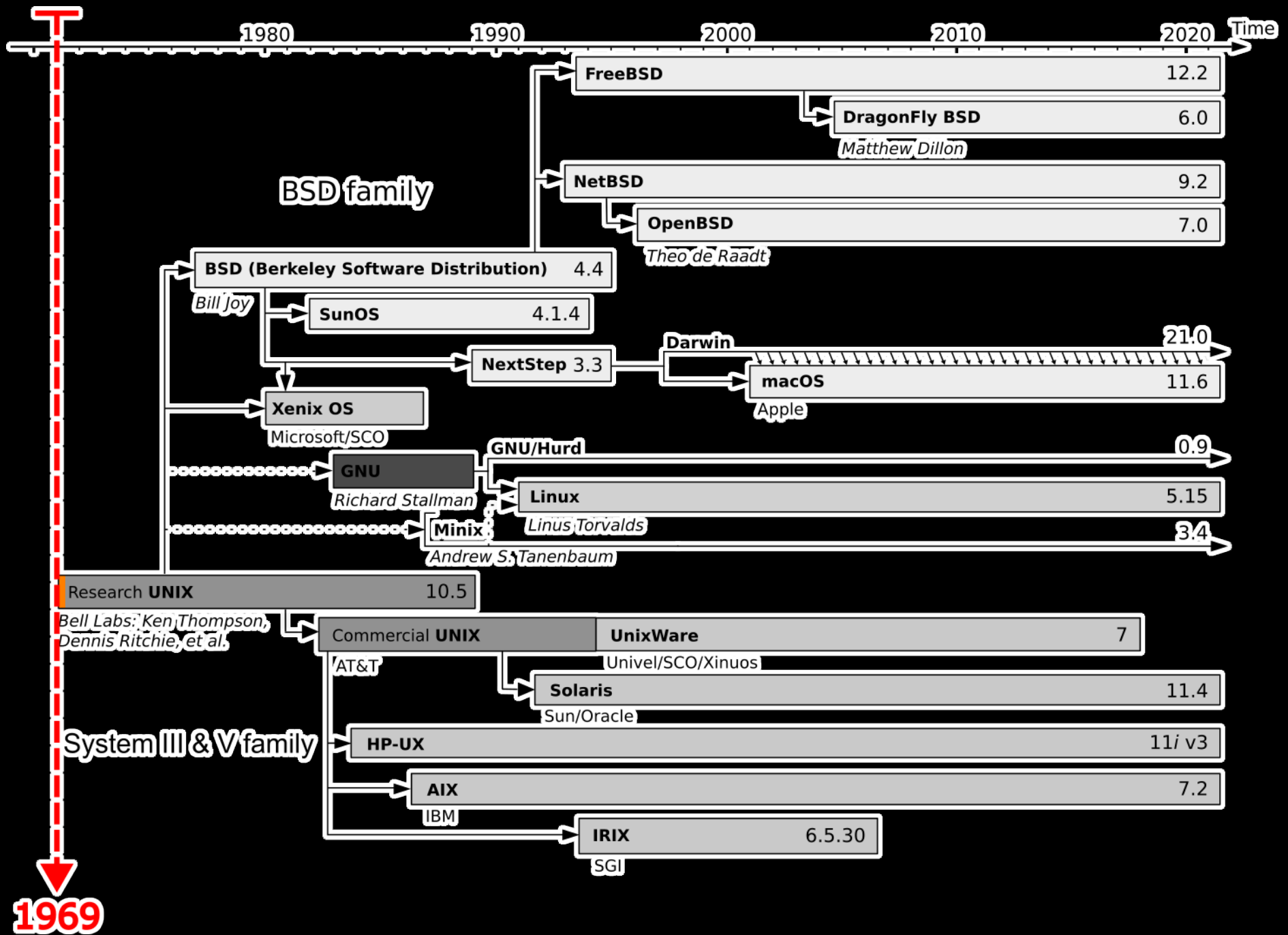


GNU/Linux

UNIX



GNU/Linux



1969 – Bell Labs



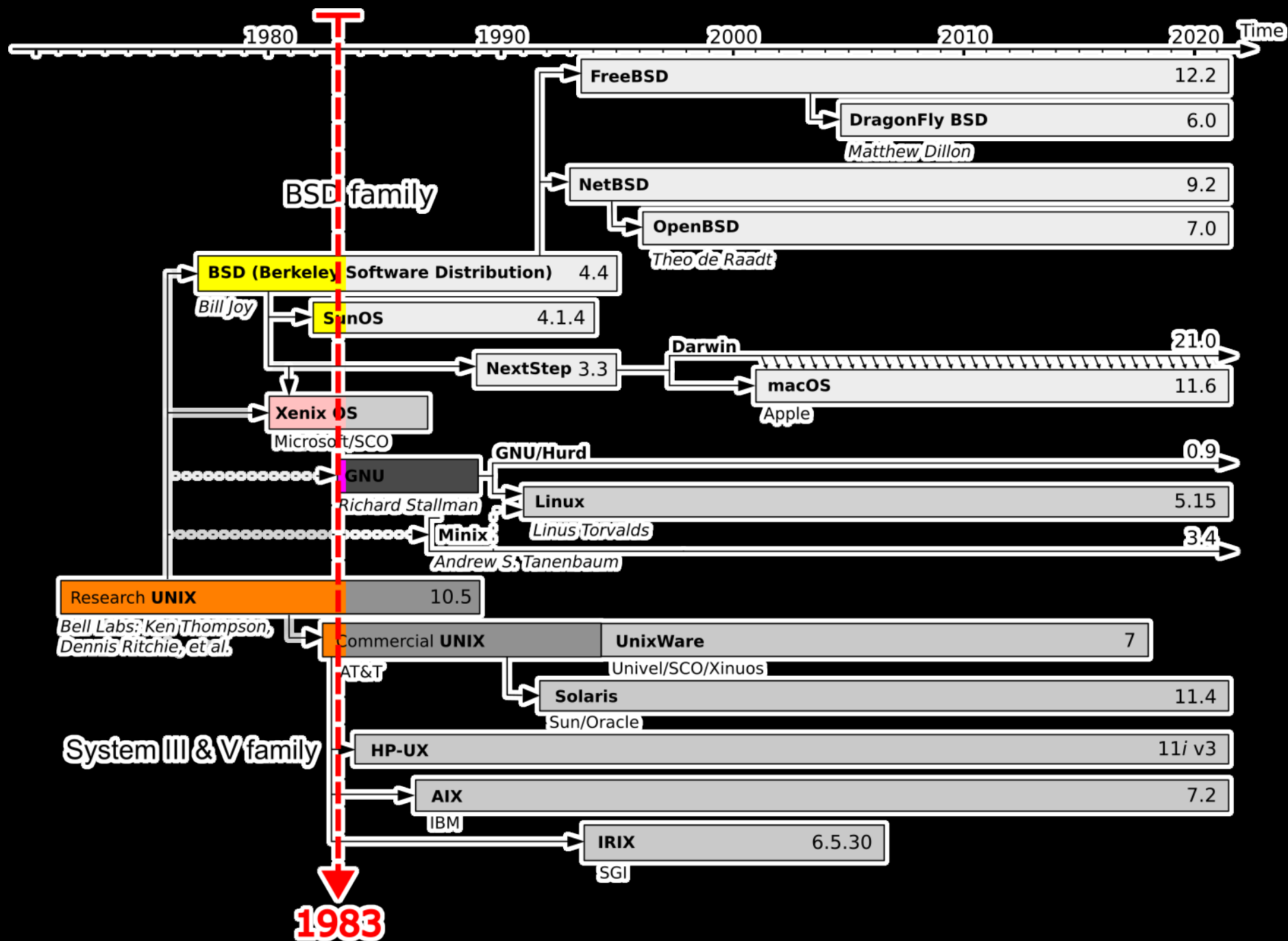
Ken Thompson

- Multics
- B
- UTF-8
- Grep
- Go



Dennis Ritchie

- Multics
- C

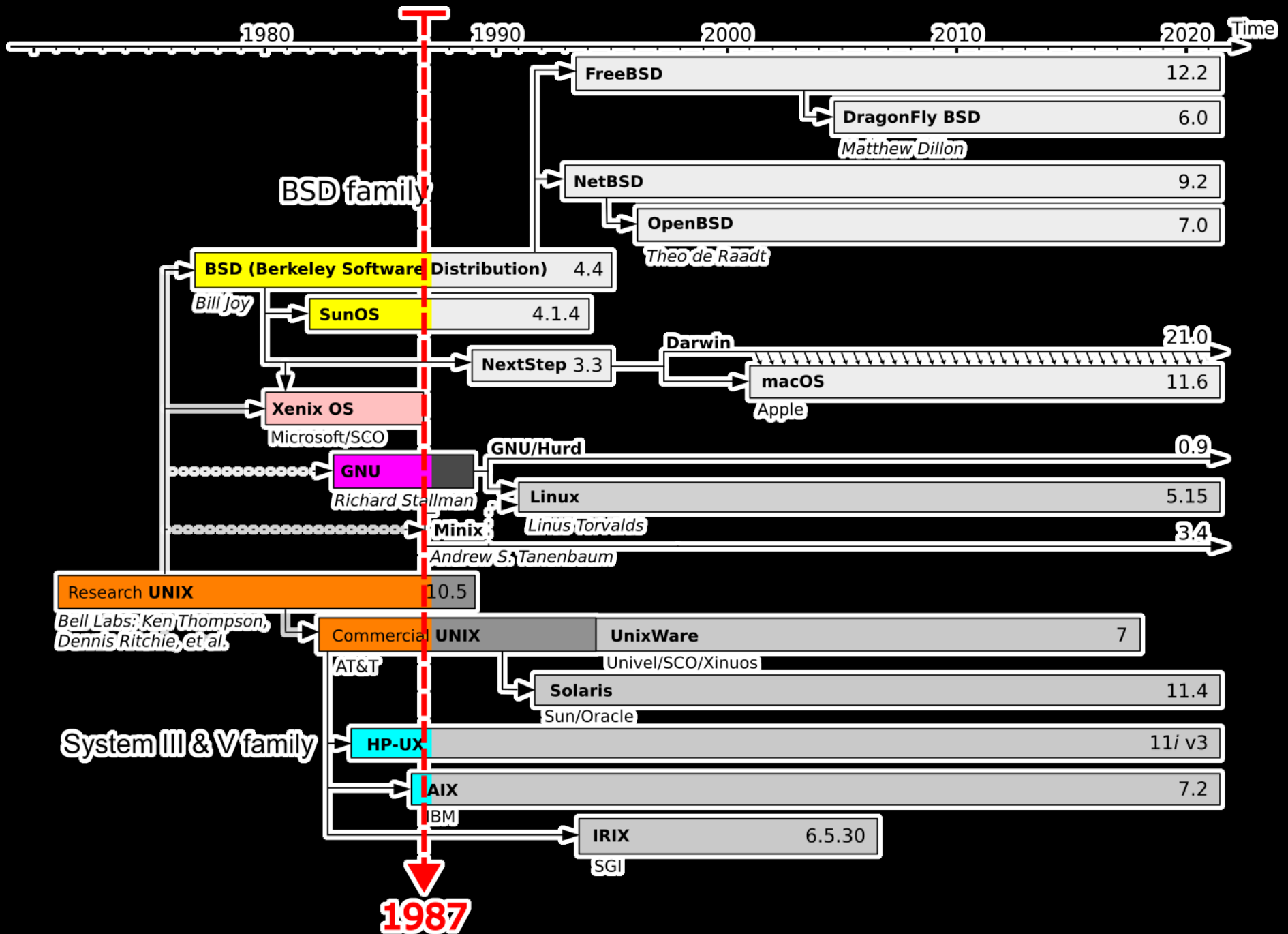


1983 - GNU



Richard Stallman

- Free software movement
- GNU
- GNU Emacs
- GNU Compiler Collection
- GNU General Public License
- Copyleft
- Free Software Foundation

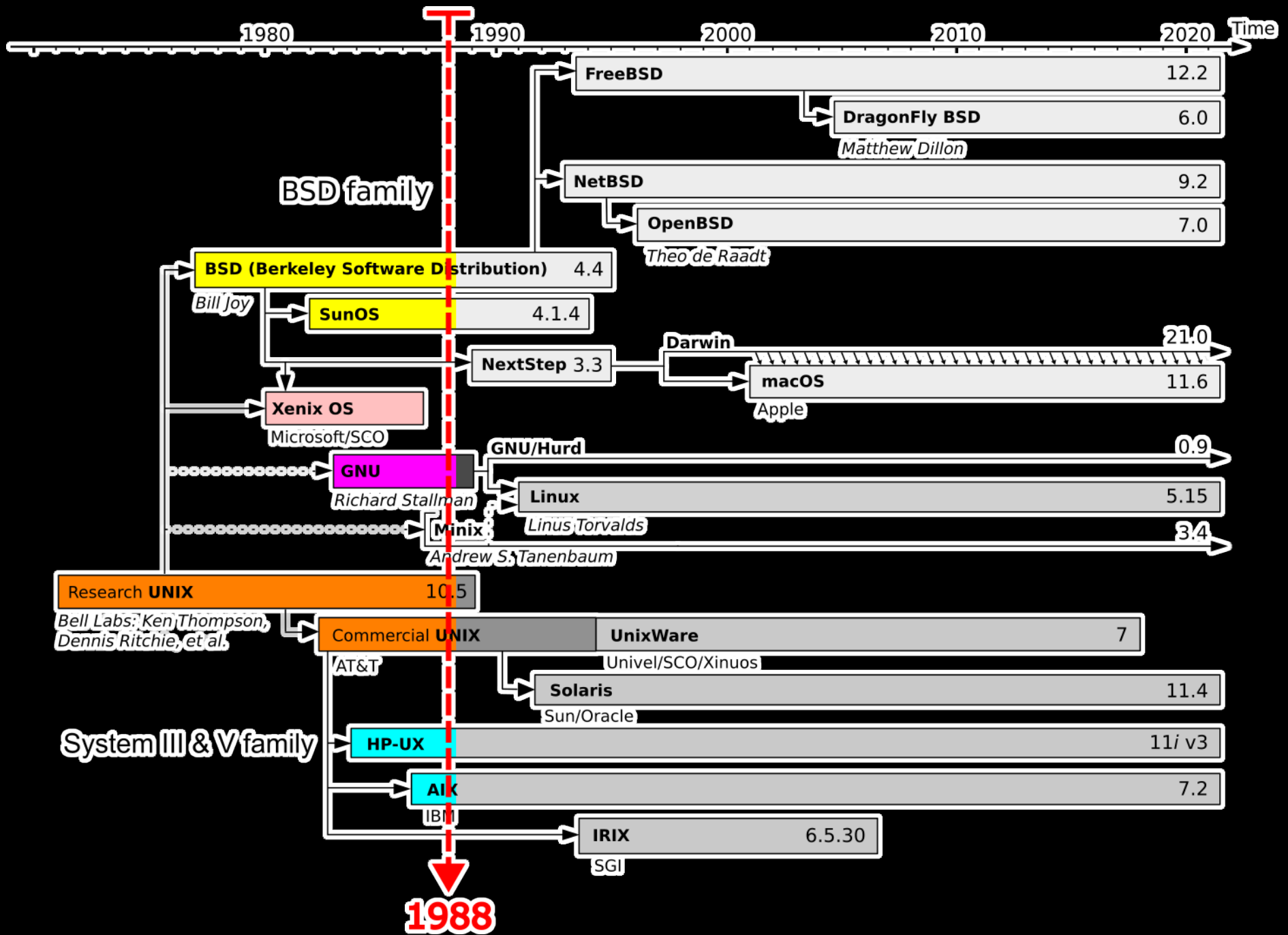


1987 - Minix



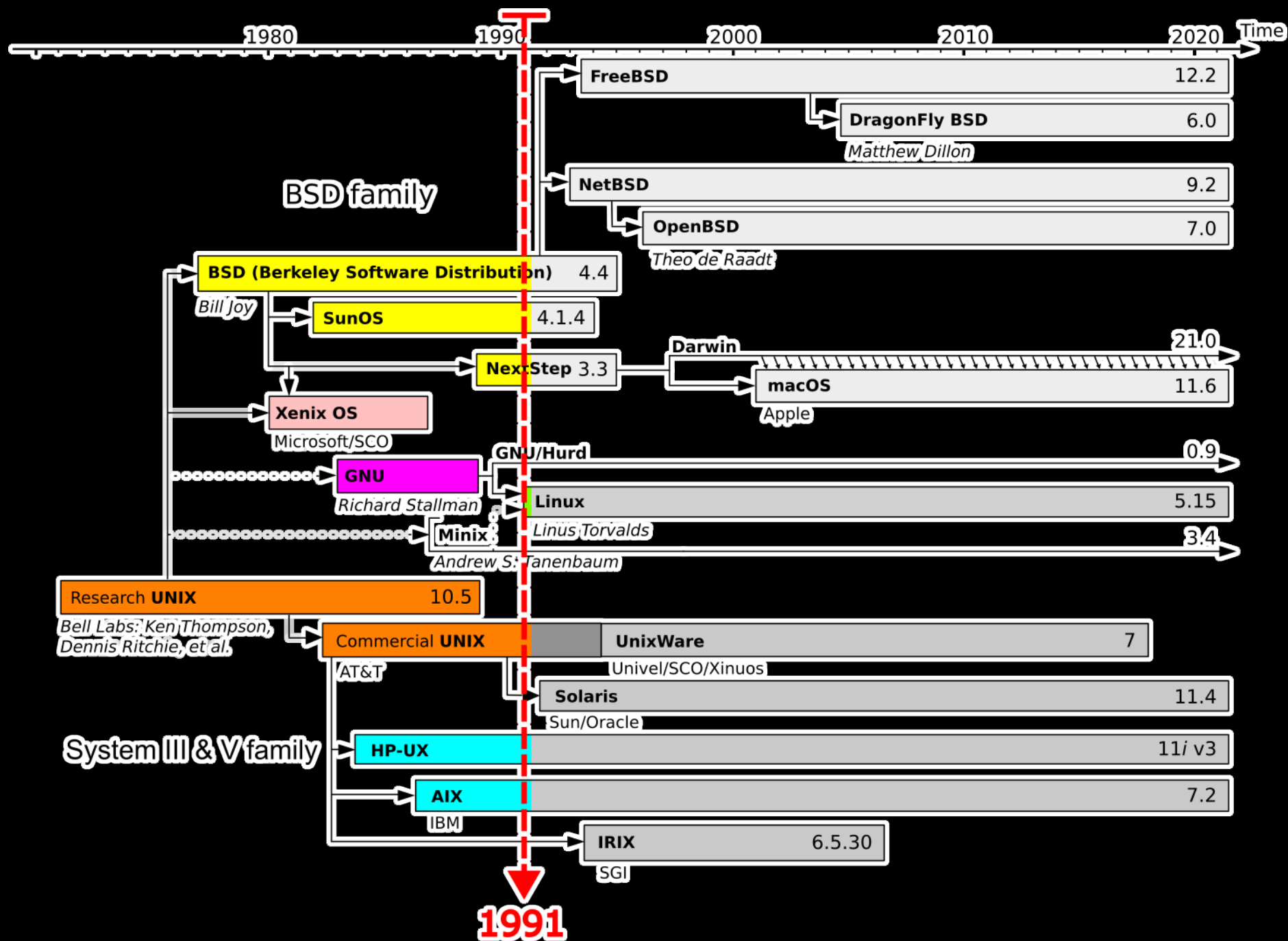
Andrew S. Tanenbaum

- Microkernels
- Book: "Computer Networks"
- Book: "Operating Systems - Design and Implementation"
- Book: "Modern Operating Systems"



1988 - POSIX

- Portable Operating System Interface y la X de UNIX como señal de identidad de la API.
- Define una interfaz estándar del sistema operativo, el entorno (incluyendo un intérprete de comandos o "shell") y programas de utilidades comunes para soportar la portabilidad de las aplicaciones a nivel de código fuente.
- El término fue sugerido por Richard Stallman.

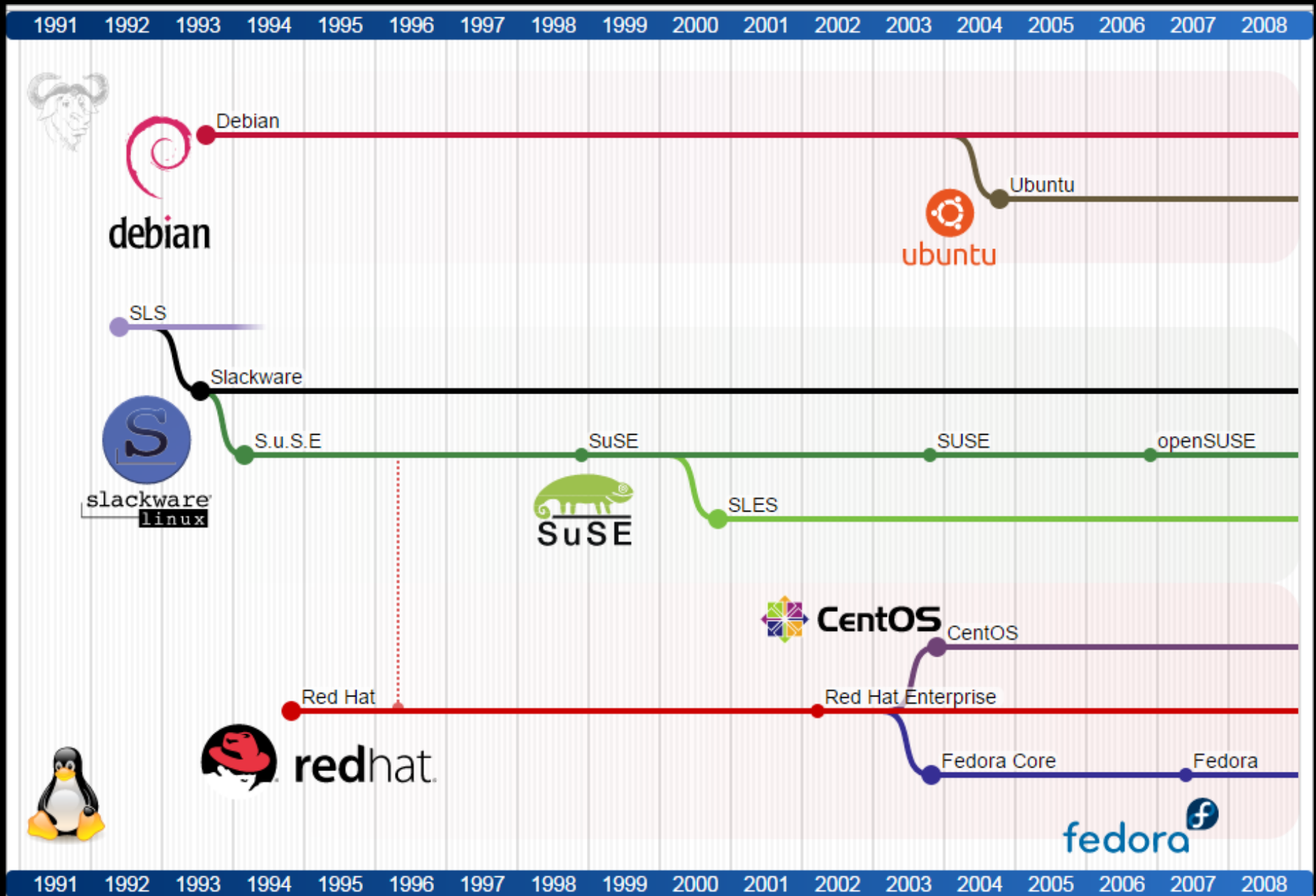


1991 - Linux



Linus Torvalds

- Linux
- Git





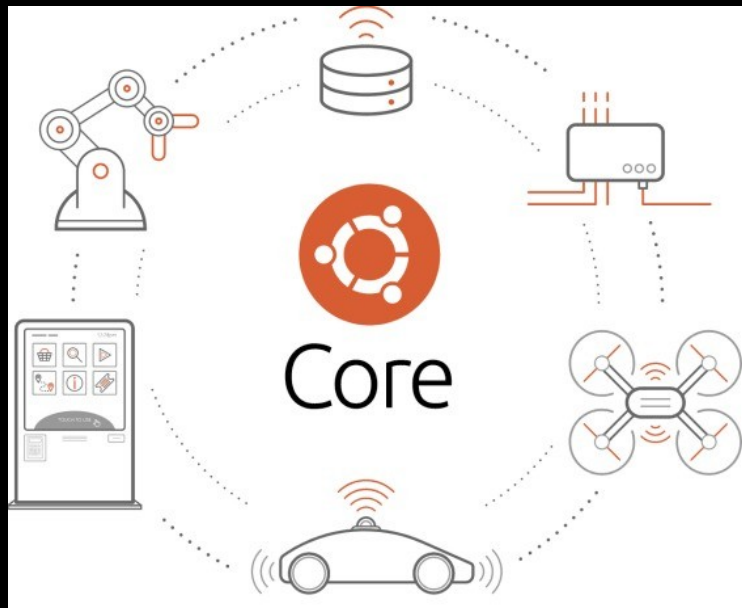
72%



96,30%



All 500 of the worlds fastest supercomputers run Linux



4%