Hackers Built the Internet

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Who are the Hackers?

There is a community, a shared culture, of expert programmers and networking wizards that traces its history back through decades to the first time-sharing minicomputers and the earliest ARPAnet experiments. The members of this culture originated the term 'hacker'. Hackers built the Internet. Hackers made the Unix operating system what it is today. Hackers run Usenet. Hackers make the World Wide Web work.

In the beginning, there were Real Programmers...

- 1945: Eckert & Mauchly's first ENIAC

- The Real Programmers typically came out of engineering or physics backgrounds. They were often amateur-radio hobbyists. They wore white socks and polyester shirts and ties and thick glasses and coded in machine language and assembler and FORTRAN and half a dozen ancient languages now forgotten.

The Early Hackers

- 1961: MIT AI Lab. acquired the first PDP-1

- 1967: DEC released PDP-10, PDP-1 successor

- 1969: first year of the ARPANET (the first transcontinental, high-speed computer network built by DoD)

- 1969: T. Hoff (Intel) creates first microprocessor

- 1971: Dennis Ritchie invented a new language called 'C' for use under Thompson's embryonic Unix

- 70s: Saymour Cray coded an OS of his own design in octal with no errors.

XEROX PARC

- July 70-Early 80s: XEROX PARC (Palo Alto Research Center, 3180 Porter Drive in Palo Alto, California). They invented mouse, windows, icons style of software interface, laser printer, and the local-area network.

- PARC's series of D machines anticipated the powerful personal computers of the 1980s by a decade

The Rise of Unix

- 1978: Thompson and Ritchie wrote Unix in C (not assembler as it used to be) on PDP-11 based on the "Keep It Simple, Stupid" philosophy

- Unix had its networking (UUCP), email, USENET.

The Birth of PCs

- The first personal computer has been marketed in 1975 (Altair 8800)

- Apple was founded in 1976

- Apple released Apple II in 1977: the first widespread PC

- PCs were based on BASIC (not C): Unix aficionados disliked it

The End of Elder Days

- 1982: some hackers from Stanford and Berkeley founded Sun Microsystems that commited to Unix

- 1982-83: Release of Motorola 68000 that allowed to create cheap yet powerful PCs

- 1983: DEC cancelled the successor of PDP and moved to VAX (VMS)

The Proprietary Unix Era

- 1984: AT&T released commercial Unix

- 80s: Sun Microsystems marketed SunOS

- 80s: DOS and Macintosh hackers increased

- 80s: Birth of proprietary BBS (Genie and Compuserve) for PCs

- 80s: Commercial Unixes costed thousand of $

- 1994: Berkeley Univ. stopped funding of BSD

The Early Free Unixes

- 1991: Linus Torvalds started to work at a Unix-clone named Linux based on Gnu Software that failed to build the GNU Hurd Kernel

- 1991: William and Lynne Jolitz were experimentally porting the BSD Unix sources to the 386

- 1993: Linux/FreeBSD/netBSD/OpenBSD were stable enough for non-hackers

The Great Web Explosion

- Mid 90s: Tim Berners Lee at CERN invented the Web. NCSA Mosaic released.

- Mid 90s: Bill Clinton/Al Gore made the Internet available. Birth of ISP (Internet Service Providers)

- 1995: Microsoft released Win95

- Mid 90s: death of some pre-web protocols (Gopher) and non-IP networks (AppleTalk, DecNET, SNA)

Late 90s: The NASDAQ Collapse

- The explosive growth of the Internet caused several companies to go on the market.

- Many "Waporware" companies collapsed.

- Several Open Source people fired.

- Big companies (IBM, HP, Oracle) jumped the Open Source wagon.

Hacker's Attitude

L'Atteggiamento dell'Hacker

1. Il mondo è pieno di problemi affascinanti che aspettano di essere risolti.

2. Nessun problema dovrebbe mai aver bisogno di essere risolto due volte.

3. Noia e ripetitività sono il male.

4. La libertà è un bene.

5. L'attitudine non è un sostituto della competenza.

Capacità di Base dell'Hacking

1. Impara a programmare.

2. Procurati un sistema Unix open-source e impara ad utilizzarlo.

3. Impara come usare il World Wide Web e scrivere in HTML.

4. Se non comprendi l'Inglese, imparalo.

La Posizione Sociale
nella Cultura Hacker

1. Scrivi software open-source

2. Aiuta ad eseguire test e debug di software open-source

3. Pubblica informazioni utili

4. Aiuta a mantenere efficente l'infrastruttura

5. Servi la cultura hacker