Contents

Notes from the visit of the computer museum of KULeuven (group 1)

Jean was disappointed that the museum only shows hardware, and hasn't found a satisfying way to show software.

He worked in computer science after graduating in 1975, developing and later moving to system administration during the eighties & nineties, having become more interested in the development of the Internet.

One of the first computers in KU Leuven was the digital PDP-11. This machine was very expensive (50 thousand dollars), while the software (AT&T / Bell Labs' Unix) was gratis, with some licensing strings attached.

The operating system that shipped with the PDP, developed by digital, was not so good, but another operating system was developed for the same machines: Unix.

Bell Labs, created as a result of of AT&T, was developing UNIX. They were selling the system for a very expensive sum (20000$), but they were also distributing it for free to universities.

The university would contact the developers (Ken Thompson and Dennis Ritchie) personally, and they would ship the operating system's source code via postal, as a hard drive. (a disk-dump of Ken Thompson's system?)

KU Leuven did not have the appropriate disk drive interface to read it in to the machine, so they went to UVA in Amsterdam, which had a machine with both disk drives. That way, they could transfer it to another drive and finally load it in their PDP-11.

Unix was shipped for free (with a service charge of 190 dollars) to universities that requested it. It came with a set of restrictions: universities could not redistribute modified copies, and while they could share it with other universities, some countries were off-limits.

Still during the Cold War, Bell had the pressure to not have the system flow to countries of the Russian block. The license agreement describing these restrictions can be found in the CS Leuven Museum website. They could share to "ABC" countries (USA being an "A" country), but not to "XYZ" countries, which included the Eastern bloc.

AT&T Unix licence and the list of commands: https://museum.cs.kuleuven.be/pdp/licentie-E.html
List of commands: https://museum.cs.kuleuven.be/pdp/ulic4.gif)(https:

//museum.cs.kuleuven.be/pdp/ulic5.gif
http://etherbox.local/home/pi/documents/6thEdlicence.pdf

COCOM: coordinating committee for multilateral export controls

Later they moved to the VAX system (https://en.wikipedia.org/wiki/VAX), also from DEC-digital, and still running Unix. This time they moved to BSD Unix, developed at Berkeley University.

Unix BSD was the first system with virtual memory. In the previous PDP they had 64kb of memory, so that was the size of the biggest program they could run.

Every year, they received the system as a magnetic tape, with the source. This tape also shipped with many commands and programs, most of which they knew nothing about, and had to search inside to figure out what was available. That's where they first encountered `make`! The documentation, in the form of Unix man pages and troff/nroff formatted documents, was also provided in this tape.

The Morris worm (1988) serves as a time-reference in his personal memories. BSD 4.3 systems running sendmail were infected; Jan Huens spent an evening with Piet Beersma from UVA to dig into the problem, and see whether their systems were exposed.