"HISTORY OF DEVELOPMENT OF OPERATING SYSTEMS"

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Introduction

The increasing pace of computerization has already brought closer the time when not only relatively few information processing professionals, but almost all members of society are in contact with computers. Contact with a computer is contact with its software and, above all, with the operating system (OS). The properties of the OS are often no less important than the properties of the hardware. There are cases when the transition from one OS to another on the same machine led to almost five-fold acceleration of program development.

On a "bare" car in the modern world

almost nobody works, and that's it

determines interest in operating systems.

Definition of OS

The operating system to the greatest extent determines the appearance of the entire computing system as a whole. Despite this, users who actively use computer technology often have difficulty trying to define the operating system. This is partly due to the fact that the OS performs two essentially little related functions:

providing the user-programmer with facilities by providing him with an extended machine

improving the efficiency of computer use by rational management of its resources

OS - a set of programs (conventional and micro) that provide the ability to use computer hardware. At the same time, the equipment provides raw computing power, and the task of the operating system is to provide the equipment for the user in a form convenient for him.

The main goals of the OS developers

- Efficient use of all computer resources
- Improving the productivity of programmers
- Simplicity, flexibility, efficiency and reliability of the organization of the computing process
- Ensuring the independence of applications from hardware (AO)

Appointment of OS

- The operating system is an intermediary between a computer and its user. It makes working with computers easier, relieving the user of the obligation to allocate resources and manage them. The operating system analyzes user requests and ensures their implementation.

1940 – 1950s – no OS

Full access to computer resources in machine language, all programs are developed in binary code. This period is characterized by the high cost of acquiring and operating computers and the low cost of labor for programmers. Computers were used in exclusive interactive mode. The main goal is to maximize the use of hardware. The main mode of the computer is simple and waiting for any actions of the programmer. At the same time, insufficient use of expensive computing equipment is observed.

1960s – development of the first OS

An important trend of this period is the creation of families of software-compatible machines and operating systems for them. Examples of families of software-compatible machines built on integrated circuits are the IBM / 360, IBM / 370 and PDP-11 series of machines.

Software compatibility also required operating system compatibility. However, such compatibility implies the ability to work on large and small computing systems, with a large and small number of diverse peripherals, in the commercial field and in the field of scientific research. Operating systems built with the intention of satisfying all these conflicting requirements have proven to be extremely complex. They consisted of many millions of assembler lines written by thousands of programmers and contained thousands of errors causing an endless stream of corrections. The operating systems of this generation were very expensive.

1970-ГОДЫ – РАЗВИТИЕ ОС

An important milestone in the history of operating systems was the creation of the UNIX OS. A feature of this system was that it was the first system program that was written using a language other than machine language (assembler). Since the mid 70-ies began the massive use of UNIX. By this time, the program code for UNIX was 90% written in a high-level C language. The widespread use of effective C-compilers made UNIX unique for that time, with a relatively easy port to various types of computers. Since this OS came with the source code,

then it became the first open OS that simple people could improve enthusiastic users.

1980s - DOS development

The history of DOS (Disk Operation System) began in 1980 at Seattle Computer Products. Networking functions did not appear immediately on personal computer operating systems. The first version of the most popular operating system of an early stage in the development of personal computers - Microsoft's MS-DOS - was deprived of these capabilities. It was a single-program, single-user OS with a command line interface, capable of starting from a floppy disk.

The missing functions for MS-DOS and similar OSs were compensated by external programs that provided the user with a convenient graphical interface (for example, Norton Commander) or thin disk management tools (for example, PC Tools).

1987 – OS / 2 appearance

In 1987, as a result of the joint efforts of Microsoft and IBM, the first multitasking system for personal computers with an Intel 80286 processor appeared, fully using the capabilities of protected mode - OS / 2.

This system was well thought out. It supported preemptive multitasking, virtual memory, a graphical user interface (not from the first version), and a virtual machine for running DOS applications. In fact, it went beyond simple multitasking with its concept of parallelizing individual processes, called a lot of threading. OS / 2 with its advanced multitasking features and the HPFS file system with built-in multi-user protection has proven to be a good platform for building local networks of personal computers.

1985 – appearance of Microsoft Windows

- In those days, when work on Windows was just beginning, it was believed that the future belongs to integrated environments. Microsoft's position was different: the president of the company, Bill Gates, decided to start creating a graphical environment that would serve as a standard platform for application developers. So, Microsoft has set itself the task of creating a platform for developers. It was supposed to provide developers with built-in functions for implementing the user interface and its components - windows, menus, dialog panels that could be controlled using the keyboard or mouse.

In Conclusion

- The history of the OS has about half a century. It was largely determined and determined by the development of the element base and computing equipment. At the moment, the global computer industry is developing very rapidly. System performance is increasing, and therefore the ability to process large amounts of data is increasing. Therefore, in recent years there has been a transition to more powerful and most advanced operating systems.