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History of Robotics

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Robotics is a science section that consists of electronic, mechanical and information engineering, computer science and other. Robotics deals with the design, construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.

Today, robots are developing very strongly and therefore they have been used almost every day. Now, as mentioned above, robots are used for military, industrial and medical purposes [1].

Military

Military robot is a machine that replaces a person in the military. It is used for reconnaissance, surveillance, demining and other military target. Military robots are used not only on earth but also in the underwater and sky.

Today, robots are the basis of any army because they do not risk human life, are several times more powerful than the creator and can be used anywhere in the world.

History of military robots

In 1910, a young American military engineer from Ohio, Charles Kettering proposed the use of aircraft without a person. According to his plan, the device controlled by the clock mechanism in a given place was supposed to drop its wings and fall like a bomb on the enemy. Having received funding from the US Army, he built, and with varying success, tested several devices.

In 1931, under the leadership of the USSR, the first tanks were built, which could be controlled by radio. These were the production tanks T-26 TT. In the early 1940s, the Red Army was armed with 61 radio-controlled tanks. These vehicles were used for the first time during the Soviet – Finnish war, where the tank “destroyer”, also created on the basis of the T-26 tank, distinguished itself [2].

After these important inventions and the end of the war, the rapid development of robotics began. This development continues to this day and still does not get tired to surprise.

Industrial robots

An industrial robot is a robotic system that is used for production. Industrial robots are automated, programmable and can move in three or more axis.

In the year 2015, an estimated 1.64 million industrial robots were in operation worldwide according to International Federation of Robotics (IFR) [3].

History of Manufacture robots

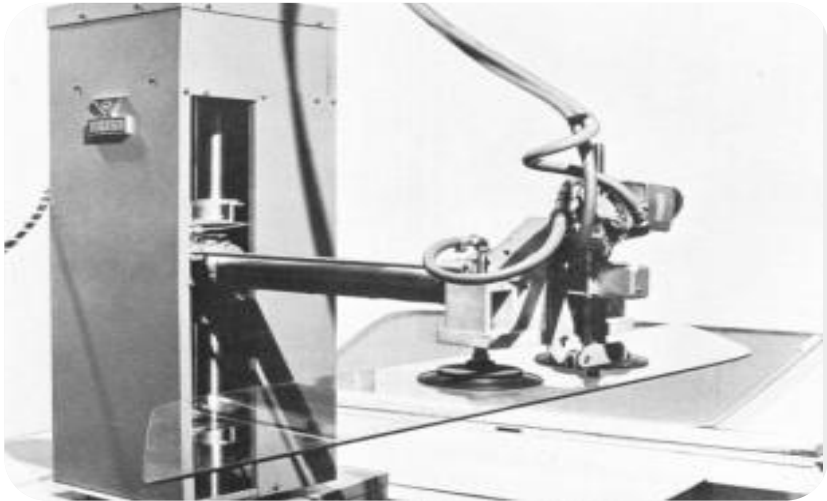
In 1947, in the USA, a group of employees of the Argonne National Laboratory, headed by R. Görz, developed the first automatic electromechanical manipulator with a copy control, repeating the movements of a human operator and intended to move radioactive materials.

The first industrial robots began to be invented and used in the mid-1950s in the USA. In 1954, American engineer J. Devol developed a method for controlling a loading and unloading manipulator using interchangeable punched cards .Together with J. Engelberg in 1956 he organized the world's first company for the production of industrial robots. Its name Unimage is an abbreviation of the term Universal Automation.

After these important inventions, automation of production began in the world – the first industrial robots, Unimeit and Versatran, were created. Their resemblance to humans was limited to the presence of a manipulator remotely

resembling a human hand. Some of them are still working, exceeding 100 thousand hours of working resource [3].

Unimate and Versatran-robots, thanks the beginning of the active development of robotics. Now industrial robots are used by such concerns as Volkswagen, Mitsubishi, Ford and others.



Versatran – one of the first industrial robots

Medicine

A medical robot is a robot used in the medical sciences. They include surgical robots. These are in most telemanipulators, which use the surgeon's actions on one side to control the "effector" on the other side.

We have obtained this category of robots by mixing the first and second categories of military and industrial robots. Medical robots use precision in the work of industrial robots and the ability to move from military robots. Medical robots can replace a doctor and can help people with disabilities.

Various types of medical robots are already performing a wide range of tasks today, but even in the future, when the machines become more advanced; they can hardly be completely trusted to make important decisions. It is thought that complex manipulations performed independently by robotic devices will also be controlled by humans.

So, in conclusion, I want to say that robots slowly replace us at work, at home, in everyday life and it seems that this will continue until robots completely replace us. But not everywhere robots will be able to replace us.

References:

1. [Electronic resource]. – Mode of access: <https://en.wikipedia.org/wiki/Robotics>. – Date of access: 21.03.2019.
2. [Electronic resource]. – Mode of access: https://ru.wikipedia.org/wiki/Боевой_робот. – Date of access: 20.03.2019.
3. [Electronic resource]. – Mode of access: https://en.wikipedia.org/wiki/Industrial_robot. – Date of access: 15.03.2019.