THE FUTURE OF INFORMATION TECHNOLOGIES

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Annotation. *Certain facts about modern IT and the reflections about the future of IT are presented in the paper.*

Keywords. IT, VR, robotics, implants, nanobots.

To predict the future of IT we must go back just a bit into the past to see where it all started. Nowadays information technologies mean computer interactions, which involve data manipulations. Technically the definition of information technologies first appeared in 1958 in the article published in Harward Business Review by Harold J. Leavitt and Thomas L. Whisler. They commented, "The new technology does not yet have a single established name. We shall call it information technology (IT)" [1].

Talking about IT, the first thing we should pay attention to is Virtual Reality. The future belongs to this technology. Nowadays to visit the virtual world we just need a VR helmet, some controllers and any kind of sound speakers such as headphones or loudspeakers. Here you are, prepared to visit the worlds created mostly for entertainment. However, it is very hard to reject the potential this technology has for learning. There is a bunch of simulators, which allow any professional or novice to train his skills in almost any sphere, like surgery, biology, aviation and so on. The future of VR is not that clear, as it seems, we can never predict what it is going to be in a day, furthermore it is difficult to foresee its future for years, decades, and centuries. However, we will try to show you our point of view.

Nowadays there are many places where the VR helmets are used for non-professional learning in some kind of virtual classes. There is a bunch of ways how this process might happen in future: 1) The virtual classes will replace the distance learning. We think that VR helmets will become a lot cheaper in the future, just as it has happened to the computers. 2) The VR helmets will lose their potential in this sphere and the classes will remain the same as they are nowadays or will develop in some other ways.

This can actually refer not only to the classes but also to any other sphere of life. The one connected with military, can actually become something horrible and impressive at the same time – imagine military vehicles that are controlled remotely from a big distance.

We cannot also forget about the robotic part of our life. The robotics develops as fast as computers do and especially its integrated part, the AI. Many philosophers already ask themselves, if there would exist the perfect AI that actually could replicate the human – would it be considered as a real living being or would it still be a simulation without the true feelings the people had? Anyway, if they become a part of our society, that will create a bunch of problems with the entire good things it will bring.

Many authors are writing about bad consequences of our actions for the descendants, which are doing the world of future apocalyptic, non-ideal, all damaged by wars, overgrown companies and/or natural disasters. However, we can also find many other themes that appeared even at the 20th century. We mostly meet the deadly robot with the AI that has no moral principles with the goal to destroy the humanity. Some writers believe that all people in the future will have metallic implants, which improve human body, including the processes that pass under our skin, or even replace it. Moreover, we will have the "grey goo" apocalyptic scenario due to which the whole world will be consumed by self-replicating nanobots that will be able to use any matter to find energy and create new copies.

When the last scenario can only exist in our imagination and on the pages of the books, the first two scenarios of the future of IT can actually become real. Of course, it will be different from those that are shown in films, but it is still probable. The AI is improving very fast; we already have the neural networks that can even learn on their own. Many companies, like Rethink Robots, that create the robots as a "replacement" for laborers, or Liquid robotics, developing the patrol robots that use the energy of the sun and water to work, and Prox Dynamics with its military scouting robots, keep improving their technology. We also have many companies that are tailored to create the prostheses of the arms, legs or even internal organs.

In conclusion, we should say, that the future is so unpredictable that it is even hard to say what we will be able to see in five hundred years or more. A hundred years ago, nobody even expected the computers to become a necessary device for everyone in future. The only thing we can say for sure is that every aspect of science, art or industry will find the way to use the progress information technologies will reach. So, the only way to guess what we will be able to see in the future – just wait for IT to progress.

References:
1. Harvard Business Review [Electronic resource]: Mode of access: hbr.org. – Date of access: 24.03.2021
2. General Electric [Electronic resource]: Mode of access: ge.com. – Date of access: 24.03.2021
3. Grotmol Solutions [Electronic resource]: Mode of access: grotmolsolutions.com. – Date of access: 25.03.2021
4. Rethink Robotics [Electronic resource]: Mode of access: rethinkrobotics.com. – Date of access: 25.03.2021