

## 3D-PRINTERS

*Belarusian State University of Informatics and Radioelectronics  
Minsk, Republic of Belarus*

*Piaredryi M.A.*

*Lazarenko A.M. – Senior Lecturer*

Great changes are coming in the mass production. It happens because of the development of 3D-printing technology that can allow to print any thing you need by yourself.

Engineers and designers have been using 3D printers for more than a decade, but mostly to make prototypes quickly and cheaply before they embark on the expensive business of tooling up a factory to produce the real thing. Previously 3D printers have been used as a tool for rapid prototyping of small parts, but now they can produce the final product. More than 20% of the output of 3D printers is now final products rather than prototypes, according to Terry Wohlers, who runs a research firm specialising in the field. He predicts that this will rise to 50% by 2020.



Using 3D printers as production tools has become known in industry as “additive” manufacturing (as opposed to the old, “subtractive” business of cutting, drilling and bashing metal). The additive process requires less raw material and, because software drives 3D printers, each item can be made differently without costly retooling. The printers can also produce ready-made objects that require less assembly and things than traditional methods—such as the glove pictured above, made by Within Technologies, a London company. It can be printed in nylon, stainless steel or titanium.

3D printers are claimed not only to make changes in production, but also to make a real cultural revolution. Ability to print articles directly at home or in a nearby office changes the very culture of ownership and eliminates the need to accumulate things. A thing stops to be a valuable possession, but it’s information model and the ability to print it with some unique properties of materials that become a valuable possession. Ownership of digital information will allow to reproduce the product again and again at any time.

The development of three-dimensional printing technology – it is at least a good opportunity to reduce costs. It would be cheaper to download the file, adjust the settings, go to a small firm close to home and print the desired object. Do not call the workers and construction equipment to build a house, just call a building robot that will print the house on the project that you created with your friends online.

All in all, 3D-printers without any doubt will change the future of mankind. They are being developed now.

List of references:

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