

contour control systems are mainly used in welding robotic technological complexes. They ensure the implementation of trajectories specified by a sequence of reference points. During the control process, intermediate points of the trajectory are calculated and the master actions for the actuators are formed. As a result, a coordinated movement of the degrees of mobility leading to the required changes in the position and orientation of the technological tool is realized.

The study of the effectiveness of industrial robots should be carried out in an experimental simulation environment using an emulator of control systems such as RCM (Robot Control Multiprocessor). The proposed control algorithm is implemented in the C++ programming language and integrated into the industrial robots modeling system.

When testing the proposed control algorithm, it is important that it ensures a collision-free movement of the robotic arm, which is crucial when operating robotic arms in a working environment with obstacles.

Volkov D.S.
Language adviser: Tykhonova M.Y.
NTU «KhPI»

3D MUSEUM AS A MODERN WAY TO GET IMMERSED IN A FOREIGN CULTURE

In recent years, the global pandemic, unpredictable disasters and many other unpleasant factors have become an obstacle for everyone to get a grasp of modern art, as numerous museums were forced to close. For instance, Notre-Dame de Paris was significantly damaged due to the horrific fire that took place several years ago and its restoration could even take decades. However, with the implementation of 3D museums, this problem can be solved to a great extent as people from all over the world can become a part of a worldwide history and its culture.

I perceive this topic as relevant, because now visiting museums and art galleries in 3D is more of a personal experience than a physical privilege. As material

and time restrictions are no longer an excuse, it is possible to get people engaged in finding out more about different cultures and help them to develop critical skills through VR tours.

I strongly believe that this opportunity in the digital industry will have a huge impact on the development of the worldview and the cultural values of society. Most people are used to spending their spare time watching movies, playing video games. No doubt, these are great activities, but now people will be able to add cultural entertainment to their routine that will expand their historical awareness. Moreover, museums often face problems displaying some ancient relics, because they usually require certain conditions to maintain their integrity and original form. Therefore, specialists keep some of them separate from others exhibited in museums. Fortunately, the digitization of artifacts allows you to store them in safe places, but keep them in the public eye in the virtual reality.

The purpose of this technology is closely related to the development of IT in our modern society. People can choose a museum in any direction and become its online visitor at one click. For example, I always wanted to visit the Vatican, and now it is not necessary to be in Rome to visit the smallest sovereign state in the world. The Vatican has created a series of virtual tours that will allow you to immerse yourself in the headquarters of the Roman Catholic Church - the residence of the Pope and one of the most important churches in Christianity, St. Peter's Basilica. Thus, I was able to easily immerse myself in a completely different culture.

All in all, I want to imply that 3D museums are informative and educational to the audience, no matter what age it is, and from now on people can visit any appropriate museum they want without lavishly spending money on travelling. So, VR technology is an amazing way to preserve, art and culture of different nations.