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CREATION OF ARCHITECTURAL PROJECTS AND ANIMATED VISUALIZATION IN THE 3D MAX PROGRAM

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Abstract: The image of the world is constantly changing, new ideas are emerging, new criteria of life are being created, ideas about geometry are changing, and computer programs for architecture and design are constantly being improved and updated.

Keywords: 3 D Max, architecture, project, animation, visualization, AutoCAD, design, drawings, graphic design, architecture, urban planning, software, program, computer, three-dimensional graphics, modeling, building structures.

To this day, not only in our country, but also in the whole country, mostly young future architects and designers are using Autodesk's AutoCAD, 3dsMAX automated software products as the main production tool in their development. The main purpose of AutoCAD is to create individual drawings and automation by applying graphic constructions of emerging objects in two-dimensional work and three-dimensional design. Another software 3dsMAX has a special place in the creative process. After all, this program, which is considered the main assistant to the representatives of the industry in the process of 3D modeling and visualization, is popular not only in our country, but also in the whole world. Modern computer graphics allow you to get high-quality results, which will leave an unforgettable impression at the construction stage. The field of architecture and urban planning has been around for several centuries. We all know how important the role of houses and buildings is in the way of life of mankind. For people to live, there is a constant need for buildings with multiple functions, from housing stock to workplaces, cultural centers, hospitals, cinemas, stadiums, service areas and many others. As a result, the construction process begins with a private house and continues until the construction of large cities. So, as long as humanity exists, the demand for architecture and construction is constantly there and it continues to develop.

3D graphics (3D, 3 dimensions, Russian 3 dimensions) - a part of computer graphics, a set of techniques and tools (software and hardware) that ensure the temporal continuity of the resulting images. [1]

Most of all, it is used in architectural visualization, cinematography, television, computer games, printed products, and also in the field of science. Three-dimensional image is created by constructing a geometric projection of a three-dimensional scene on

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a computer screen using special programs. In this case, l can correspond to real-world models (cars, buildings, hurricanes, asteroids) and be completely abstract (a projection of a four-dimensional fractal). To obtain a 3D image, the following steps required:

• modeling - creating a mathematical model of the scene and its objects.

• display - create a projection according to the selected physical model.

Events (virtual simulation space) includes several categories of objects:

• Geometry (constructed using various modeling techniques, e.g. building)

• Materials (visual features of the model, for example, the color of the walls and[2] the ability to reflect / refract windows)

• Light sources (direction adjustment, power, light spectrum)

• Virtual cameras (choice of point and projection angle)

Forces and Effects (arranging the dynamic deformation of objects, mainly used in animation)

• Additional effects (objects that simulate atmospheric phenomena: light in the fog, clouds, flames, etc.).[3]

Every day, information and communication technologies (ICT) are introduced into every sphere of our life. In the current period, among all other fields, the introduction of ICT opportunities in the teaching of various subjects in the educational system is an urgent issue.ICT serves not only to form students' knowledge and skills, but also to develop their personal characteristics and increase their interest in knowledge. This will help students to become more interested and engaged in the field. As we all know, the student receives more information through the sense of sight than through the sense of hearing and can clearly see its content and essence. For example, rather than verbally explaining an object, it can be easily and quickly conveyed to the student's mind by demonstrating it. We are living in a period of rapid development of technical and software information and communication technologies in the world. It would not be an exaggeration to say that there are no areas left untouched by personal computers. Elements of computer graphics are also widely used in all sectors of the economy. Three-dimensional graphics are widely used in engineering design, advertising, architectural design, and other fields. Three-dimensional graphics is the most complex and wide-ranging area of computer graphics. In recent years, three-dimensional 3D modeling programs have become more common with traditional 2D graphics programs. [4]The 3D modeling program that is widely used nowadays is the 3D Studio MAX graphic program developed by Autodesk. plays a very important role in development. In order to achieve the desired result, the teacher must have high skills and modern, practical experience.

We should divide the lesson program in such a way that the students can quickly and easily see the results they want, and then it is possible to arouse their interest and then move on to complex design. , at the beginning it is not possible to interest the

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student, but even if the lesson is interesting, it is very difficult to give them knowledge and demand the given knowledge. [5]Therefore, at the beginning of the lesson, it is appropriate to give brief information about the concept of the program, its possibilities, and its aspects in the field of construction. However, if we emphasize the idea about the aspects of this field, it is clear to the students that the 3Ds Max program was originally developed for animations and not for the architecture field, and later it was adopted by architects and we use the commands here as they are needed in the field of construction. It will be easy for us to increase their interest and achieve the goal by providing information and the content that the program has a wide range of possibilities.[6]

Conclusion:

After the information provided above, we start the tutorial with the quick keyboard commands used in the program, which is easy and sufficient for the introductory part. At the same time, it will not be difficult for us to start with a small, easy and interesting 3D model, for example, drawing a modern chair, and by gradually increasing the complexity of the drawing, we will move on to modeling a building object.

View of objects created in the 3Ds Max program. Our goal is not to complete the work plan by giving students "faster knowledge", but we are supporters of quality education. Of course, good quality education takes time and effort.

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