

OPPORTUNITIES OF COMPUTER GRAPHICS IN CREATION OF ELECTRONIC TEXTBOOK

Bagbekova Laylo

PhD, TSPU after named Nizami

Madaminova Xilola

2nd Year Graduate Student of Bukhara University of Innovations

ANNOTATION

This article provides information about the concept of computer graphics and the capabilities of electronic textbooks. It is also explained that graphical representation is an important process in the creation of electronic textbooks and their use in education.

Keywords: Computer, graphics, multimedia, program, three-dimensionality, space, pixel, modeling, screen, electronic textbook, photography, image, computer memory, format, extension.

The concept of computer graphics now includes a wide range of fields, from simple graphic drawing to creating and embellishing various images in real life, and even creating new image-related projects with the help of a software tool. It provides the opportunity to work in a multimedia environment.

Computer graphics is primarily an emerging software, meaning that computer graphics relies on existing and emerging software. It is even widely used to decorate the programs themselves. Its development made it possible to accurately describe how processes take place in real three-dimensional space. Therefore, there are currently such practical software packages that can be used to obtain the result of the solution in the form of a graph, given only the main parameters of the problem under consideration.

Among the programs that work with computer graphics, you can list a number of programs. These include Microsoft Paint, Adobe Photoshop, Adobe Illustrator, Corel Draw, Macromedia and Adobe Freehand, Adobe InDesign, Adobe ImageReady, Macromedia and Adobe Flash, Discreet and Autodesk 3ds Max, Cinema 4d, Alias and Autodesk Maya, LightWave, Adobe Brush, etc. . Computer graphics work can be done in these programs. Some allow for simple drawing, some for house designs, and some for 3D modeling and even 4D modeling. Knowing the size of the screen is also important when working with computer graphics. The screen is actually made up of dots. It is called pixels. The higher the number of dots on the screen, the higher the quality of the screen. The dimensions of the screen are also determined taking into account the above.

The more illustrations the e-textbook has, the easier it is to master. For this, it is important to use photos and pictures that match the information provided in the electronic textbook. The graphic information that we want to include in the textbook may not be at the level of our requirement. For example, the image may be old, have many spots, or other poor quality levels. In addition, mainly graphic data takes up a lot of space in the computer memory. Their format also plays a big role here. As we all know, images in .gif and .jpeg formats take up little space in computer memory and any computer can view these images. It is very useful to use such

pictures in the textbook, which, first of all, ensures that the textbook takes up less space in the computer memory. Sometimes we have to prepare pictures (graphic data) using various graphic programs. For example, graphic data created in the graphics program Paint has the extension .bmp, which takes up a lot of space in the computer's memory, or graphic data entered through a scanner has the extension .tif, which also takes up a lot of space. occupies To convert these data into gif or jpeg formats, we use Adobe Photoshop, which is one of the graphic programs with high capabilities. With this program, in addition to converting a picture from one format to another, you can remove spots from it, process old pictures, copy a picture or part of it to another picture, change its colors, and so on. Adobe Photoshop is an electronic photo editing software that runs on Windows. To work in Adobe Photoshop, we must first install it on our computer. When installing a program, we should try to install a program that works in a language that we understand as much as possible. To date, several versions of this program have been released, among which Adobe Photoshop 7 is the most capable and most recently developed and widely used today.

We can use the Russian version of this program. Work on images is carried out using Adobe Photoshop. To do this, we can open the desired image and make changes to it by clicking the open command of the File menu. Using Adobe Photoshop, we can open a picture of any format and save it in the format we want. Of course, the *otkrot* and *sokhranit kak...* commands of the file menu are used here. Because the format in which the image is saved is very important, images in formats such as bmp, tif, psd take up a lot of space in the computer memory, and if we use that image in the textbook, the size of our textbook may increase. Also, not all programs or computers can open files in this format. That's why we save images mainly in gif and jpeg formats. Like other graphics programs, Adobe Photoshop also has a toolbar. Adobe Photoshop's toolbar is located on the left side of the screen and contains a total of 46 tools. 20 of them are visible in the window when the program is launched. The remaining 26 are activated using additional commands later in the program. In addition, Adobe Photoshop program Navigator, color window, window for working with selected part of the image and similar windows are available, which further increase the user's capabilities. These windows are located on the right side of the screen.

In this case, we get rid of the results in the form of many tables, and this should be strived for. Computer graphics are playing an important role not only for academic staff, but also for artists, designers of various fields, specialists involved in advertising, creation of Internet pages, teaching process and other fields. Its use, especially in the field of polygraphy, has led to the use of highly decorative techniques in the creation of colorful, pictorial literature, textbooks, and artistic works. Creating eye-catching videos and web pages is hard to imagine without computer graphics.

REFERENCES

1. Madaminova Xilola "Elektron ta'lim resurslari va uning funksional imkoniyatlari" // "Ta'lim tizimida zamonaviy axborot texnologiyalari resurslaridan foydalanish istiqbollari" // 2023-yil 30-may, Toshkent // 607-609
2. Bagbekova, L. (2020). Distance education system as a new form of teaching. Theoretical & Applied Science, (9), 12-14.

3. Kadirbergenovna, B. L. (2022, February). Massive open online course basic requirements for digital educational resources. In Conference Zone (pp. 187-190).
4. Bagbekova, L. (2019). Opportunities of massive open online courses. European Journal of Research and Reflection in Educational Sciences Vol, 7(12).
5. Madaminova Xilola "Elektron ta'lim resurslaridan foydalanish samaradorligi" // "Zamonaviy informatikaning dolzarb muammolari: o'tmish tajribasi, istiqbollari" respublika miqyosidagi ilmiy-amaliy anjuman//2023-yil 30-may, Toshkent//457-460
6. Kadirbergenovna, B. L. (2019). The importance of independent education in education system. Педагогика ва психологияда инновациялар, (5).
7. Otaboevich, K. M. (2021). Model of Developing Ideological Competence in Students. Annals of the Romanian Society for Cell Biology, 1284-1292.
8. Kadirbergenovna, B. L. (2022, February). Create 3d graphics with the hand of 3d max software. In Conference Zone (pp. 206-208).
9. Bagbekova Laylo Kadirbergenovna. (2022). Teaching computer graphics as a pedagogical problem on the basis of massive open online courses in information conditions. World Bulletin of Social Sciences, 8, 71-74.
10. Bagbekova L.K., Eshmatova Sh.I., Qobulov R.O. Elektron darslik yaratishda kompyuter grafikasi imkoniyatlari. Masofaviy ta'lim makonini takomillashtirishda axborot resurslari va texnologiyalari integratsiyasi va didaktik ta'minoti//Respublika miqyosidagi ilmiy-amaliy anjuman materiali// Toshkent 2020