

ELECTRONIC METHODOLOGICAL INSTRUCTIONS ON COMPUTER GRAPHICS PREPARATION METHODOLOGY

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ANNOTATION:

In this article they say about preparation and the importance of electronic guidelines on the lessons of "computer graphics".

Keywords: Engineering computer graphics, graphics program, computer technology, electronic methodical instruction, program FS Capture, AutoCAD.

INTRODUCTION

Any activity requires the emergence in the human brain of an idea of the outcome of the activity, that is, of being able to compare it with the source material. This indicates that the process and outcome of the activity must be thought through in the human imagination before performing the activity, such an idea is necessary for the person to compare with the existing objects, acting with a preconceived notion.

Due to the emergence of opportunities for rapid and complete access to the necessary information and the development, mastery and processing of various methods of their description, the learning process is changing dramatically in accordance with the specific purpose of teaching and the completeness of education. In the process of introducing modern computer and telecommunication technologies into the education system, some limitations and inertia in traditional education have to be overcome. The demand for high-quality education, in turn, leads to the emergence of a fundamentally new education system.

New information technologies change the nature of students' thinking, changing the essence of the teaching process, as well as to some extent increase the quality and effectiveness of teaching.

In each lecture session, the theoretical knowledge required to perform tasks such as drawing primitives-components of graphic information on a computer screen, transforming them into acceptable variants and printing on-screen images is given step by step. In hands-on activities, skills and competencies are enhanced using practical commands such as drawing, editing, sizing, and linking objects.

The main purpose of teaching "Engineering Computer Graphics" is to teach students the order and rules of computer-aided drawing of all types of graphic information in engineering and specialty subjects, such as drawings, diagrams and schemes in two or three dimensions.

The main task of "Engineering Computer Graphics" is to teach students the knowledge and skills necessary for the free performance of design and creation of models of technological processes on the computer, using practical and operational programs and ready-made packages. Autodesk has a wide range of software products (AutoCAD, ArchiCAD, AutoCAD Electrical, 3ds Max, Design Review...), which are widely used all over the world. Design work is carried out on the basis of various computer graphics programs: AutoCAD, 3DMAX, DipTrase, TopCAD, Infracad, ArchiCAD. In the field of computer graphics, an automated design system is studied to perform graphic

information on a computer using AutoCAD programs. Currently, professional colleges and universities teach computer graphics on the basis of AutoCAD. AutoCAD is developed by Autodesk and is designed for easy user participation in the design process. Autodesk has a wide range of software products (AutoCAD, ArchiCAD, AutoCAD Electrical, 3ds Max, Design Review...), which incorporates the latest technologies that are widely used around the world. AutoCAD software plays an important role in the company's software products. Graphic capabilities are very high and can perform both simple and complex tasks at the same time. It is noteworthy that it is directly related to the exact sciences.

On the basis of this program, students make various drawings. The subject "Engineering Computer Graphics - Computer Design" is designed for students who have partially or mastered the disciplines of "Drawing Geometry" and "Drawing", and students are required to simultaneously consolidate their knowledge of engineering graphics and acquire the necessary knowledge and skills in computer graphics. Therefore, the process of mastering the subject of computer graphics among students is a bit difficult. This is why the teacher requires you to work with each student individually throughout the lesson. Naturally, the teacher does not have the same ability to engage all students in the classroom. Therefore, students will have to practice more independently. These include literature, textbooks, e-textbooks as a practical methodological aid by the teacher for students to acquire the necessary knowledge, skills and abilities independently of the subject of computer graphics. To find a solution to this problem, we will consider the preparation of a methodical guide on the subject of computer graphics using the software FS Capture. First, the AutoCAD program is downloaded. Works with two programs at the same time. AutoCAD

program start-up window-user interface (desktop) to get acquainted with the toolbar for drawing, cross-section drawing in AutoCAD 2007, color to cut, type commands, line thickening. Commands to draw circles and polygons from drawing elements-parts. We will explain step-by-step instructions on how to edit a drawing - get acquainted with the correction commands, hatching the cut and shear surfaces, memorize graphic information. The FS Capture program, on the other hand, provides an audio recording of the process being performed on a computer monitor. The full name of this program is Fast Stone Capture and its on-screen tab is as follows. Once the program is downloaded, double-click the left mouse button on the shortcut to launch it. When this is done, the following window will open on your computer monitor. Figure 1

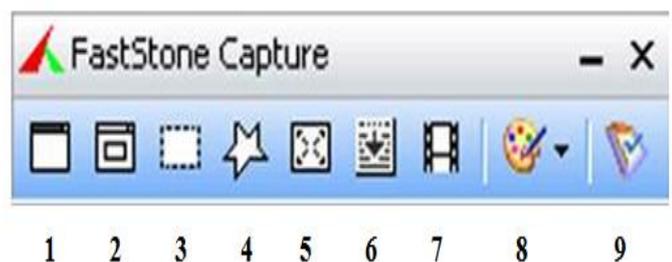


Figure 1 Icons of the Faststone Capture program

The first command in Figure 1 is to set the active window to the active window. Command 2, Zahvat window object. Command 3, reserve pryamaugolnoy oblasti- right. Command 4, capture proizvolnoy area. Command 5, capture the entire screen, Command 6, capture the window s prokrutkoy, Command 7, record screen- capture the screen. Command 8. output image and editor consists of 9 configuration commands. Screen 7 - When the left mouse button is pressed twice on the screen capture command, the following image will open on the computer monitor Figure 2.

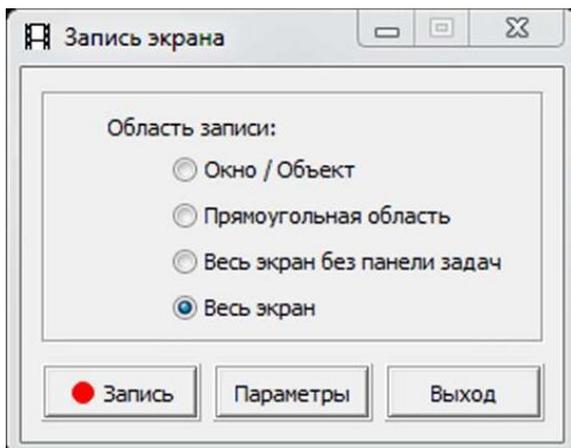


Figure 2 Memory window of the Faststone Captured program

The last column in Figure 2 is the ves screen command. Press the red button on the bottom row, the next command will open the next window on the computer monitor Figure 3. From this window, the start button is pressed, so that the program is fully launched and captures all the processes taking place on the computer monitor.

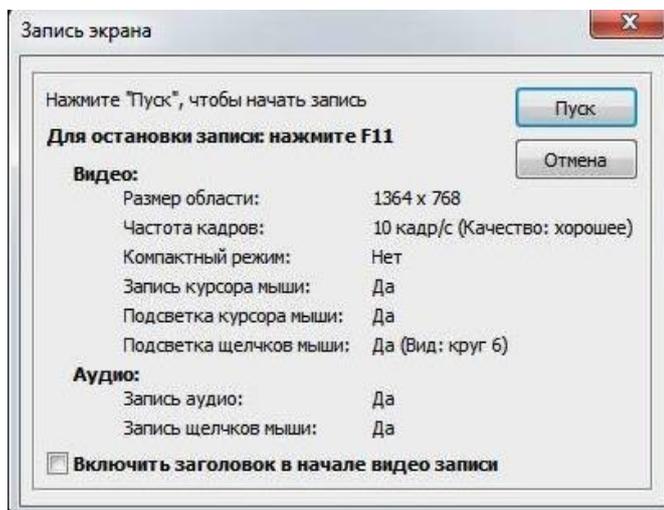


Figure 3 Video capture of processes in Faststone Capture

We can record sound by connecting universal headphones to a computer device. We will distribute the prepared video file to the students. Students will use this video file to independently acquire the necessary

knowledge and skills as well as assignments. The advantage of this methodical instruction is that the given instructions can be followed one after another and again and again. This allows you to quickly and easily master the science of computer graphics. World experience requires students to learn to draw geometric patterns and perform graphic tasks on a computer after gaining a certain level of knowledge of folk arts and drawing.

In short, the science of computer graphics should be sufficient for the students of the university to master and master the knowledge of engineering computer graphics. Therefore, engineering can be used as a means of introducing computer graphics and graphical capabilities of information technology in graphic work performed in all educational institutions and institutes of advanced training in drawing and specialty disciplines.

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