TECHNOLOGY FOR WORKING WITH GRAPHIC PROGRAMS

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ANNOTATION

This article provides information about working with graphic programs on a computer, their types and capabilities. Some problems encountered in working with graphic programs are discussed.

Keywords: Computer graphics; animation tools; animation programs; Adobe Illustrator; Corel Draw; 3D modeling programs; illustrations.

Today, it is difficult to find a field that has not been penetrated by computer graphics and animation tools. Computer graphics and animation tools can be divided into the following groups according to the field of application:
• Computer graphics programs designed for printing works;
• Two-dimensional color image computer graphics;
• Programs designed for presentation work;
• Two-dimensional animation programs;
• Three-dimensional animation programs;
• Two-dimensional animation programs;
• Two-dimensional and three-dimensional animation programs;
• Complexes processing video images;
• Programs for scientific visualization.

Computer graphics and animation programs are of great interest to artists and designers, cinematographers, creators of computer games and educational programs, scientists, as well as all specialists who use images of various formats in their work.

Computer graphics programs designed for polygraphic work and drawing have the ability to fill the text with various illustrations, create page designs, and print high-quality polygraphic products. An example of such programs is the Adobe Photoshop raster package, which allows you to process images. These and similar packages allow you to use tools necessary for editing and editing raster images: color correction of scanned images, "smoothing" of photos, special effects and masks. The latest versions of the package also have the ability to create and edit vector contours, apply multi-layer texture of images. The package includes various masks, a set of tools designed to work with color and create special effects from a large number of filters.

In addition to raster packages, there are also vector computer graphics programs designed for polygraphic work. Among them, it is worth mentioning Adobe Illustrator and Corel Draw programs designed for the Windows system. Illustrator is intended for creating illustrations, developing the general design of pages and printing the finished image in high quality. The package has tools for processing text and multi-page documents, in addition to the ability to create symbols and figures of arbitrary shape, and then scale, rotate (around its own axis) and deform them.

In addition to drawing, Corel Draw vector package can prepare various graphics and edit raster images. This program is provided with tools for managing files, displaying slide movies on a computer screen, working with "hand" drawing and image layers, applying three-dimensional special effects, and text processing. Apart from these, Adobe PhotoShop, SGI and Barco Creator, Live Picture, Scitex Blaze, Linotype Da Vinci, Eclipse, Pixelfx programs for Macintosh computers running in Windows environment are widely available. Barco Creator software is distinguished by its speed of operation and wide functionality.

Systems for working with video and composition.

Creating multi-layered compositions using digital video image processing programs and two-dimensional and three-dimensional graphics, replacing the complex (filming) photography process, processing the captured materials using computer graphics, capturing the captured materials combined with computer animation, the results can be produced on film and videotapes.

Adobe Premier video editing software for Windows and Macintosh allows you to edit digitized video, still images, and sound files. The latest version of the package has the ability to process several independent videos in different ways, use many filters, create special effects and fonts. As competitors of this program, the MediaMerge program of the ATI company, the CoSA After Effects program of the Adobe company, which is above the most powerful programs, can be mentioned. Composer software running in the SGI environment is a product of Alias/Waferfront. This program has the ability to create special effects, video recording tools, and complex scene creation equipment. It is possible to create, record, and edit high-quality video products. In addition, it is possible to combine individual frames and animation clips, mix them, add special effects and texts. The package (program) can display not only the final result of video recording, but also intermediate frames (results) on small screens.

Composer software allows you to use all film and video formats and video processing devices. In addition to these programs, the SGI environment includes Chiron's video processing software, Integrated Research's Harmony, Parallax's Matador, Avid's Media Suite Pro, Discreet Logic's Flint package, Flame, Interno, Khaos's Pandemonium.

Modeling is 2-dimensional and 3-dimensional (2D and 3D).

2D and 3D modeling programs are useful for design and engineering development. In addition, these programs can be supplemented with three-dimensional animation, polygraphic, and presentation packages.

Among the modeling programs, you can get AutoCad from Autodesk as the most powerful automated design system used in the WINDOWS environment. AutoCad is generally regarded as the graphical core of a computer-aided design (CAD) system. With the help of the program, it is possible to generate and edit various lines, arcs, texts, create 2D and 3D models, automate the solution of many problems that arise during the design process, create special scripts and macro commands, and adjust and adapt the system to specific problems and applications.

The AutoCad package has an internal programming language Auto LISP, with the help of which the user can create new commands and even use high-level programming languages.

Alias/Wavefront spline modeling software Sketch! is used. This program provides high-quality visualization. The Ray Dream Designer program has a set of special modeling tools that allows you to achieve photorealistic quality of the image. .

Crystal 3D Designer from Crystal Graphics can also be used on IBM-compatible computers. This program has tools for visualization, creating shadow effects, placing materials on surfaces (nalojenie materialov na poverkhnosti). Some of the most powerful modeling and design programs used on Silicon Graphics workstations include Alias/Wavefront's Designer, Studio, and AutoStudio programs. With the help of these programs, it is possible to find a solution to the problem of simultaneous work with 2D and 3D models and integration with existing automated design systems.

The Designer program uses high-level modeling based on splines, and has sufficient tools for evaluating the characteristics of geometric objects, convenient animation equipment, and a high-quality rendering module.

It is possible to complete and expand the possibilities of Designer and turn it into Studio. The Studio program differs from Designer by the high level of modeling capabilities, the perfection of the system for working with outlines and curves, additional options for evaluating geometric objects, rendering and drawing. AutoStudio was created as a result of the addition of special tools for modeling and animation to the Studio program, specially designed for car designers. Also, these programs can be supplemented and

expanded with additional tools and capabilities for use in multiprocessor models of Silicon Graphics. Among the automated design systems working in the SGI environment, it is possible to mention the Vislab program of the Engineering Animation company. This program allows you to create a visual solution to design and engineering problems.

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