

USE OF COMPUTER TECHNOLOGIES IN THE STUDY OF ARCHITECTURAL DECORATION IN FINE ARTS CLASSES

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ABSTRACT

If we look at the centuries-old history of the Uzbek people, we can see in our daily lives that this nation has left a great and invaluable legacy for present and future generations in all areas of science, literature and art, architecture and handicrafts. In particular, the art of painting is a flower and a unique kind of heritage left to us by our ancestors. The current changes in the educational process and the work being done to reform the content of education and bring it into line with international educational standards are aimed at radically improving the quality of education in higher education. that is, the use of new information and computer technologies in the educational process requires the formation of creative abilities of students studying in our schools and the development of their creative thinking.

KEYWORDS: *Science, Literature And Art, Architecture, Painting, Secrets Of The Profession, New Form, Information And Computer Technology, Art History, Fine Arts, Architecture, Design, Design, Biology ,Chemistry, Physics, Astronomy, Mathematics, Computer Science, Information And Communication Technologies, Coreldraw And Autocad, Geometric Constructions, Girix, Graphic Applications.*

INTRODUCTION

If we look at the centuries-old history of the Uzbek people, we can see in our daily lives that this nation has left a great and invaluable legacy for today's and future generations in all areas of science, literature and art, architecture and crafts. In particular, the art of painting is a flower and a unique kind of heritage left to us by our ancestors. [1]

As you know, the art of painting has long been popular in Central Asian architecture. Especially in the second half of the XIX century and in the XX century in Khorezm and in the regions of the Republic culture and art flourished. During this period, in Bukhara, Samarkand, Khorezm, Quqon, Margilan, Tashkent, there were folk masters who raised the level of applied arts, such as pottery, pottery, carving and painting. Our current goal is to pass on the legacy of these masters and the secrets of the profession to young people and pass it on to future generations. The use of information and computer technologies in the educational process is important in solving these problems. [2]

The Law on Education and the National Training Program set the task of applying new forms, content and methods of teaching to higher education workers. This requires students to become

professionals. The fact that the main subject and object of the national model of training is the individual is in line with the motto "Personnel decides everything." [3]

The current changes in the educational process and the work being done to reform the content of education and bring it into line with international educational standards are aimed at radically improving the educational work in higher education institutions. The use of new information and computer technologies in the educational process, thereby teaching in our schools and fostering the creative abilities of young learners and the development of their creative thinking. Indeed, today the education system is undergoing a great development. Opportunities for the widespread use of computer technology in the education system are developing. To date, computer technology has covered all areas of education, science and development.

Computer graphics is widely used in various fields of education: engineering graphics, art history, fine arts, architecture, design, engineering, biology, chemistry, physics, astronomy, mathematics, computer science and other disciplines. Electronic textbooks and visual aids have been developed in these disciplines so that students can easily master these areas. However, computer technology is not being used effectively in many disciplines, especially in the decorative arts. Computer graphics can be used successfully in applied decorative arts, especially painting. It is imperative that we, the teachers of fine arts, make effective use of information and communication technology programs to give an idea of our architectural monuments and to draw the patterns of ornaments that are preserved in them. It is necessary for us, the teachers, to fulfill these tasks in order not to lose the unique architectural patterns that are still preserved in our architectural monuments. [4]

Computer graphics are very useful in drawing Islamic and girih patterns used in Uzbek folk applied arts such as painting, wood carving, ganch carving, gold embroidery and others.

We can use computer graphics applications CorelDRAW and AutoCAD graphics applications in the field of applied decorative arts.

We can use CorelDRAW to create Islamic pattern compositions and AutoCAD to draw girih pattern compositions.

Many higher education institutions and vocational colleges now offer drawing classes using AutoCAD. The introduction of computer technology in the arts and crafts will naturally lead to high results in this area. In particular, the role and place of AutoCAD graphics program in the study and copying of entrance compositions on the art of painting in all our regions is invaluable. Our professional teachers, who have been teaching and educating the fine arts in schools, now have access to computers. In the classroom and in extracurricular activities, students will be taught to draw patterns that are common in our national architecture, free access to computer programs, and students will be taught to draw patterns in the style of girih. [5]

Girih is an Arabic word meaning "knot", "tangle". Each entry is a unique node, both literally and figuratively. Girih is made in knot-forming nets. To find the solution to the girih, you need to "untie the knot and find the end of the rope". It's all about finding the main figure and determining its exact position in the species.

Girih patterns are based on the geometry of the circle, which is solved using a compass and a ruler. It consists of dividing a circle into equal parts to form a net and arrows. The artist, who was

engaged in geometric design, had to solve very interesting problems. For example, the arrangement of eight-pointed stars, the formation of five-pointed stars, and so on.

Making Girix required a precise knowledge of the properties of geometric figures and a positive use in composing them. Stellar pentagonal, star-shaped ridges are common in traditional Central Asian ridges.

Star-shaped figures are made at opposite ends of a square or rectangle. The compositions consist of four and eight three-pointed stars. This is an inheritance inherited from the past, which is made in a strict sequence to form a correct geometric shape.

Using AutoCAD graphics software, these tasks can be completed in a very short time. With this program, you can draw girich pattern compositions with great precision, and you can draw and copy the resulting pattern compositions to the desired size. Pattern compositions can be painted in different colors using the color palette. [6]

AutoCAD has a number of commands that you can use to draw input and pattern compositions. Using the capabilities of this program, it is possible to draw girix pattern compositions with high accuracy. Girix construction begins with a line diagram of geometric patterns. The other side of the coin is that the pattern is intertwined and the art is intertwined. As a result of the artistic work of Girikh, a complex composition is created, creating a complex geometric pattern. To draw this composition, first create a grid from the command button "Pryamougolnik" (rectangular drawing), the button of the command "Pryamaya" (straight line) and the command "Cut" (cross-section). used in the execution of the distribution. Then, using the commands in the "Edit" panel, the excess lines of the finished distribution are removed. Then, using the Copy button and the Mirror button, the pattern is reproduced and duplicated. [7]

The commands in the Drawing panel, the Edit panel, and the Privyazka abyekta panel are used to draw Girix pattern compositions.

The commands in the Drawing panel are as follows:

"Otrekoz" - button for cutting command;

"Pryamaya" - a button to draw a straight line;

"Multiline" - button for drawing double lines;

Polyline is a multi-line command button

Mnogougolnik - button to draw a polygon;

Rectangle - button to draw a rectangle;

"Arc" - a button to draw a bow;

"Circle" - the command button to draw a circle;

"Ellipse" - button to draw an ellipse;

The "Edit" - "Edit" panel commands are:

"Steret" - a button to delete the selected object;

"Copy" - button to copy from the object;

Mirror - button to create a symmetrical image of the object;

"Move" - button to push the selected object;

"Array" - a command button to enlarge the image of the object;

"Move" - the button to move the selected object;

Povernut - button to cut off the excess part of the object;

"Chassis" - a button to remove the angle chamfer of the lines intersecting at an angle;

Delete command button;

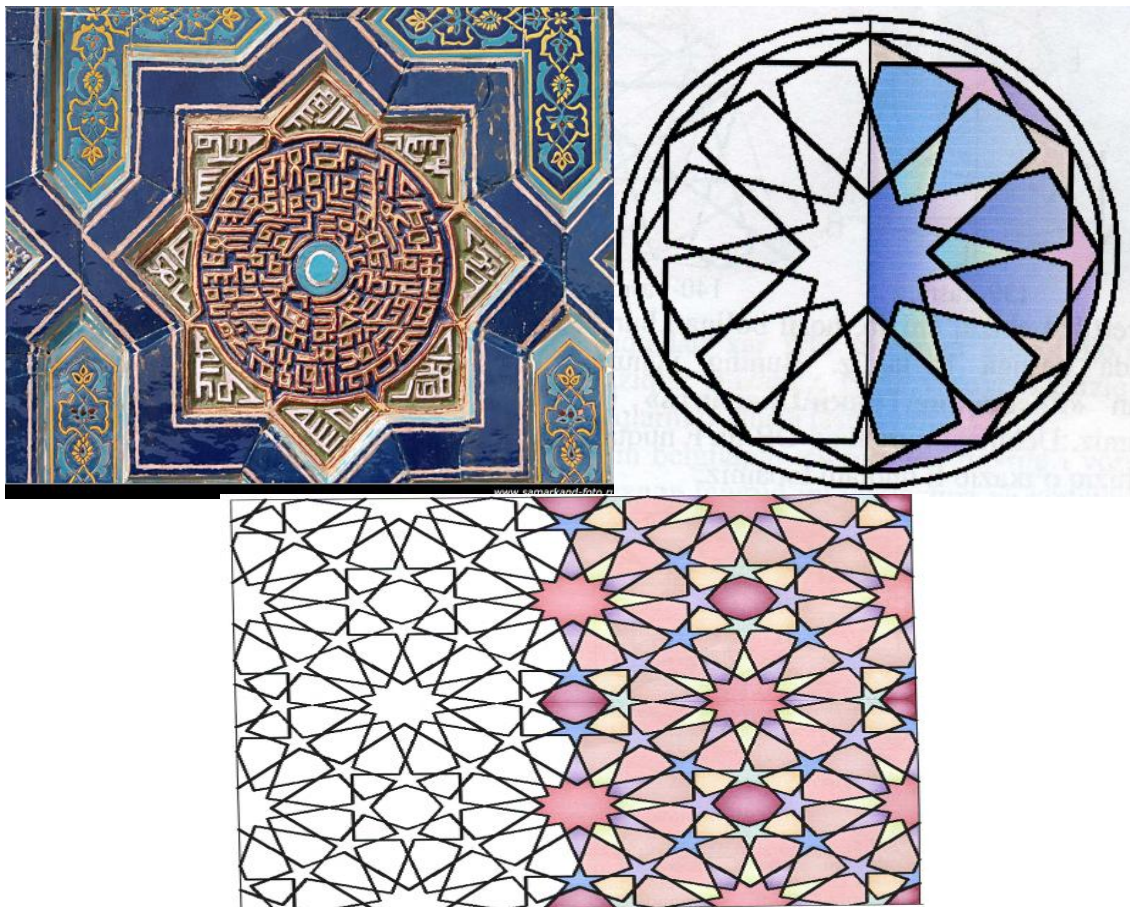


Figure. 1

Thousands of historical monuments have been erected in our country, which still attract people from all over the world. They embody the rich spiritual values of our people formed over the centuries, as well as their creative and creative potential. is inherited. These buildings are part of the history of our country, its long history, the people of our country, the achievements of our ancestors in architecture, which many centuries ago were able to show the subtleties of art in their buildings. the image of a hard-working people who have been sweating for years is clearly embodied. [8]

For a building to become an architecture, it must be created in the form of a high-level work of art or a work of art. Architecture differs from other types of human activities, including construction, in that, in addition to usefulness, it also performs ideological and artistic aesthetic functions that meet the needs of a particular historical and socio-spiritual environment and period.

The drawings, developed by Central Asian architects, are based on a grid and scale system of cells, in which the history and style of each building to be built are clearly expressed. Academician M.S. Bulatov in his "IX-XIV centuries, geometric harmony in the architecture of Central Asia" in his monograph he described the geometric analysis of many architectural monuments, proving for the first time that medieval architects had not only practical but also theoretical knowledge, that construction was based on drawings. [9]

Just as there are no meaningless words, there are no meaningless patterns. Even primitive rock paintings have a certain meaning. Many of them describe the process of hunting and trapping wild animals. Before the introduction of Islam in Central Asia, monumental fine arts flourished. This is evidenced by the fact that the monuments of Afrosiyob, Varakhsha, Bolaliktepa are decorated with thematic panels. Various topics, such as the arrival of ambassadors with gifts, the warmth of hospitality, and the hunting process, were clearly reflected in them. After the introduction of Islam, fine arts were replaced by mainly ornamental, ie floral, geometric patterns. Such patterns have been used since ancient times, along with monumental art, and have a symbolic meaning. The colorful floral and geometric patterns are intertwined to form an ideologically rich, meaningful whole panel.

Creating pattern elements in Corel DRAW has become a modern requirement. Corel DRAW is a program that creates and edits illustrations based on the principle of vector graphics. The capabilities of the Corel DRAW program help to create a variety of graphic compositions. In particular, dynamic interactive tools, various effects and the ability to prepare graphic data in HTML and PDF formats. You can also choose different colors in the color palettes in the Corel DRAW graphics editor. There are also a variety of tools to help you work with different formats, many filters needed for import and export, image printing tools create the highest creative environment for the artist. [10]

Launch the Corel DRAW graphics editor. After launching Corel DRAW, its window will appear as shown in Figure 2. To work on the graphics, use the Welcom to Corel DRAW (Welcome to Corel DRAW) dialog box and one of the options must be selected. If we select the New Graphic option, a standard window with a print sheet in the center of the screen will appear, as shown. In this dialog box, in the What is New section, you will find the latest changes to the Corel DRAW program.



Figure 2 Below we provide information about the main elements of the Corel DRAW window.

All surfaces except the beginning of the line and the print sheet. Workspace Figure 2.referred to as In the left corner of the window is a graphics panel, and on the right is a color palette. From the top edge of the window, there is a row header, a menu bar, a standard toolbar, and an attribute panel. At the bottom of the window there is a horizontal scroll bar, and below it there is a status bar. In the center of the window is a leaflet. The shadow frame is the sheet border. The white area around the sheet is called the workspace of the document window.

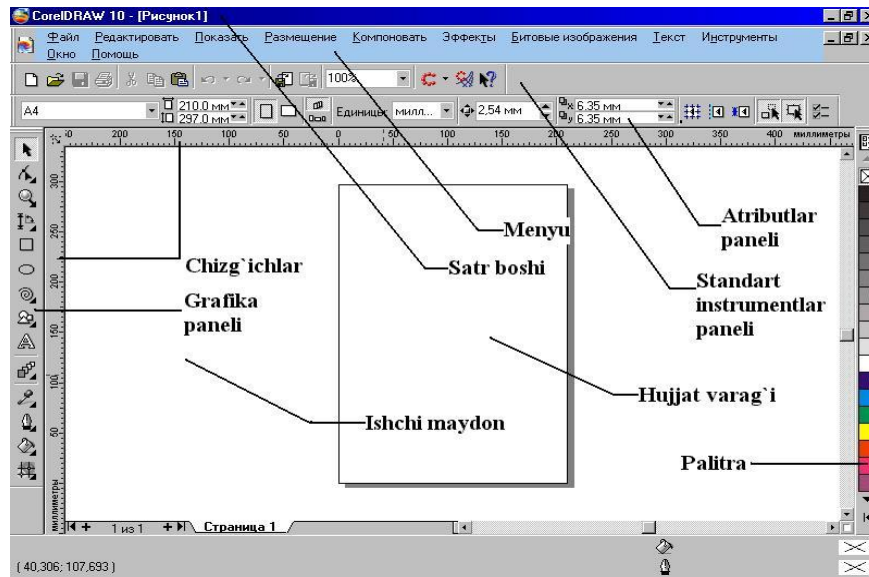


Figure 3.

Graphics panels. Interactive tools. Graphics panels. The graphics panel contains the tools needed to create a graphic work. There are also additional tools on the graphics panel that change the color and shape of objects. Some instrument buttons have small black triangles at the bottom

right. If you press such a button with the "mouse" for a while, it will open the buttons for additional tools.



Figure 4.

The following table contains information about all the tools in the graphics panel and the main functions of the tools attached to them:

N/r	Instrument	Additional tools	Functions to be performed
1	Pick (ko`rsatgich)		Selection and rearrangement of objects
	Shape (shakl)	Knife (Pichoq) Eraser (o`chirg`ich) FreeTransform (Erkin holatda o`z-gartirish)	Changing the shape of objects by pushing the contour links. Cut out parts of graphic objects and join lines. Delete parts of an object. Modification and reconstruction of objects.
3	Zoom (Maciura6)	Pan (varaqqi surish)	View objects in enlarged or enlarged state. Place the sheet on the edge of the document window.
4	Freehand (egri)	Bezier (Egri Beze) Artistic (Badiiy vositalar) Dimension (o`lcham chiziqlari) Connector Line (Birlashtiruvchi chiziq)	Draw curved lines as you would in a pencil Draw a curve by "merging points" and controlling the shape of the curve. Drawing in brush mode using various fog art effects. Draw dimension lines to place objects or dimensions between them. Draw connecting lines between objects.

5	Rectangle (To`g`rito`rt- burchaklik)		Draw a rectangle of different sizes and proportions
6	Ellipse (Ellips)		Draw ellipses of different sizes and proportions
7	Polygon (Ko`p burchaklik)	Spiral (Spiral) Graph Paper (Diagramma to`ri)	Draw polygons and stars with different sides. Spiral drawing. Draw a grid of different line diagrams.
8	Text (Tekst)		Figure or plain text input
9	Interactive Fill(Interaktiv quyish)		Interactive coloring of objects
10	Interactive Transparency (Shaffoflikni interaktiv tuzish).		Interactive creation of object transparency
11	Interactive Effects (Effektlarni interaktiv tuzish)	Interactive Blend(qadam-baqadam o` tishni interaktiv tuzish) Interactive Contour (Oreolni interaktiv tuzish) Interactive Distortion (Interaktiv deformatsiyalash) Interactive Envelope (Egiluvchi shakllarni interaktiv tuzish) Interactive Extrude (hajmni interaktiv tuzish) Interactive Drop Shadow (Soyani interaktiv tuzish)	Interactive creation of step-by-step transitions of objects. Interactive creation of objects that replicate the shape of other objects. Interactive deformation of objects. Interactive bending of object shapes. Imitation of a three-dimensional effect for objects. Interactive creation of a half-tone shadow falling from objects.
12	Eyedropper (Tomizgich)	Paintbucket (To`ldiruvchi)	Add a color by selecting the color of the object. Color the object from the standard color scheme.

Main menu. The main menu bar is located at the top of the Corel DRAW screen, below the row header row. This is the only item in the program that has a specific location that cannot be placed

anywhere on the screen. The main menu consists of 11 items. The user can also add additional special commands to this menu.

If you click on any item in the main menu, a list of commands will open. You can select a command from the menu by clicking on the "mouse" or the corresponding key. For example, if you want to open the Color Management dialog box, you can click the "Tools" menu with the "mouse" and then the "C" key. In addition to the "mouse", the use of keys also helps to speed up the work.

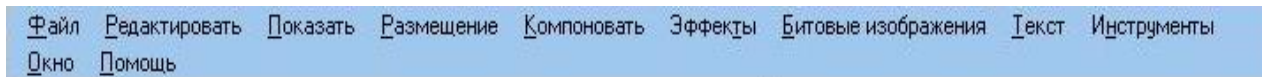


Figure 5

Windows system menu. The system menu icon in the document window is located in the left corner of the menu bar, to the left of the File command. In the background of the document is the Corel DRAW (balloon) logo.

The system menu consists of standard commands that control the Windows system window, including Restore, Move, Size, Minimize, Maximize, Close, Next.) are available.

The system menu of the Corel DRAW main window is invoked by clicking on the balloon icon to the left of the word Corel DRAW or by pressing the ALT-PROBEL keys together. Right-click to invoke the menu. [11]

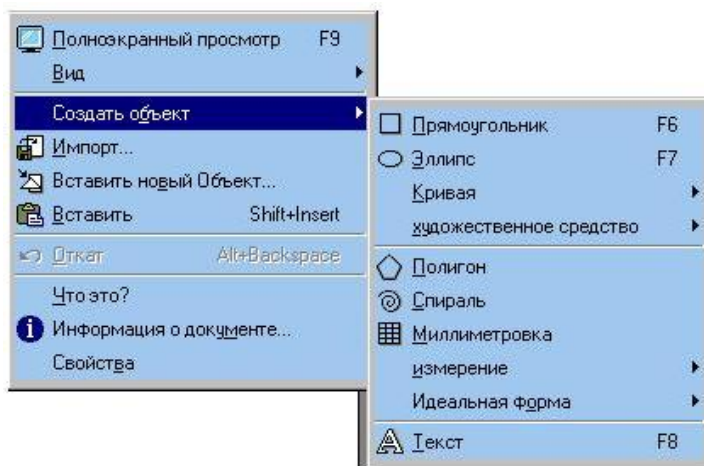


Figure 6.

In Windows, you perform certain actions by right-clicking anywhere on the screen. This feature is also widely used in the Corel DRAW graphics editor. Clicking the button on the right will invoke the context menu.

This image shows the Document context menu. We open the command menu to select the tools in the graphics panel by clicking on the command Create Object.

The next picture shows the Object menu. We call this menu by going to the group of selected objects and clicking the button on the right. Commands in such menus are called context menus because they depend on the status of the minutes being called.

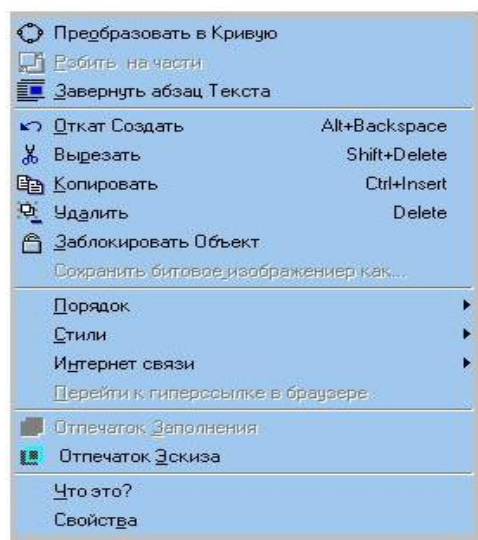


Figure 7.

Toolbar (Toolbar) context menu. The context menu of the Toolbar shown in Figure 7 is one of the most interesting and desirable menus. This menu is invoked by right-clicking on a standard toolbar, attributes panel, or graphics panel. You can select the toolbar through this menu.

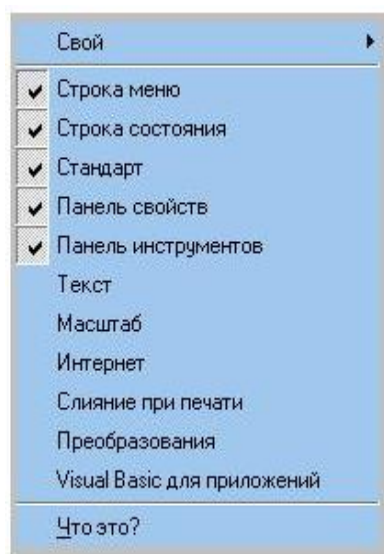


Figure 8

Standard instrument panel. The standard toolbar is located below the main menu bar. This panel has buttons that allow you to quickly and easily find the various functions of the Corel DRAW. In addition to these buttons, the panel has a drop-down list called Zoom levels.

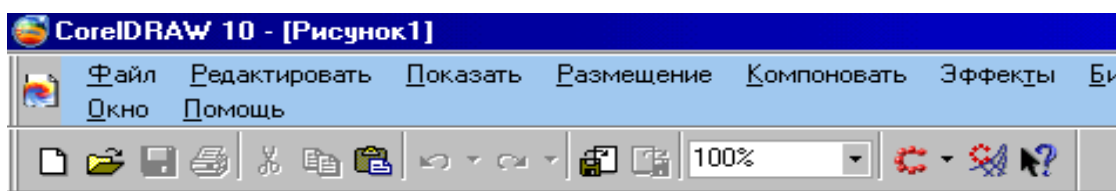


Figure 9

You can select 12 different scales from the Zoom levels drop-down list:

- To Selected
- To Fit (all objects)
- Po Page
- To Width
- To Height
- 10%, 25%, 50%, 75%, 100%, 200%, 400%.

You can also specify non-standard Scale coefficients in the Zoom parameter field. To do this, press the ENTER key, giving the required scale in percent.

Everyone can create a standard toolbar to suit their style of work.

If you place the mouse pointer on any button on the toolbar and wait for a while, the information with the name of the button will appear. Additional information about the function of this button will appear in the status bar at the bottom of the screen.

The table provides information about the buttons on the standard toolbar.

In conclusion, in the circle of fine arts, in the process of performing these tasks, students learn the basics of the laws of creation of very elegant patterns, entries, using simple geometric drawings.

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In conclusion, in the circle of fine arts, in the process of performing these tasks, students learn the basics of the laws of creation of very elegant patterns, entries, using simple geometric drawings.

The work in these graphics programs is automated and the drawings are performed with high accuracy. The use of graphic software in applied decorative arts not only increases its effectiveness, but also increases students' interest in applied decorative arts, as well as computer literacy and skills.

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