Abstract: The graphics applications in various technical and economic fields find in Microsoft Visio a most useful graphical environment. Those applications are more and more used in didactic activities because they are attractive, accessible on the Internet, and allow their users to study or visualize a phenomenon. In this paper we present a few possible graphical applications, used for graphical communication.

Key words: Visio, graphical communication, diagrams, drawings.

1. INTRODUCTION

In contemporary society, infographics has become a useful tool in all fields, technical, economic, or artistic. As a consequence, by using the computer, the gap between arts and technology is diminishing, because computer users have certain esthetical requirements regarding software. This is why some software producers have developed programs with powerful design tools, and thematic libraries for drawing.

Infographics play an important role not only in the field of office work but in many others.

In order to meet growing demands, the Visio Corporation has offered a wide choice of software drawing tools, for creating diagrams with multiple uses, through the Visio software. The Visio group of products comprises:

- Visio Standard, general software addressed to a wide area of users;
- Visio Technical, for drawing technical designs like schematics, or building interior;
- Visio Professional for drawing networks, information flowcharts, or business activities systematizations;
- Visio Enterprise Network Tools (VENT) and Visio Enterprise Architect (VEA) which are software tools for networks and databases designs.

As the Microsoft Company discovered, infographics plays an especially important role in office applications. Thus, although Microsoft had its own drawings and design tools, used for its Microsoft Office, it has decided that they need the Visio solutions. Consequently, in 1999 they bought the Visio Corporation, and transformed it in a division of Microsoft.

With a new friendlier and more accessible Microsoft office style interface, the Visio Software has become more and more used world wide.

The success of this design tool is due to the following features:

- Powerful graphic tools which allow designing the needed elements;
- Multiple windows working possibilities;
- Easy image transfer by copy-paste to any Microsoft Office application;
- Easy image, sound, and animation acquiring from diverse sources;
- The drawing tool included in this product allows data transfer between Visio and other Microsoft products;
- A wide choice of file types to be created: dwg, svg, gif, jpg, html etc.;
- Easy to use working interface for Microsoft Office users;
- A drawings-and-shapes library for different uses.

The present paper will present some of the graphical applications of Microsoft Visio for various fields of activities.

2. USING THE VISIO SOFTWARE

Taking into account the wide choice of domain structured libraries, which include various pre-defined shapes, it is necessary to begin by choosing the domain for which the application is needed.

After choosing the domain, a tools area will appear from which the shapes can be inserted into the design area by drag-and-drop. The shape parameters such as size, layout, position, can be modified and the shape connected to other shapes easily.

In figures 1-8 we exemplify using Visio for some very frequent designs for presentations.

Fig.1. Auditing type diagrams.
Fig. 1 Electrical scheme.  

Fig. 2 Decision tree.  

Fig. 3 Presenting a Network structure.  

Fig. 2 Marketing style presentation.  

Fig. 3 Presenting an office layout.  

Fig. 7 City map scheme.
Fig. 8 Presenting a decision structure.

The design tool for mechanical engineering has a more particular approach, being one of the recent developments. For example, certain steps should be done for drawing a spring:

- Choosing the icon from the Mechanical Engineering (fig. 9);
- Drag-and-drop the icon into the work area;
- Automatically, a dialog menu will appear (fig.10) where the spring design parameters are required such as exterior diameters, lengths, number of spires, and spires diameters (fig.11);
- After this, the parameters can be changed at any time using the right click menu (fig.12);
The traction arch can be chosen by glueing the connection points (fig. 12), the diameter of the wire can be chosen as well (fig 13);

![Fig. 13 Dialog Box for choosing wire diameter.](image)

- The testing diagram can be designed as well by using the adequate shapes;
- Finally, a spring design results (fig. 14).

Another example is represented in fig 15, the quotes of welding.

![Fig. 15 Welding design sample.](image)

3. CONCLUSIONS

The Microsoft Visio professional program is frequently used in the assisted presentation of quality instruments in the graphic processing of databases information, in the updating and administration of web pages.

Due to Microsoft Visio Professional facilities, using them in the didactic activity will ease the creation of didactic presentations, making them more attractive and useful.

The fact that the graphic tool provided allows data transfer between Microsoft Visio and other Microsoft products, combined with the parameterization of the shapes used in design, allows creating scaled designs, which makes Visio a real useful tool for engineers.

4. REFERENCE


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