

importantly - with high quality.

It should be noted that the development of the project is carried out in accordance with the standards, norms and requirements that apply in the construction field. With the introduction of basic data of architectural components into a program, it is possible to calculate not only the cost of a complete project, but also to find out the price of the building's nodes separately.

Thanks to computer modeling, the time for designing systems is greatly reduced, no matter how difficult they are. And there are also special programs that help to make construction estimates, and can also carry out not only the verification and comparative analysis of the estimate documentation, but also make an objective assessment of the existing tender proposals. And that's not all, as there are a large number of design programs that are aimed at creating internal metamorphosis of buildings.

Although there are so many softwares used in our Construction Industry but the usage depends on the profile we are working. Most of civil engineers remain confused when it comes to software though there are so many, which we need to learn. How many and what kind of software we should know to grow in our professional life?

For example, AutoCAD and 3D Max- the most popular software in civil engineering world designed by Auto-desk 2D and 3D design, drafting, modeling, architectural drawing etc. can be created by this software. This is the most powerful resource to express your imagination to write down, to draw or to plot them. Revit, Tekla – are building information modelling software for architects, landscape architects, structural engineers, MEP engineers, designers and contractors. Lira and Scad - computing complex for the strength analysis of structures by the finite element method, which uses in our country and neighboring countries.

References:

<https://www.quora.com/What-are-the-softwares-that-a-civil-engineer-must-know>
<https://bigreddog.com/10-software-programs-to-know-in-civil-engineering/>

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MAIN COMPONENTS OF MULTIMEDIA

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Multimedia is one of the most perspective and popular directions of information technology development. Their purpose — application creation, containing "collections of images, texts and data which are followed by a sound, video, animation and other visual the effects including the interactive interface and

other mechanisms managements". This definition is formulated in 1988 European Commission on problems of implementation and use of new technologies. Ideological premises of emergence of technology of multimedia consider the concept the organizations of memory "MEMEX" offered in 1945 to American scientist Vanniver Bush. It provided information search in compliance with its semantic contents, but not on formal grounds.

A particular interest in the late eighties in use of multimedia technology it is connected with a name of Bill Gates which possesses the idea of creation and successful implementations in practice of a multimedia product on the basis of office museum the inventory database for "National Art Gallery" in London, with use in it is mute all possible "environments": images, sound, animation, hypertext system. This product integrated in itself three basic principles of multimedia:

- 1) information representation by means of a combination of a set of the environments perceived by the person;
- 2) Network information and communicative environments (Internet, virtual offices, etc.).
- 3) existence of several subject lines in the maintenance of a product;

The special pointer with the sensor called by a feather is a part of the device. Own controller sends impulses on the orthogonal grid of conductors located under the tablet plane. Having received two such signals, the controller will transform them to the coordinates transferred to the PC. The computer transfers this information to the point coordinates on the monitor screen corresponding to the provision of the pointer on the tablet. By means of a feather the drawing on the tablet is put, at the same time graphics editors perceive it as a pencil, a brush, a piece of chalk, etc. Having inverted a feather, the image can be erased. Digitayzera are the instrument of digitization of three-dimensional objects. For further processing and editing results of scanning there is a set of different programs. Mechanical digitayzer have rather high accuracy — up to 0.2 mm. Models from the 3D series can remove coordinates with a speed of 1000 points per second and report information with a speed of 38 Kbps. 31 Before scanning line an object, draw in detail lines across which there will pass the feather. It is possible to digitize in the semi-automatic and manual modes.. In the course of scanning of an object as coordinates of points get to the computer, on the monitor the space model appears. For creation 3D - images it is possible to use programs which allow to present the scanned objects in the different ways, for example in the form of points, lines, a wire frame, splines and also to edit and save 3D - images in files of the formats dxf, IGES, obj, txt, 3ds for the subsequent import in other applications.

The web design became one direction of modern multimedia. Thus, it is possible to select the following main scopes of computer graphics