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GOSPODARKA I INNOWACJE

LABORATORIUM WIEDZY Artur Borcuch

Volume: 41 | 2023

Economy and Innovation
ISSN: 2545-0573

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SKETCH UP SOFTWARE AND ITS CAPABILITIES

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ARTICLEINFO.

Keywords: Sketchup, 3D model, architecture, animation, 3D store, 3D printing, Export, import, free, trial, intuitive.

Annotation

The article describes information about the Sketchup program and its capabilities and 3D modeling, the processes of occurrence of the 3D store SketchUp program and in which areas this program can be used, and provides practical examples of this program.

Sketch Up is an intuitive application for designers and architects that can be used to quickly create 3D models of objects, structures, buildings and interiors. Thanks to the intuitive workflow, the user can very accurately and graphically reflect his idea. Sketch Up is the simplest solution used to model a 3D home. Sketch Up, comparable to both Cinema 4D, has the ability to create both realistic images and sketch images. The program has a simple and convenient interface, which is easy to learn, thanks to which it will have more and more users. Sketch Up was released in 2000. SketchUp is available in two versions: there are free and paid SketchUp Pro versions for non-profit use with some functional limitations.

The capabilities of the program include a wide library of ready-made models, materials and styles, support for plugins and macro, the ability to work with layers and scenes, the creation of ready-made parts of the models themselves, as well as models of real buildings and structures. The last paragraph distinguishes this program from others, which is primarily due to the relative simplicity of creating such models.

The main feature is the almost complete absence of pre-installed Windows. Once the instrument is complete or immediately, all geometric properties are set from the keyboard in the Value Control Box field (parameter control field), located in the lower right corner of the workspace, to the right of the measurements (scale) record).

Another major feature is the Push/Pull tool, which allows any aircraft to be “pushed” off the road and forms new sidewalls as it moves. This tool is claimed to be patented. You can move the plane along a predetermined curve, for which there is a special "Follow me" tool.

SketchUp works with graphics files of various formats, such as bmp, jpg, png, dwg, psd, etc., and, if necessary, provides for the export of models to one format or another.

The Google Earth resource program ("virtual globe") and the simplified SketchUp 3D editor are integral components of a single family of software products, and the user can easily transfer information from one package to another.

So, in particular, when modeling copies of architectural structures, you can easily import an antenna or

satellite photo of the desired building from Google Earth, as well as the topography of the area, and then "build" a model of a virtual building on the foundation, which will be a satellite photo of the prototype building.

- After creating a model of an architectural installation or other objects in SketchUp, users could place their creations in Google's public online collections. So, in particular, in the selection of collections" developing cities " there are several thousand models of real architectural buildings in the world. It should be noted that Google has adopted 3D models only on the condition that they are textured and properly georeferenced.
- In addition, the program offers the following possibilities:
- Support for plugins for export, visualization, creation of physical effects (rotation, movement, interaction of created objects with each other, etc.);
- Help to create macros in Ruby and call them from the menu. Macros can automate repetitive actions. There is a function for loading and using many ready-made macros offered by other users;
- Support for the creation of "components"-model elements that can be created, then used many times, and then edited - and changes made to the component will be reflected in all places where it is used;

Library of components (models), materials and styles of the workplace that can be downloaded from the internet;

- The ability to add additional characters to the model with a tool for viewing the model in the section and setting the dimensions visible in the style of the drawings;
- Ability to work with layers;
- Ability to create dynamic objects (for example: opening the cabinet door by clicking on the pointer);

SketchUp is a popular 3D modeling software that can be used for Architecture shows, animations, and 3D printing.

In 2012, Google sold SketchUp to Trimble Navigation Limited. Trimble retained the Free / pro pricing model. SketchUp Make is a free version of the tool and SketchUp Pro will cost $ 695 starting with this entry. Educational benefits are available to students and teachers.

SketchUp comes with a free trial version of Make SketchUp Pro, so users can try to make the purchase. SketchUp users can create 3D models, but the ability to import or export SketchUp Make models is very limited. SketchUp Make is not only licensed for non-commercial use.

3D Warehouse va Extension Warehouse

3D store is live and good with Trimble SketchUp version. This is done by 3dwarehouse.sketchup.com you can find it on the site. In addition, Trimble installs an extension repository to download extensions that extend the functionality of SketchUp Pro.

3D Warehouse incorporates several architectural elements from popular buildings to individual pieces of furniture, but participating users have loaded 3D printable objects with templates.

In addition to Trimble resources, SketchUp users can download and download Thingiverse products, a popular exchange site for models targeted at 3D printers.

3D printing

To print to most 3D printers, users need to download an extension compatible with the STL format, but SketchUp is a popular choice for 3D print enthusiasts. therefore, there are many textbooks and other materials for you to start with.

Winning side

1. Free Download
2. Easy to learn
3. Integrated with 3D Warehouse
4. Many of the clock models in Thingiverse are suitable

Minority

1. The free version is very limited
2. It is difficult to make modeling difficult
3. The displayed product may not be what you expect

Don't expect SketchUp to compete with professional products like Make Autodesk Maya. SketchUp is not close to this level of complexity. However, SketchUp does not require constant use for many years.

It is very easy to create a pattern in the form of an architecture or on a 3D printer. SketchUp Make is a simple tool for beginners or a great tool for those looking for a simple way to create simple 3D objects. 3D models are ideal for students in areas such as interior design that enhance presentations. Starting to download models from a typical 3D location works easily.

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