What is a 3D scanner? All about the application and device of three-dimensional scanners in one article!

3D scanner is a device which you can use to create accurate three dimensional models of real objects. The benefits of this technology It converts the object to its digital image as a simple 2D scanner converts the image on the sheet of paper in the image on the computer. 3D scanners are used in many industry fields of science, medicine and art. In particular, they have successfully solved the problem of reverse-engineering control the shapes of objects of cultural heritage preservation in the Museum are used in medicine and design. Thus they are necessary in all cases when it is required to register the shape of the object with high accuracy and in a short time. Three-dimensional scanners can simplify and improve manual work and sometimes even to perform tasks that seemed impossible. These devices are useful in industry for non-contact surface inspection of complex geometric shapes and to design systems. They are used 3D scanners Usually the 3D scanner is a small electronic handheld device weighing up to 2 kg or landline which uses as backlighting a laser or a flash lamp. The accuracy of object models ranges from tens to hundreds of micrometers. It is possible to scan color or just the shape of the surface. These devices not only simplify the process of creating three-dimensional models they print with maximum precision in relation to the original the original. 3D scanners are divided into two types according to the method of scanning Contactless devices are in turn subdivided into two separate categories Passive scanners do not emit at the object and see the reflected background radiation. Most scanners of this type respond to ambient visible light radiation. Active scanners emit the object to waves and uses their reflection to analysis. Radiation are different To create 3D scanners use different technologies. Each of them has its limitations advantages and disadvantages. Today, the main areas are optical and laser technology. Scanning through optical technology is carried out by projecting the object lines form a unique pattern. Information about the shape of the surface of the object is contained in the distortion of the projected image. In scanning laser technology is used laser eye safe. To attach the 3D scanner with laser illumination to the object scanning are often used special reflective markers are fixed near the object of scanning or directly on it at certain points. Laser scanners for the most part not suitable for scanning moving objects

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