

Case study

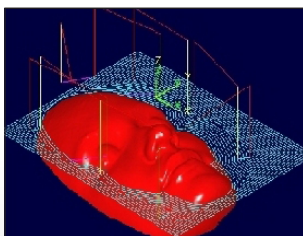
From a free form object to the milling unit

HANDYSCAN 3D

A division of Creaform inc.



Fadal



FIND A WAY TO REPLICATE A HUMAN FACE AND CREATE A PHYSICAL MODEL

With the development and integration of laser scanning techniques, as well as laser scanning's compatibility with CNC machines, the steps to create a realistic 3D model starting with the digitizing process, to the generated code, are becoming much faster and easier.

Not too long ago, a CAD solid model was needed before generating the G code. With techniques and devices such as the new HandyScan 3D, which directly outputs STL files quickly and accurately, the need to create a solid CAD model has quickly become obsolete, giving more flexibility to companies in the fields of prototyping, prosthetics and model making.

The teams of HandyScan 3D, Fadal and VisualMill partnered together to demonstrate the versatility of their units by integrating 3D techniques in a creative new way. The compatibility between the HandyScan 3D and the Fadal vertical milling center powered by VisualMill gives flexibility to anyone wanting a replica of a human part or an object. Their goal was to replicate a human face in aluminum.

At a recent trade show, the face of a lady was scanned with the HandyScan 3D; a STL file was then directly created. With the HandyScan 3D, it is very easy to scan human body parts. Since the HandyScan 3D is self positioned in space, shifts in the model's position do not affect the data acquisition and the collected data is always perfect. The HandyScan 3D uses a laser cross to capture the lumps and splits of every surface. The STL file was cleaned up and used to create the toolpath for the Fadal CNC machine. Within 15 minutes, the team was able to scan a face, clean the data and create the toolpath. The human face was reproduced using aluminum. It is also feasible to mill any material used to make casts or molds.

The HandyScan 3D can also be used for other applications during the design and manufacturing process of any objects. Scans can be done with objects, clay, prototypes and models. The data collected from a scan can be use to scale a model up or down, make a copy or a sample. The negative of the data can be use to create the mold.



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