



COST OF MAKING MODELS PLUNGES - MANUFACTURING - INNOVATION.

By Max Glaskin.
516 words
21 January 1996
The Sunday Times
ST
English

© 1996 Times Newspapers Ltd. All rights reserved

THREE-DIMENSIONAL models of new products could soon be constructed within the hour by a computer-linked machine that can make plastic structures from drawings at the press of a button.

Its creators claim it will speed up the design process and could become as common a piece of equipment in design studios as the photocopier.

Most components for mass manufacturing are first created using computer aided design (CAD), which allows engineers to examine a three-dimensional image on a computer screen from all sides.

Unfortunately, they have to print out two-dimensional images on paper unless they can afford to spend \$330,000 on laser-powered rapid prototyping machines.

Now, however, designers will be able to buy a machine for about \$66,000 that can make models of their concepts within an hour.

Nadya Anscombe, technology editor of European Plastics News, is impressed with the new, cheaper system. "It should mean we get better-designed products, sooner," she says. "The lower cost and small size of the machine mean it will find a home in many design studios."

The multi-jet modelling (MJM) machine was invented in Valencia, California, by 3D Systems, the world's largest manufacturer of rapid prototyping machines.

Its founder, Chuck Hall, had discovered earlier that when two laser beams cross inside a bucket of liquid plastic, the material solidifies at that point. By controlling the beams with computers he was able to create three-dimensional models through a technique called stereolithography. But the new system is simpler, using standard ink-jet printer components to build models in successive layers with a patented liquid plastic that solidifies in seconds at room temperature.

A print head of 96 jets, controlled by the CAD workstation, deposits a layer of plastic on a platform. Then the platform is lowered and a second layer is deposited. The process is repeated until a three-dimensional model of the CAD file is created.

Hansjorge Votteler, European marketing manager for 3D Systems, says that although models made by the new MJM method are not as accurate as those made by stereolithography, the machine will make it cheaper and more convenient for designers to check how a product is progressing.

He says: "Everybody involved with the development of a product, whether it is a car or a mobile phone, needs models to help them to decide if the design is going in the right direction. The engineers and toolmakers can identify manufacturing problems and the marketing department can improve the aesthetics. If they can get a model in an hour or so they can speed up decision-making."

And just like conventional paper print-outs, the MJM models will be scalable, allowing small or full-scale versions to be made.

The system is also sophisticated enough to ensure a complex model takes no longer to make than a simple model of comparable overall size. The new machine can make models up to 25x25x20cm and can be networked to all the CAD workstations in a studio.

Not Available for Re-dissemination.

Document st00000020011023ds1l00g8v

Search Summary

Text	
Date	All Dates
Source	Newspapers: All
Author	All Authors
Company	3-D Systems Corp
Subject	All Subjects
Industry	All Industries
Region	United States
Language	English
Results Found	186
Timestamp	17 July 2018 11:15