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Direct Digital Manufacturing System from Stratasys Reduces Barriers to Adoption

Innovations Step up Technology in Five Key Areas

MINNEAPOLIS--(BUSINESS WIRE)--

(Nasdaq:SSYS) Stratasys today announced a new direct digital manufacturing and prototyping system -- the FDM 400mc.(TM) The system has improvements in five key areas sought after by manufacturers.

Three improvements center on part quality. These are accuracy, repeatability and material properties. The remaining two improvements are speed and flexibility.

"Manufacturing experts have said that general industry advances in these areas were needed to encourage migration to direct digital manufacturing," says FDM product manager Patrick Robb. "Stratasys took this seriously when designing the FDM 400mc. These enhancements are part of our focused effort to meet the needs of the direct digital manufacturing market with our high-end FDM systems."

Innovation in both hardware and software contribute to the improvements by increasing precision in the deposition of plastic. Results include smooth head movement, precise head positioning, and consistent material-bead width.

Accuracy & Repeatability: Improvements in both the design and manufacturing of the extrusion head gantry make it straighter and stiffer. This holds the extrusion head to a tighter positional accuracy that can produce parts with a higher tolerance. And it results in performance that is repeatable.

This, in combination with the stable thermoplastics used, enables the FDM 400mc to outperform nearly any competing technology in accuracy and repeatability. Extensive testing shows that the FDM 400mc maintains this repeatable performance when manufacturing multiple identical parts in different runs, at various platform positions, and on various machines.

Material Improvement: The FDM 400mc is introduced with a new material - ABS-M30, which offers real improvements over standard Stratasys ABS across a number of mechanical properties, including Tensile strength, Impact strength, and Flexural strength. ABS-M30 mechanical properties are up to 67 percent stronger than standard Stratasys ABS, thus expanding functional capabilities.

In addition, due to improved build parameters and hardware improvements, parts manufactured from either PC-ABS or PC on an FDM 400mc are significantly stronger than the respective parts built on other FDM systems. PC-ABS parts are up to 17 percent

stronger when built on the FDM 400mc, and PC parts are up to 29 percent stronger.

Speed: The FDM 400mc is faster than FDM predecessors, and it has a build-speed increase of 29 percent (when averaging all material types and slice thicknesses). Unlike competitive technologies, this speed increase does not come at the expense of part quality -- due to the stiffer gantry, improved extrusion parameters, and better extrusion flow control. These innovations allow part quality to improve, even at the faster speeds.

Flexibility: Users can customize their system, selecting the material packages and build-envelope size as needed. This reduces the system purchase price because users pay only for their needed envelope size and material capabilities. Standard build-envelope size is 14 x 10 x 10 in. (356 x 254 x 254mm); optional build-envelope size is 16 x 14 x 16 in. (406 x 356 x 406). The larger build-envelope option includes additional material bays for longer running jobs.

The FDM 400mc can build with the following optional materials: ABS-M30, PC, PC-ABS, and PPSF. Plans call for the eventual addition of ABS, ABSi, and PC-ISO, which are currently available on other FDM systems.

The FDM 400mc is scheduled to begin shipping in August.

Stratasys Inc., Minneapolis, makes prototyping and direct digital manufacturing systems. According to Wohlers Report 2007, Stratasys supplied 41 percent of all such systems installed worldwide in 2006, making it the unit market leader for the fifth consecutive year. Stratasys owns the rapid prototyping process known as fused deposition modeling (FDM). The process creates functional prototypes and end-use parts directly from any 3D CAD program using ABS plastic, polycarbonate, PPSF, and blends. The company holds over 180 granted or pending rapid prototyping patents globally. Stratasys products are used in the aerospace, defense, automotive, medical, education, electronic, and consumer product industries. On the Web: www.Stratasys.com.

FDM is a registered trademark, and FDM 400mc is a trademark, of Stratasys, Inc.

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