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3D Printing is Merged with Printed Electronics

Revolutionary "Smart Wing" Created for UAV Model Demonstrates Groundbreaking Technology From Stratasys and Optomec

MINNEAPOLIS--(BUSINESS WIRE)-- (Nasdaq: SSYS) Stratasys and Optomec Inc. today announced that the companies have successfully completed a joint development project to merge 3D printing and printed electronics to create the world's first fully printed hybrid structure.

Additive manufacturing first: Electronic circuitry was printed onto a model of a UAV wing, which itself was 3D printed. (Photo: Optomec & Stratasys)

The first project, the development of a "smart wing" for an unmanned aerial vehicle (UAV) model with functional electronics is a revolutionary event that has the potential to change product development in industries including medical device, consumer electronics, automotive and aerospace. A video on stratasys.com discusses the making of hybrid structures.

"Bringing together 3D printing and printed electronic circuitry will be a game changer for design and manufacturing," says Jeff DeGrange, VP of direct digital manufacturing at Stratasys. "It has the potential to completely streamline production by requiring fewer materials and steps to bring a product to market."

An Optomec Aerosol Jet system was used to print a conformal sensor, antenna and circuitry directly onto the wing of a UAV model. The wing was 3D printed with the Stratasys Fused Deposition Modeling (FDM) process. The electrical and sensor designs were provided by Aurora Flight Sciences, a supplier of UAVs. "

We envision many potential applications of the Stratasys-Optomec approach for hybrid direct digital manufacturing," said David Kordonowy, who leads Aurora Flight Sciences' Aerostructures Research Group. "The ability to fabricate functional electronics into complex-shaped structures using additive manufacturing can allow UAVs to be built more quickly, with more customization, potentially closer to the field where they're needed. All these benefits can lead to efficient, cost-effective fielded vehicles."

The combination of FDM 3D printing and printed electronics technologies can provide benefits over traditional prototyping, manufacturing and field repair processes. Performance and functionality of products can be improved in two ways: 3D printers enable lighter weight mechanical structures; and conformal electronics printed directly onto the structure frees up space for additional payload. In turn, the process has a positive impact on the environment by using fewer materials.

“Manufacturers can implement this hybrid technology in a multitude of applications, not just in aerospace,” says Optomec’s Ken Vartanian. “This technology can benefit numerous industries by allowing thinner, lighter, fully functional structures that cost less to manufacture.”

Optomec is the world-leading provider of *additive manufacturing* solutions for high-performance applications in the electronics, solar, medical, and aerospace & defense markets. These systems utilize Optomec’s patented *Aerosol Jet* Printed Electronics technology and LENS powder-metal fabrication technology. The company has a global customer base of more than 100 users that includes many industry-leading manufacturers. Online at: www.Optomec.com

Stratasys Inc., Minneapolis, is a maker of additive manufacturing machines for prototyping and producing plastic parts. The company markets under the brands uPrint and Dimension 3D Printers and Fortus Production 3D Printers. The company also operates RedEye On Demand, a digital-manufacturing service for prototypes and production parts. Stratasys manufactures 3D printers for Hewlett Packard, which it sells under the brand Designjet3D. In 2011 Stratasys acquired 3D printer maker Solidscape Inc. According to Wohlers Report 2011, Stratasys had a 41-percent market share in 2010, and has been the unit market leader for the ninth consecutive year. Stratasys patented and owns the Fused Deposition Modeling (FDM®) process. The process creates functional prototypes and manufactured goods directly from any 3D CAD program, using high-performance industrial thermoplastics. The company holds more than 285 granted or pending additive manufacturing patents globally. Stratasys products are used in the aerospace, defense, automotive, medical, business and industrial equipment, education, architecture, and consumer-product industries. Online at: www.Stratasys.com

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Forward Looking Statements

All statements herein that are not historical facts or that include such words as "expects," "anticipates," "projects," "estimates," "vision," "could," "potential," "plan", "intends", "desires", "assume" or "believes" or similar words constitute forward-looking statements covered by the safe harbor protection of the Private Securities Litigation Reform Act of 1995. Except for the historical information herein, the matters discussed in this news release are forward-looking statements that involve risks and uncertainties. These include statements regarding projected revenue and income in future quarters; the size of the 3D printing market; our objectives for the marketing and sale of our Dimension® and uPrint® 3D Printers; our support removal systems; and our Fortus® 3D Production Systems, particularly for use in direct digital manufacturing (DDM); the demand for our proprietary consumables; the expansion of our paid parts service; and our beliefs with respect to the growth in the demand for our products. Other risks and uncertainties that may affect our business include our ability to penetrate the 3D printing market; the success of our distribution agreement with

HP; our ability to achieve the growth rates experienced in preceding quarters; our ability to introduce, produce and market consumable materials, and the market acceptance of these materials; the impact of competitive products and pricing; our timely development of new products and materials and market acceptance of those products and materials; the success of our recent R&D initiative to expand the DDM capabilities of our core FDM technology; and the success of our RedEyeOnDemand™ and other paid parts services. They also include statements about future financial and operating results of our company after the acquisition of Solidscape and anticipated benefits of the acquisition. Actual results may differ from those expressed or implied in our forward-looking statements. Such forward-looking statements involve and are subject to certain risks and uncertainties, which may cause our actual results to differ materially from those discussed in a forward-looking statement. Such risk factors include our ability to successfully integrate and market Solidscape products, our ability to attract and retain management, and our ability to protect and defend intellectual property. These statements represent beliefs and expectations only as of the date they were made. We may elect to update forward-looking statements, but we expressly disclaim any obligation to do so, even if our beliefs and expectations change. In addition to the statements described above, such forward-looking statements are subject to the risks and uncertainties described more fully in our current report on Form 8-K filed in connection with the completion of our acquisition of Solidscape and in our reports filed or to be filed with the Securities and Exchange Commission, including our annual reports on Form 10-K and quarterly reports on Form 10-Q.

Photos/Multimedia Gallery Available: http://www.businesswire.com/cgi-bin/mmg.cgi?eid=50216160&lang=en

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