

# New file format will help 3-D printing progress

22 July 2011, By Anne Ju

(PhysOrg.com) -- A newly approved standard for 3-D printing file interchange will greatly enhance 3-D printing capabilities, says Cornell's Hod Lipson, who led the development of the standard.

The new standard, which was also developed by former Cornell graduate student Jonathan Hiller, is like a PDF in that it allows people to easily exchange printable object files. The [format](#) was approved by a consortium of industry and academia representatives, led by Lipson, associate professor of mechanical and [aerospace engineering](#) and computing and [information science](#), and is listed under the ASTM, an international standardization organization, as standard F2915.

3-D printing is an emerging technology in which objects, ranging from machinery to toys, are printed with the aid of computer-generated files. Until now, Lipson said, the industry had relied on old, limited file formats and a collection of proprietary improvements, which had been holding back progress. The new standard replaces the old STL (StereoLithography) format by adding native support for color, multiple materials and higher resolutions.

"This new format will mark the beginning of a new era of 3-D printing capability," Lipson said. "It's a bit like when the world of printers took off once postscript was invented, because all printers became mutually compatible."

The new standard, called AMF (Additive Manufacturing File Format), will provide engineers, architects, artists and others involved in 3-D design and [printing](#) to seamlessly transition from design to physical printed object, independent of the [specific software](#) or printer hardware being used.

Lipson also noted that geometric design [software vendors](#) and 3-D printer manufacturers will be the primary users of AMF, but anyone involved in the

design, aggregation, fabrication and consumption of 3-D objects using new additive manufacturing technologies would also benefit from the new standard.

Lipson runs the Cornell Creative Machines Lab and also leads the Fab@Home project, which seeks to bring user-friendly, inexpensive 3-D printers into homes and schools.

**More information:** Files, documentation and forums for AMF are available at [www.stl2.com](http://www.stl2.com)

Provided by Cornell University

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