

Waiting for a replacement part for your domestic appliance? Print your own

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(PhysOrg.com) -- Media coverage: Researchers based at the Innovative Design and Manufacturing Research Centre at the University of Bath have designed and developed a printer that can create objects from 3D files.

Dr Adrian Bowyer's Replicating Rapid Prototyping – known as RepRap for short - is a free desktop 3D printer capable of printing plastic objects. The object is formed by applying successive layers of solid material and the self-replicating machine could transform the nature of manufacturing.

[Rapid prototyping](#) and 3D printing are becoming commonplace, but the development of a self-replicating machine is making it possible for anyone to have their own machine for around the same price as a high-specification mobile telephone. It has enabled the costs of 3D printing to be massively reduced and therefore increased its accessibility.

Since many parts of RepRap are made from plastic and RepRap can print those parts, RepRap is a self-replicating machine - one that anyone can build given time and materials. It also means that - if you've got a RepRap - you can print lots of useful stuff, and you can print another RepRap for a friend.

The machines are most often used to create draft copies - prototypes - of objects that will later be created at greater expense with other materials. However, people could produce everyday objects in their own homes

and put them together.

In the developed world RepRap machines could be used to manufacture replacement parts for domestic appliances, with the user having downloaded the appropriate files from the internet. People at home or at work could also download files for new products, with some files being available free and others available for a fee.

The Engineering and Physical Sciences Research Council (EPSRC) supports the Bath Innovative Design and [Manufacturing](#) Research Centre (IdMRC) which is located in the Department of Mechanical Engineering of the University of Bath.

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