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AN REVIEW ON 3D PRINTER

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Introduction

"When objects can be described in a digital file, they become much easier to copy and distribute and of course, to pirate. Just ask the music industry. When the blueprints for a new toy, or a designer shoe, escape onto the internet, the chances that the owner of the IP will lose out are greater". The personal 3D printers of today most often build things from plastic using a process called fused filament fabrication (FFF), Plastic filament is heated and extruded from a nozzle like a tiny and precise hot injector while the machine draws out 3D objects layer by layer. As one layer of plastic is laid on top of another. they fuse together, and, when cooled, form a solid and durable plastic part. This technology has been around for about 25 years and used in the design and engineering industries for everything from designing parts for cars to designing baby toys. Whilst the real quest was how to make 3D printers more personalized and yet affordable answer came out as a project called "RepRap" (short for replicating rapid prototyper). Developed by Dr. Adrian Bowyer at Bath University, is the 3D printer that started it all in 2007. The first RepRap named Darwin, was a 3D printer capable (at least in theory) of reproducing itself by printing the parts needed to make a new one. Due to the self-replicating ability of the machine, authors envision the possibility to cheaply distribute RepRap units to people and communities, enabling them to create (or download from the Internet) complex products without the need for (distributed manufacturing) including scientific equipment.

Literature Review

A 3D printer uses a virtual, mathematical model to construct a physical artifact that can be manipulated and viewed on the computer screen. The 3D printer can take the symbolic