

Genius Printers

Developing Novel Techniques for Unmatched 3D Printing

Technology has the power to change the way the world operates. When 3D printing came to the fore in the late 1980s, it was considered to be an expensive commercial technique to be used only by large companies and industries. Today, 3D printers are mainstream devices that can be bought easily from both online and offline stores and put to use with equal ease. Their usage ranges from design studios, schools and community centres, to hobby classes.

With so much ease, one would think that the markets must be flooded with 3D printers of all kinds and sizes. However, this isn't the case. The reason, as experts suggest, is the lack of suitable device that could balance the printed object's finesse with strength, along with using the best possible material and using a process that gives maximum adhesion to the object.

The current printing technologies like FDM, DMLS, SLS, EBM etc. all lack on one or the other criteria. To revolutionize the 3D printing world,

someone needed to replace the injection moulding machines, produce a drum printer that is at least 200 times faster than current ones, eliminate the empty-volume-weak-part-problem, overturn the poor surface finish restrictions, and work for ceramic, metal and plastics.

The problem might seem complex, but that's exactly what Genius Printers did. The company, with several patents under its belt, is looking forward to building the world's first powder-based 3D printer that can print a layer of 1/4m² within 100 milliseconds. This technology is called Hyperfusion and is faster than HPs and Desktop Metal's inventions.

The Genius Mind

Markus Ulrich is the Founder and CEO of geniusthings, the holding of Genius Printers. Born in Germany, Markus completed his mechanical engineering degree from the Dortmund University. He then went on to gain extensive knowledge as a broker, trader and trustee.

Markus then formed and founded an IT-database company and sold the business 13 years later. To his credit, Markus has filed several patents in the field of 3D printing, built an SLA machine, designed many machines including full-colour FDM printhead, and robot printer with viscous resin for huge models. He believes that the Printer is the most complex machine he has ever tried his hands on. All the patented technologies invented by Genius Printers are the brainchild of Markus.

From Ideas to Objects

3D printing is a fascinating process to watch and the products that come out of it are equally amazing. There has been a lot of buzz around what all can be done and is being done through this technology. The possibilities are endless and range from printing dentures, houses, spacecraft, human-organs to cars. However, the usability issue has mostly been undermined. Most printed objects are fine for demonstration purposes, but surface roughness

and material distribution isn't comparable to injection or stamped parts. As the layers aren't well joined, they don't possess the requisite vector strength. Thus printed parts, at least FDM prints, can hardly be used for functional purposes. This is where Genius Printers' adequate solutions come into play.

Genius Printers' novel solution involves the usage of centrifugal force inside a drum to press out or inject granulates, which is currently used by injection moulders, thereby reducing the flowing plastic's viscosity for a fraction of a second. This is due to the spark at each tiny little hole inside a cartridge, contrastingly similar to the inkjet printers.

The company has filed a patent for using a flexible nozzle to produce detailed fine lines as well as wide ones, hence increasing the printing speed by up to 100 times than the present FDM printing technology. They believe that the same principle applies to concrete, silicone, gel or any other liquefied process-able materials.

Markus Ulrich
Founder and CEO

An Optimized Future

Genius Printers is currently seeking funds in Europe and the US in exchange for shares. These funds will enable the company to translate its vision into products that will help the 3D printing industry to reach its potential. There's a huge market that needs to be explored and Genius Printers is ready to do so.

Genius Printers aims to optimize production by offering new printing technologies, which are so fast that even real mass production becomes possible for multi-colour and multi-material objects. The First Electroplating 3D Printer with Unmatched Patent-Pending Features named GP 13 is just a glimpse of the company's determination and potential.



"We are keen to bring to life all of our patents for unmatched printing experience"