

GCRI INTERVIEW

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**Can you give our readers some insight into what led you to found EOS?
What makes EOS' business model so successful?**

In the mid-eighties, I worked for General Scanning which evaluated additive manufacturing (AM) on a project level. The company finally decided not to invest into the further development of this technology, but I, personally, was convinced that this would be a future technology which would change the way we design and manufacture, which led me to found my own company under the name "EOS." Reality today proves that I was right. EOS is a success story. One of the reasons for EOS' success is that we further develop our technology in close cooperation with key customers. This way we can ensure that we understand their challenges to find adequate technological solutions.

What is EOS' primary R&D focus at the moment and what is your vision for EOS in the future?

Over the years, our additive technology was primarily seen as a redeemer for manufacturing challenges where conventional manufacturing technologies could not offer a solution. More and more serial parts are being manufactured with our technology and additive manufacturing latter step by step becomes an established manufacturing technology which can offer interesting alternatives compared to conventional techniques. It can offer real value added when it comes to freedom of design, mass customization, functional integration, and lightweight design. This is not only of interest for our customers operating in the Rapid Prototyping arena. It also becomes an increasingly interesting solution for Original Equipment Manufacturers (OEM) who step by step seek to use our technology for serial applications. In order to meet their particular needs in an adequate way, we currently focus on topics such as process stability, quality assurance, and the development of serial applications. Dental crowns and bridges are serial applications which EOS already offers today. Other applications will follow and a lot of these are being developed in close cooperation with our customers.

What are the challenges of 3D printing, and what are the limits to this manufacturing process?

We are still facing a number of challenges, namely:

Additive manufacturing is still a relatively new technology and as such is on a constant journey to further development and improvement. Particularly with new customer segments from the OEM world approaching us, quality and serial manufacturing standards need to be adjusted to their needs. And the latter are somewhat different and more challenging compared to the Rapid Prototyping (RP) world.

New technologies always need to meet proof-of-concept standards when customers compare our technology to conventional ones which have been on the market for years, if not decades. Yet, the particular AM design enables lightweight structures which could not be manufactured the conventional way. New material properties can be achieved with AM too which conventionally are not possible.

Those industries which tend to offer the highest market potential for our technology in the coming years – medical and aerospace – are among the most regulated ones. So it takes quite a number of years before AM will be widely used in these areas.

With the current “3D printing” hype in the media – which mostly refers to B2C systems – it is very important to manage expectations, i.e. 3D printing is not yet a plug and play technology. It also needs an experienced operator to produce excellent parts that meet industry expectations and standards.

In which area will 3D printing, in your opinion, have the greatest impact? Is this technology disruptive enough to change industrial and domestic manufacturing as we know it?

EOS is currently serving a number of key industry applications, such as automotive, tooling, and lifestyle products. The industries that, from today’s perspective, offer the biggest potential for a real industry adoption of the technology are aerospace and medical, in particular, dental.

And, yes, the technology has a certain disruptive power as it introduces a mind-set change with regards to the way we design and manufacture. Some even call it an industrial revolution. We would rather call it an evolution of design and manufacturing.

EOS’ 3D-printed Stradivarius is an impressive consumer application. Do you have a favorite 3D printing application? If so, please explain why.

We currently see exciting customer solutions in the robotics field. Grippers designed for AM and manufactured with our technology enable a weight reduction for the industrial robots and the gripper they use. As a result, robots can move faster with reduced energy consumption. As such, this is a truly sustainable application.