

“ THE OPPORTUNITY IS HUGE IN 3D PRINTING

Dassault Systèmes is one of the pioneers in the 3D printing domains. In order to know how Dassault Systèmes is focusing on 3D printing, Dataquest spoke to Dr Chandan Chowdhury, Managing Director-India, Dassault Systèmes. Excerpts

How does Dassault Systèmes see the future of 3D printing in India?

A new world of making is in progress today and we are helping people to design new materials and new machines (it could be aero parts or bio printing) and this will fundamentally challenge the way we produce and design tomorrow's world where we foresee a huge impact on new topologies, new materials, and new assembly structures.

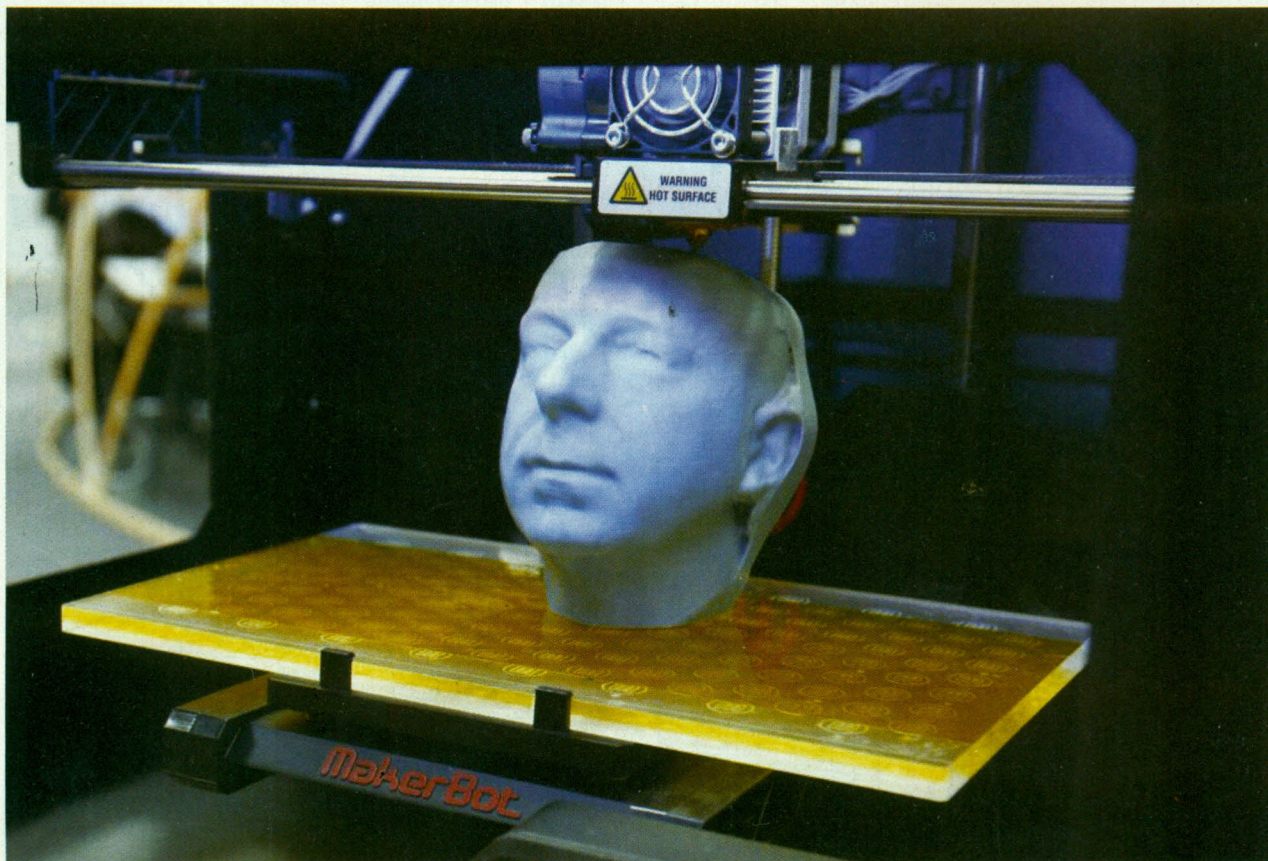
We have announced a new partnership with Safran Group, a leading international high-technology group in aerospace, defense and security, to develop expertise in the virtual validation of the additive manufacturing process using Dassault Systèmes' 3DEXPERIENCE platform. The partnership combines Dassault Systèmes' 3DEXPERIENCE platform with Safran's expertise in innovative technologies, for the development of a world-class, end-to-end digital solution for additive manufacturing. This new end-to-end process will address upstream material design and downstream manufacturing processes and testing to provide digital continuity for all engineering parameters necessary for the additive manufacturing of an engine part: Material science, functional specification, generative design, 3D printing optimization, multi-robotic production, and certification.

Our 3DEXPERIENCE platform's strategy covers all aspects of the additive manufacturing process, from material design to conceptual design, generative design to manufacturing, and certification to repair. Together with Safran, we will nurture virtual world processes for a complete approach in this field that will help revolutionize tomorrow's manufacturing."

According to 6Wresearch's India 3D Printer Market (2015-2021), the India 3D printer market is expected to cross \$79 mn by 2021, with automotive applications accounting for the biggest chunk of business. Educational and medical applications are also expected to witness good growth. With the expiry of the key patents, low cost of production, increasing awareness, penetration and advancements in material research, the 3D printer market is expected to witness tremendous growth in the coming years. Over all it looks like a promising scenario for 3D printing in India.

What are the verticals where 3D printing is expected to leave more impact on?

In many industry verticals including automotive, consumer goods, healthcare, aerospace, etc, and also a significant part of research is dedicated to additive manufacturing. The features of 3D printing technology have brought technology on a verge of revolution where 3D printing is



ready to transform from niche status to becoming a feasible choice to traditional manufacturing process in various applications. The key areas of application such as healthcare and aerospace, which are growing at a promising rate, have witnessed penetration of 3D printing technology in a significant manner.

What are the challenges to make 3D printing mainstream in India?

3D printing is still in its infancy in India. Technology adoption needs to start with schools so that a rich talent pool is available to take up research on 3D printing application in various fields. With the expiry of the key patents, low cost of production, increasing awareness and penetration, and advancements in material research, 3D printer market is expected to witness tremendous growth in the coming years. India primarily imports 3D printers from countries such as China, US, and Germany. However, with government initiatives to boost domestic manufacturing like the Make in India campaign, many local players are expected to emerge in the forecast period. Governments' involvement is

boosting the overall adoption of the technology by making investments for application of 3D printing in education and research.

In India many players are looking at only the '3D printing' aspect, where as our focus should be the entire process of innovation right from 'innovation connected with end consumers' to delivery of the 3D printed products to customers.

What are your company's market plans with regards to 3D printing?

Dassault Systemes is focused on primarily working with global OEMs and suppliers in aerospace, healthcare, consumer goods, and automotive and assisting in evolving technology to apply 3D printing. To partner with leading 3D printer manufacturer to work on material research and evolve latest technology to make its application feasible for various applications. We have certain offerings for 3D printing in rapid prototyping application which is being leveraged by many companies worldwide. We will continue to grow this business alongside the above engagements.