

Anjan Ghosh Hajra – I3DP

This is Kansas Profile. I'm Ron Wilson, director of the Huck Boyd National Institute for Rural Development at Kansas State University.

I looked into a human brain. Don't worry, I wasn't doing brain surgery. I was witnessing a demonstration of an incredible new, high-tech three-dimensional imaging system. This process is being pioneered by a team of entrepreneurs in the heart of Kansas. It's today's Kansas Profile.

Anjan Ghosh Hajra is the CEO of Immersion 3D Plus, the innovative company which developed this technology. Anjan's father, Ashish Ghosh Hajra, came to the U.S. from India in 1971. After working back east, Ashish was transferred to a job in Salina where he enjoyed a long career with what is now Philips Lighting. He also worked on advanced degrees in chemical engineering at K-State.

"I fell in love with Kansas," Ashish said. He also connected with Dr. Swapan Chakrabarti, a University of Kansas electrical engineering and computer science professor, who shared innovative ideas about 3D imaging.

Ashish started a company named Immersion 3D Plus, or I3DP, in Salina to commercialize these ideas. I3DP acquired the exclusive rights to the initial patents on Dr. Chakrabarti's work from the University of Kansas and has since developed and filed additional provisional patents. Ashish also invested in Abilene where he is interested in expanding. Abilene is a rural community of 6,844 people. Now, that's rural.

Ashish's son Anjan studied at a medical school, in India, and at K-State before joining the business. "He has made a big difference," Ashish said. Besides Anjan and Ashish, the company's leadership team includes Dr. Chakrabarti as chief technology officer, K-State-Polytechnic engineering technology professor Dr. Raju Dandu as consultant, and research associate Alec Cork.

"We've developed a technology that allows you to see all sides of an image – and even what's inside," Anjan said. Using digital equipment, their process enables amazing volumetric visualization of what is inside people and things.

"We call it true 3D," Anjan said. "This is more than a hologram or just wearing glasses in a movie theater," he said. In fact, no 3D glasses are required.

The demonstration depicted the inside of a human brain and more. Thanks to this technology, we could see from all angles as well as through the brain itself.

Imagine the applications of this technology. Perhaps a doctor or specialist could more accurately see the inside of a human organ. Perhaps an engineer could see the inside of a building or a piece of equipment, or scan the earth for water or oil and gas. Perhaps a surgeon could conduct more precise operations using this technology.

There would also be applications for gaming, education and training.

Another innovation of this company is High Dynamic Range imaging. For example, a standard range has a measure of gradient called 8 bits per color, while High Dynamic Range can depict up to 16 bits per color.

This produces more vivid, richer colorations in movies, photos, or other images, for example. It's like Technicolor with depth.

In October 2017, I3DP presented the Immersion 3D Plus concept at a special event hosted by the Kansas Small Business Development Center called Encountering Innovation. It was an opportunity for innovative small businesses to present their

concepts to representatives of potential federal customers, primarily the Department of Defense. “The DoD is the largest customer on earth,” said Alan Badgley of the Kansas SBDCs. “They need innovation and technology, and we can be a match-maker to connect them with innovative midwestern small businesses,” he said.

Another round of Encountering Innovation will be held in October 2018 in Johnson County. For information on that session, see www.encounteringinnovation.com.

“It was a real confidence boost to see their interest in our technology,” Anjan said. Imagine high-tech in the middle of the country. “What Silicon Valley has done in California, why can’t we do that here with Kansas kids?” Ashish said. For more information, see www.i3dplus.com.

I looked into a human brain. Immersive, 3D imaging enabled us to see inside and through the brain and other organs. We commend Anjan and Ashish Ghosh Hajra and all those involved with Immersion 3D Plus for making a difference with their innovative technology. I could see this business has a lot of brain power – and a lot of heart.

For the Huck Boyd National Institute for Rural Development, this is Ron Wilson with Kansas Profile.