



POWER TO THE CREATORS

# The Marvel of 360 Live Streaming of Cardiac Surgery in Hyderabad, India

Z CAM VR S1 Camera and ASSIMILATE SCRATCH VR Z Tools Add Value to 360 Medical and Educational Experiences

**V<sub>3</sub>RA Studios** (<http://v3ra.com>) in Hyderabad, India has a clearly stated passion for creating 360/VR videos because they capture the beauty and stories of the world. V<sub>3</sub>RA is also at the forefront of producing 360/VR experiences for critical, real-world applications like cardiac surgery. Company co-founder Siddarth Kunwar spearheads the VR/360 productions and takes on the roles of DP and director for many of the VR experiences.

Rapidly expanding their business, V<sub>3</sub>RA recently registered a new company, Doctravision, and teamed with Dr. Srinivas, Interventional Cardiologist at the Citizens CATH Lab, as an advisor. In this capacity, they developed a 360/VR project for Advanced Cardiovascular Solutions India ([www.acvs.in/programme.html](http://www.acvs.in/programme.html)) Fraternity of Advanced Cardiovascular Technique (FACTS) conference ([www.acvs.in](http://www.acvs.in)).

Dr. Srinivas and other top cardiovascular surgeons in India liked the idea of implementing 360 for its larger canvas size and wanted to broadcast 360 live from a cardiac surgery room to the Hyderabad International Convention Centre (HICC) Novotel, where doctors were showcasing and discussing their new techniques and practices at the conference for FACTS.



Images courtesy of V<sub>3</sub>RA Studios.

*The Times of India*, August 21, 2017 reports, “The immediate advantage of using 360 over a more traditional, two-dimensional educational approach is that one gets the feel of being in the same room as the operating doctors. Also, 360-degree content only requires a single camera in the room, thus adding to the logistical advantages of this method. Even machines used in surgical procedures can be zoomed in on, to get a better view,” said Dr. Srinivas Kumar, Interventional Cardiologist at the Citizens CATH Lab, who is working in tandem with Doctravision, a company focusing on providing immersive live-streaming solutions for medical conferences all over South East Asia.”



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The shoot, using the combination of one Z CAM S1 VR Camera and ASSIMILATE's SCRATCH VR Z software occurred in the CATH lab operating room of three hospitals: NIMS Hyderabad, Apollo Hospital Secunderabad and Citizen Hospitals Hyderabad. The live feed was sent to the ICC convention hall at the Novotel Hotel, Hyderabad, via optical fiber cable, where it was projected on to an 18' x 16' screen.

“During the shoot, we were able to focus on the work of the surgeons and the support staff, showing the interdependency and importance of the tasks that make such a surgery successful,” stated Siddarth Kunwar, director and DP for this project. “By moving the camera, you can see the effect of the metrics as well, such as the heartbeat monitor and blood count, during different stages of the operation. The viewer can learn from these advanced operating techniques and how top surgeons align their staff and equipment to achieve optimal results during the operation.”

Kunwar noted, “By using one integrated solution of the Z CAM S1 and SCRATCH VR Z, our equipment was not intrusive – about the size of a large coffee mug on a monopod instead of a 2D camera sitting on a tripod with an operator behind it. The surgeons considered this an added benefit.”

Kunwar describes the live streaming as simple as shoot, click, present. “We made a quick stitch through Kolor Autopano and used the .kava file when prompted for the template in SCRATCH VR Z. We pressed the live button, set the bit-rate to 35mbps and disabled save-content to disk. From SCRATCH VR Z, we went straight to broadcast at the Novotel. At full-screen everyone could see a very clear, live view of the surgery,” said Kunwar.

In the future for live streaming 360 projects, Kunwar is considering stacking two S1 cameras so that one stream could be used for other client purposes, such as streaming to another social media platform via a different desktop or recording to a hard drive for future use.

Kunwar has found that if you have the right VR tools – camera, stitching and post-production software – there's not much deviation between a 2D and VR workflow. Of course, the VR files are larger than 2D and require a much higher level of computational power and storage but that can be managed with some careful planning. “With advances in these types of tools, and the many VR headsets that are increasing productivity and making viewing comfortable, 360/VR experiences are clearly the future of entertainment, education, and communications. We are geared up for it with the right talent and the right tools.”

Learn more about how  
the **Z CAM S1 Camera** and  
**ASSIMILATE SCRATCH VR Z**  
simplify 360/VR production in  
a single, integrated workflow at :  
[www.assimilateinc.com/products/  
z-cam-scratch-vrz-bundle](http://www.assimilateinc.com/products/z-cam-scratch-vrz-bundle)