Pondy Photo 2014 brings you The Future of 3D Modelling in India

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Nicholas Morelle (left) speaks as Nicholas Chorier listens enrapt

What happens when art and science combine in order to achieve something that can be labeled brilliant unambiguously? A sight like that is rare but every now and then something like that do come our way. This Sunday, 23 March, as Pondy Photo 2014 organized a presentation the audience got to watch and learn about ‘The Future of 3D modelling from a Scientific Perspective.’

One of the speakers in the presentation, the artist, was Nicholas Chorier, an aerial photographer who uses kites for his photography. In his own words, kites are much less intrusive than drones or choppers and are much more environment friendly.

The second half of the body of speakers included Nicholas Morelle, an archaeologist and topographer who uses aerial photography to make accurate 3D models of any landscape, historical ruins, architectural structures and almost anything.

Nicholas Chorier takes the photos, while Nicholas Morelle makes the 3D models. But how does he do it? Well, it isn’t easy. What one needs to make 2D photographs produce 3D models is a very good camera, at least a 20 megapixel one. The idea is that if one takes many different photographs of an object, they can all be combined together to form a 3D model. The idea is simple enough, but it is not as simple to execute.

The eye, says Morelle, is like a camera. If you have just one eye, you can only see little better than a two dimensional image, but combined vision of both eyes help us to make better distinction between the depths of each object. His science is somewhat similar. He uses multiple images of the same place from different angles and the combined vision helps him create 3D models of the place.

Morelle projects his 3D models based on Chorier's aerial photographs

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The software used by Nicholas Morelle for the purpose of producing the 3D image is known as PhotoScan, although other software like Micmac, SFM & Meshlab, Dcatch can also be used. The computer needed to do this enormous processing must be one with greater specifications. A 64 GB RAM is a minimum requirement. The CPU core used by Morelle is an i7 – 4930K with 12 MB cache and up to 3.40 GHz of processing speed. The graphics card of his choice is an Nvidia Quadra 2000 D – Dual. The images to be used must also be captured in the RAW of TIFF format and not in JPEG as all the available data will go into the 3D modelling.

This technology is up and coming as more and more archaeologists, architects and engineers are taking it up. It is much less time consuming than the traditional methods. The use of simple geometry and theodolites to measure the height and width of a structure just became old school with the arrival of 3D modelling from aerial photography.

Nicholas Chorier is a Kite Aerial photographer from France and one of the nine photographers whose works were on display at the Old distillery for Pondy Photo 2014. He, his kite and his camera have traveled all over India and have discovered brilliant perspectives. Nicholas Morelle, also from France, is an archaeologist and topographer. He has been to many places in India and has used his method to construct 3D models of many places, which by traditional method would be very challenging. For xample, the Belgaum fort which is not managing to draw attention from the government. Nicholas Morelle has also worked with Malik Sandal Institute of Bijapur and The Study L'ecole Internationale, Pondicherry. He is currently pursuing his Phd which is also related to this work.

Photos: Habeeb Rahman

Tathagata Mitra

1st, M.A. Mass Communication

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