

<http://www.youtube.com/watch?v=kcFwOydoLLw>

Pointtools 3D Models Help NASA Understand Potential of Laser Scanning

Software from Pointtools is being used to create 3D walk through models to explore the viability of laser scanning on the moon and mars. Researchers from Navajo Technical College together with representatives from NASA and New Mexico Tech laser scanned a volcanic formation in New Mexico gathering 240 million individual measurements. Using Pointtools software the data was processed to create an immersive and interactive 3D computer model from which NASA scientists can assess the potential of laser scanning for future missions.

The survey party, using a Faro LS 120 laser scanner, mapped the four windows lava tube in the El Malpais National Park collecting eight individual scans each composed of 30 million points. The project was designed to understand the viability of laser scanning lava tubes and other formations on the moon and mars and to provide examples of the type of data laser scanning could collect and the information that could be interpreted from the laser mapping.

“This project was a proof of concept for NASA to determine what kind of data could be acquired by sending a rover vehicle, equipped with laser scanner, into a lava tube or cave on the moon or mars,” commented H Scott Halliday, Course Leader at Navajo Technical College. “From the Pointtools model we can make an evaluation of the type of structures that can be picked up and conclude whether it is possible to determine water, ice and or micro organisms. This was great experience for the students and both NASA and New Mexico Tech have been impressed with the results.”

The Pointtools generated walk through clearly shows members of the survey team and survey equipment together with ice formations and details of past volcanic activity. “We selected Pointtools software for this project as it seemed to be the easiest and most appropriate software to utilise that would create the type of walk through visualisations required. We are exploring ways of only modelling what need to be modelled and using more of the point cloud data in 3D visualisations and simulations,” concluded Halliday.

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