Using LiDAR Technology in Gray/Renyolds Building

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Light Detection and Ranging, LiDAR for short, uses light to make measurements of spaces, objects, and terrain using laser technology.

The LiDAR systems calculates how long a beam of light takes to travel until it meets an object or surface and reflects to the detector. The distance is calculated using the speed of light and their referred to as 'Time of Flight' measurements.

Hundreds of thousands of laser pulses scan an object each second. Rapidly collecting surface data to develop a 3D image called a 'cloud point.'

These detected measurements offer vast versatility due to their compatibility to be transformed into 3D models allowing objects and environments to be digitally mapped.

"This is a real world (object), let's get some information in the digital world," College of Design Director of Technology and Facilities Joe Brewer explained. "Now that the University has a LiDAR, we're going to increasingly digitize our physical footprint, and that (process) saves time and money for everyone."

One example of LiDAR technology being used in the real world is electric self-driving vehicles. Those vehicles operate through surveying its surroundings, distances from objects to navigate from place to place safely.

"So the building will have labs... classrooms and will be incredibly, digitally enabled," Brewer said. "We're trying not to think about how we taught five years ago, we're trying to imagine and think about how we'll teach 20 to 30 plus years."

The longstanding goal is to offer students an experience that's uncanny to anything the College of Design has ever done previously. All the while, being inclusive with other students outside of design to experience immersive technologies for academic advantages.