UNSW SYDNEY | Australia's Global University

School of Civil Environmental Engineering

Real-time Autonomous 3D Mapping with UAV LiDAR

DESCRIPTION of YOUR TECHNOLOGIES

The technology provides real-time and autonomous 3D mapping of construction and mining projects. It is investigated based upon the unmanned aerial vehicle (UAV) and the light detection and ranging (LiDAR) technique newly developed at UNSW Sydney. The system is capable of scanning construction sites with active laser and generating 3D point clouds data on the fly.

COMPETITIVE ADVANTAGES OF YOUR TECHNOLOGIES

- The start-of-the-art UAV equipped with digital cameras is capable of converting aerial images into digital terrain models (DTM). But it would take days or weeks' time to complete the surveying job for a large site.
- The new technology can scan the field in real time. It is estimated to improve the productivity of construction surveying by 3,000% over the current best practice in the industry.

SPECIALISTS IN AUTOMATION AND ROBOTICS

The group is specialised in construction automation and robotics, UAV for construction surveying, intelligent data processing, active laser scanning.

SELECTED RECENT PROJECTS and TRACK RECORD

- 2017 NSW TechVouchers grants sponsored by NSW Department of Industry and Linke & Linke Surveys
- Over 10 years of research innovation in engineering construction and management.

THE TOOLS OF OUR TRADE

- Mobile LiDAR system
- UAV system capable of 6kg payload and 30min flight time
- Software for data processing of real-time LiDAR point clouds

OUR EXPERTS

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