



UNSW
SYDNEY



Autonomous Multi-Sensing Drone for Real-time 3D Mapping and Biomass Monitoring

Using an autonomous, multi-sensing drone to provide real-time and autonomous 3D mapping of construction and mining projects. The unmanned aerial vehicle (UAV) is capable of scanning construction sites with an active laser, and generating 3D point clouds on the fly.

Competitive advantage

The state-of-the-art UAV, equipped with digital cameras, is capable of converting aerial images into digital terrain models (DTM). Compared to conventional surveying methods for a large site, this saves days or even weeks of time

Impact

The new technology can scan the field in real time and is estimated to deliver a 30x improvement on current best-practice field surveying

Successful applications

- Linke & Linke Surveys
- Research innovation in engineering construction and management

Capabilities and facilities

Specialism in construction automation and robotics, UAV for construction surveying, intelligent data processing, active laser scanning

Research Infrastructure:

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

Our partners

- Linke & Linke Surveys
- Smartweld Inc.
- Gulicage Tech.

More Information

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