Aerometrex develops new fuel load aerial mapping technology to assist bushfire mitigation

Aerometrex R&D programme delivers new analytics product based on the company's LIDAR mapping service that provides full depth, three dimensional canopy fuel loads in bushfire prone areas

Can be applied regardless of location, topography or ground cover

Developed as new pre-emptive firefighting tool in wake of disastrous Black Summer fires across Australia in 2019-2020

Numerous post Black Summer fire inquiries recommended greater use of remote sensing technologies

New technology available to government and emergency authorities around Australia for forthcoming fire season

Leading aerial mapping business, Aerometrex Limited ("AMX"), is pleased to announce it has developed new technology able to determine, in three dimensions, the exact fuel load densities in any bushfire prone region in Australia.

Aerometrex believes the breakthrough should allow emergency authorities, government, and communities to adopt a far more science-based and pre-emptive fuel load strike position ahead of this year's bushfire season.

The product is an advance of the Company's existing LIDAR (Light Detecting and Ranging) technology and was developed by Aerometrex's Research and Development team over 2020 in consultation with government and industry in the wake of the disastrous Black Summer fires across Australia last summer.

The technology will be available to authorities ahead of this year's bushfire season. It surpasses current and historic fuel load methodologies by delivering and visualising data not possible to be collected or "seen" from conventional satellite, aerial or drone imagery fire-fighting tools.

Its rapid, ultra-high density data capture of fuel load density underneath tree canopies is achievable regardless of location, terrain type, ground cover or accessibility.

The system employs up to two million individual laser pulses per second emitted from a sensor within an aircraft as it flies above the area of interest. By measuring the time taken for each laser pulse to travel down to the surface and get reflected to the aircraft, the precise location of the point of reflectance can be calculated in three dimensions.

Since LIDAR technology explicitly measures the landscape in three dimensions, it is often free of geometric distortions that can be associated with other imaging techniques. When an individual laser pulse is incident on a tree, shrub or any other vegetation, some of the energy is reflected back to the sensor from the very top of the vegetation and some energy penetrates through the canopy and accurately images the internal structure of the vegetation and even the ground below.

This penetrating power delivers a far more accurate image of vegetation and is more sensitive to variations in vegetation structure and density compared to remote sensing techniques such as satellite imagery and RADAR. Data from the advanced LIDAR technology then allows for the extraction of understorey fuel load estimates that would otherwise be fully obscured from view in satellite or aerial imagery by overlying canopy.

For personal use only

It can be scaled from a single metre by metre square, up through the needs of a single home, to a local community, onto a fire-fighting team and right up to an entire region and is accurate in 3D down to a height of 25-50cm above ground.

Aerometrex's R&D program for the new technology included tests across 10 sites within the heavily vegetated Belair National Park in the Adelaide Hills.

Aerometrex says that as ground fuel loads are one of the primary causes behind the intensity and scope of evolving bushfires, along with prevailing weather conditions, quantifying fuel loads and overall fuel hazards is a fundamental step in future bushfire management and planning and for better understanding of the risks posed by bushfires to the community, the economy and the environment.

The Company says the outcomes and product development from its research are both timely and relevant following the detailed recommendations of the Bushfire Royal Commission, state-level bushfire inquiries and the final reports published by the Bushfire & Natural Hazards CRC.

Many of these reports highlighted remote sensing technologies such as LIDAR as critical resources that have the potential to revolutionise bushfire management and response practices following the 2019/2020 Australian bushfire season.

It is understood to be the first system able to standardise the capture of LIDAR for the purpose of bushfire fuel load mapping in Australia.

This release is approved by the Board of Directors of Aerometrex Limited.

- ENDS –

For further information, contact as below:

Mark Deuter – Managing Director

P: +61 8 8362 9911

E: investorrelations@aerometrex.com.au

W: https://aerometrex.com.au/asx-announcements/

Metromap: www.metromap.com.au

ABOUT AEROMETREX

Aerometrex Limited is a professional aerial mapping business specialising in aerial photography, photogrammetry, LiDAR, 3D modelling and aerial imagery subscription services.

The company listed on the ASX in December 2019 to raise capital to fund its growth. The company has a clear strategy to provide value to its shareholders by providing high-quality, accurate aerial imagery and LiDAR products to a growing client base.

AMX has strong Board and Executive teams, with a combined staff experience in the industry of 930 years total.