

Image creation method in UAV survey

Extracts ground surface conditions with high accuracy



Overview

Recently, drones (or UAVs) have been used as a platform for three-dimensional measurement using Structure from Motion (SfM). By using machine learning on the obtained image data, quantitative evaluation and grasping of topography and vegetation information have been attempted, but conventional methods have problems in simplicity and accuracy improvement.

Therefore, the present invention provides a method for producing a composite image of the ground surface by which the utilization status of the ground surface such as vegetation can be easily grasped using height information obtained by using a drone.

The composite image is highly versatile because it can be obtained as a three-channel RGB image. Moreover, it can be processed by any free software you want to use and the installation is not difficult.

In terms of machine learning accuracy, the Sørensen–Dice coefficient for the comparison example in which the homestead woodlands was extracted using only ortho images was 0.64, while **the Dice coefficient for the synthetic images was 0.80, showing an improvement in accuracy.**

Is there any vegetation or structure that you would like to understand and manage?

**Details regarding the undisclosed technology:
Please contact us**

Product Application

- Understanding and maintaining vegetation (trees and plantings in residential forests and parks)
- Disaster surveys (fallen trees, etc.)
- Surveys of buildings, solar panels, etc.

IP Data

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