

UAV Based Mapping for Uniciti Alam Campus

Abstract

Agriculture, construction, mining, inspection, infrastructure, and real estate all have huge potential for unmanned aerial vehicles (UAV) mapping. The demand for high-quality aerial data capture from unmanned aerial vehicles (UAVs) is rapidly increasing. UAVs are employed in civil applications to aid in large-scale aerial mapping of buildings. In general, surveying is a difficult task for surveyors due to the restricted access region, the time commitment, and the typically high cost of resources and equipment. To settle this issue, this paper introduces UAV-based mapping. The primary goal of this research is to conduct UAV-based mapping. The building surrounding Uniciti Alam Campus, UniMAP, has been chosen as the location for this study. A flight mission plan with two flying paths, horizontal and vertical, was created and uploaded to the UAV to map the building. The mapping process in this study is carried out using the DJI Mavic Pro drone. Aside from that, the UAV captured and collected visual images as it flies through different flight paths. The drone image was then processed in Agisoft Metashape software to generate 3D modelling. The goal of this project's research is to determine which mapping technique can produce high-quality 3D mapping that is accurate and fast from software.

Keywords

3D modelling; Agisoft Metashape; UAV mapping