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Mapping on a Budget Using Drones and Digital Data

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[1]Vertical Aspect

Abstract

Small drones, both fixed wing and multirotor, are tools well suited to capturing the imagery required for aerial mapping. The requirements for getting started in the UAV mapping business can be less than one might think, but there's a significant difference between an attractive looking map and an accurate, survey-grade product that would be useful to surveyors, engineers and contractors.

This presentation will show how someone with a limited budget and very little background can enter the drone mapping field on an incremental basis – "dipping one toe into the water" to help determine if you have the passion, aptitude and patience for providing UAV mapping services without a major capital investment.

UAV mapping is about a lot more than just something that looks like a Google satellite map. While it encompasses the traditional orthomosaic image that you'd see on Google Earth, many don't realize all the other products that can be obtained.

…Build a visual 3D model for inspection, market a project or reconstruct an accident scene …. Determine the volume of piles of materials, generate a cut and fill map of the quantity and location required to achieve a desired field profile…. Determine watershed runoff including elevation contours or slope directions…. Plan for the installation of security cameras or lighting through a viewshed… Determine the health and biomass of crops using multispectral cameras…

- What are the two main classes of drones (fixed wing and multirotor) and what are their advantages, disadvantages and cost of entry?
- What are the overall components needed for UAV mapping and how do they all fit together, from flight planning through final deliverable?
- What are some possible implementation strategies, along with the best way to obtain the skills and knowledge?
- What kind of accuracy can be obtained, and what other equipment and procedures are needed to obtain survey-grade accuracy?

Obtain the answers to these questions and ask some of your own, from a UAV mapping training and services provider with real world experience