

5 Must-read Articles for Geomatics Professionals

Knowledge
is
power!



Education is a key pillar of the mapping and surveying profession. At 'GIM International' we do our very best to keep you informed with the latest knowledge, tailored to the demands of the geospatial industry's broad spectrum of interests and applications. This week, we are highlighting five articles providing need-to-know information for everyone involved with the aspects concerned: UAV

photogrammetry software, spectral image cameras, the latest Lidar developments, the main challenges to consider when selecting a UAV for your mapping project and, last but not least, information about how to use the captured geospatial data effectively.

UAV Photogrammetry Software: What Should You Know Before Buying?

The incredible diffusion of unmanned aerial vehicles (UAVs) has pushed many companies and research groups to implement dedicated software for the processing of data acquired by these devices. The number and the completeness of these software solutions have

constantly increased with the aim to satisfy a growing and heterogeneous market. Depending on the scope of the UAV acquisitions, the experience and technical skills of the operator as well as the available budget, there are several affordable solutions already available on the market. The holistic software probably does not exist, but some features and options should be considered when approaching these instruments in order to find the optimal solution for one's needs. [Read on...](#)

Spectral Imaging Cameras: A Review of Key Specifications

Going beyond the three visible bands and limited spectral range available in conventional digital cameras opens up a wealth of new possibilities for identification, mapping and measurement of surface and material properties. The application of spectral imaging is currently seeing increased interest across multiple disciplines and application areas, including quality control in industrial applications, agriculture, geological and environmental or urban mapping, to name but a few. [Read on...](#)



Multispectral camera with 5 bands within the visible and near infrared, applied from a UAV for vegetation mapping.

Lidar Data Capture: Where Are We Now?

Lidar provides an excellent way for mapping applications such as distribution utility services, as-built surveys of mines and roads, vegetation risk management and forestry services. In this article Tim Hustwayte, senior client manager at NM Group, answers the most frequently asked questions regarding the latest Lidar developments and describes how to achieve the best possible project outcome. [Read on...](#)

Five Challenges When Selecting Drones for Mapping

Every mapping project is unique; even within the same industry, each project will have its own distinct challenges. Selecting the right equipment is therefore key to getting the job done. Unmanned aerial vehicles (UAVs or 'drones') have emerged as a solution for many mapping and surveying projects. This article elaborates on five important challenges that should be considered when finding out which type of drone is the best fit, and includes practical examples based on a recent mapping project on Silhouette Island in the Seychelles. [Read on...](#)



Digital surface model (DSM) as an overlay on an orthophoto

Effective Use of Geospatial Big Data

The heart of any geospatial analysis system, regardless of its location or configuration, is increasingly becoming the server. All systems face a similar challenge, whether the system is in the 'cloud', a secure data centre or on a single machine running in an office. This challenge is primarily the ability to deal with the ever-increasing quantities and variety of data the world now produces at an unprecedented rate. This article explains how, for mission-critical systems, purposely designed software is required that has been tested in the most demanding environments. Try doing it cheaper and you only end up wasting money. [Read on...](#)

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