

ZBYNĚK ŠKODA

Czech Technical University in Prague, Faculty of Civil Engineering, Czech Republic

OPTIONS UAV APPLICATIONS IN THE CONSTRUCTION INDUSTRY USING PHOTOGRAMMETRY

Abstract:

This paper aims to introduce the possibilities of unmanned aerial vehicles (UAVs) in construction. UAVs were the domain of predominantly armies, which sought to develop and use them for military purposes to eliminate human losses, thanks to the possibility of piloting from vast distances. In the last few years, however, the use of UAVs has greatly increased, both among professionals and the public, and is increasingly interfering in the field of civil aviation. An unmanned system is an unmanned aircraft, controlled remotely or capable of flying independently thanks to reprogrammed flight plans and various autonomous systems. After prices have dropped and availability has increased, the range of affordable unmanned systems that are offered to people has increased rapidly, which means that almost anyone can afford an unmanned system today. It is therefore not surprising that although unmanned systems are often used in the military for reconnaissance and offensive flights, they are also used for many civilian tasks, such as firefighting, police surveillance or field reconnaissance, and finally, UAVs find many use cases in civil engineering and construction, which will be presented in this paper.

Keywords:

Drone, UAV, innovation, remotely piloted aircraft, 3D model, photogrammetry

JEL Classification: O32