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Using Airborne LiDAR to assess the condition of an archaeological sites: a case study

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Abstract: Although discovered more than 60 years ago and used in many areas, LiDAR technology began to be used more widely in archeology after 2012. The discovery using airborne LiDAR of previously unknown large settlement formations from the Maya era in the almost impenetrable forests of Mexico and Belize proves the advantages of the method in an indisputable way. However, due to the high cost, there are limitations to its application. But in the last few years, with the development of LiDAR systems carried by drones, this research has become readily available. Although in most cases they serve to discover archaeological sites, they can also be successfully applied in the study of already known ones. Same as the case examined in the current report. The settlement mound Razkopanitsa near the village of Manole is famous for the unique findings discovered by the archaeologist Petar Detev during its partial excavations in 1946 and 1964-66. In order to initiate the archaeological investigation again, it is necessary to establish the mound's exact dimensions. Currently, the mound is located in a wooded area and overgrown with bushes and trees, so there are restrictions on the mechanical removal of vegetation. The research carried out with LiDAR mounted on a drone and the resulting 3D model of the terrain not only meets the set tasks, but also undeniably proves the advantages of the method.

Използване на въздушен LiDAR за оценка състоянието на археологически обекти: случай от практиката

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