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Title of presentations:

1. DIGITAL PHOTO-CAMERA CALIBRATION FOR PHOTOGRAMMETRY REQUIREMENT

ABSTRACT. The result of photogrammetry is a digital object or terrain images in the plane or three-dimensional space. A precise data of the object is photographed by a professional – a digital photo-camera with the calibrated lens optical system (evaluation of optical lens distortion parameters). The camera calibration is performed in a laboratory or with special calibration software using special test field of camera calibration. In Europe there have been used a lot of various software and a different calibration test field (plate) (two-dimensional, three-dimensional, and so on). It is important to choose the simplest, cheapest and the most acceptable method of camera calibration. The presentation analyzes the result of the photo-camera *Canon EOS-1D Mark II* (a resolution is 21 million points, with 21 mm focal length) calibration and the camera calibration suggestions.

2. PLANNING OF UNMANNED AERIAL VEHICLE FLIGHTS AND TERRESTRIAL IMAGES ANALYSIS

ABSTRACT. Recently, the aircrafts tend to be replaced by unmanned, light, simple structure, aerial vehicles or unmanned aerial vehicles (UAV) with the intention of updating the field of aerial photogrammetry. The built-in digital photo camera takes images of the Earth's surface. To satisfy the photogrammetric requirements of the photographic images, it is necessary to carry out the terrestrial project planning of the flight path before the flight, to select the appropriate flying height, the time for acquiring images, the speed of the unmanned aerial vehicle and the other parameters. The presentation deals with the project calculations concerning the unmanned aerial vehicle flights and the analysis of the terrestrial images acquired during the field-testing flights. The terrestrial images have been processed by *PhotoMod*, *Pix4d Mapper* photogrammetric systems; there are presented the results registered during the flights and the possibilities of their usage as well as the observations watched.