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FIRST EXPERIENCES WITH KINECT V2 SENSOR FOR CLOSE RANGE 3D MODELLING

E. Lachat, H. Macher, M.-A. Mittet, T. Landes, and P. Grussenmeyer
Photogrammetry and Geomatics Group, ICube Laboratory UMR 7357, INSA Strasbourg, France

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Abstract. RGB-D cameras, also known as range imaging cameras, are a recent generation of sensors. As they are suitable for measuring distances to objects at high frame rate, such sensors are increasingly used for 3D acquisitions, and more generally for applications in robotics or computer vision. This kind of sensors became popular especially since the Kinect v1 (Microsoft) arrived on the market in November 2010. In July 2014, Windows has released a new sensor, the Kinect for Windows v2 sensor, based on another technology as its first device. However, due to its initial development for video games, the quality assessment of this new device for 3D modelling represents a major investigation axis. In this paper first experiences with Kinect v2 sensor are related, and the ability of close range 3D modelling is investigated. For this purpose, error sources on output data as well as a calibration approach are presented.

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