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OFF-THE-SHELF VIDEOGRAMMETRY – A SUCCESS STORY

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Abstract. Since the time Brown introduced the concept of *self-calibration*, it was known that there was no impediment in using consumer grade devices for metric purposes. Today, dSLR cameras are knowingly the standard photogrammetric tool in applications when time is not an issue, thus images can be taken sequentially. Nonetheless, albeit available with standard video signal, there has been little interest in applying them to observe dynamic scenes. In this paper we present a methodology to use dSLR cameras for shape and motion reconstruction at frequency of 30Hz. Particular focus is put on calibration and orientation issues, in static and dynamic cases i.e. cameras also undergoing a change in position during the measurement. Performance of the system was validated with results obtained by a system of superior quality.

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