



#### [Volume XL-7/W2](#)

Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-7/W2, 75-80, 2013  
www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XL-7-W2/75/2013/  
doi: 10.5194/isprsarchives-XL-7-W2-75-2013  
© Author(s) 2013. This work is distributed  
under the Creative Commons Attribution 3.0 License.

### A Study of Scan Patterns for Mobile Mapping

J. Elsberg<sup>1</sup>, D. Borrmann<sup>2</sup>, and A. Nüchter<sup>2</sup>

<sup>1</sup>School of Engineering and Science, Automation Group, Jacobs University of Bremen gGmbH, Campus Ring 1, Bremen 28759, Germany

<sup>2</sup>Informatics VII : Robotics and Telematics, Julius-Maximilians-University Würzburg, Am Hubland, Würzburg 97074, Germany

Keywords: LIDAR, scan patterns, mobile mapping, combination of terrestrial and kinematic scanning

**Abstract.** Mobile terrestrial scanning systems automate terrestrial laser scanning. Continuous scanning mobile terrestrial systems constantly spin the terrestrial laser scanner and thus combine terrestrial scanning with kinematic laser scanning. This paper presents a scan pattern analysis for these systems. We aim at finding the most advantageous combination of terrestrial and kinematic systems. The resulting 3D point cloud depends on the scan pattern and the trajectory and velocity of the mobile system.

[Conference Paper](#) (PDF, 1483 KB)

Citation: Elsberg, J., Borrmann, D., and Nüchter, A.: A Study of Scan Patterns for Mobile Mapping, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-7/W2, 75-80, doi: 10.5194/isprsarchives-XL-7-W2-75-2013, 2013.

[Bibtex](#) [EndNote](#) [Reference Manager](#) [XML](#)