

TIM STAROSTE:

„Traffic Count at Roundabouts with stationary Drones“

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Abstract

Data from a traffic survey are the basis for traffic planning as well as for input data of traffic engineering assessment procedures. These data are also indispensable in the course of simulation processes. In this respect, for example node current counts are essential for the correct dimensioning of intersections or for the calibration of models.

However, at complex junctions like roundabouts, it is not possible to count the traffic with standardized procedures. A correct classification of the traffic participants with subsequent allocation to a traffic flow is impossible for the counting staff, since the complex junction geometry and the associated traffic flows require several traffic participants to be recorded at the same time. Therefore, within this bachelor thesis, a new method to undertake traffic counts at roundabouts is investigated.

In the first part of this thesis, the basics of traffic counts are discussed based on a literature search. The associated traffic-related target figures with regard to node flow counts at roundabouts will also be described. With the aim of generating video material, which can then be evaluated fully automatically, the second part deals with possible camera locations in connection with a stationary drone. Based on further literature research, a fundamental understanding of general legal contexts and the current state of the art with regard to drones will be developed.

Within the scope of a feasibility study, the legal and technical viability of the new survey method, especially the stationary drone, is examined with the subsequent result.

To make the survey method “traffic count at traffic circles with stationary drones” tangible for subsequent users, the necessary process steps are illustrated in a flowchart.