

Comparison of Computer Software for Swept Path Analysis on Example of Special Paved Areas

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Abstract : On special paved areas, such as road intersections, vehicles are usually moving through horizontal curves with smaller radii and occupy considerably greater area compared to open road segments. Planning procedure of these areas is mainly an iterative process that consists of designing project elements, assembling those elements to a design project, and analyzing swept paths for the design vehicle. If applied elements do not fulfill the swept path requirements for the design vehicle, the process must be carried out again. Application of specialized computer software for swept path analysis significantly facilitates planning procedure of special paved areas. There are various software of this kind available on the global market, and each of them has different specifications. In this paper, comparison of two software commonly used in Croatia (Auto TURN and Vehicle Tracking) is presented, their advantages and disadvantages are described, and their applicability on a particular paved area is discussed. In order to reveal which one of the analyzed software is more favorable in terms of swept paths widths, which one includes input parameters that are more relevant for this kind of analysis, and which one is more suitable for the application on a certain special paved area, the analysis shown in this paper was conducted on a number of different intersection types.

Keywords : software comparison, special paved areas, swept path analysis, swept path input parameters

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