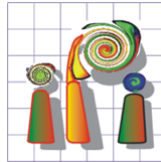




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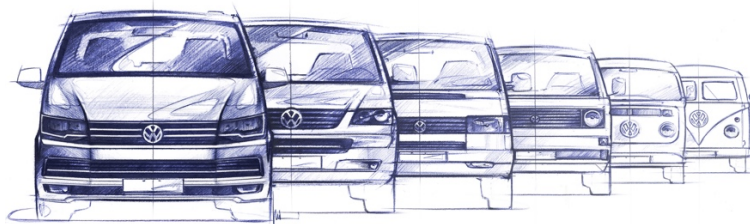
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Leibniz
Universität
Hannover

Institut für Photogrammetrie und Geoinformation

MASTERARBEIT

Analyse von Designlinien am Beispiel T7 für das Werk VWN Hannover



vorgelegt zur Erlangung des akademischen Grades

MASTER OF SCIENCE (M.Sc.)

von

Sabrien Serhan

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Abstract

This thesis investigates and describes the outer design elements of a transporter and their reliability. The focus is on the exterior design elements of the new Volkswagen Multivan 7th generation T7, which is planned for 2021. The growing competition in the automotive industry has also increased the demands on automobiles. Accordingly, the design and shape of a vehicle are an essential criteria for purchase decisions.

The topic relevance of design elements to today's car industry has been chosen due to its application in the quality assurance field. Car design is emphasized through sharp edges or lines, smooth lines and flashier styling. Design elements demonstrate technical prowess and precision. Contours help divide the car into light and dark surfaces, building tension and drawing attention to specific styling cues. Perfect proportions are the key to aesthetics and harmony. A striking iconic silhouette creates a strong product identity that stands out among multiple designs. Proportion also reflects the stance or body language of the car, giving the impression of forward-movement even while it is standing. Every line of the car is curved with a tension to emphasize dynamic movement.

It is essential to check the geometries of the above-mentioned design elements. Examining and securing the geometries of design lines or light edges are tasks under quality assurance. A detailed investigation of design lines allows conclusions to be drawn about possible wear of the pressing tool because exterior sheet metal components are produced by a stamping plant.

Furthermore, this thesis deals with the analysis and the specification of design line accuracy. Measurements were performed on sheet metal parts before the serial process. The study examines the difference between two sensors of the ATOS GOM metrology system and their reliability for detecting edges on a sheet metal surface.