Problem Specific Design of Actuators for Micro Adjustment

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Abstract. Ongoing miniaturisation of functional parts in electronic, optical and mechanical devices results in an increasing demand for precision. By means of laser beam forming of especially designed sheet metal parts within an assembly the needed high accuracy can be reached. The use of the so called actuators, their mounting within the assembly and their activation through laser irradiation are well known steps. The design however is a sophisticated process so far depending on the experience of the designer. It is often determined in a time consuming iterative process. In this paper concepts and methods for an assistance system for the designer of actuator geometries using kinematic chains will be presented.