Sächsisches Textilforschungsinstitut e.V.

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KonRAD – Contour-accurate machining using robotics – Individual path generation and flexible contour machining with robotics based on CAD data

Problem / Motivation

- Shortage of skilled workers and labor for repetitive handling tasks and assembly in the manufacture of textile products
- Smaller batch sizes and increasing variety are creating pressure to increase the efficiency of production processes
- Demand for applications involving robotics, AI, and image processing in the textile industry
- Automation of sewing processes can only succeed if the process of programming new variants is also solved and is profitable even for smaller batch sizes

Solution

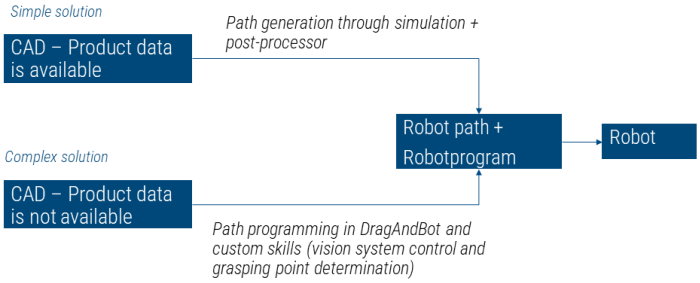
- Use of model-based programming and simulation tools, in which textile manufacturers themselves can teach new outer contours of textiles and produce them with the aid of a robot
- Generation of robot paths and programs from CAD product data
- Use of standardized robotics and camera systems for outer contour recognition and gripping point determination

Projektstart

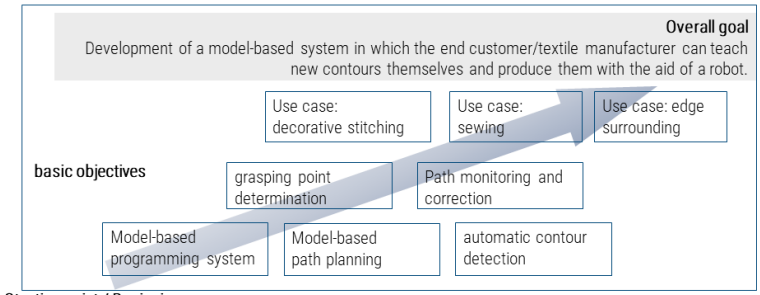
10/2025

Projektpartner

Available for inquiris



Approaches to robot path generation



Sub-objectives and overall objectives of the project

Acknowledgement

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INNO-KOM

Federal Ministry for Economic Affairs and Energy

on the basis of a decision by the German Bundestag

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