

## Automation of Mobile Manipulators

<b>Area:</b>	Blasting pit drill
<b>Person in charge:</b>	Christian Sturm
<b>Duration:</b>	2007 – 2008

A wheel drilling carriage with a manipulator arm having eight degrees of freedom is used for blasting pits and anchor drillings in tunnel construction. The manual controlling of the arm on the joint level is to be replaced by a direct control of the end-effectors (drill) in the Cartesian system. With the help of models and by analysing the kinematic structure of the given system, the goal is to achieve a solution making use of the inverse kinematics at the position level. An analysis of the work space is to be made in the further process and the results are to be visualized by a simulation.