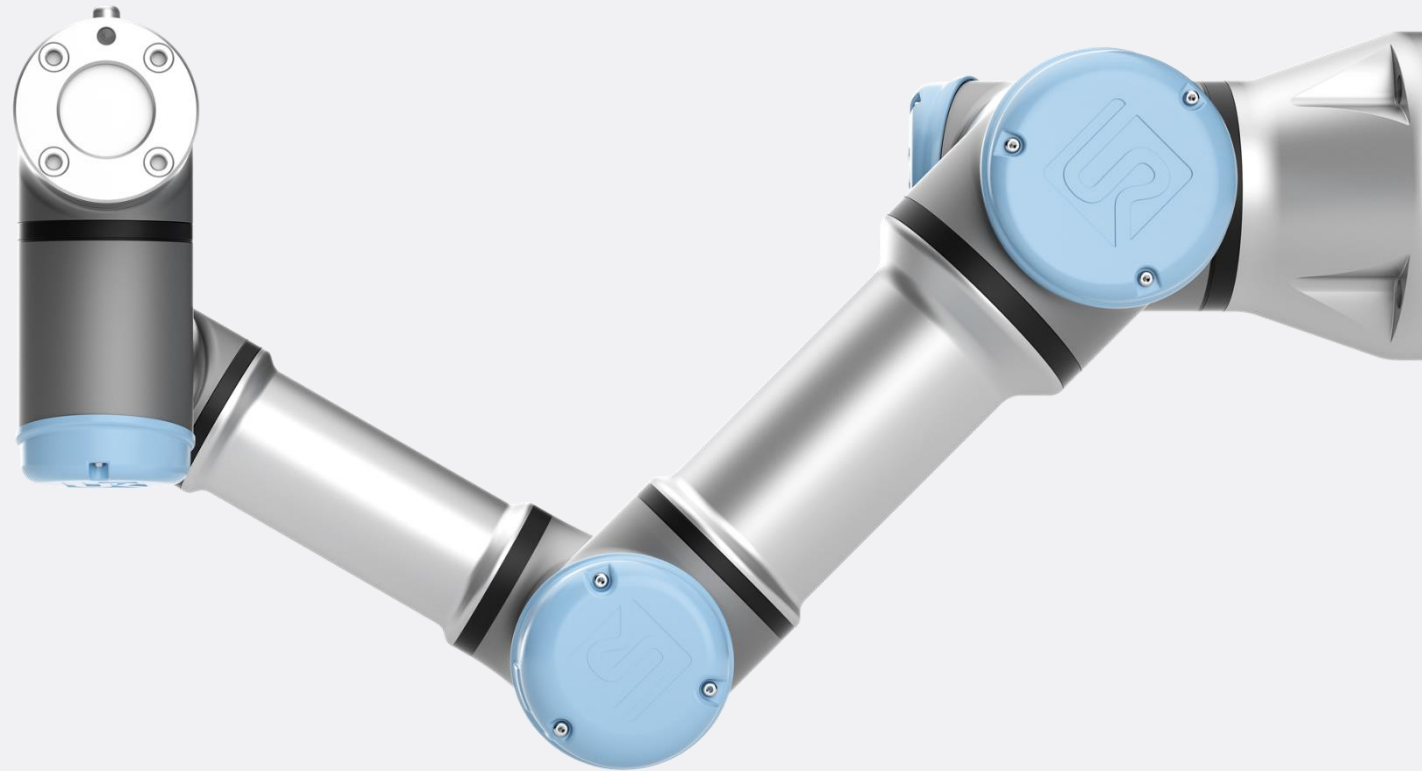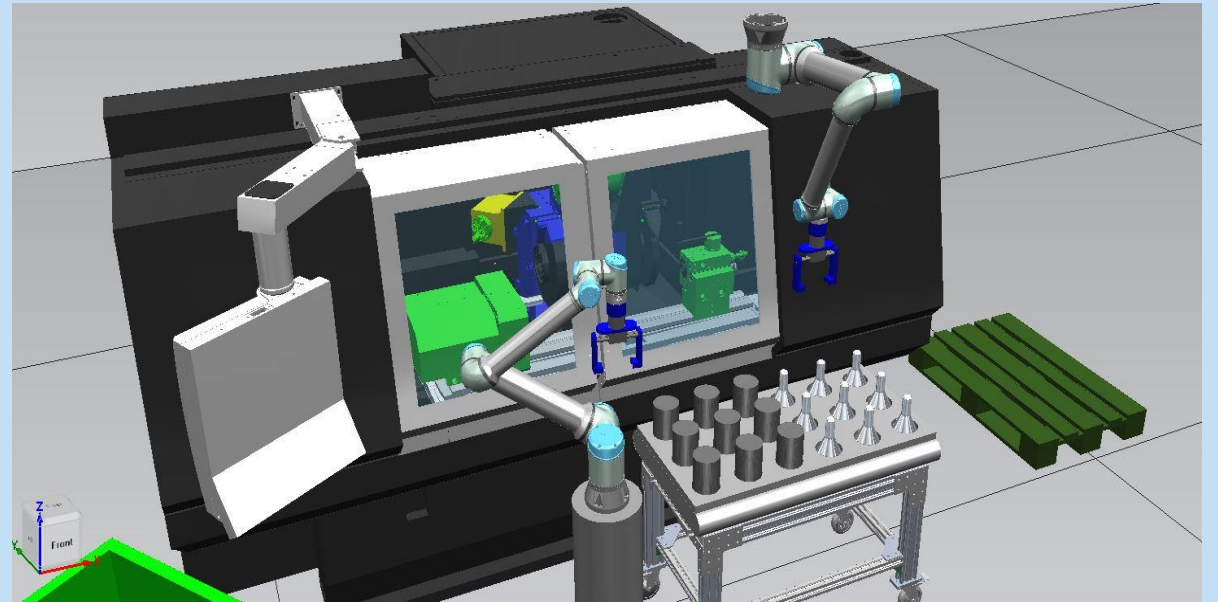# Robot Simulation
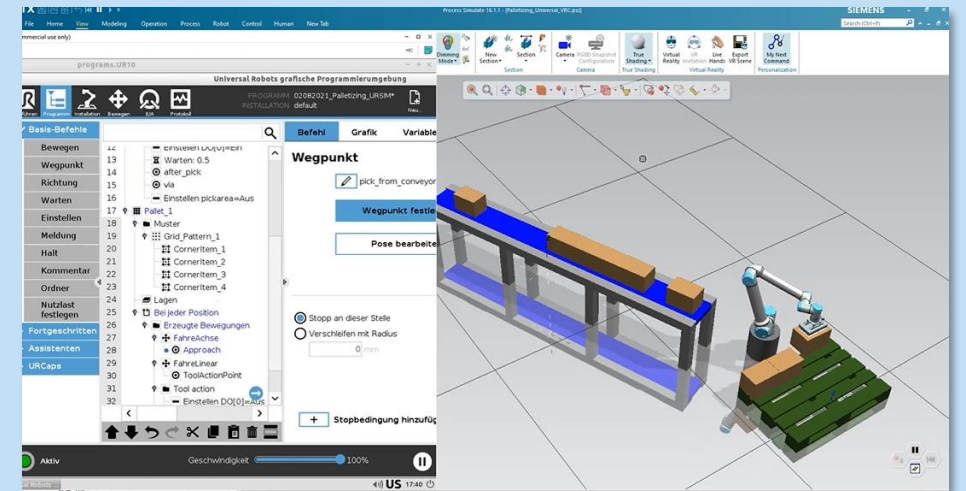
smart Factory Summit

Benjamin Völzke
09/2021

3D simulations allow different protections and demonstrations

- What is simulation?
  - Reachability analysis
  - Concept analysis
  - Cycle-time analysis
  - Creation of robot programs
  - Program analysis
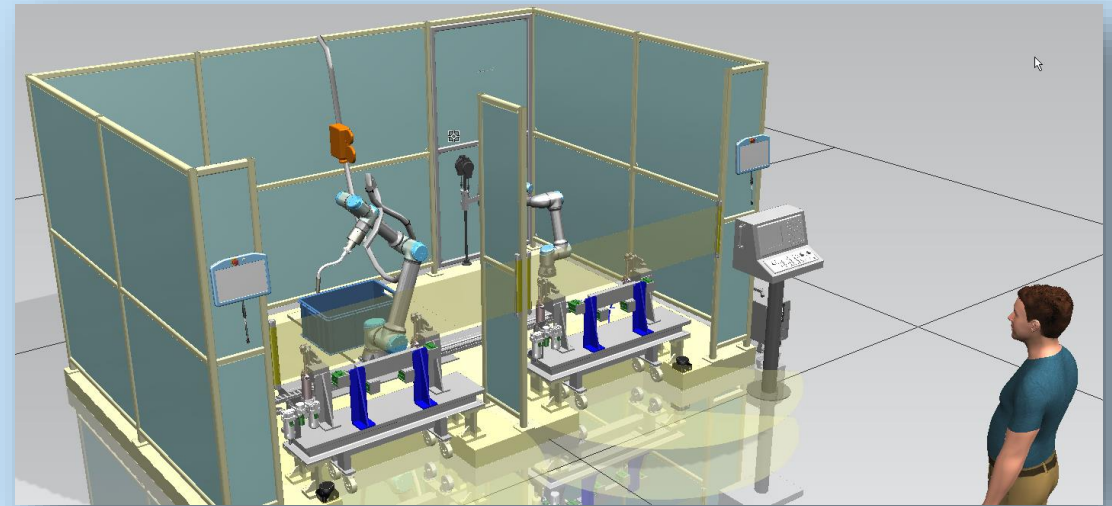 - Demonstration and POC for End User, Partner

Technical Possibilities

- Simple import of CAD files (all CAD format supported)

- User-friendly simulation SW (visual components, roboDK, Process Simulate)

- Connection between URsim or real robot available

- Simple material flow simulation

- Creation of real robot program (with syntax)

- VRC – virtual robot controller (simulation software is connected to URsim or real robot)

- Simulate and validation of robot programs and PLC (virtual commissioning)

- Simulation of safe areas (robot safe)

- Simulation of additional components (like conveyor, fixture)

Benefits

- Early Reachability analysis
- Concept analysis
- early troubleshooting – safe money
- Simple presentation of robot use in 3D or movies
- Presentation of material-flow
- Demo different Use-Cases (pick + place, conveyor)
- Fix program error in robot and plc before you start on construction side

Thank you

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