

# v6

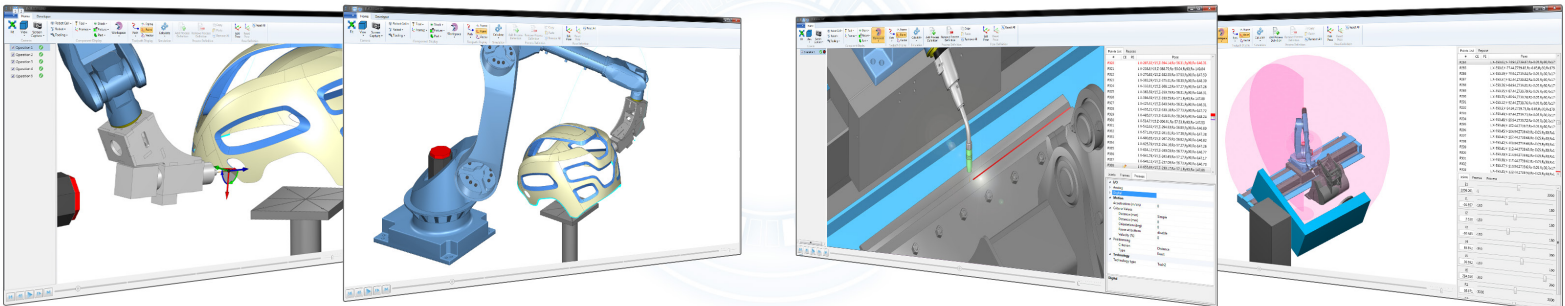
## ***Robotmaster***® CAD/CAM FOR ROBOTS

# RISE

Simplified, Interactive, High-Performance!

## Robotmaster Interactive Simulation Environment

RISE provides a unique integration of user control and intervention into the speed and flexibility of Robotmaster's renowned automation and optimization tools. This new graphical interface elevates Robotmaster to a new and unprecedented standard of user experience.

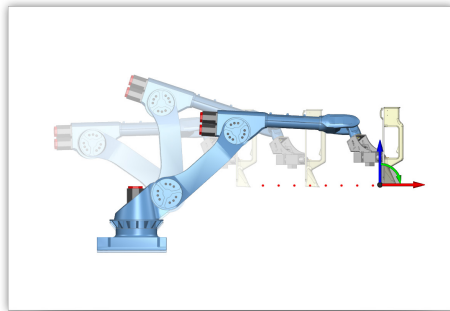


# Robotmaster Interactive Simulation Environment (RISE)

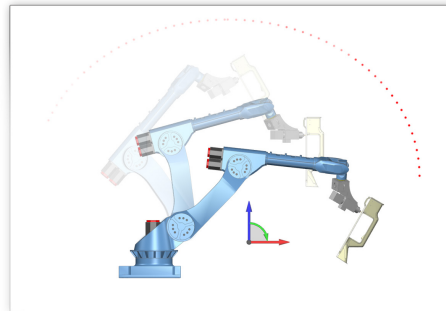
**RISE** is a coherent, interactive interface controlling the power of Robotmaster from within a comprehensive simulation environment.

## Dynamic Interaction

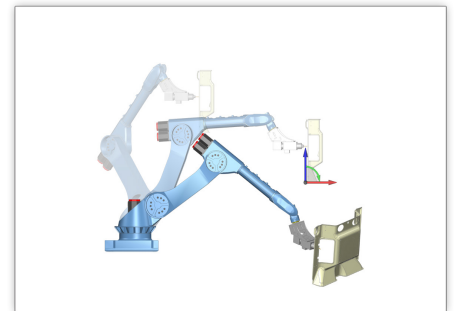
The new and unique Robotmaster environment provides easy and intuitive control of your robots unparalleled by any other CAD/CAM system. You can easily modify the robot's positions and trajectories, manually or automatically, by a simple click-and-drag of the robot's arm, axes, tools or your work piece. Robotmaster V6 is the perfect marriage of the users' manufacturing knowledge, powerful CAD/CAM programming tools and our unique robot specific optimization. Robotmaster creates perfect robot trajectories quickly without costly and tedious iterations.



Translate



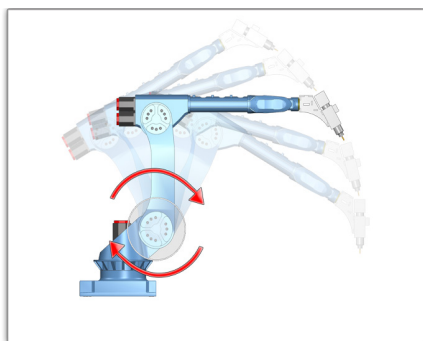
Rotate



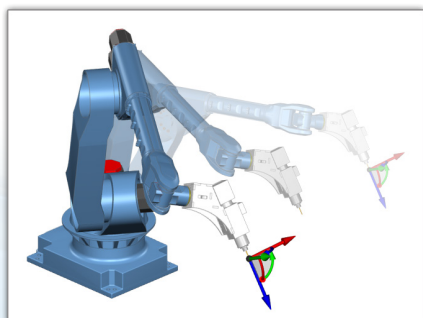
Combined dynamic interaction

## Transition Move Editing

Users now have numerous options, within the new simulator environment, to manage transition moves between operations. You can jog the robot joint by joint, move the robot on the work piece or tool frames, and easily change the base, elbow or wrist configurations.



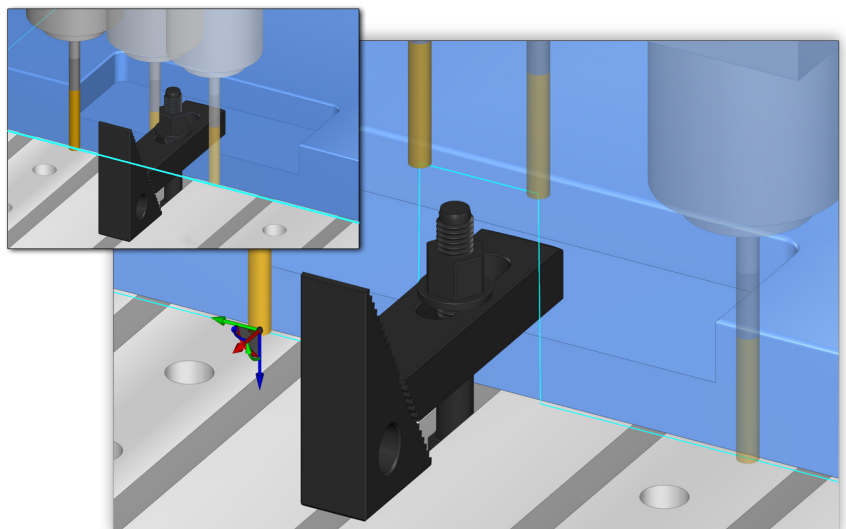
Jog by joint



Move in tool or user frame

## Simplified Interaction

V6 revolutionizes the user experience with its intuitive click-and-drag interface and numerous user requested enhancements. These enhancements include: point-specific editing, process settings, commands and triggers. Additionally, the new operations list provides reach and error status icons, "quick verify" options to reduce analysis times, dynamic and automatic reach limit display, user's work coordinate system referencing and many more.



Manual point editing

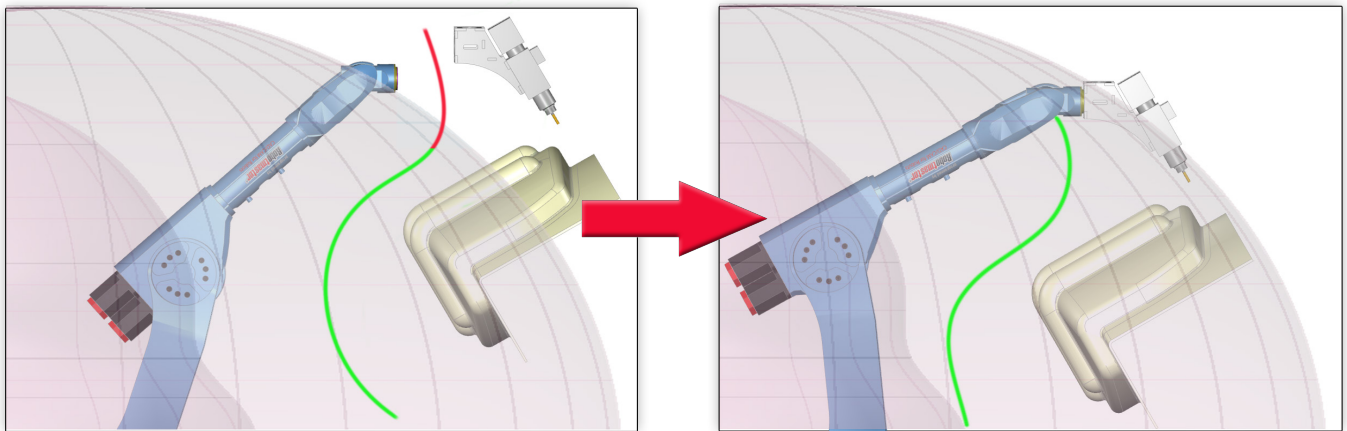


# The ultimate in process customization, increased productivity & program optimization

- Instant visualisation of the impact of any changes in the workspace – reach, interference or collisions
- RISE eliminates trial-and-error entry of settings to achieve desired orientations and program success
- Integrate, customize and control your process with the required parameters seamlessly into Robotmaster

## WORKSPACE ANALYSIS

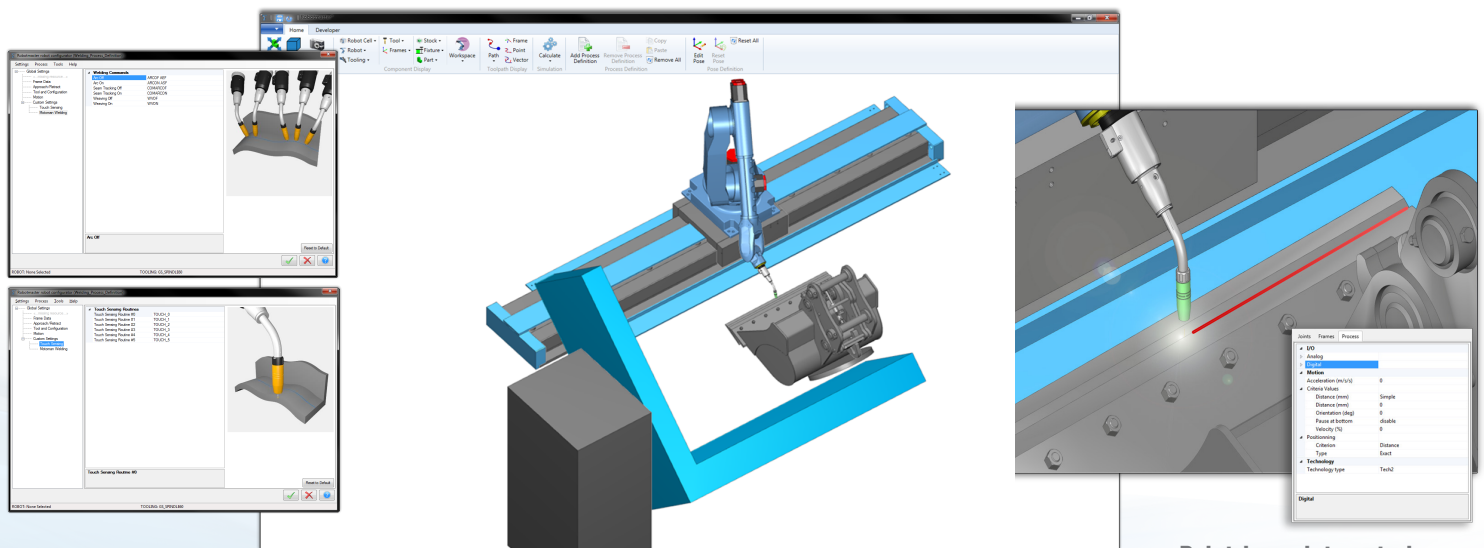
A more powerful and intuitive workspace analysis feature is fully integrated into RISE for rapid and optimal positioning of your parts. Easy visualization of the robot's reach limits, coupled with dynamic recalculation, clearly shows the full impact of changes made on all operations. The workspace analysis and visualization environment also supports rails and rotary tables.



Visualize and fix complex reach issues quickly and easily

## CUSTOM PROCESS DEFINITION

The integration of parameters specific to the user's process (e.g. welding, cutting, etc.) is now simplified by new parameter screens. These user modifiable screens define the interface, terminology and control settings unique to the application. The process parameters can be created, modified and fully controlled by the user for the entire program, specific operations or at select points.



Global and operation specific parameters

Point-by-point control

# New Features and Enhancements at a Glance

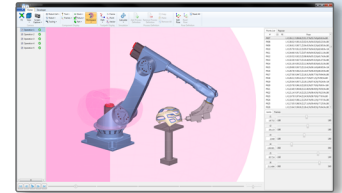


## **RISE - New Robotmaster Interaction and Simulation Interface**

- Click-and-drag the robot by joint or tool to intuitively jog
- Easy to use graphical helpers for moving the robot, part or a program point
- Point editing for modifying coordinates or defining process specific settings/triggers
- Integrated simulation settings for updating the work piece or the fixture
- Selectable operation list for toggling paths on and off
- Status indicator icons for:
  - Path success
  - Reach limitations
  - Robot errors (singularity, joint limits, etc...)
  - Collisions

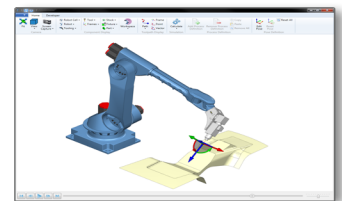
## **Repose Editor Integrated in Simulation**

- Define a repose using the simulation by:
  - Jogging the robot by joint
  - Moving the robot in the part frame or the tool frame
  - Changing the base, elbow or wrist configuration
- Manage the repose list by setting the current robot posture to a specific repose or viewing an existing repose in simulation
- Simulate the program, stop at a specific point and be able to move the robot from the selected point to define a new repose point



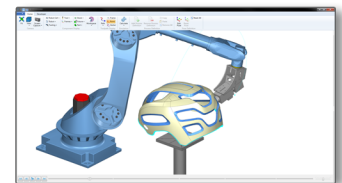
## **Workspace Analysis Integrated in Simulation**

- Workspace checking integrated with robot simulation for comprehensive analysis and visualization of potential reach problems
- Ability to select a problem point on the path and move the part dynamically with direct simulation of the robots posture for quick resolution of reach errors
- Rails and rotary axes are now supported in the workspace analysis
- Quickly toggle workspace visualization on/off during simulation
- Icon controlled reach status reporting in the operation list



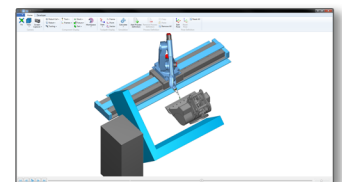
## **Process Parameter Screens**

- New screens for controlling process parameters (ex: welding, cutting settings)
- Easily customizable parameter pages for:
  - Global program parameters
  - Operation specific process parameters
  - Point specific process settings, commands or triggers
- Powerful control tools to fully exploit the process settings for any application



## **Optimization Enhancements**

- New "quick check" option that calculates maps only if errors are detected
- New user-selectable density settings to reduce calculation time for large paths
- Ability to optimize up to four parameters simultaneously: tool rotation, tool tilt, rail and rotary position, including more than one type of a specific parameter (ex: two rotaries or two tilts)
- Mouse hover over advanced maps displays the joint values

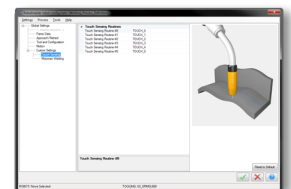


## **Global and Local Interface Enhancements**

- Ability to set local settings for multiple operations
- New safe retract settings with automatic reach checking

## **Enhanced Rotary Axis Control**

- Rotary optimization
- Combined rotary settings to maintain a constant tool orientation when 2 rotary axes are used



## **New Productivity Enhancements**

- Work coordinate system (WCS) support has been added for referencing original part to user's setup
- New Pack to Send utility, convenient for packaging and sending files between users or for tech support
- Publish simulations to 3D PDF files

## **Performance Enhancements**

- Faster collision checking
- Quick optimization checking for large programs by reducing optimization density

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