**DENSO**

High-speed Workpiece Alignment without Collisions Using "Optimal Path Planning for Multiple Robots"

— Paths with short cycle times are generated automatically from paths created by experts

— Optimal paths for multiple robots are generated automatically to reduce burdens on engineers

Optimal path generation increases existing equipment productivity

Shortest paths with no interference between robots and peripheral devices are generated automatically

Cycle times reduced by about 30% more than paths created by experts   *Based on research by DENSO
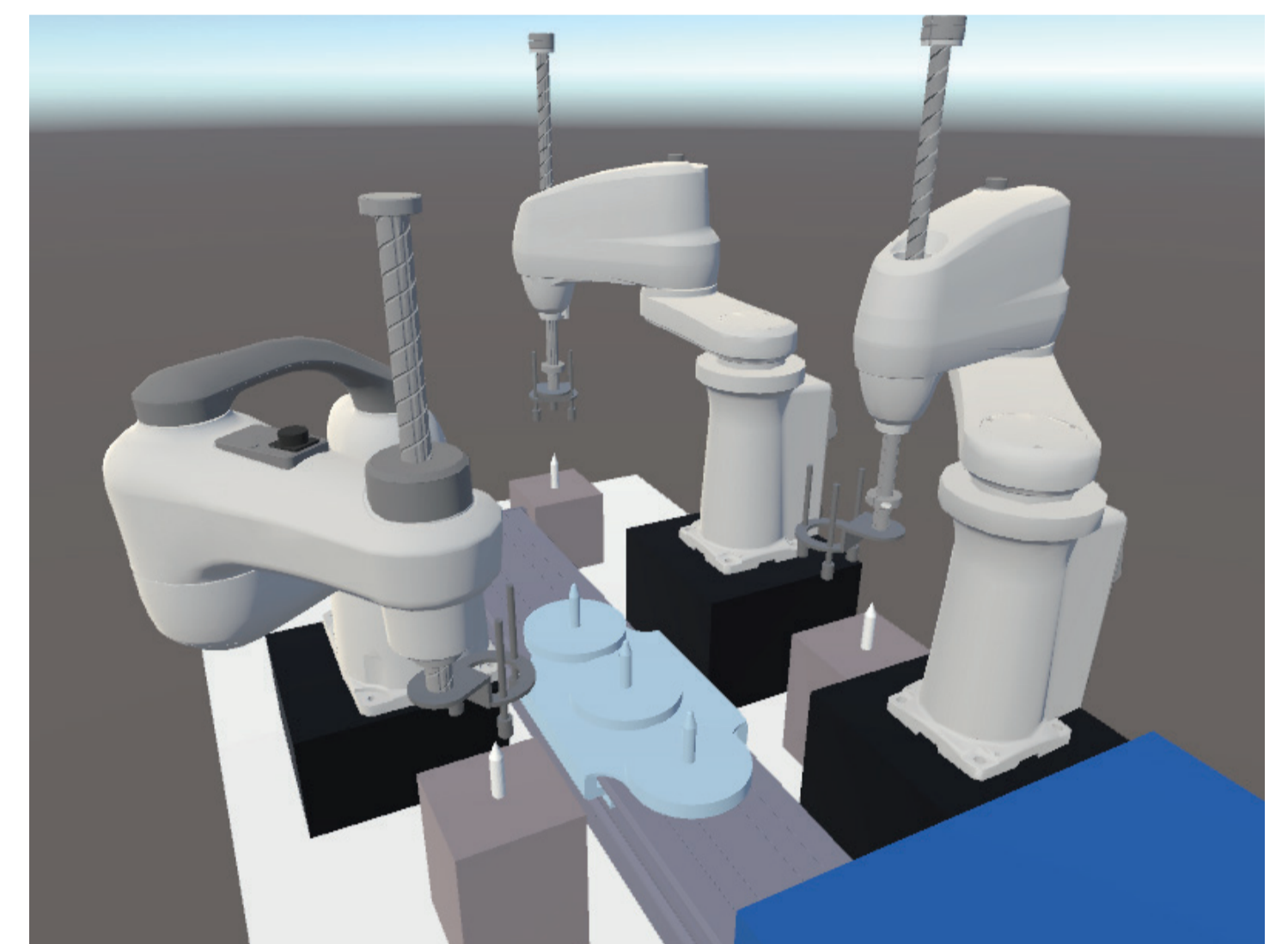
Liberates engineers from difficult programming and adjustment work for multiple robots

AI is used to automatically generate and integrate paths for multiple robots, greatly reducing teaching and programming work

Route adjustment conventionally performed by trial and error is no longer needed, enabling equipment start-up in a short time
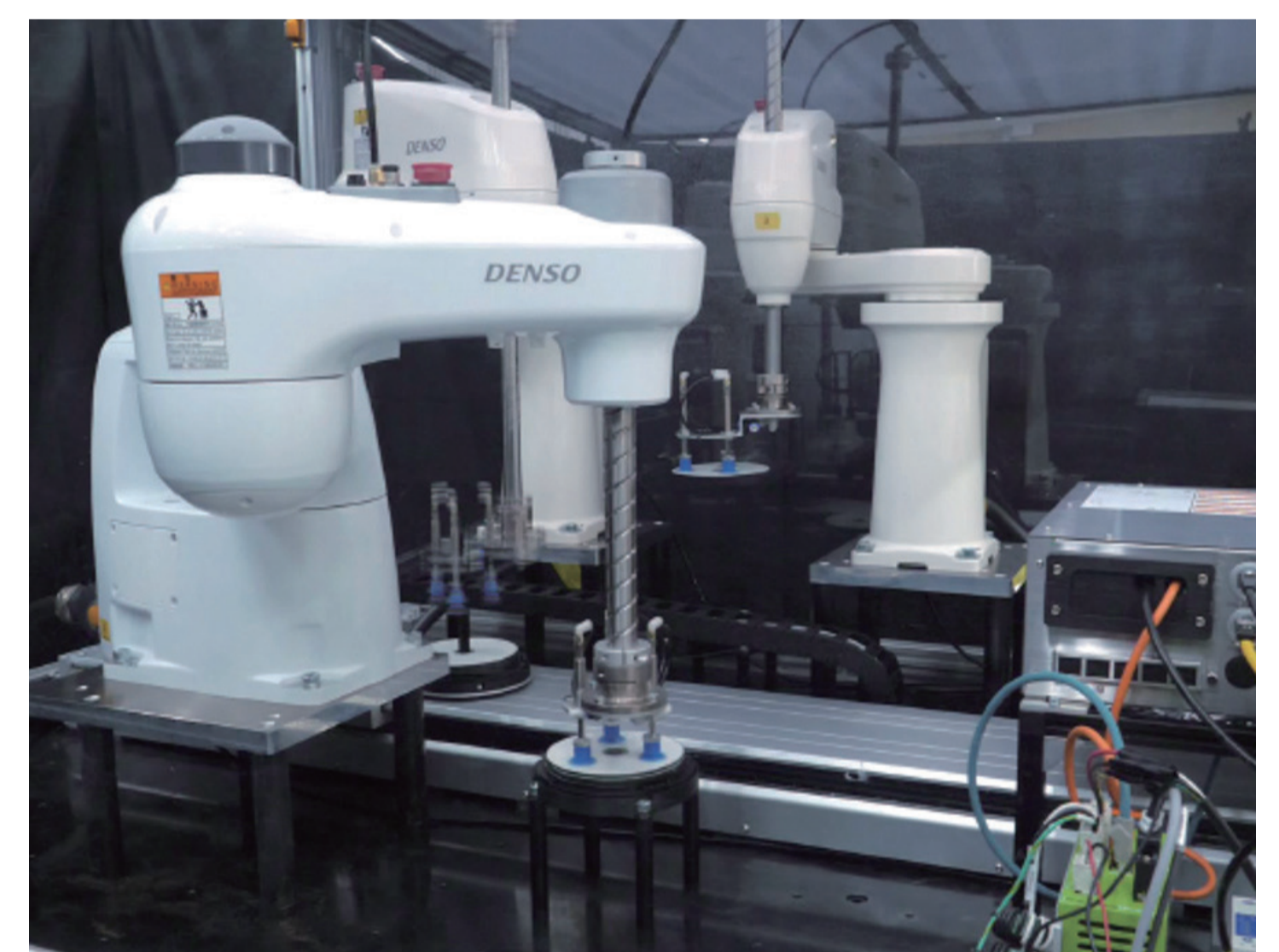
What is Optimal Path Planning for Multiple Robots?

Optimal Path Planning for Multiple Robots is an optional function for automatically generating routes with the shortest cycle times. These routes are calculated by importing the CAD data of peripheral devices and setting each start point, waypoint, and end point of the robot in advance, and then applying DENSO's proprietary Optimal Path Planning algorithm.

Conventional
Route created by human manual work
Start point
Obstruction
Loss!
End point
Waypoints

Optimal path planning
Route generated automatically by AI
Start point
Obstruction
Optimized by AI!
End point
Waypoints