

# HOOPS for FACTORY AUTOMATION & ROBOTICS

*A Robust Platform for the Rapid Development of High-Performance Applications.*

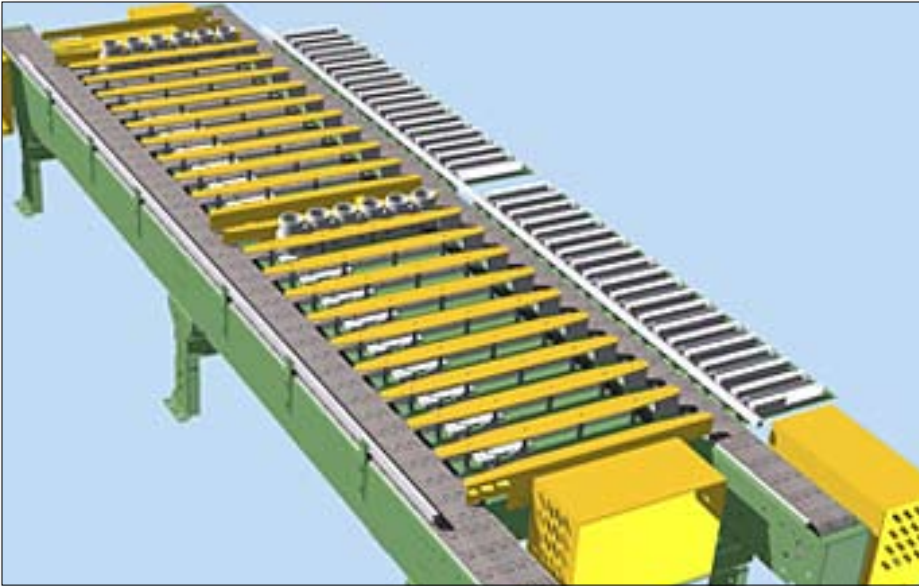


Image from Autodesk.

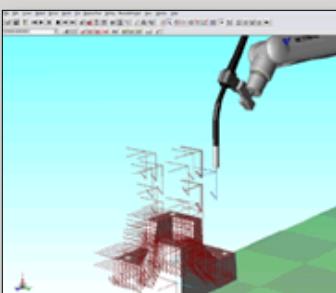
**H**OOPS is a 2D/3D development platform for creating or enhancing professional-grade applications. HOOPS' rich set of API's enable developers to work from a very high level – dramatically jumpstarting application development. Programming teams using HOOPS are able to produce more competitive applications, while reducing total R&D costs and accelerating project delivery.

## HOOPS WILL HELP YOU:

- **Develop High-Performance Applications**
- **Reduce R&D Costs**
- **Compress Time-to-Market**

HOOPS is the perfect platform for Factory Automation & Robotics applications such as:

- **Robotics Programming**
- **Digital Prototyping**
- **3D & 2D Factory Layout**
- **Factory Floor Scanning**
- **Process Planning**
- **Process Monitoring**
- **Simulation**
- **.....And More**
- **Factory Asset Management**



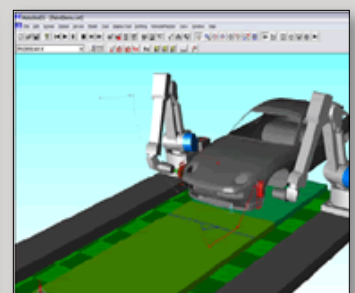
Screenshot from Yaskawa.



Screenshot from Gerhard Schubert.



Screenshot from Spatial.



Screenshot from Yaskawa.

**HOOPS Factory Automation & Robotics Customers**

HOOPS is used in over 175 engineering applications worldwide. HOOPS-based Factory Automation and Robotics applications have been developed by companies such as Brooks Automation, Daihen, and Yaskawa, all of whom benefited from creating their software using the robust foundation of the HOOPS 2D/3D graphics platform.

**Tech Soft 3D Services:**

To help HOOPS developers get maximum return from their investment in HOOPS, Tech Soft 3D offers dedicated support, consulting and training; as well as extensive documentation, tutorials and sample code. These services are designed to assist developers make optimal use of the rich HOOPS API's and further speed the development of high-performance applications. In addition to gaining access to all of the power contained within the HOOPS libraries, you're also partnering with Tech Soft's dedicated team of graphics professionals – leveraging our extensive experience helping companies deliver industrial-grade 2D/3D applications.

**HOOPS for Factory Automation & Robotics**

By licensing HOOPS, you are building upon the market-proven HOOPS Foundation - a robust set of API's encapsulating all of the necessary graphics tools you'll need for the creation or enhancement of an advanced engineering application. In addition, you'll have immediate access to HOOPS' rich set of specialized technology that addresses the unique needs of Factory Automation and Robotics applications.

**HOOPS' Foundation Capabilities Include:**

- Rich 2D & 3D integrated scene-graph creation and management
- Fast interactive on-screen viewing, manipulation and interaction
- Full support for optimal rendering on both OpenGL and Direct3D
- High quality text rendering and management
- Crisp print and plot output
- Support for all major 32bit and 64 bit platforms, including Windows Vista
- Comprehensive & intelligent handling on over 80 popular graphics-cards
- Pre-integrated with all major UI systems
- Highly compressed streaming format for graphics communication
- Source-code level sample applications for desktop, web, Java and .NET

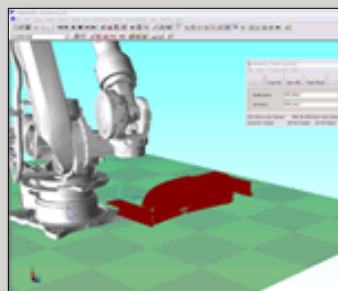
**HOOPS' Advanced Capabilities for Factory Automation & Robotics Include:**

- Large Model Visualization (LMV) for real-time viewing of even extremely large scenes
- Animation Engine including record, playback and serialization
- Fast clash-detection for both static and dynamic scenes
- Advanced sectioning on multiple planes for creating cut-away views
- Professional annotation options including 3D bill-boarding and occlusion
- Boolean operators for geometry modification operations
- Walk-through operators including gravity and collision avoidance
- Highly-optimized polycylinder-primitives for pipework rendering
- Graph and charting classes optimized for large datasets
- Advanced multi-layer transparency for displaying hidden objects
- Advanced shader-based real-time material rendering
- TCP/IP and HTTP Graphics server for collaborative design review
- Direct Integration with 3D InterOP\* for import of all major MCAD formats.
- Tight connections to both Parasolid\* and ACIS\* kernel modelers
- Direct support for DWF\*, DWG\*, JT\*, DGN, VRML, OBJ and STL import
- Microstation and 3D Studio Plug-ins for direct export of HOOPS' native HSF format
- Export to DWF\*, PDF, 3D PDF, VRML, STL and OBJ for lightweight publishing
- Support for stereo and immersive viewing

*\* Requires additional 3rd party toolkits.*



*Screenshot from Brooks Automation.*



*Screenshot from Yaskawa.*



*Screenshot from Gerhard Schubert.*

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