

# HOOPS for PLANT & PROCESS

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



Image from COADE.

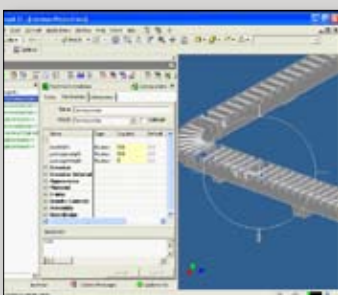
**H**OOPS is a 2D/3D development platform for creating or enhancing professional-grade applications. HOOPS' rich set of API's enable developers to work from a very high level – dramatically jumpstarting application development. Programming teams using HOOPS are able to produce more competitive applications,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

## HOOPS WILL HELP YOU:

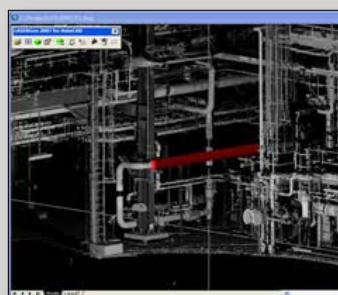
- **Develop High-Performance Applications**
- **Reduce R&D Costs**
- **Compress Time-to-Market**

HOOPS is the perfect platform for Plant & Process applications such as:

- **3D & 2D Plant Design**
- **Process Simulation**
- **Analysis & Engineering**
- **Visualization & Collaboration**
- **Facilities Management**
- **Real-Time Plant Monitoring**
- **Plant & Facility Scanning**
- **....And More**



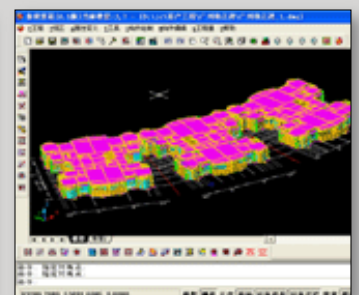
Screenshot from Autodesk.



Screenshot from Trimble Navigation.



Screenshot from COADE



Screenshot from Lubansoft.

### HOOPS Plant & Process Customers:

HOOPS is used in over 175 engineering applications worldwide. HOOPS-based Plant & Process applications have been developed by companies such as Autodesk, COADE, and Trimble Navigation, 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 Plant & Process

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 to unique needs of Plant & Process applications.

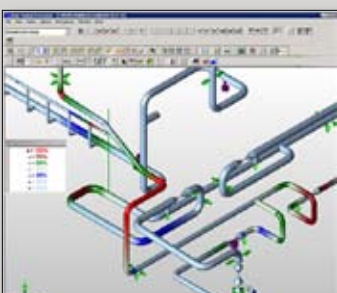
#### HOOPS' Foundation Capabilities Include:

- 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 lightweight visual communication
- Source-code level sample applications for desktop, web, Java and .NET

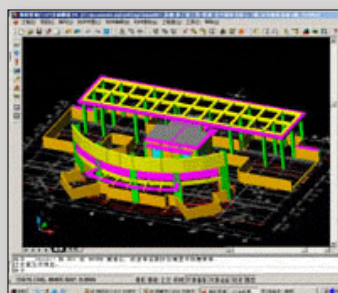
#### HOOPS' Advanced Capabilities for Plant & Process include:

- Large Model Visualization (LMV) for real-time viewing of even extremely large plant models
- Highly-optimized polycylinder-primitives for pipework rendering
- Clash detection for interference and proximity checking
- Walk-through operators including gravity and collision avoidance
- Animation of plant processes and events including record and playback
- Support for exploded assemblies for maintenance and installation animations
- Point-cloud support for laser-scans and management of large point-sets
- Comparison of design model with point-cloud data for "as-built" analysis
- Advanced annotation options including bill-boarding and occlusion
- Advanced sectioning on multiple planes for creating cut-away views
- Texture-based analysis-shading for accurate display of analysis results
- Graph and charting classes as well as large plotter format output
- Extensive primitive and Boolean support for creating pipe-components
- Advanced multi-layer transparency for displaying hidden objects
- TCP/IP and HTTP Graphics server for collaborative design review
- Direct import of DWF\*, DWG\* DGN, VRML, STL, and OBJ Files
- Direct import of MCAD formats\* such as IGES, STEP, CATIA, SolidWorks & Others
- Microstation and 3D Studio Plug-ins for exporting HOOPS' native HSF format
- Direct Export of DWF\*, PDF, 3D PDF, VRML, and HSF formats for model publishing
- Integration with popular solid modeling kernels\* for true solids creation and editing
- Advanced shader-based material rendering
- Support for stereo and immersive viewing

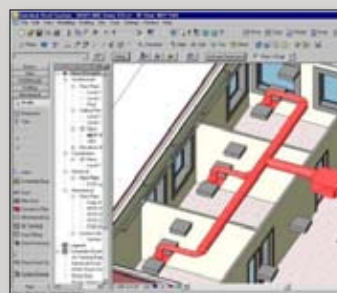
*\* Requires additional 3rd party toolkits.*



Screenshot from COADE



Screen shot from Lubansoft..



Screenshot from Autodesk.

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