

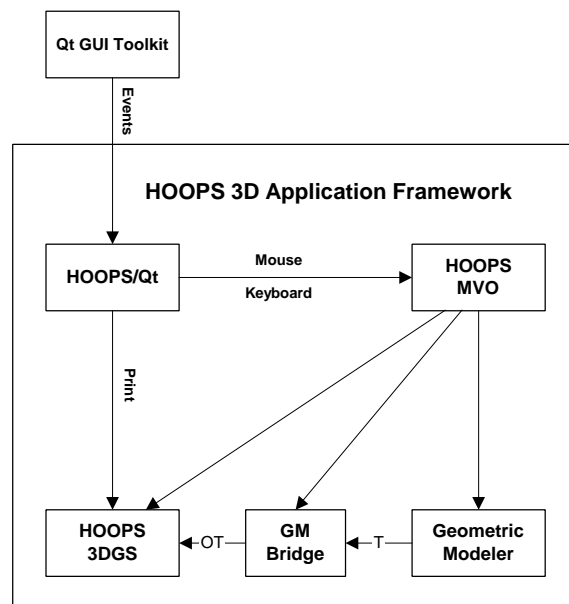
THE HOOPS[®] 3D Application Framework

Now integrated with the Qt User Interface Toolkit!!

The **HOOPS 3D Application Framework** integrates several software components found in most advanced 3D applications and provides developers with an extensible base architecture for rapidly building high performance, world class 3D applications for the PC, UNIX and LINUX platforms.

The Application consists of several components: the HOOPS 3D Graphics System, the HOOPS/MVO application objects, the HOOPS/GM Bridges, and the HOOPS/Qt GUI integration component. If a geometric modeling kernel is used, the HOOPS/GM Bridges connect industry leading geometric modeling kernels to the HOOPS 3D Graphics System. Currently bridge modules exist for the Parasolid[®] Modeling Kernel from Unigraphics and the ACIS 3D Toolkit[®] from Spatial Technology.

HOOPS 3D Application Framework components can be licensed separately or as a bundled solution depending on your application needs. Each component is described in more detail on the back page of this document.



HOOPS information, and a free 30-day evaluation can be obtained by contacting us at 510.769.2301 or sales@tsoftamerica.com. For more detailed technical information visit our web site and see our HOOPS Technical Overview in the Developers Reference/White Papers section:

HOOPS Application Framework Component Descriptions

The HOOPS 3D Graphics System - a commercial-grade graphics software component providing the algorithms and data-structures necessary to incorporate 2D and 3D, interactive, vector and raster graphics capabilities into applications for the CAD/CAM/CAE, Scientific Visualization, GIS and Geophysical industries. Customers of HOOPS include ***PTC, SDRC, Ansys, Fluent, Microcadam, Mechanical Dynamics, Tecoplan, SPSS, Landmark Graphics, and over 100 commercial applications globally.***

HOOPS/Qt Integration Component

The HOOPS/Qt Integration module connects the framework to the popular Qt UI toolkit. Specifically, it connects the HOOPS 3D Graphics System to a drawable widget in the toolkit so that HOOPS can draw to a window and connects the HOOPS/MVO objects to the Qt event queue so that user generated events are dispatched to the appropriate MVO objects

The HOOPS/MVO Application Objects

The HOOPS/MVO Class library is an extensible set of objects that implement much of the common functionality found in graphically rich technical computing applications. The HOOPS/MVO class library is completely platform independent. There are three main classes: model, view and operator (MVO). The model class is used to organize the application's 3D geometric data; the view class is used to create views of the model such as drawing visual output on a computer monitor or hardcopy device; the operator classes are used to interact with the model or one of its views

Geometric Modeling Kernel

If an application requires solids capabilities, the geometric modeling kernels provide the data structures and algorithms for creating and modifying 3D topological and geometric data. The HOOPS 3D Application Framework does not include these kernels but is pre-configured to work with either the Parasolid or ACIS geometric modelers. However, Tech Soft America is a licensed reseller of the Parasolid Modeling Kernel and can supply that component to ISVs. A Parasolid specific version of the HOOPS 3D Application Framework – the ParaHOOPS 3D Application Framework is also available from TSA.

HOOPS/GM Bridge Component

The geometric modelers provide little or no services for visual display or hardcopy output of the 3D data they manage – this is not their area of expertise. The kernels output tessellated geometry that must be mapped to the HOOPS 3D Graphics System. The HOOPS/GM Bridge provides this functionality.

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