



“Our customers will benefit greatly from the increased performance and capabilities HOOPS allows us to provide in IronCAD. This integration allows IronCAD developers to focus on enhancing IronCAD’s core capabilities, while developers at Tech Soft 3D work to deliver improvements to graphical performance and visualization.”

Cary O’Connor, Director of Marketing

Business Profile

Product Using HOOPS
IronCAD

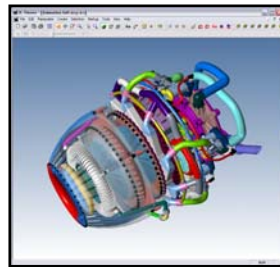
More Info
www.ironcad.com

Industry
MCAD

TS3D Products
HOOPS

Company Brief

IronCAD is a leading provider of 3D Design Productivity Solutions, focused on delivering the highest levels of customer satisfaction and productivity. The company’s flagship design product IronCAD is used by thousands of customers worldwide and has won a number of industry awards for its innovative technology.



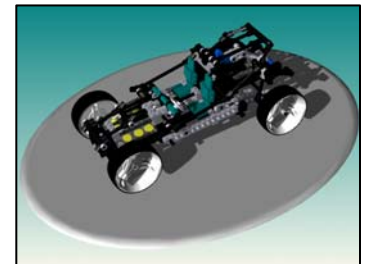
The Challenge

IronCAD set out to revamp their graphics in order to deliver performance and functionality that was required by their customers when dealing with assemblies containing large amount of graphical data. This meant support for complex large-assembly rendering algorithms, shaders and future support for Direct3D on Vista to achieve near real-time feedback during graphical interactions. IronCAD users also demanded that any new graphics system still allow them to achieve top performance with WindowsXP systems using OpenGL. Until 2007

the IronCAD application relied upon an internally-developed, OpenGL-based graphics engine. The IronCAD R&D team also needed to be able to integrate HOOPS as quickly as possible to achieve their aggressive yearly release targets.

The Solution

When the R&D team at IronCAD researched the full range of functionality in the HOOPS API, they discovered approaches they could use to dramatically improve graphical performance when dealing with large assemblies. They also discovered additional functionality such as support for Direct3D, shader-based rendering of materials, lightweight format for fast file loading, and data publishing to popular formats such as 3D PDF. HOOPS Consulting resources also provided dedicated training and consulting to help the IronCAD team achieve it’s aggressive release goals.



The Results

- IronCAD achieved a 10X performance gain with large assemblies due to HOOPS.
- Due to HOOPS’ flexibility, IronCAD users on Vista will be able to take advantage of powerful Direct3D hardware. At the same time, users on WindowsXP systems can still effectively drive their OpenGL hardware.
- Due to HOOPS’ high-level nature, IronCAD was able to replace their legacy graphics engine with approximately 6 man-months of development effort.
- Users of IronCAD are better able to collaborate with others, using HOOPS’ ability to publish to lightweight formats such as HSF, 3D PDF. IronCAD users appreciate this functionality, and the R&D team saved several months of development work.
- With HOOPS training and consulting, IronCAD engineers were able to quickly understand the high-level interface and how to integrate this into their existing code.
- A close relationship with a committed team of support engineers who assist IronCAD engineering with resolution of issues and provide advice regarding optimal implementation of HOOPS.