Solutions Sheet

SGI® Onyx® 3000 Series with InfinitePerformance™ Graphics and CATIA® V5/ENOVIA® DMU V5

The Ultimate in Interactive Performance

Benefits for CATIA V5 Users

- Ultimate interactive performance for CATIA V5/ENOVIA DMU V5
- Breakthrough price/performance for advanced visual computing
- Affordable, high-performance virtual reality capabilities

Features

- Fully certified/optimized for CATIA V5/ENOVIA DMU V5
- Diverse operating modes drive productivity and economy
- Modular flexibility and serviceability
- Key multithreaded CATIA V5/ENOVIA V5 functions
- OpenGL Multipipe SDK software flexibility

Ultimate Interactive Performance for CATIA V5/ENOVIA DMU V5

Are your scientific and engineering analysis problems becoming too complex to visualize on workstations? Are you looking for ways to interactively visualize complete models instead of single subassemblies? The SGI Onyx 3000 series with InfinitePerformance graphics offers up to 283 million polygons per second and an unbelievable 7.7 billion pixels per second of sustained performance, allowing you to interactively visualize your toughest problems. This remarkable performance is available in an economical package that simplifies work for people doing polygon-intensive applications such as ENOVIA DMU Navigator. The Fibre Channel disk subsystem of the SGI Onyx 3000 series provides loading of models in CATIA V5/ENOVIA DMU V5 that is several times faster than traditional SCSI disks.

Breakthrough Price/Performance for Advanced Visual Computing

SGI Onyx 3000 series with InfinitePerformance graphics provides multiuser graphics performance at prices that have never before been achieved. The unique SGI® NUMAflex™ architecture eliminates the internal bandwidth constraints that cause data congestion in most computer systems. This enables polygon-intensive ENOVIA DMU Navigator to run quickly and effortlessly, so users can get to work immediately rather than wait minutes for data to load. Now is the time to purchase your first advanced graphics system or add graphics capabilities to existing SGI® Origin® 3000 series high-performance servers.

Affordable, High-Performance Virtual Reality Capabilities

With the SGI Onyx 3000 series with InfinitePerformance graphics, it is possible to drive a multichannel SGI® Reality Center™ room or wall facility with a dedicated graphics pipe per channel at a fraction of the former price, adding incredible immersive visualization to your daily work routine. The single system image and the availability of optimized CATIA V5/ENOVIA DMU V5 solutions offer a new experience that provides a different way to see into your data. Greater affordability allows you to make collaborative visualization available to many teams, empowering your users to make critical decisions in a timely manner

Fully Certified/Optimized for CATIA V5/ENOVIA DMU V5

The SGI Onyx 3000 series with InfinitePerformance graphics is certified with all CATIA V5/ENOVIA DMU V5 solutions, and has been heavily tuned and optimized for maximum performance and efficiency. It incorporates all high-quality rendering features than have been developed specifically for V5 on SGI® systems (Phong shading, ClearCoat™, ClearCoat™ 360, OpenGL Shader™).

Diverse Operating Modes Drive Productivity and Economy

The SGI Onyx 3000 series with InfinitePerformance graphics offers flexible operating modes to keep it working around the clock. You can use it simultaneously as an interactive multiuser workstation, as a visual server, and to drive an SGI Reality Center facility. Put it to work at night and on weekends as a compute server to create data for analysis during the next business day.

Modular Flexibility and Serviceability

SGI Onyx 3000 series visualization systems offer the best scalability, flexibility, and reliability available today, offering unprecedented modularity and configurability that enable you to solve your most important graphics problems. The SGI Onyx 3000 series with InfinitePerformance graphics enables you to scale graphics, CPU, memory, storage, and I/O components independently, allowing you to deploy, upgrade, service, expand, and redeploy your system in every possible dimension. Plus, it's binary compatible with existing applications and other SGI graphics computers, further protecting your investment.

Key Multithreaded CATIA V5 and ENOVIA V5 Functions

The SGI Onyx 3000 series with InfinitePerformance graphics will benefit from numerous CATIA V5/ENOVIA V5 functions that have been multithreaded for key application performance. Multithreaded functions include graphic database culling, clash detection algorithms, model tessellation algorithms or file models loading, and more that will be added over time.

OpenGL Multipipe™ SDK Software Flexibility

Great hardware is only part of the solution. To ensure your success, SGI also delivers software tools and application programming interfaces (APIs). OpenGL Multipipe™ and OpenGL Multipipe Software Development Kit allow you to scale single-pipe CATIA V5/ENOVIA V5 across multiple InfinitePerformance graphics pipes with unprecedented flexibility and performance.

Decomposition allows you to use multiple pipes to render frames that would normally be rendered by a single pipe. Here is an overview of the decompositions that are supported natively by CATIA V5 and ENOVIA V5:

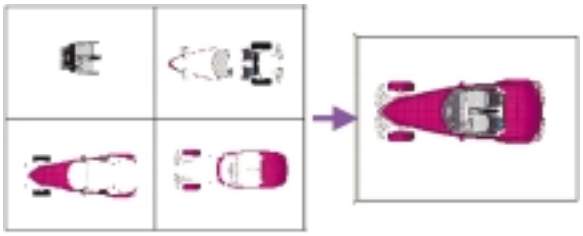
Decomposition Modes

SGI's Scalability Engine

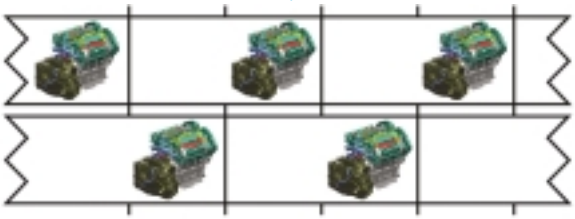
1. Screen-based decomposition

2. Eye-based decomposition

3. Data-based decomposition



4. Time-based decomposition



Unique Advantage:
All modes can be used separately or combined in any number of ways.

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