

Orion / MMS[®]



Modeling

Control Design

Implementation

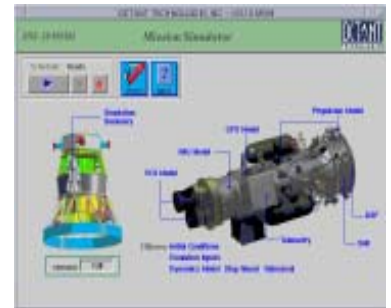
Real Time Control & Modeling

Orion/MMS[®] by Octant Technologies provides the toolset to rapidly develop real-time, embedded controllers and dynamic system models targeted to the VME platform. **Orion** offers Multi-Model System (MMS) to give you modularity in generated code designs. With MMS technology, you'll compile faster, dynamically link and retarget single and multi-processing architectures across an array of processors with ease. Use **Orion/MMS[®]** for rapid prototyping, real-time interactive testing (PIL, HIL), industrial and production control, flight systems development and for mission planning and training activities. **Orion/MMS[®]** provides seamless support for automatically generated code from both SystemBuild™/AutoCode™ and Simulink[®]/Real-Time Workshop[®] toolsets*.



Data Visualization

Display and archive your data in a meaningful way with **Orion/MMS[®]** using **datascope[™]**. **datascope** provides a rich set of GUI control and display widgets that automatically connect to a highly scalable real-time database; you may also import your own pictures and displays. The flexible client-server relationship supports a multiple client architecture. Supervisory control and alarms monitoring capabilities are also provided. Data logging and trend analysis tools provide the capability to store and rapidly view collected data. You may also create scripts to interact with **Orion/MMS[®]** to perform automated regression tests.



Orion/MMS[®] supports an open client interface with the Octant Stream Server (OSS). Other displays such as LabVIEW[™] can be supported on customized projects using OSS's open API*. **Orion/MMS[®]** also contains an embedded web server to remotely monitor and control your applications.

Configurable Signal Interfaces

A wide variety of continuous analog and discrete electrical signals over a range of voltage and current specifications are available in various configurations to optimize your design for performance and economy. Most common asynchronous, synchronous and network protocols are supported. A series of sensor and actuator interfaces for motion, thermal and electrical power control complete the family of real-time interface options. A well defined device driver interface allows Octant engineers to quickly create new device drivers to extend our list of supported commercially available devices. Octant's hardware engineers can also design signal interfaces for custom applications.



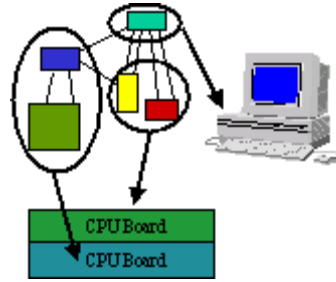
Graphical Configuration Tools

Orion/MMS[®] models are targeted to processors and inter-connected at initialization using a file specification, or "scenario". Octant's scenario editor speeds scenario development with a graphical user interface. This integrated tool manages processor selection, model assignment, inter-model signal connection, electrical interface configurations and display interconnections. Automated 'make' and 'run' support ensures a proper architectural configuration.



Scalable Processing

Orion/MMS[®] systems scale to economically fit your needs while providing superior performance in real-time operation. Rack mounted and portable configurations host single processor, multiprocessor and multi-chassis architectures. **Orion/MMS**[®] makes it easy to port designs among many configurations.



Stretch your modeling capabilities further using **Orion/MMS**[®] workstation target tools. Non real-time workstation targets work with the real-time embedded **Orion/MMS** platform to give true source level module debugging, even when using a graphical code generator.

Workstation Modeling

Octant offers workstation targets for non real-time modeling in conjunction with **Orion/MMS**[®]. Solaris and Windows versions are available. Workstation modeling offers a low cost adjunct to the real-time version for design development, off line debugging and non real-time execution. **Orion/MMS**[®] technology facilitates easy migration of your designs across all platforms.



Data Acquisition

Orion/MMS[®] supplies real-time data acquisition capabilities to capture test data input/output signal streams. User supplied specifications configure the logging mechanism to record an individual signal or groups of signals at regular intervals for off-line analysis.

Applications

Orion simulators from Octant support a wide range of applications:

Design

Rapid Prototype
Code Production
Data Acquisition
System Identification

Integration

Signal Emulation
Signal Stimulus
Processor in the Loop (PIL)
Hardware in the Loop (HIL)

Operations

Operator Training
Field Testing

Supported Interfaces

Processors

- 350/450 Mhz PowerPC750, 256/512MB, 100/100Mbps
- 1.3 GHz PowerPC7457, 1GB, 10/100/1000Mbps

Analog Input

- 16 ch, 16 bit, $\pm 5/10V$
- 64 ch, 16 bit, $\pm 5/10V$, 100KHz

Analog Output

- 8 ch, 13 bit, $\pm 5/10V$, 3V/ μs
- 32 ch, 12 bit, $\pm 5/10V$ or 0/25mA

Serial Digital I/O

- 4 ch, high speed RS-485/422

Discrete Digital I/O

- 48 ch, TTL/CMOS/OC
- 24 ch, EIA-422
- 24 ch, 0/50V, 500mA
- 24 ch, 0/50V, opt. iso.
- Interrupt, timer options

Motion Control

- 4 ch, quadrature, 1.2MHz
- 2 ch, servo control, 2900 pps

Communications

- 1 ch, MIL-STD-1553B, BC+31RT
- 1 ch, PCM 10 Mbps
- 3 ch, SpaceWire, 10 Mhz

Multi-Processor Bridge:

- Ultrahigh speed reflective memory interface with interrupt, fiber optic
- General purpose dual ported memory I/O bus adaptor, fiber optic

<http://www.OctantTech.com>

(408) 436-0800

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Octant Technologies, Inc.

2107 North First Street, Suite 220

San Jose, CA 95131 USA

