

FOR IMMEDIATE RELEASE

FOR MORE INFORMATION:

FOR MODULUS:

David Berberian
Modulus Technologies, Inc.
713-523-7211 x13
berberian@modulus.com

FOR SUN:

Mary Camarata
Sun Microsystems, Inc.
650-786-8645
mary.camarata@sun.com

Robin Lutchansky
Lutchansky Comm.
408-369-8280
robin@Lcomm.com

**SUN AND MODULUS PARTNER TO OFFER
INDUSTRY-LEADING FAULT TOLERANCE FOR
TELECOMMUNICATION SWITCHES AND DEVICES**

Modulus InterAgent Extends ChorusOS and JavaOS To Provide Most Powerful Reliability In Telecommunications From Public Switches To Infrastructure Routing To Hand-Held Devices

PALO ALTO, CA and HOUSTON, TX -- June 30, 1998 - Sun Microsystems, Inc. and Modulus Technologies, Inc. today announced a technology partnership designed to provide leading high availability across an entire telecommunications infrastructure. By incorporating Modulus InterAgent[®] middleware into Sun's ChorusOS[™] and JavaOS[™] embedded system operating systems, the new technology combination extends the current high availability Sun provides in embedded public switches and hand-held devices down into the network's infrastructure itself to ensure continuous web-tone accessibility from all points of the network.

"As the RTOS platform of choice for telecommunications organizations, the higher degree of strength that the Modulus InterAgent software brings to the ChorusOS and JavaOS environments allows our customers to extend the Sun reliability they depend upon across their entire networks, increasing the level of confidence for telecom manufacturers," said Mark Tolliver, vice president of Sun Microsystems Consumer and Embedded Devices division. "In fact, both the ChorusOS and InterAgent products already have large real-time deployments, and we are already seeing good customer response from the combination. InterAgent is a natural fit in our plan to provide our embedded systems customers with a large array of tools to use in their ChorusOS and JavaOS developments."

Sun ChorusOS is a feature-rich, real-time operating system and development environment, specifically designed for the most demanding high performance applications such as those required in the telecommunications arena. Its unique componentized OS architecture allows ChorusOS configurations to scale seamlessly from very small embedded instances (10KB) to high functionality, transparently distributed platforms. Reliable enough to be used by seven out of 20 of the world's leading telecommunications providers, ChorusOS is used by Alcatel to control the biggest railway exchange in Europe. Fault tolerance enablers provide

continuous “uptime” to deliver telecommunication standards of 99.997 percent uptime or only three minutes of downtime per year.

Sun JavaOS is a family of small and efficient operating environments optimized for distributed network computing using Java. Based on open standards including Java, TCPIP, and HTML, JavaOS provides affordable access to network services, security and central management to any user, anytime, using any device. Part of the Sun JavaOS family, JavaOS for Consumers is the premier operating system for a new range of network connectable consumer devices used for communications, entertainment, and mobile computing. Sun JavaOS for Business provides rich functionality for business use in specific function, task-oriented applications such as those used by bank tellers, insurance agents, and travel agents.

Modulus’ InterAgent Toolkit provides one of the industry’s most comprehensive message-oriented middleware and publish-and-subscribe technologies. InterAgent supports multiple distribution modes, including point-to-point messaging, unicast, broadcast, and multicast. Other features, such as event services, quality-of-service options, notifications, persistence, and management facilities add features critical to developers of enterprise-class real-time distributed applications.

The ChorusOS and InterAgent combination will enable developers to build robust real-time applications that can incorporate a range of reliability options. For example, customers can build continuous availability (hot standby) and high availability (cold standby) functionality into their ChorusOS and JavaOS-based systems. By using InterAgent’s convenient application programming interface (API), developers can mix continuous availability and high availability modes within the same application so that each part of the system is protected by precisely the degree of fault tolerance required. The new ChorusOS/InterAgent software can also manage an active cluster of processes and load balance the processing tasks within the cluster for optimal system operation. This load-balanced clustering capability also enhances system scalability because processes can be dynamically added or removed from a cluster with no interruption in system operation.

Because InterAgent supports a wide range of network protocols, operating systems, and platforms, developers can build distributed applications in mixed environments without sacrificing overall system reliability. For example, users can build a complete cooperative application and then selectively deploy application components on ChorusOS or JavaOS platforms where true real-time performance is needed and have these components seamlessly cooperate with other application components residing on other operating systems, such as Sun Solaris. Both the ChorusOS and InterAgent architectures are modular so that configurations can be scaled from very small embedded devices to high-end distributed platforms.

“The JavaOS/InterAgent combination provides the industry’s richest range of real-time embedded system capabilities,” said Rex Shelby, CEO of Modulus. “Both ChorusOS and InterAgent have their origins in the real-time arena, and that heritage shows itself in

the functionality and performance of the products. Modulus is pleased to work with Sun, and we believe that the JavaOS/InterAgent offering will set a new standard for the industry.”

About Modulus

Modulus is a pioneer in enterprise publish-and-subscribe middleware and one of the contributors to the Java Messaging Services (JMS) specifications. Modulus' InterAgent Toolkit provides the capabilities of message-oriented middleware through a unique architecture of intelligent routing agents which efficiently handle the routing of information throughout complex mixed platform and network environments. Modulus is headquartered in Houston and distributes its products directly and through OEM and VAR channels. Customers using the Modulus technology span a wide range of application areas and industries throughout the world. Information on Modulus can be found at <http://www.modulus.com>.

About Sun

Since its inception in 1982, a singular vision, “The Network Is The Computer™,” has propelled Sun Microsystems, Inc., (NASDAQ: SUNW), to its position as a leading provider of hardware, software, and services for establishing enterprise-wide intranets and expanding the power of the Internet. With more than \$9 billion in annual revenues, Sun can be found in more than 150 countries and on the WorldWide Web at <http://www.sun.com>.

###

Sun, Sun Microsystems, Java, JavaOS, Solaris, and “The Network Is The Computer” are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries. InterAgent is a registered trademark of Modulus Technologies, Inc. All other product names, trademarks, and registered trademarks are the property of their respective holders.