



Real-Time CONCURRENT EVENTS

The Newsletter of Concurrent Computer Corporation®

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Concurrent Computer Corporation Introduces Power Hawk™ Series 700

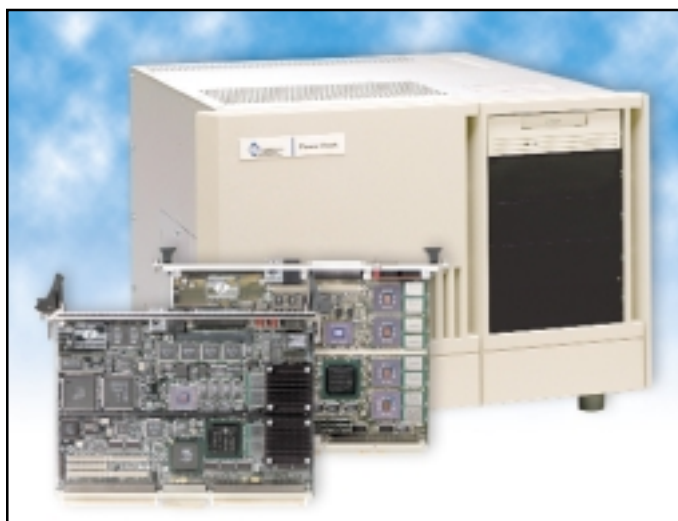
*Series 700 Addresses the Market for Real-Time, High-Performance,
Single-Board Symmetric Multiprocessing System Solution*

Concurrent recently announced the latest addition to its family of real-time computing systems – the Power Hawk Series 700 next generation real-time symmetric multiprocessing (SMP) system for data acquisition and simulation applications. Series 700 systems feature Motorola's MPC7400 (G4) PowerPC™ microprocessor and offer up to four tightly-coupled G4 CPUs on a single 6U VME card.

Series 700 systems offer leading-edge integrated circuit and packaging technology. The dual and quad-CPU Series 700 processor boards are true symmetric multiprocessors that run a single copy of Concurrent's PowerMAX OS™ real-time operating system. All CPUs on a board are linked by a high-speed PowerPC processor bus and have direct, cache-coherent access to all of on-board main memory. Each CPU includes its own 2 MB backside L2 cache. Main memory up to 512 MB per processor board is currently available.

Two or more Power Hawk Series 700 processor boards can be combined to create closely-coupled multiprocessor configurations of up to 32 CPUs. In a closely-coupled system, processor boards are linked via a high-

performance P0-PCI bus that provides for optimal data sharing and task synchronization between all system CPUs. In closely-coupled systems, applications can use the same interprocess communication mechanisms and can achieve the same determinism as in an SMP.



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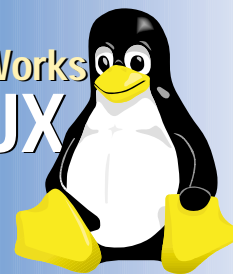


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2 PRESIDENTIAL PERSPECTIVE




Dan Dunleavy,
President,
Real-Time

Concurrent is now on the cusp of its second quarter for Fiscal Year 2001, and the Real-Time Division remains strongly focused on continuing its legacy of more than 30 years in the market. This is a stimulating time for Real-Time, and the past quarter's successes are a testament to our commitment to our customers and the relationships we have forged throughout the history of real-time high-performance computing.

The company proudly introduced its latest Power Hawk Series 700 next generation real-time SMP system recently, and shipped numerous systems to key customers, including MHL, NASA, and others. We've also been moving out smartly with Linux.

Building on Concurrent's time-proven systems, another great example of the

company's invariable historical presence, as well as its vigor for the future, is the Model 3200-2000 real-time computing system. This next generation 3200 offers up to four times the application computational performance of a Series 3200 Model 3280 processor. Not only does this latest 3200 model offer unmatched performance and compatibility with previously installed Series 3200 systems, customers can now upgrade directly from systems they may have installed in the 1980s to the latest technology, with no intermediate steps.

Concurrent is the worldwide leader in real-time. Our customers' confidence in us fuels our drive to excel in our achievements and remain a step ahead in the real-time industry. We look forward to sharing those achievements with all of our customers in the months and years ahead. 

VP REAL-TIME REPORT




Rob Menzel,
Vice President,
Real-Time

Concurrent's success continues to ring true as we near the conclusion of Year 2000. It has been a year of great accomplishment and growth for the Real-Time Division, a leading provider of high-performance, real-time computer systems, solutions, and software for commercial and government markets.

Focusing on strategic market areas that include hardware-in-the-loop and man-in-the-loop simulation, data acquisition, and industrial process control, Concurrent has achieved significant wins in these areas. Attesting to its leadership in the simulation arena, in the year 2000, Concurrent shipped systems to customers EER Systems, Inc.

and AAI. Strength in data acquisition was demonstrated by contracts with the U.S. Army's Guardrail program and the U.S. Navy's AEGIS program. And, renowned world leaders, such as Hamilton Sunstrand and Ford Automotive, looked to Concurrent for their critical hardware-in-the-loop solutions.

Concurrent continued to make strides with these products in these markets with an outstanding product suite, featuring its Series 700 and new Linux operating tools. With our experience and our sights on the future of real-time computing, Concurrent continues to deliver what our customers want. 

Raytheon PATRIOT Missile Improves Guidance Simulation with Night Hawk® System

Raytheon Company/Electronic Systems recently purchased a Night Hawk computer system for its Phased Array Tracking to Intercept of Target (PATRIOT) Guidance Test and Simulation Facility (GTSF). GTSF is a dynamic hardware-in-the-loop flight facility that provides real-time, end-to-end simulation of the PATRIOT system. According to Larry Stolz, GTSF lead, the Night Hawk is the key ingredient in improving the guidance simulation capability for the PATRIOT program, and its reception at Raytheon is the pivotal step in the next phase of the GTSF's evolution.

The computer comprises eight CPUs, over two gigabytes of RAM, and five VME cages that hold the I/O cards, which will form the new central nervous system of the GTSF.

Concurrent's Night Hawk replaces a multiprocessor VAX mainframe and several PCs that served as the Target Model, Simulation Executive, and Radar Model for the facility's guidance simulation. During the proposal process, the Raytheon Six Sigma analysis of failure rates experienced during the ongoing PATRIOT Anti-Tactical Missile (ATM) Capability 3 (PAC-3) preflight testing effort was used to justify the Night Hawk purchase and to estimate long-term cost savings. Failure rates were linked to equipment age, lack of processing power, and human errors resulting from the multiple-machine distributed system architecture.

The Night Hawk addresses these issues by providing one centralized system that will start off all other processes, dramatically decreasing system load time and operator error. With the Night Hawk's state-of-the-art technology and an all Commercial-Off-The-Shelf (COTS) hardware configuration, maintenance issues resulting from the previous hodge-podge of COTS and custom-designed hardware become moot. Additionally, Concurrent's maintenance support contracts cover all system hardware and software, greatly reducing downtime. Finally, the pure processing power of the Night Hawk provides the headroom needed

to meet Raytheon's simulation growth requirements for the foreseeable future.

According to Stolz, more important than the technical specifications of the Night Hawk is the


promise it holds for the future of GTSF. A team of six engineers is dedicated to integrating GTSF and the pre-planned improvements utilizing Concurrent's Night Hawk system should provide exciting work for another two years. The GTSF is the premier PATRIOT missile hardware-in-the-loop test facility and, when completed, "Project Night Hawk" will ensure its quality of service to the customer well into the twenty-first century. 



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Concurrent Displays at ITEC 2000

At ITEC2000 (International Conference, Exhibition and Network for Training Education and Simulation), Concurrent featured its versatile Power Hawk real-time systems. Held April 11-13 at the Netherlands Congress Center, this premier conference is Europe's largest simulation and training industry conference. This year's conference attracted more than 2,000 training and education technology specialists.

By offering a fully integrated real-time solution including hardware, software, graphics, and real-time tools for both low- and high-end applications, Concurrent demonstrated complete solutions to customers from around the world.

Over the three-day conference, Concurrent's booth generated significant interest from attendees, confirming that the multi-processor Power Hawk is still the worldwide leader in real-time computing today. 




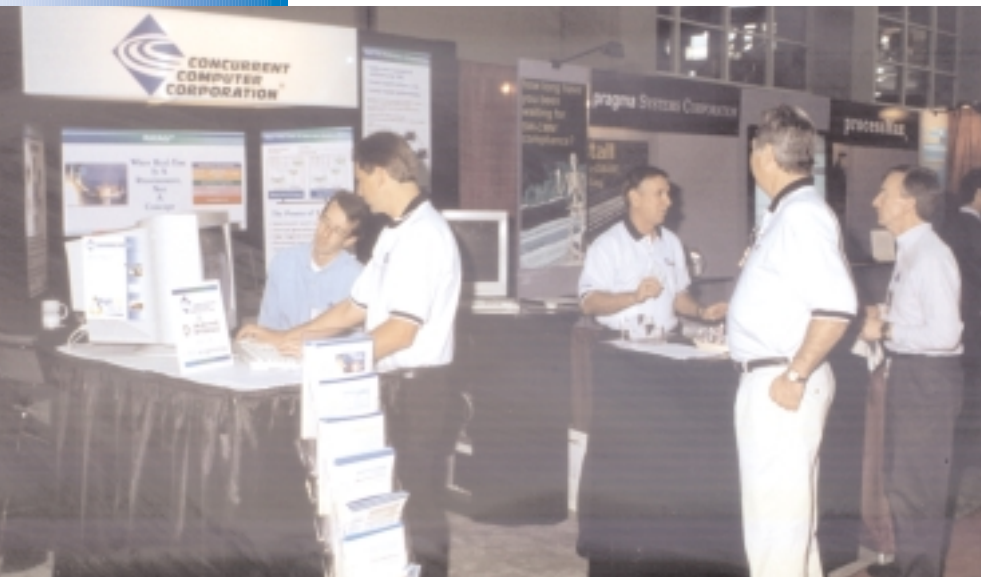
Concurrent displays its leading real-time solutions at ITEC2000.

Concurrent Holds Prominent Presence at Annual STC Show

With years of experience in meeting the stringent demands of critical military applications, Concurrent once again took part in the annual STC show May 2-3 in Salt Lake City, Utah. STC, the leading Software

Technology Conference, is co-sponsored by the Dept. of the Air Force, Dept. of the Army, Dept. of the Navy, Defense Information Systems Agency (DISA), and non-federal co-sponsor the Utah State University Extension.

Concurrent invited attendees to experience "real-time" solutions, attracting numerous people to its booth with its PowerWorks Linux Development Environment (LDE), MAXAda, and OrbExpress demonstrations. Concurrent's 33 years' of proven real-time experience was compelling in this forum. Software professionals from around the world attended the show to increase their awareness and understanding of effective software technologies, exchange knowledge, and receive the latest software strategies from leaders in the field. More than 3,000 attendees participated in this year's event, including representatives from the Air Force, Army, Navy, Marine Corps, DISA, and other government agencies, industry and academia. 



Concurrent attracts significant interest with its PowerWorks LDE, MAXAda, and OrbExpress displays at annual STC show.

Kiowa Warrior Helicopter Training Program Takes Off with Concurrent Computer Systems

EER Systems, Inc. recently purchased ten additional PowerMAXION™ 6404 computers. Three were for its OH-58D Kiowa Warrior (helicopter) Crew Station Mission Equipment Trainer (CSMET) Program, and seven were for its OH-58D Kiowa Warrior Cockpit Procedures Trainer (CPT) Program. EER Systems also purchased eight Power Hawk 640 systems for the Kiowa CPT application. The Kiowa Warrior CSMET and CPT programs are being produced for the U.S. Army's Simulation, Training, and Instrumentation Command (STRICOM) in Orlando, Fla. The CSMET units are being fielded around the world.

Concurrent's PowerMAXION systems successfully met the performance goals established in development and early production phases of this program. Earlier this year, EER Systems, Inc. purchased 12 PowerMAXION 6404 systems. PowerMAXIONs handle CSMET and CPT program real-time tasks that include flight simulation, pilot/copilot inputs, image

generator commands, DIS interface, graphics and touch screens, and aural cueing commands.

A reconnaissance and multi-purpose helicopter, the two-seat, single-engine OH-58D Kiowa Warrior can reach speeds of 125 knots. When armed, it can be used for aerial reconnaissance, aerial security, target acquisition, command and control, defensive air combat, and multi-purpose helicopter contingency applications.

As a result of Concurrent's continued commitment to the program and experience in configuring the trainer system, Concurrent has acquired an in-depth knowledge of the Army's CSMET and CPT requirements. Concurrent's history with the customer, reputation of superior product performance, and extensive customer support contributed to EER System's selection of Concurrent as the source for real-time computers for Kiowa trainers. EER's continued selection of Concurrent is confirmation of a textbook lesson in working together to get the job done.



Concurrent 2000 Training Schedule

Concurrent's Technical Education Center offers both introductory and advanced level courses for Concurrent software and hardware products. Courses are taught by professional instructors with vast field experience. The following schedule includes courses that will be taught November 2000 through June 2001.

Software – Fort Lauderdale, FL

PowerMAX OS System Administration
 January 29 – February 2
 March 12-16
 May 21-25

PowerMAX OS Real-Time Programming
 February 26 – March 2
 May 7-11

PowerMAX OS Real-Time Tools

March 5-9
 May 14-18

CXUX System Administration
 On Request

Hardware – Fort Lauderdale, FL

UNIX Software Overview
 November 27 – December 1
 June 4-8

5000 Series System Maintenance
 June 11-22

Night Hawk Hardware Overview
 January 22-26

PowerMAXION System Maintenance
 December 11-22
 April 23 – May 4

Power Hawk System Maintenance

December 4-8
 March 26-30

MAXION System Maintenance
 On Request

Series 3200 – Oceanport, NJ

The following classes will be scheduled upon customer request:

OS/32 System Operations I & II
 3200-400/600 Maintenance
 3200-400/600 Transition
 3200-850 Transition
 3200-85 Maintenance
 3280 MPS Maintenance

For additional information about courses or registration, please visit our Website at www.ccur.com or call us at 1-800-245-6453


Concurrent Introduces Power Hawk Series 700

Continued from page 1

The Series 700's PowerPC G4 CPU is the first microprocessor that can deliver sustained performance of over 1 Gflop. The G4 can process data in 128-bit segments rather than the 32-bit or 64-bit segments of traditional processors. The G4's AltiVec vector instruction set performs 4, 8, or 16 calculations in a single cycle, providing IEEE floating point performance four times faster than non-vector processors.

Power Hawk Series 700 is supported by Concurrent's field-proven PowerMAX OS, a real-time UNIX®-based operating system enhanced to provide the determinism and performance needed for mission-critical applications. Included with PowerMAX OS is a complete set of GUI tools for simplified development of application

software. Optimized compilers for ANSI C/C++, Fortran, and Ada95 are available. Application processes executing on any CPU board can share data, send messages, generate interrupts, and respond to interrupts from processes running on any other CPU board. Processes can also access a common synchronized clock source.

Rob Menzel, VP of Concurrent Real-Time Sales and Marketing, stated, "Concurrent is pleased to offer this newest Power Hawk to our customers. We believe the four-processor model 740 will be a big seller. It addresses a major need for a high-performance, single-board SMP solution for many simulation and data acquisition programs." 

**Closely- & Loosely-Coupled Systems
Multiple Chassis with 2 to 32 CPUs**

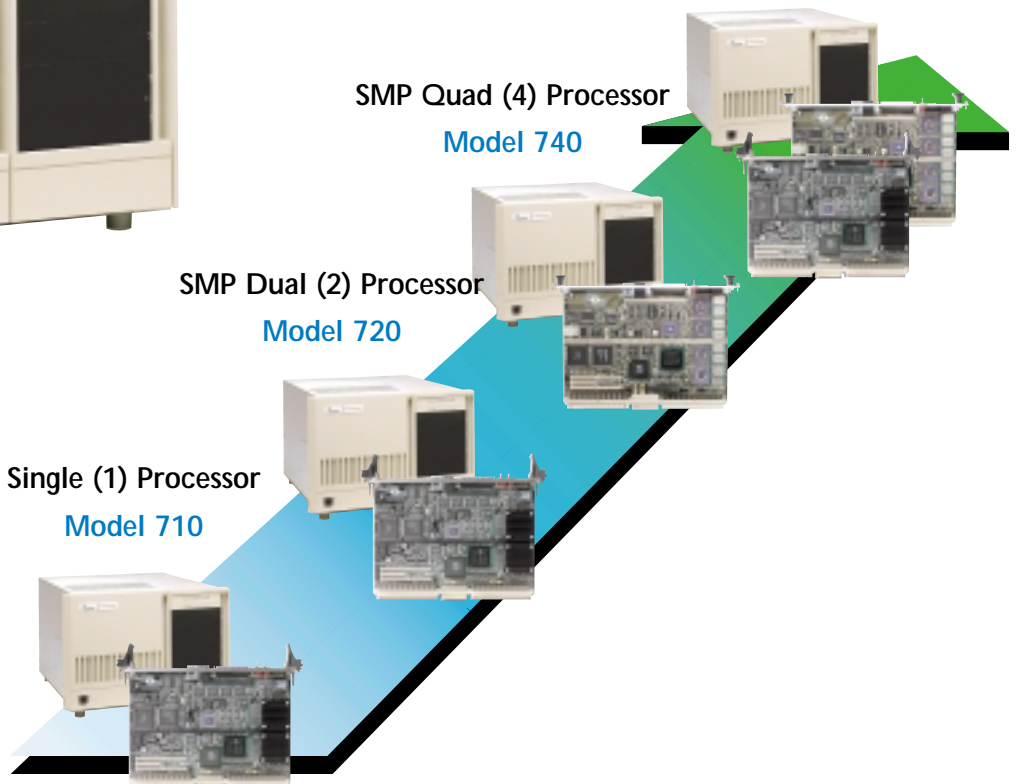
Model 720 and Model 740



**SMP Quad (4) Processor
Model 740**

**SMP Dual (2) Processor
Model 720**

**Single (1) Processor
Model 710**




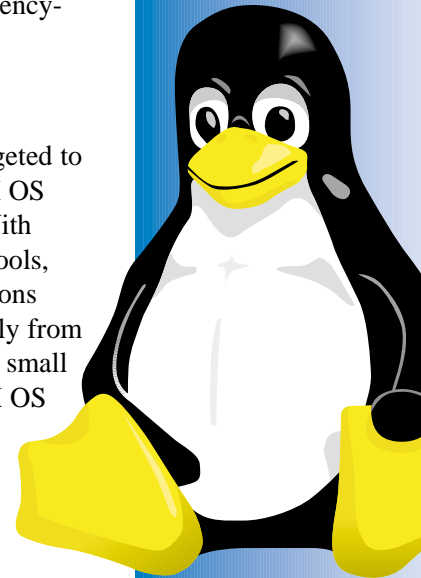
Concurrent Introduces PowerWorks™ Linux Development Environment

Concurrent's PowerWorks Linux Development Environment (LDE) allows users on a Linux PC to develop applications for any Concurrent PowerPC-based, real-time computer system. PowerWorks LDE offers the advantages of a desktop environment, while providing the extensive features of Concurrent real-time development tools and PowerMAX OS.

The PowerWorks LDE offers an easy and economical way to utilize the extensive features of Concurrent compilers and real-time GUI tools. The base product includes Concurrent's high-performance C/C++, Fortran, and Ada95 compilers; NightView symbolic debugger;

NightTrace event analyzer; NightSim frequency-based scheduler; and the NightBench GUI development environment.

Application programs are compiled and debugged directly on a Linux PC while targeted to a system running Concurrent's PowerMAX OS real-time UNIX-based operating system. With PowerWorks LDE real-time development tools, users can debug and monitor their applications running on a PowerMAX OS system directly from the desktop Linux PC. Each tool includes a small run-time agent that runs on the PowerMAX OS target system in a non-intrusive manner, preserving the deterministic characteristics of the application. 




Concurrent Ships Next Generation Family of High-Performance Series 3200

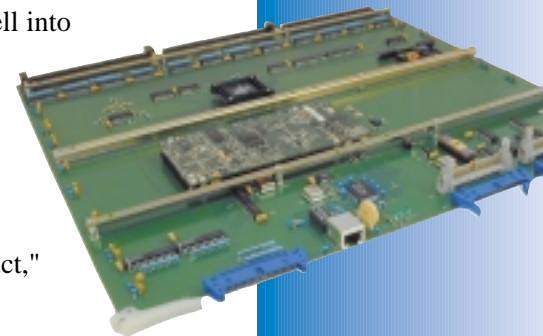
Concurrent recently shipped the latest addition to its family of real-time computing systems – the Model 3200-2000 next generation computer system. The Model 3200-2000 features improved computational speed, microsecond interrupt handling, high system I/O throughput, and extensive system connectivity. The 3200-2000 provides the response needed by today's mission-critical, high-availability application environments and, more importantly, retains all previous software to provide enhanced capabilities with no software changes.

This next generation 3200 offers up to four times the application computational performance of a Series 3200 Model 3280 processor and up to 17 times the performance of the Model 3212 processor. In addition, all system memory, floating point and DMA bus interfaces are provided directly on the 3200-2000 processor module, reducing maintenance and operating costs by offering key Series 3200 functionality on a single 17" board. The single-board engine features an industry-standard Motorola PowerPC processor with Flash-stored microcode software and includes a 233 MHz or 350 MHz PowerPC 750 processor; 64, or 128, MB of ECC memory; CDS/Console interface; one MUX bus interface;

and up to three DMA bus interfaces.

"Concurrent has provided upward compatibility in its Series 3200 product line from the first 32 bit mini computer introduced in 1974 to the current 3200-2000 product. This, along with its long-term support capabilities, maximizes our customers' investments. The overwhelming response for this product has started the process to develop other enhancements that will enable our customers to extend the useful life of this industry-leading product line well into the future. We have recently shipped 3200-2000 boards to customers in Europe and have a number of U.S. customers currently evaluating the remarkable performance enhancements of this new product," says Don Bauer, VP, Customer Services and Legacy Systems.

The Model 3200-2000 is fully compatible with the I/O subsystems of installed Series 3200 systems and is available as a complete computer system or as a processor board upgrade to previous Series 3200 systems. 



Concurrent Office Locations

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Michigan	248.355.3596
New Jersey	732.974.9622
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Washington	206.574.0014
Canada	607.748.5970
France	33.1.39.30.52.00
Germany	49.89.856.030
Japan	81.3.3864.5712
Spain	34.91.578.01.25
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Presidents' Club Members Celebrate with Weekend in Cabo San Lucas

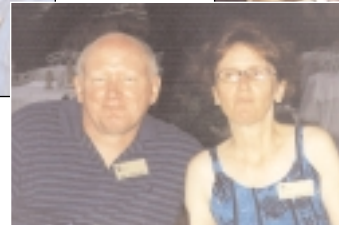
Concurrent's top performers are recognized each year for their significant contributions to the company's success. Members of Presidents' Club 2000 were rewarded for their achievements and many hours of hard work with four days in Cabo San Lucas, Mexico. From Sept. 14-17, members and their guests enjoyed the many activities offered in this exclusive locale.

The event was hosted by Steve Nussrallah, Concurrent President and CEO; Dan Dunleavy, President of Concurrent's Real-Time Division; and

Jack Bryant, President of Concurrent's XSTREME (VOD) Division. Real-Time honorees included:

Pat Archer, Jean-Marc Brangoulo, Bob Calzaretta, Brian Finegan, Jeff Hollensen, Bill Kahn, Jean-Pierre Leroy, Denny McWatters, Rob Menzel, and Dave Stanko.

Special Real-Time recognition goes to Bill Kahn, Salesman of the Year; Jean-Marc Brangoulo, Analyst of the Year; and Jeff Hollinson, Home Office Support Person of the Year.



Concurrent's top performers and their guests enjoy the sun, sand, and festivities offered in Cabo San Lucas.



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