
FAULT
ENABLED
ON LINE

1994 DISK/TREND INTERVIEW CHECKLIST

DATE __/__/__

Pyramid Technology Corp.

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Manufacturer type
__Arrays
__Disk drives
__Software
__Computer systems
__Subsystems
__Other _____

Licensees

__Specification worksheet

__Shipment Worksheet

Major customers

__Application Worksheet

Rev. 05/13/94

Servers & Databases

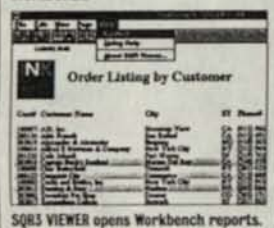
NEWS BRIEFS

MITI to ship SQR3 Workbench modules for administrators

MITI will ship in January two modules for its SQR3 Workbench procedural report writing environment, which lets database administrators create reports using MITI's Structured Query Report fourth-generation language.

SQR ReportMate gives program developers a Windows environment for coding reports, including a debugger and a layout window for parsing code in a drag-and-drop, WYSIWYG format.

SQR3 Viewer allows users to view and disseminate reports created by Workbench.

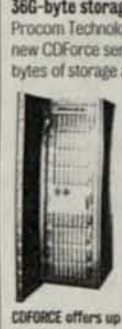


SQR3 VIEWER opens Workbench reports.

The modules are free to users of SQR Workbench, which is $525. Workbench runs on Windows 95, Windows NT, and Windows 3.x and can query most relational and flat-file data sources. MITI, of Long Beach, Calif., can be reached at (800) 366-6484 or at info@miti.com.

Procom CD system boasts 36G-byte storage, management GUI

Procom Technology Inc. is shipping a new CDForce server with up to 36G bytes of storage and centralized, GUI-based software to control disk monitoring and drive mounts and dismounts.



CDFORCE offers up to 36G bytes.

The server models include 14-, 21-, or 56-drive versions ranging in price from $16,995 to $43,995. CDForce runs on NetWare, OS/2, LAN Server, Windows NT Advanced Server, Solaris, SCO Unix, or AppleTalk.

CDForce is available now from Procom. The Irvine, Calif., company is at (800) 800-8600 or at http://www.procom.com.

BRIEFLY NOTED

AT&T EasyCommerce Services will ship next quarter AccessPlus 3.0, designed to improve the functionality of AT&T Mail. ■ **IBM** has created a Decision Support Solutions unit to offer systems integration and consulting services to data-warehouse customers. ❑

Enterprise strategies take hold

BY PC WEEK STAFF

Client/server technologies continued to put computing into the hands of users in 1995 and, in doing so, showed signs of inheriting the traditions of its mainframe forebears.

Data warehousing was discovered, or perhaps rediscovered, as rising IT costs and corporate downsizing created the need to give decision makers direct data access. To keep pace, database vendors acquired or developed technology to meet those needs.

Large-scale enterprise messaging platforms from Lotus Development Corp., Microsoft Corp., and Novell Inc. suffered delays, but despite a slow start following IBM's purchase of Lotus, Notes seems poised to affirm its lead.

Server manufacturers, preparing for the arrival of the P6 processor, tried to shake the file-and-print label historically attached to Intel Corp.-based servers and vied for a piece of the high-end application-server market dominated by RISC/Unix systems. In addition, vendors worked to build in more scalability and relieve I/O bottlenecks, while Compaq Computer Corp. mapped out an enterprise strategy for the first time.

LOOK BACK 95

As the year came to a close, each segment of the server and database market outlined ways to connect all the parts together over the Internet. That trend shows no sign of slowing in 1996.

RESTOCKING THE WAREHOUSE

Data-warehousing technologies, which help migrate and prepare legacy data for user analysis—still an essential process for mainframe database administrators—are now in the hands of users in emerging client/server environments.

"[The user] is getting more and more ability to sit down and ask the machine a question without raising the people costs [of administration]," said James Rader, manager of integrated booking information systems for television at Intelsat, in Washington.

Vendors of decision-support system tools became hot commodities as database players went on the acquisition trail to buy into the market. Oracle Corp. bought IRI Software; Informix Software Inc. purchased Stanford Technology Group Inc. But Sybase Inc. announced it would develop its own online analytical processing engine.

Middleware for connecting front ends to a variety of disparate back-end data sources, including legacy systems, also became an essential element of enterprisewide warehouses. Microsoft acquired Netwise Inc., and IBM expanded its gateway product line. Oracle, with its Open Gateways, and Sybase, with its OmniConnect product, dusted off connectivity

SEE ENTERPRISE, PAGE 35

DATABASE PENETRATION

Market penetration among major DBMS vendors

*Sites planning to increase their commitment to product, or purchase product for first time
Source: Sentry Market Research survey of 700-plus IT sites nationwide

IQ ships IQ/Objects 5.1, preps OLAP tool

BY BEN PHILLIPS

IQ Software Corp. is shipping an upgrade of its IQ/Objects object-based query and reporting tool and a Windows NT server version of its query processor.

IQ also plans to release an object-based OLAP (online analytical processing) application, code-named Vision, early next year.

Vision will use an OLAP engine licensed from Sinper Corp. to build aggregates from both relational and multidimensional databases.

New features in IQ/Objects 5.1 are automatic table-join definitions, improved complex join paths handling, and multiple-aggregate cells in multidimensional crosstabs.

IQ/Objects defines query components as reusable objects with which users can quickly build complex decision-support reports. By leveraging an object's ability to pass on attributes to another, users can issue queries that automatically use the results to build a secondary query.

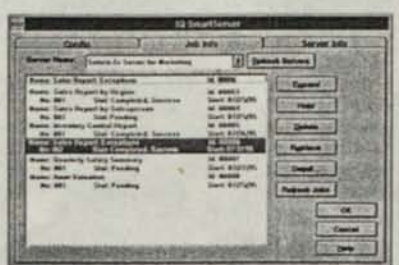
"I wasn't impressed with their product before," said Jim Reynolds, a consultant to AT&T Wireless Services, in Redmond, Wash., explaining that IQ/Objects 5.1 boasts significantly improved performance. "And drag-and-drop [form creation] was definitely a selling point."

IQ/SmartServer allows users to deploy a three-tier architecture. The application automatically distributes the query processing load between client and server to provide maximum performance and reduce network traffic.

"We evaluated several packages, but we'll buy IQ/Objects because of SmartServer," said Maria Richards, an IT consultant to Government Technology Services Inc., in Chantilly, Va.

IQ officials say they plan to develop an API for IQ/SmartServer, allowing connectivity to query tools other than IQ/Objects.

Both IQ/Objects and IQ/SmartServer use Open Database Connectivity to extract data from most relational databases.



IQ/SMARTSERVER lets users deploy three-tier architectures.

IQ/Objects 5.1 is available on NT, Windows 95, and Windows 3.x platforms, priced at $695. A database administrator's version costs $995, and a scaled-down version costs $250. IQ/SmartServer is already available on major Unix platforms; the NT version costs $5,000.

IQ, of Norcross, Ga., can be reached at (800) 458-0386 or at http://www.iqsc.com. ❑

Pyramid builds up new Reliants with more speed

BY STEPHANIE LAPOLLA

Pyramid Technology Corp. revved up its Reliant family of servers with new models that include faster processing speeds, a PCI bus, and a new dual-processing machine.

The new C series includes the single-CPU desktop graphics server RM200 C for three-dimensional and multimedia processing and the quad-processing RM400 C for database applications, both of which replace existing models.

The new RM300 C adds a dual-processing machine to the mix as a workgroup server.

All of the models use MIPS Technologies Inc.'s R4000-class of RISC processors running at either 133MHz or 200MHz clock speeds. The MIPS processors provide a 64-bit system bus with up to 528M-byte-per-second throughput, said company officials in San Jose, Calif.

The C series also provides an upgrade path that is not available in the current models.

"The new [servers] have an upgradable chip set, so that if I wanted to grow my business or expand the number of users, I can go from the current [MIPS] R4400 chip set to the R10000 with just a chip replacement," said Syd Farber, technical consultant at Wang Laboratories Inc., in Tewksbury, Mass.

In addition, all of the systems in-

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Enterprise

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middleware for inclusion in warehousing schemes.

DBMS vendors also pushed new products designed to offer server-level functions to small workgroups. Informix scaled down its DBMS architecture, while Sybase rewrapped the Watcom database acquired with Powersoft Corp.

MESSAGING: SIGNS OF LIFE

With its $3.5 billion acquisition of Lotus in June, IBM professed to an army of concerned customers that it would leave Lotus, as well as Notes and cc:Mail, alone. And as the third major upgrade of Notes, Version 4.0, goes to manufacturing, Lotus seems poised to retain its market edge.

One benefit IBM brought to the table was economies of scale: Lotus announced in mid-December a 55 percent price cut on the Notes Desktop client, to $69, and introduced an even cheaper Notes Mail client, at $55.

"IBM has resisted the temptation to spoil the pot. Not only has IBM not put its hand in there and slowed down the Lotus charter, but the change in Lotus management has been very positive for the product line and customers," said Eric Brown, a senior analyst at Forrester Research Inc., in Cambridge, Mass. "Before, Lotus wasn't in a position to take great risks. Now [it] can be more aggressive and adventurous."

Microsoft, meanwhile, once again stumbled in the messaging market, failing to deliver its first client/server E-mail system, Exchange. The decision to include client/server replication in Exchange 1.0 is one of the factors that has delayed the release of the Exchange client and server until the end of the first quarter.

Novell also announced delays in shipping the beta of its client/server version of GroupWise, GroupWise XTD, until the first quarter; a second-quarter ship date is now forecast. The system is expected to feature real-time replication, a Windows NT server, and built-in workflow from FileNet Corp., company officials said.

SERVERS AT YOUR SERVICE

Server vendors sought to make standard hardware more attractive to buyers with bundled management software, operating systems, and service and support contracts.

As market-leader Compaq continued to build upon its Insight Manager server administrative software, Hewlett-Packard Co., Digital Equipment Corp., Dell Computer Corp., and AST Research Inc. added management software to Intel-based servers.

"In 1995, server [vendors] began to take the view that a server is more than a piece of hardware," said John Dunkle, president of Workgroup Strategic Services, in Portsmouth, N.H.

Compaq joined the likes of IBM and HP by announcing in the fall that it had signed DEC as its global service and support provider. Compaq's systems strategy will be built on a partnership with Cisco Systems Inc. and the acquisitions of Thomas-Conrad Corp. and NetWorth Inc.

As servers and hard-disk drives increased in speed, the 20M-byte-per-second SCSI interface became a bottleneck. As a result, two new interfaces surfaced: the 80M-byte-per-second Serial Storage Architecture and the 100M-byte-per-second Fiber Channel Arbitrated Loop. ◘

Reported by Ben Phillips, Paula Rooney, and Stephanie LaPolla

Pyramid

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clude PCI (Peripheral Component Interconnect) and EISA buses, support for either the company's SINIX Unix-based operating system or Microsoft Corp.'s Windows NT, and a Redundant Arrays of Inexpensive Disks controller supporting levels 0, 1, and 5.

The entry-level RM200 machine supports up to 256M bytes of main memory and 100G bytes of storage; the high-end RM400 supports up to 1G byte of memory and more than 300G bytes of storage.

PYRAMID'S RM400.

The C series will ship in January from resellers and the company. Pricing starts at $11,000 for the RM200, $35,000 for the RM300, and $112,000 for the RM400.

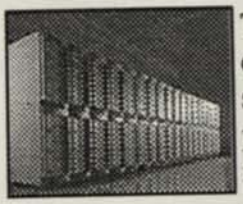
Pyramid, of San Jose, Calif., can be reached at (408) 428-9000 or at http://www.pyramid.com. ◘

ARRAYS

Hardware

The most powerful parallel server family in the world!
Since 1983 Pyramid has been a pioneer in the development and delivery of high-end commercial UNIX systems employing multiple RISC microprocessors. Today Pyramid delivers the most powerful parallel server family in the world. Pyramid/SNI is the ONLY company to provide a complete range of high-performance, continuously available, binary compatible SMP (symmetric multiprocessor) UNIX servers, as well as the latest MPP (massively parallel processor) technology with the option of having the best of both worlds! With Pyramid/SNI you can combine these SMP and MPP technologies into a SINGLE ENTERPRISE SYSTEM utilizing the revolutionary "mesh" interconnect. No other company provides this flexibility in designing data center class UNIX systems for large transaction processing, data warehousing , video services and enterprise messaging.

All Pyramid servers utilize MIPS RISC microprocessors and a commercial version of SVR4 UNIX, allowing you to easily upgrade and/or combine SMP and MPP processors as desired to fit your specific application environment. Additionally, Pyramid UNIX servers feature numerous fault-tolerant and fault-resilient technologies to provide superior RAS (reliability, Availability and Serviceability).

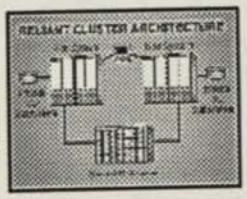


The Reliant1000 is ideally suited for all applications that can take full advantage of distributed parallelism such as decision support. The Reliant RM1000 combines the strengths of both SMP and MPP technologies with its high band-width, scalable mesh processor interconnect. This interconnect fabric allows for integration of MPP CPU nodes, Nile SMP servers, RM600 SMP servers and integrated disk arrays into one enterprise system.

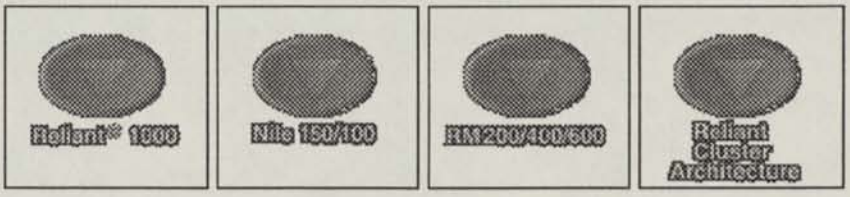
The Nile Series is targeted at the high-end UNIX SMP marketplace, and represents one of Pyramid's latest generation of fault tolerant technologies. It is the industry's highest performing and available alternative to proprietary mainframe technology. The Nile Series is targeted at data centers where RAS is of prime importance and where hundreds of users and dozens of gigabytes of data must be supported. Nile Series systems may be connected together into Reliant Clusters to provide continuous availability.

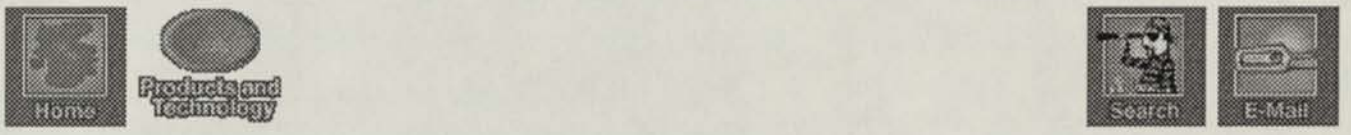
The RM200/RM400/RM600 line of commercial UNIX servers provides scalable performance from the desktop to the data center. In certain configurations, these servers can be integrated into Pyramid's Reliant RM1000 combined SMP/MPP enterprise system.

The Reliant Cluster Architecture offers a complete set of features to extend the availability of a single server. The Reliant Cluster Architecture guards against faults through a redundant design -- multiple Pyramid systems, mirrored data, multiple path access to storage media, and multiple network communication channels -- to eliminate single points of failure. The Reliant Cluster Architecture also provides automatic



switchover and continuous database capabilities to greatly speed the recovery time of an unexpected failure. These features combined offer resilience to hardware, software, and network failures and minimize the impact of a non-operational system.





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PYRAMID® TECHNOLOGY
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About Pyramid

PYRAMID® TECHNOLOGY

DATA SHEET

RELIANT RM1000

A new generation of high-end decision support and data warehousing applications is transforming how users access corporate databases. These applications, combined with powerful, new open parallel processing databases such as Oracle and Informix are enabling users to "mine" the data. This leads to valuable new insights about trends, competitive threats, and potential market opportunities.

Utilizing these powerful, new applications requires a computing system that goes beyond support for today's on-line transaction processing (OLTP) applications. It requires a system that offers a massively parallel design optimized for large-scale decision support – one whose structure allows additional I/O capacity and memory to be added as processing power is increased.

The Reliant® RM1000 Parallel Server introduces enhanced capabilities, including unprecedented parallel database transaction performance, enhanced scalability and continuous resource availability. The Reliant RM1000 Server is a robust and powerful computing system that scales up to hundreds of processing nodes and supports more than ten terabytes of on-line information.

Applications such as decision support, messaging and video server technology take full advantage of the new architecture's distributed parallelism to achieve new levels of performance. The Reliant RM1000's high-bandwidth, scalable mesh interconnect also provides for the integration of the Pyramid Nile™ Series, thereby combining the strengths of SMP and MPP technology. This evolutionary architecture ensures investment protection and allows you to build a single system which supports all application types including OLTP and DSS.

Reliant® RM1000: A Continuously Available, Fully-Scalable System

Delivers tens of terabytes of high performance, highly available disk capacity

Revolutionary mesh interconnect enables performance scaling with aggregate bandwidth, expanding as more nodes are added to the system

Provides a compact, easy to manage intelligent disk farm for SMP and MPP processors

On-line service including hot-swappable CPUs, disk drives, fans and power supplies

Integrates with Nile Series for optimized SMP and MPP

Massively parallel design ideal for new generation of applications such as decision support (DSS) and data warehousing

Supports parallel database functions

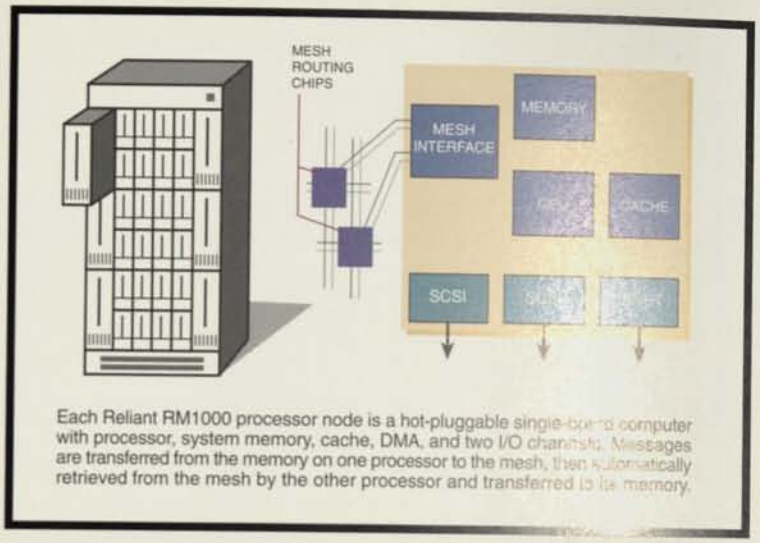
Supports an enhanced TCP/IP which groups processor nodes together

Preserves software and hardware investments by offering binary compatibility with Pyramid DC®/OSx™ on all MIServer® ES and S Series™ and Nile Systems

Breakthrough distributed parallel processor technology – from the industry leader in delivering high-end UNIX enterprise servers

Reliant RM1000 is distinguished by three key capabilities:

- It offers both *scalable performance* and *capacity*. With Reliant RM1000, processing power, memory, I/O, and communications capabilities grow in concert as the system is expanded. When you add a processor node, you automatically increase all critical performance factors – eliminating bottlenecks commonly found in other high-performance systems. The Reliant RM1000 can be scaled, beginning with one processor and expanding to hundreds.
- It offers *reliability, availability, and serviceability*. Reliant RM1000 supports Pyramid's stated goal of a 7X24 continuously available system with hot-swappable processors, disk drives, fans, and power supplies. Reliant RM1000 also offers online maintenance, enabling you to service and upgrade both hardware and software without shutting the system down.
- It offers *investment protection*. A high percentage of a computing system's cost of ownership is typically consumed with application development, maintenance, and servicing. Because Reliant RM1000 uses the same chassis, operating system, processor technology, and disk drives as Pyramid's Nile computer, integrating massively parallel computing is a relatively painless process.

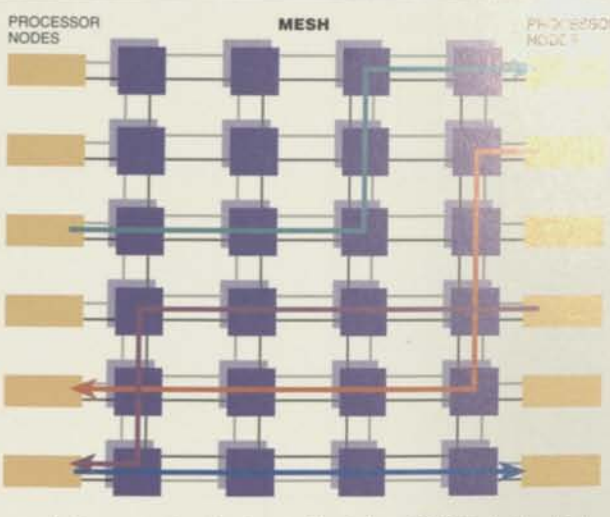


Each Reliant RM1000 processor node is a hot-pluggable single-board computer with processor, system memory, cache, DMA, and two I/O channels. Messages are transferred from the memory on one processor to the mesh, then automatically retrieved from the mesh by the other processor and transferred to its memory.

ELIMINATING THE I/O BOTTLENECK

On many high-performance, multiprocessing computers, the law of diminishing returns applies beyond a certain number of processors. This is because in *shared-everything* architectures, the memory and I/O bandwidth can become overloaded as more processors compete for shared resources.

Reliant RM1000 overcomes this limitation because as you add processor nodes to the system, you also add additional, independent I/O buses and memory. Each processor board contains its own 64-bit MIPS R4400 microprocessor, copy of the operating system, memory, cache, communications interface, and two fast-and-wide SCSI-2 I/O buses. The result is a dramatic



The mesh interconnect is at the heart of the Reliant RM1000. It offers high bandwidth and excellent scalability. This mesh interconnect simultaneously routes messages between multiple processor nodes. Messages flow throughout the mesh in parallel without CPU intervention from the sender's to the receiver's memory.

RELIANT RM1000 FEATURES

CELLS

Reliant RM1000 is based on modular cabinets called cells. Cells can be stacked two high and connected side-by-side to build larger configurations.

Each cell supports:

- 6 nodes
- 24 disk nodes
- Control and environment node
- Redundancy cooling
- 4 internal SCSI busses
- 4 external SCSI busses
- 6 Ethernet interfaces
- 2 5.25" HH SCSI slots (for use with tape devices at initial release)

Each cell features:

- Redundant mesh networks
- N+1 power supplies and redundant disk fans. Power supplies and fans can be replaced on-line.
- Compute nodes can be replaced on-line.
- Software RAID and/or mirror disks
- Disk nodes can be replaced on-line.
- Control and environment node can be replaced on-line
- Static dual-hosted SCSI busses (if one CPU fails, the other CPU on the SCSI bus automatically provides access to the devices)

PROCESSOR NODES

Each processor node features the following:

- 64-bit R4400 CPU with 16 Kilobytes of primary instruction and data caches
- 1 or 4 MB secondary cache with single-bit correction and double-bit error detection
- 128 or 256 MB of DRAM memory with single-bit correction and double-bit error detection
- Network interface to redundant mesh networks
- Two fast-and-wide SCSI-2 busses
- One 802.3 10 MB Ethernet interface
- Service network interface
- Support functions including EEPROM and non-volatile RAM, service and history recording functions
- Redundant cooling fans
- Packaged in a modular, online, field-replaceable unit

MESH NETWORK

- Aggregate mesh network bandwidth grows as the size of the mesh increases.
- Redundant to increase system availability and performance

SERVICE NETWORK

The Reliant RM1000 includes an extensive service network that is based on Echelon LONWORK's Network and Echelon Neuron distributed control microprocessors. This network ensures rapid fault diagnosis and isolation. The network comprises the following:

- Intra-cell network provides control and sense functions internal to each cell.
  - Disk node front panel LED control
  - Power supply status
  - Disk drive cooling fan status
- Global synchronized clock

SOFTWARE

Operating system	DC/OSx: Commercial version of UNIX System Laboratories SVR4
Disk array	Virtual disk with RAID 0-5 capabilities
Languages	C, C++, COBOL, Fortran
Applications	Broad range of applications and tools available through Pyramid's partner solutions program
Databases	Oracle7 is currently available and Informix 8.0 will be available
Networking	TCP/IP enhanced for distributed parallel environment, NFS, SNMP, NetWare, Lan Manager, OSI, FTAM, CMIP, DCE
System Management	MESH Visual Manager (MVM), visual system manager (VSM I and II), performance monitor

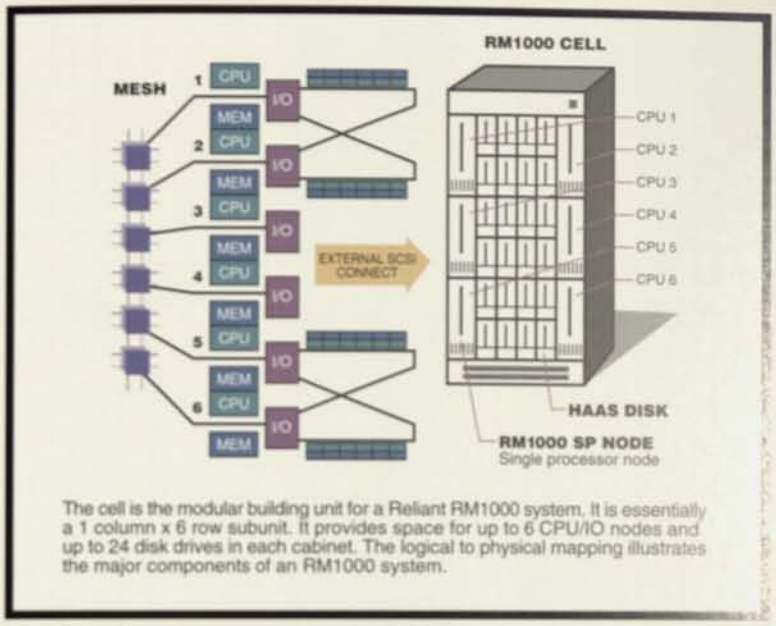
increase in both processing power and I/O throughput as each new processor node is added.

In addition, the processor nodes are linked together with a revolutionary mesh interconnect. This high-bandwidth, scalable interconnect simultaneously routes messages between multiple processor nodes. Messages flow throughout the mesh without processor intervention from the sender's to the receiver's memory. A hardware-generated, message-checking protocol ensures reliable message delivery.

The elegance of Reliant RM1000 is its scalability, starting with as little as one processor node and expandable to hundreds. Each Reliant RM1000 cabinet holds six processor nodes and as many as 24 hot-swappable disk drives. Many cabinets can be connected together delivering tens of terabytes of high performance, highly available disk capacity.

A MACHINE YOU CAN COUNT ON

Most traditional scientific MPP machines are not designed for the rigorous demands of commercial computing. But Pyramid understands the special needs of this market, which is why we designed Reliant RM1000 as a 7 X 24, continuously available system with hot replaceable CPUs, disk drives, fans, and N+1 power supplies.



The cell is the modular building unit for a Reliant RM1000 system. It is essentially a 1 column x 6 row subunit. It provides space for up to 6 CPU/IO nodes and up to 24 disk drives in each cabinet. The logical to physical mapping illustrates the major components of an RM1000 system.

The Reliant RM1000 network contains two complete, independent mesh interconnects that offer redundancy and additional bandwidth. The processor nodes use both meshes when communicating among nodes. In the event of a component failure within one mesh, traffic is routed to the other. This redundancy ensures that there is always a communication path between operational nodes.

SIMPLE INTEGRATION OF SMP AND MPP

Pyramid continuously seeks to protect its customers' technology investments, and Reliant RM1000 is no exception. In fact, the Reliant RM1000's chassis is the same one currently used in the disk subsystem of Pyramid's Nile enterprise servers, called the HAAS-3. This disk subsystem is field proven and tested. To integrate Reliant RM1000 with the HAAS-3, you simply replace the Nile I/O controllers with a single Nile-to-mesh interface and add Reliant RM1000 processor nodes. The elegance of this upgrade and integration is that both machines also use the same operating system – Pyramid's DC/OSx,a version of UNIX SVR4. Reliant RM1000 also uses the same processor technology and disk drives. The result: little disruption to your existing computing operations. The integration of Nile series SMP nodes and RM1000 MPP nodes provides the ultimate flexibility in configuring an enterprise server that supports various application types such as OLTP and DSS.

SYSTEM MANAGEMENT ENHANCES RELIABILITY AND AVAILABILITY

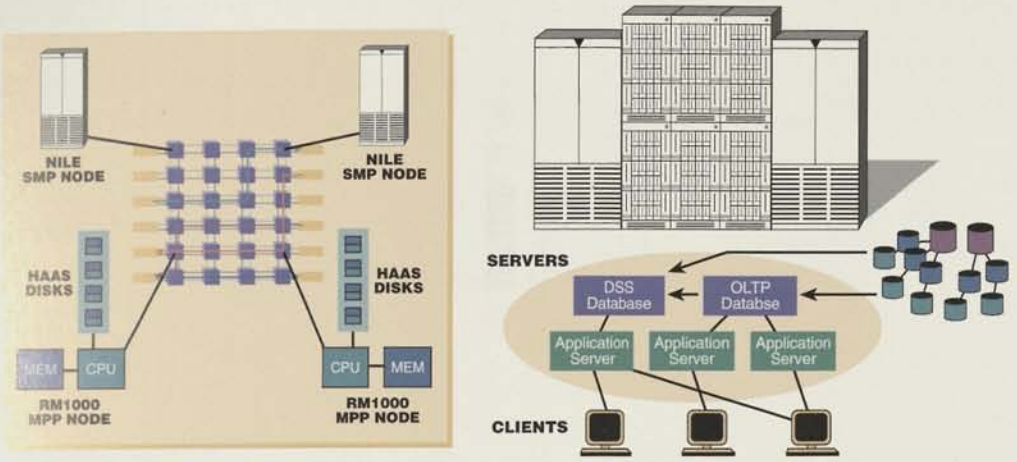
Pyramid and its partners offer a comprehensive suite of software products that improve the operations and deployment management of parallel systems, enhancing reliability and predictability.

OPERATIONS MANAGEMENT

The Reliant RM1000 operating system includes utilities for collecting and monitoring system usage information regarding CPU, I/O, networking, NFS, and memory activities. Using reports from these utilities, administrators can analyze the current performance of the system to determine load-balancing and system-tuning strategies.

Also included is an automated backup system called Pyramid Alexandria that allows you to backup and restore multiple disk volumes in parallel. Alexandria manages every aspect of the Reliant RM1000 backup and archival storage, from automatically starting scheduled store operations to managing data, media, and tape libraries. An intuitive graphical-user interface (GUI) simplifies operations.

Complementing these Pyramid products are a host of Pyramid partner products in the areas of job scheduling, storage management, and application management.



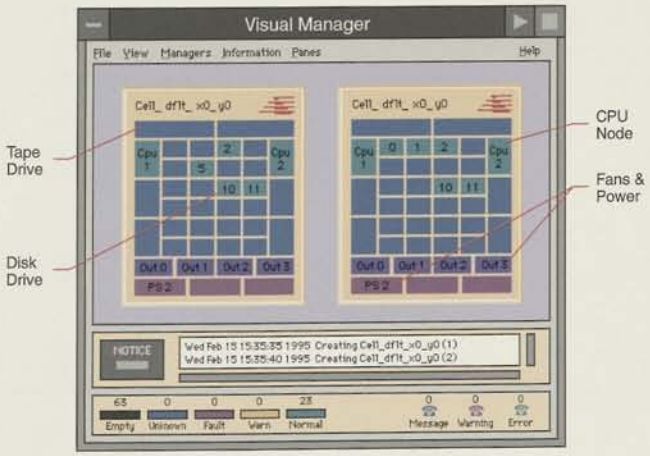
Pyramid's integrated SMP/MPP environment provides scalability for incorporating all or part of the data center server functionality. Nodes may run independent applications/databases. RM1000 nodes may be used as Parallel query engines, mass storage controllers or scalable applications front-end.

DEPLOYMENT MANAGEMENT

The Reliant RM1000 Visual System Manager™ is a GUI software package that replaces traditional character-oriented UNIX utilities. It allows easy resource management that would otherwise be impractical on a massively parallel system. Operations can be performed over multiple nodes, tape devices, storage devices, printers, the file system, kernel, user and group configuration, and error messages.

FROM SMP TO MPP TO DATA CENTER-CLASS SUPPORT

The world's most demanding UNIX applications today run on Pyramid platforms. These platforms include SMP, clustering, and now massively parallel processing, and combine an advanced UNIX operating system with RISC processor technology. But beyond technology, Pyramid provides the full level of data center-class support that your business-critical environment demands. Pyramid offers a comprehensive suite of professional products, services and support tools that help you successfully implement scalable enterprise computing.



Intuitive graphical user interface (GUI) for performing system administration tasks.

"We are pleased that our cooperative engineering efforts, as the development partner on this project, have enabled Oracle to be the first parallel database available on the Reliant RM1000 Server."

Jerry Baker
Sr. V.P. Product & Platform Technologies
Oracle Corporation

PYRAMID® TECHNOLOGY

SPECIFICATIONS

PHYSICAL

Dimensions (per cabinet)	Height 36 in. (91 cm), width 19 in. (48 cm), depth 38 in (97 cm)
Weight (per cabinet)	450 lbs (204 kg) fully loaded
Temperature range (recommended operating)	20 degrees to 30 degrees C (68 degrees to 86 degrees F)
Sound level (maximum configuration)	60 dB maximum

MAIN CABINET POWER

AC service	90 to 264 VAC, 50 to 60 Hz (single cabinet) 180 to 264 VAC, 50 to 60 Hz (maximum config)
AC current	12 A at 120 V each receptacle (single cabinet) 24 A at 220 V each receptacle (maximum config)
Heat dissipation	4000 Btu per hour (single cabinet) 32,000 Btu per hour (maximum config)

REGULATORY APPROVALS

UL-1950
CSA-950
IEC-950 (TUV)
VFG 243/1991 and CISPER 22B
IEC 801-2-3-4
IEC 555-2
FCC Class "A" Self Certification

Specifications are subject to change without notice.

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NEWS RELEASE

PYRAMID TECHNOLOGY

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Pyramid Technology and Siemens Nixdorf Extend Parallel Server Line to Include Evolutionary Parallel-Processing

Introduction of the Reliant RM1000 Brings World's Most Powerful Massively Parallel System To Market

SAN JOSE, CA and PADERBORN, GERMANY, February 27, 1995 -- Pyramid® Technology Corporation (NASDAQ:PYRD) and Siemens Nixdorf Informationssysteme AG (SNI) today announced the introduction and availability of the new Reliant® RM1000 Parallel Server for open enterprise computing. With the introduction of the Reliant RM1000, Pyramid and Siemens Nixdorf offer the industry's most comprehensive and scalable family of parallel server products, including small to high-end symmetric multi-processing (SMP) systems, clustered SMP server configurations and now, massively parallel-processing (MPP) systems. The Reliant RM1000 will be showcased at CeBIT '95 in Hannover, Germany (March 8-15) and at UniForum in Dallas, Texas (March 14-16).

The Reliant RM1000 Server is a new system architecture that will scale up to hundreds of processing nodes and tens of terabytes of on-line information. The Reliant RM1000's architecture is ideally suited for all applications that can take full advantage of distributed parallelism such as decision support, messaging and video server technology. In what the companies call an "integrated" parallel design, the Reliant RM1000 combines the strengths of both SMP and MPP technologies with its high-bandwidth, scalable processor interconnect. This interconnect fabric will integrate into one system both single CPU nodes and Pyramid's Nile Series and Siemens Nixdorf's RM Series Servers. For customers who already have large systems deployed on SMP platforms, this will enable them to further extend system capacity or configure additional parallel processors.

Explosive Growth in Parallel Processing

The Reliant RM1000 Parallel Server is positioned to capture a leading share of the fast growing worldwide market for parallel-processing servers. According to Gartner Group, Inc., the market for commercial massively parallel-processing servers will grow from $1 billion during 1995 to $5 billion by 1998.

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"The Reliant RM1000 Server enables the combination of the best features of SMP and MPP into a unique solution that meets the needs of the most demanding re-engineering or data warehousing requirements," said Boyd Pearce, vice president of marketing for Pyramid. "The Reliant RM1000 Parallel Server is a logical complement to our existing Nile Series Servers and provides all Pyramid customers a clear, evolutionary roadmap for their current systems."

"We are seeing among our international customer base strong demand in areas such as decision support -- and parallel-processing architectures are ideally suited to deliver the performance requirements demanded by these new applications," said Moos Bulder, vice president of systems unit midrange for Siemens Nixdorf. "Clearly, the parallel-processing market represents an area of incredible growth potential for us, and that is why we have worked so closely with Pyramid to deliver the Reliant RM1000's evolutionary parallel capabilities to the open systems enterprise marketplace. In combination with our successful and scalable UNIX server range of the RM Series, this new parallel technology will meet enhanced customer needs for client/server enterprise solutions."

Advancements in Commercial Solutions

Pyramid and Siemens Nixdorf have long been leaders in delivering scalable, high-performance solutions into the commercial market using symmetric multi-processing (SMP). These companies are already on their 5th generation of SMP systems, when most competitors are still trying to perfect their first design. Pyramid and Siemens Nixdorf are now using this expertise to extend parallel processing for commercial applications using MPP techniques to support solutions which can clearly benefit from distributed parallel solutions. New open system software enhancements from UNIX database vendors are now opening the door for MPP system deployment in the commercial market.

"We are pleased that our cooperative engineering efforts, as the development partner on this project, have enabled Oracle to be the first parallel database available on the Reliant RM1000 Server," said Jerry Baker, senior vice president of product and platform technologies for Oracle Corporation.

"The new Reliant RM1000 offers significant performance improvement and critical fault-tolerance features for future high-end R/3 customers. Its integrated SMP/MPP architecture will allow for very large R/3 installations with more than one thousand users, thereby meeting a rapidly growing demand in our marketplace. We are very pleased with the first results of the performance and reliability evaluation of Reliant RM1000 in our laboratories. Our joint engineering efforts will enable R/3 to take full advantage of the new parallel capabilities and offer a state-of-art commercial solution in the open systems market," said Paul Wahl, executive vice president for SAP AG.

"The Reliant RM1000 is an exceptionally robust product, both with respect to its operating system and hardware," added Manfred Herrmann, director of systems and platforms for SAP AG.

Over 40 key software partners have already endorsed their products on the Reliant RM1000 Parallel Server and many have committed to early delivery and optimization on this new platform.

Key Features and Benefits

- Continuous processing -- The Reliant RM1000 offers continuous processing with 7x24 hour availability in an open server solution. The system is designed with many fault tolerant components, including processor communications, power and cooling, and disk subsystems. All system components may also be repaired on-line, and software maintenance / update does not interrupt the system.
- Scalable I/O bandwidth -- The Reliant RM1000 will scale up to hundreds of processors, with each processor having its own independent I/O resources. This provides for massive I/O bandwidth and is ideally suited for I/O intensive applications such as video server technology and decision support.
- Single point of control -- The Reliant RM1000 features a parallel-processing architecture that provides a single point of control and a single storage system image for all resources.
- Binary compatibility -- The Reliant RM1000 Server uses the same state-of the-art 64-bit MIPS R4400 RISC processor technology as Pyramid's Nile Series and SNI's RM Series. In addition, the Reliant RM1000 Server uses an advanced UNIX operating system which is an extension of Pyramid's and SNI'S SVR4-based UNIX operating systems, known respectively as DC/OSx and SINIX.

Pricing and Availability

The Reliant RM1000 Parallel-Processing Server is available now direct from Pyramid Technology and SNI. Prices start at $200,000 for four processors and 16 GBs of disk storage.

About Pyramid Technology and Siemens Nixdorf

Founded in 1981, Pyramid Technology develops scalable enterprise servers that deliver high-quality, high-performance solutions for the mid-range to high-end of the open systems market. These highly available systems run the most demanding UNIX relational databases in the world, and are based on both symmetric multiprocessing (SMP) and parallel-processing architectures that combine an advanced UNIX operating system with the RISC processor technology. Pyramid provides data center-class support for business-critical environments complemented by a full suite of professional programs and support tools that help customers successfully implement scalable enterprise computing. Pyramid has installed approximately 3500 systems worldwide. In the past fiscal year (October 1, 1993 to September 30, 1994), Pyramid had revenues of approximately $218 million. Pyramid has a workforce of approximately 850 employees.

Siemens Nixdorf Informationssysteme AG (SNI), Paderborn, Germany, is a systems partner with universal expertise in the field of information technology. It is one of the world's largest companies in this area and is the largest supplier of information technology of European origin. In the past fiscal

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year (October 1, 1993 to September 30 1994), SNI had incoming orders worth DM 11.7 billion and revenues of DM 11.7 billion. SNI has a work force of approximately 39,000 and is represented in 45 countries. With a full-line server family ranging from desktop to enterprise servers, more than 10 years experience in commercial UNIX and an installed base of more than 120,000 UNIX servers, SNI is seen as the most competent vendor in the European UNIX market.

# # #

PYRAMID TECHNOLOGY

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The Reliant RM1000 -- Industry Perspectives

The industry quotes provided below apply to the Reliant RM1000 as offered by both Pyramid Technology and Siemens Nixdorf

Industry Analysts

"The Reliant RM1000 is designed to be integrated with both stand-alone and clustered Pyramid Nile and SNI RM Series systems, providing both companies with the ability to offer a massively scalable family of products to their customer base. We believe that Pyramid's unique solution will give Pyramid and SNI a significant competitive edge in growing the commercial MPP market -- their roadmap provides for investment protection and a clear evolutionary growth path integrating SMP and MPP technologies."

Bob Sakakeeny
Director of Research
Aberdeen Group

"The alternative parallel processing approaches of shared-everything SMP and shared-nothing MPP architectures each have unique strengths. Pyramid's combination of these approaches, which extends the Nile's SMP power through the addition of the Reliant RM1000, allows for a smooth integration of OLTP and decision support applications. Pyramid has been recognized as a pioneer in scalable, open systems commercial computing -- and with the introduction of the new Reliant RM1000 Parallel Server, they should remain a key player in the rapidly growing decision support arena. "

Rich Partridge
Research Analyst
DH Brown Associates

"Pyramid's introduction of the Reliant RM1000 Parallel Server and its capability to integrate with the company's SMP servers illustrates Pyramid's continued pursuit of innovative technology solutions for its customer base. We believe Pyramid is at the forefront of a trend in which mainstream commercial computer vendors will bring selected MPP technologies to the commercial marketplace."

Gene Lee
Research Manager
IDC

"In the open systems arena, experience in deploying very large databases is a critical point-of-difference and Pyramid has that experience today -- including customers running some of the most demanding, high-end UNIX SMP installations in the industry. That's why, in addition to being the first ones to bring an integrated massively parallel-processing and symmetric multi-processing solution to market, I believe Pyramid's SMP to MPP story will place them at the forefront with enterprise-level customers."

Norton Greenfeld
President
Implements, Inc.

Database Partners

"We expect the availability of Informix Dynamic Scalable Architecture (DSA) on the Reliant RM1000 to be ideally suited for VLDB, clustered configurations and massively scalable environments, and to deliver to market one of the most powerful, versatile, and reliable decision support and data warehousing solutions available."

David Watson
Director Servers & Connectivity
Informix

"We are pleased that our cooperative engineering efforts, as the development partner on this project, have enabled Oracle to be the first parallel database available on the Reliant RM1000 Server."

Jerry Baker
Sr. V.P. Product & Platform Technologies
Oracle Corporation

Software Partners

"The availability of Information Builders' FOCUS for Open Environments with the Parallel Data Query (PDQ) option on the Reliant RM1000 Server provides customers a very powerful solution for implementing large-scale decision support systems such as data warehouses in an enterprise client/server environment."

David Sandel
General Manager UNIX Division
Information Builders

"Micro Focus enjoys a strategic partnership with Pyramid for the delivery of tools for the development and maintenance of mission critical applications. The new Reliant RM1000 will deliver the performance and throughput to be ideally suited for high response rate business applications."

Colin Bodell
Assistant V.P. Worldwide Customer Engineering Group
Micro Focus

"Pyramid /SNI's delivery of MPP capabilities in the Reliant RM1000 provides the benefits of MPP while continuing support of advanced symmetric multi-processing. MPP technology, particularly the way in which Pyramid/SNI has chosen to implement it, provides customers with significant gains in processing capabilities."

Rick Bergquist
V. P. Technology
PeopleSoft

"The new Reliant RM1000 offers significant performance improvement and critical fault-tolerance features for future high-end R/3 customers. Its integrated SMP/MPP architecture will allow for very large R/3 installations with more than one thousand users, thereby meeting a rapidly growing demand in our marketplace. We are very pleased with the first results of the performance and reliability evaluation of Reliant RM1000 in our laboratories. Our joint engineering efforts will enable R/3 to take full advantage of the new parallel capabilities and offer a state-of-art commercial solution in the open systems market. "

Paul Wahl
Executive Vice President
SAP AG

"The Reliant RM1000 is an exceptionally robust product, both with respect to its operating system and hardware."

Manfred Herrmann
Director Systems & Platforms
SAP AG

"The new Reliant RM1000 system will be an ideal platform for deploying data warehousing and business information systems with the SAS System. The Reliant RM1000's power and scalability coupled with the capabilities of SAS software will combine to create a superior decision support solution."

Barrett Joyner
V.P. North America's Sales & Marketing
SAS

# # #

PYRAMID® TECHNOLOGY

FACT SHEET

Reliant RM1000

The Reliant® RM1000 Server is a new system architecture that will scale up to hundreds of processing nodes and tens of terabytes of on-line information. The Reliant RM1000's architecture is ideally suited for all applications that can take full advantage of distributed parallelism such as decision support, messaging and video stream server. In what the companies call an evolutionary parallel design, the Reliant RM1000's high-bandwidth, scalable processor interconnect can integrate both single CPU nodes and Pyramid's Nile™ Series and SNI's RM Series into a single system, thereby combining the strengths of SMP and MPP technology. This enables customers who already have large systems deployed on SMP platforms to extend system capacity and provide for additional parallel processors to support large scale decision support environments.

Features and Benefits

Hardware
Field Proven
Continuously Available
Integrates SMP/MPP

Software
Binary Compatability
Virtual Storage Facility
Workload Partition Facility
Advanced Clustering
Parallel Relational Databases

Market
Data Warehousing
Decision Support
Business Transaction Solutions

CONTINUOUS PROCESSING

The Reliant RM1000 offers continuous processing with 7X24 hour availability in an open server solution. The availability advantage of parallel-processing systems resides in each processor having its own non-shared resources including a bus, memory, I/O system, and a separate copy of the operating system and database management software. Processors communicate across the high-bandwidth, fault-tolerant interconnect. This architecture allows the user to repair components and even upgrade the system's software without interruption to critical application and database resources.

BINARY COMPATIBILITY

The Reliant RM1000 Server used the same state-of-the-art 64-bit MIPS R4400 RISC processor technology as Pyramid's Nile Series and SNI's RM Series. In addition, the Reliant RM1000 Server uses an advanced UNIX operating system which is an extension of Pyramid and SNI's UNIX operating systems, known respectively as DC/OSx and SINIX. This advanced UNIX operating system enables current customers and software partners rapid application development and ease of portability to the new Reliant RM1000 server environment.

SCALABLE I/O BANDWIDTH

The Reliant RM1000 will scale up to hundreds of processors, with each processor having its own independent I/O resources. This provides for massive I/O bandwidth and is ideally suited for I/O intensive applications such as video stream server and decision support.

EXPANDED PARALLEL CAPABILITIES

The Reliant RM1000 architecture will allow for the coupling of shared memory parallelism (SMP) and distributed parallelism (MPP) within a single platform, meeting a variety of on-line and information processing application requirements.

ADVANCED CLUSTERING

The Reliant RM1000 Server will extend the range of existing SMP-based clustered configurations by enabling Pyramid's Nile Series and SNI's RM Series to use the new interconnect for communications and resource sharing. Joint

development with Oracle has enabled Oracle Parallel Server to take full advantage of these new capabilities.

SINGLE POINT OF CONTROL

The Reliant RM1000 features a parallel-processing architecture that provides a single point of control and a single storage system image for all resources.

INVESTMENT PROTECTION

The Reliant RM1000's high-bandwidth, scalable processor interconnect enables integration of the Reliant RM1000 system and Pyramid's Nile Series, thereby combining the strengths of SMP and MPP technology, providing investment protection.

ORACLE 7.1.4

Oracle 7.1.4 is immediately available on the Reliant RM1000 Parallel Server. A 12-month joint engineering effort with Oracle as the development partner, has resulted in a fully optimized Oracle port for Pyramid and Oracle VLDB customers.

VIRTUAL STORAGE SYSTEMS

DC/OSx virtual systems support RAID redundancy models and disaster recovery with remote mirroring of journals and trickle feed.

DATAWAREHOUSE/DECISION SUPPORT

Data warehouses can be installed with 10 terabytes of on-line storage and 10's of terabytes in on-line hierarchical storage, supporting a full range of communiations and interoperability with mainframes and legacy applications. With open data warehousing and business critical solutions environments, customers can re-engineer legacy COBOL applications into information rich environments, with 30 to 1 reductions in new code to support.

SPECIFICATIONS

PHYSICAL

Dimensions (per cabinet)	Height 36 in. (91 cm), width 19 in. (48 cm), depth 38 in (97 cm)
Weight (per cabinet)	450 lbs (204 kg) fully loaded
Temperature range (recommended operating)	20 degrees to 30 degrees C (68 degrees to 86 degrees F)
Sound level (maximum configuration)	60 dB maximum

MAIN CABINET POWER

AC service	90 to 264 VAC, 50 to 60 Hz (single cabinet) 180 to 264 VAC, 50 to 60 Hz (maximum config)
AC current	12 A at 120 V each receptacle (single cabinet) 24 A at 220 V each receptacle (maximum config)
Heat dissipation	4000 Btu per hour (single cabinet)

REGULATORY APPROVALS

Listing and labeled to UL-1950
Certification and marked to CSA-950 by CUL
Licensed and marked to IEC-950 (TUV)
VFG 243/1991 and CISPER 22B
IEC 801-2-3-4
IEC 555-2
FCC Class "A" Self Certification

Specifications are subject to change without notice.

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CERTIFICATE NUMBER FS23510 ISO 9001

PYRAMID TECHNOLOGY

SEP 19 1995

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March 1995

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Siemens Nixdorf's Acquisition of Pyramid Technology
Questions and Answers

About Pyramid Technology Corporation

	QUESTIONS	ANSWERS
1	What were Pyramid's sales for 1994?	Sales for last year totaled $218.5 million.
2	How many people does Pyramid employ?	As of September 30, 1994 Pyramid employed 850 people.
3	What is Pyramid's product line?	Mid-range to high-end UNIX servers, including: - Pyramid Reliant ® RM1000 Parallel Server - Pyramid Nile ™ Series R 100 and 150 - Pyramid MIServer ® ES Series
4	In which countries other than the USA does Pyramid currently conduct business?	Pyramid conducts business in the UK, Korea (via OEM) and Australia (via a joint venture with Fujitsu Corporation).

About Siemens Nixdorf Informationssysteme AG

	QUESTIONS	ANSWERS
5	What were SNI's total sales for 1994?	Sales for last year were DM11.7 billion.
6	How many people are currently employed at SNI?	As of September 30, 1994 SNI employed 39,200-43,000 people.
7	What is SNI's product line?	SNI provides both hardware and software products for its customers. Hardware - SNI offers a full range of computers, from laptops to supercomputers, as well as self-service systems, ATMs and high performance printers. Software - Additionally, SNI offers system software and application software. Services - SNI also offers many services to its customers including maintenance/training and support, professional services and additional support for varied projects.
8	What is SNI's current presence in the U.S. ?	To date, SNI maintains two offices within the U.S. Siemens Nixdorf Information Systems Inc., operates from Burlington, MA and Siemens Nixdorf Printing Systems L.P. operates from Boca Raton, Fl. Total 1994 sales in the U.S. for these two offices totaled $271.8 million, and together, they employed 1,022 people.

About SNI's Systems Unit Mid Range Division

	QUESTIONS	ANSWERS
9	What were Systems Unit Mid Range's (SU MR) sales for 1994?	SU MR's sales for last year totaled DM2 billion.
10	How many people are currently employed at SU MR?	As of September 30, 1994 SU MR employed 2, 500 people.
11	What is SU MR's product line?	SU MR offers its customers a complete UNIX product range, from desktop systems to enterprise servers, which are binary compatible and based on MIPS RISC processor technology and UNIX System V Release 4.

About the SNI-Pyramid Acquisition

	QUESTIONS	ANSWERS
12	What was the acquisition price for Pyramid Technology?	SNI paid $16 per share for the 82.6% of shares not previously held.
13	What was Pyramid's share price at closing?	At closing, January 6, 1995 the share price was $12.25.
14	What was the average share price in the 4th quarter of 1994?	The average share price was $10.58.
15	What was the average share price in calendar year of 1994?	The average share price was $10.50.
16	What were the number of shares purchased?	The number of shares purchased by SNI totaled 15, 583, 965. Of that number, 2,717,743 were already held by SNI.
17	Which company performed the acquisition?	The acquisition was performed by Siemens Nixdorf Mid-range Acquisition Corp., an indirect, wholly-owned subsidiary of Siemens Nixdorf Informationssysteme AG ("Siemens Mid-range")
18	What will be Pyramid's name after the acquisition?	The company will be called Pyramid- A Siemens Nixdorf Company.

After the Acquisition

	QUESTIONS	ANSWERS
19	What will be the future range of products the company will offer?	Within the confines of the previously existing cooperative relationship, SNI and Pyramid worked together to develop a framework for a common product family. However, it had not been possible to put these concepts into practice under the current equity relationship. The 100% acquisition of Pyramid makes possible the development of a common product family. The product line ranges from MPP systems at the high-end to SMP and uniprocessor servers at the mid-range and finally, to business workstations at the low-end. The entire product range will be completely compatible, from the smallest to the most powerful system.
20	What are the future research and development strategies for both companies?	Based on the existing cooperative relationship, we have a clear understanding of the relative strengths within the respective development organizations at SNI (in the UNIX area) and Pyramid. Development of the UNIX operating system and MPP technology will remain a Pyramid focus, while SNI's development area will concentrate on SMP and uniprocessor technology.
21	How will sales activities be coordinated?	Going forward, SNI's North American UNIX operations will be joined together with the existing North American Pyramid business unit to provide customers a single point of contact. The remainder of SNI's business in North America will remain untouched. In Europe and the rest of the world, similar actions will maximize business opportunities and increase efficiency. To date, areas of overlapping functions between the two companies appear to be small.
22	Who will be responsible for producing the common product line?	Production of the common product line will be optimized to take advantage of SNI's existing capabilities in the areas of purchasing, revenue, and automation while recognizing that trade issues and the need to configure and service customers will exist.

	QUESTIONS	ANSWERS
23	How will resources be managed?	The focus of cooperative activities will be to increase worldwide market share within the fast-growing open systems market place. Nevertheless, efforts to maximize the synergy and efficiency of joint operations will be pursued.
24	What is the overall goal of the acquisition?	The fundamental goal of the acquisition is to secure appropriate technological competence and development capacity for the future. To complement its offerings of high-end UNIX servers, SNI requires MPP systems for new applications, e.g. for decision support. Pyramid has such systems, systems which, in contrast to other products on the market, use the same operating system (DC OSx) as well as the same hardware architecture (MIPS processor) as the SNI products. To that end, SNI acquired licensing rights for the MPP technology in August 1994 from Pyramid. In addition, SNI believes it will establish itself in the UNIX sector in the important North American market more quickly by acquiring Pyramid than would otherwise be the case. Pyramid, on the other hand, must develop from the specialized vendor of high-end systems that it is in now towards the wider market. Pyramid feels it needs a strong partner in order to do just that.
25	Who initiated the acquisition talks?	Originally, Pyramid. Pyramid and SNI have a long-standing history of cooperative agreements. In August of 1994, SNI increased its stake in Pyramid from 5.4% to 17.4%. In the course of subsequent discussions, SNI came to share Pyramid's opinion that a 100% acquisition by SNI would be the best way of achieving the synergy effects both sides are striving for. Both partners believe that fusing their mid-range activities will result in significantly improved effectiveness as well as a stronger position in international competition.
28	Does SNI have any future plans for further participation in the U.S. market?	SNI has no concrete plans at the moment.
29	Does SNI have any plans for mid-range workstations?	Cooperation with Pyramid makes both partners more attractive for software companies (ISVs) as well as for system houses and VARs. SNI seeks to possibly explore this option further although no concrete plans currently exist.
30	What are SNI and Pyramid's standing and market share within the server industry?	For mid-range systems (system price below US $1 million): Germany Western Europe World USA SNI #1 (38.4%) #1 (13.5%) #5 (5.4%) (0.1%) Pyramid -Not amongst the top 10 vendors #9 (2.5%) For UNIX mid-range systems (system price between US $100,000 and $1 million) Germany Western Europe World SNI #1 (56.9%) #1 (23.4%) #4 (7.5%) Pyramid #8 (3.4%)Not amongst top 10 vendors #8 (4.4%)

	QUESTIONS	ANSWERS
31	Why did SNI acquire 100% of Pyramid?	Only through a 100% incorporation could the product families of both partners be optimally integrated so as to prevent separate product developments. Less conflicts within the sales organization can be expected as well as possible shareholder law suits concerning violation of Pyramid's independence. By appropriate measures, it has been ensured that Pyramid will retain its entrepreneurial character and be known as a "Silicon Valley Company".
32	Did SNI exercise the option of 17.5% - 24%?	No, as it would have been more expensive to do so and it would have been necessary to increase the amount of outstanding shares.

Pyramid and SNI USA Future Cooperation

	QUESTIONS	ANSWERS
33	How will the acquisition effect existing Pyramid relationship?	All partnerships will remain as is for both companies.
34	Who will be the CEO of Pyramid?	The President and CEO of Pyramid will be John Chen. Richard H. Lussier will take on a broader role within the Siemens organization.
35	Will there be only one company in the USA?	As far as mid-range systems business is concerned, there will be only one company, Pyramid Technology. Other SNI companies remain unchanged.
36	Will there be any transfer of employees from SNI USA to Pyramid or vice versa? If so, how many?	Yes. There will be a transfer of 25 people from SNI UNIX Sales Force to the Pyramid USA Team.
37	Will there be any job cuts due to the merger?	No.
38	Who was the consultant firm for the acquisition transaction?	Goldman Sachs.
39	Was there any insider trading related to the merger?	We have no knowledge of any insider trading.
40	Were there any court cases relating to the merger?	Yes. One or more suits have been filed against Pyramid and Pyramid's attorneys are addressing the matter. There will be no further comment at this time.

PYRAMID TECHNOLOGY

NEWS RELEASE

Pyramid Technology Corporation
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For Immediate Release

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Stacy Welsh
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Siemens Nixdorf And Pyramid Merge Global Operations To Become Largest Provider Of Open Systems Servers In $100K To $1M Category

Acquisition of Pyramid by Siemens Nixdorf Combines Entrepreneurial Flair and Technology Leadership with Worldwide Presence and Resources of a $7.5 Billion Company

San Jose, Calif. -- March 14, 1995 -- Executives of Pyramid® Technology today outlined details of their worldwide operations, strategy and focus following the completion of Pyramid's acquisition by Siemens Nixdorf Information Systems, Inc., (SNI). SNI is a wholly-owned, $7.5 billion subsidiary of Siemens AG, a worldwide electronics concern with annual sales of $54.6 billion.

According to John Chen, president and Pyramid's newly appointed CEO, the merger will not impact the entrepreneurial spirit of the company, but will dramatically affect the balance of power within the server marketplace by improving Pyramid's position among those companies seeking to meet the rapidly growing demand for commercial open systems solutions among corporate customers. Prior to the merger, Chen acted as president and chief operating officer for the company.

Aggressive Growth Plans

"Siemens Nixdorf expects to be a $2 billion operation in North America within five years, further extending its technical lead in the open enterprise computing category where we compete head-to-head with IBM, AT&T, H-P, DEC and others," said Chen. "Together with Siemens Nixdorf, Pyramid will offer its customers the broadest and most scalable line of commercial UNIX products available in the industry today."

Aggressive growth plans are in place for growing R&D spending and expanding the sales force. In fact, Pyramid's field sales organization will be expanded immediately as the company absorbs SNI's Enterprise Systems Division in North America. Pyramid will also benefit from Siemen's vast procurement capabilities and its office presence in 45 countries worldwide.

"Pyramid has a fourteen-year history of providing leading-edge server solutions to our customers," Chen added. "Our customers will retain all of the benefits of working with a technology-driven Silicon Valley company, while gaining a great degree of security and investment protection because of our backing by Siemens."

more. . .

Executive Direction

Chen assumes the CEO title from Pyramid's chairman Richard H. Lussier, who has played a pivotal role in building Pyramid's strong leadership position in the commercial UNIX market. Lussier will be responsible SNI's Americas operations and will remain on Pyramid's board.

"Under John's stewardship, we'll leverage our core technical strengths and Silicon Valley culture to best realize the synergies and competitive advantages of the worldwide Siemens Nixdorf organization," noted Lussier. "We expect minimal transition delays as the companies already share a mutual strategic vision, common sense of purpose, long-standing OEM partnership and a fully integrated and binary-compatible product line."

First Joint Product Announcement

Last week, Pyramid and SNI jointly announced the Reliant® RM1000 Parallel Server that will scale up to hundreds of processors and more than 10 terabytes of on-line information. It is the first to integrate on-line transaction processing with data warehousing and decision support applications. The system was showcased at CeBit '95 in Hannover, Germany (March 8-15) and will also be shown at UniForum '95 in Dallas, Texas (March 14-16). Evidence of the enthusiastic market reception for the RM1000 are the more than 40 independent software vendors who have announced support for the platform, including Information Builders, Informix, Oracle, SAP and SAS.

Pyramid Technology - A Siemens Nixdorf Company

Pyramid Technology -- A Siemens Nixdorf Company is a leading provider of scalable enterprise servers delivering the industry's most complete range of UNIX solutions from the desktop to the data center. Together with parent company, Siemens Nixdorf Information Systems, Inc., the companies have a presence in 45 countries and more than 120,000 UNIX system installations worldwide. Pyramid and SNI's combined mid-range systems operations represent over $1.6 billion in sales worldwide and make the combined company the largest provider of systems in the mid-range UNIX server market (Source: IDC). Pyramid provides premier strategic services for business-critical environments complemented by a full suite of professional programs and support tools that help customers successfully implement scalable enterprise computing.

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Pyramid Technology Corporation --
A Siemens Nixdorf Company
UniForum '95 At-A-Glance
Booth #902
Dallas Convention Center

Siemens Nixdorf Completes Acquisition of Pyramid Technology

• Siemens Nixdorf and Pyramid merge global operations to become largest provider of open systems servers in $100K to $1M category.

• Executives of Pyramid Technology outline details of their worldwide operations, strategy and focus following the completion of Pyramid's acquisition by Siemens Nixdorf Information Systems.

The Reliant RM1000 Parallel Server Introduction

• Pyramid Technology and Siemens Nixdorf extend parallel server line to include evolutionary parallel-processing.

• Introduction of the Reliant RM1000 brings world's most powerful massively parallel system to market.

• Key database and software vendors endorse their products on the Reliant RM1000 Parallel Server.

Pyramid and Oracle Announce Enterprise Solutions Program

• Pyramid announces that it has entered into a strategic alliance with Oracle Corporation to focus on implementing mission-critical open systems solutions for very large database (VLDB) customers.

• Strategic initiative positions companies to increase share of the high-end systems market.

Pyramid Technology Enhances Customer Service Offerings

• Pyramid announces the selection of Comdisco Disaster Recovery Services to provide disaster recovery services to Pyramid customers throughout North America.

• Joint marketing agreement includes installation of Pyramid enterprise server at Comdisco's Disaster Recovery Services Center in Wood Dale, Illinois.

Siemens Nixdorf Receives X/Open UNIX Brand -- Spec 1170 Compliance

• Siemens Nixdorf becomes one of the first suppliers worldwide to qualify for new standard.

-- MORE --

Exhibit Highlights

The Most Powerful Parallel Servers in the World
- Binary-compatible RISC family ranging from the desktop to enterprise systems
- Ultra-fast 200 MHz R4400 processor chips
- High availability technology
- Operating system awarded X/Open's UNIX brand for Spec1170 compliance

Strategic Software Partners
- Database tools: Oracle, Informix, Sybase, VMarkSoftware
- Applications: SAP R3, Andyne, SAS, Oracle Financials, Information Builders
- OLTP products: Transarc, Novel

Additional product and services from Siemens Nixdorf:

Software Tools
- R/3 LIVE KIT: Allows faster development of R/3 solutions using artificial intelligence and a large suite of implementation tools and methodologies
- TRANSVIEW: Integrated software products enabling complete network, system and application management from a single console.

Specialized Services
- Migration from legacy mainframes to open enterprise servers
- Network design, implementation, management and support
- Systems integration and consulting

PYRAMID TECHNOLOGY

SEP 19 1995

NEWS RELEASE

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FOR IMMEDIATE RELEASE

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Brenda Hansen
Oracle Corporation
415-506-5555

Pyramid Technology and Oracle Corporation Announce Enterprise Solutions Program

Strategic Initiative Positions Pyramid And Oracle To Increase Share Of The High-End Systems Market

DALLAS, Texas -- March 14, 1995 -- Pyramid® Technology -- A Siemens Nixdorf Company today announced that it has entered into a strategic alliance with Oracle Corporation to focus on implementing mission-critical open systems solutions for very large database (VLDB) customers.

Named the Enterprise Solutions Program (ESP), the alliance agreement calls for each company to contribute resources in the areas of engineering, sales and support, consulting and marketing. The program will leverage the combined experience and expertise of Pyramid and Oracle to provide customers with a single source for the support and implementation of their high-end open systems solutions. Pyramid and Oracle currently share many high-end customers, including Fidelity Investments, CVS, Canada Trust, McKesson and Standard and Poors.

"Companies are discovering that open systems can offer reliability, availability and service on par with their mainframe and legacy systems, and Pyramid's open systems deliver that low-risk alternative," said Boyd Pearce, vice president of marketing for Pyramid Technology. "The introduction of the Pyramid/Oracle ESP alliance means that our customers can comfortably plan and achieve extremely fast deployment of new applications that are built on a solid, stable Oracle/Pyramid platform."

"The ESP alliance takes on even greater importance in context of our recent introduction of the Reliant® RM1000 Parallel Server," Pearce continued. "Many of our shared, high-end customers -- McKesson Corporation, for example -- are implementing decision support systems with very large Oracle databases running on the Reliant RM1000 . The ESP alliance is a tailored program that enables issues common to VLDB environments to be uniquely addressed."

more . . .

ESP Features and Customer Benefits

There are five key features and benefits to this new cooperative agreement:
1.) *Feature:* The ESP alliance provides for a dramatic increase in the number of Pyramid systems engineers devoted to Oracle's ESP Engineering Center in Redwood Shores, California.

Benefit: Rapid deployment of new customer applications based on enhanced system "stressing" and integration capabilities.
2.) *Feature:* Pyramid will now have even earlier access to new Oracle product releases.

Benefit: Enables faster development times of new Oracle applications for customers running on the solid, stable Oracle/Pyramid platform.
3.) *Feature:* The more sizable and focused engineering team will result in enhanced tuning of Oracle for Pyramid and a greater number of tuning guides created specifically for the implementation of Pyramid's system.

Benefit: Increased information about systems design guidelines.
4.) *Feature:* Based on their joint expertise in the emerging data warehousing market, Pyramid Professional Services and Oracle Consulting will formalize their design and implementation methodology in an integrated solutions consulting offering for the very large database market.

Benefit: Unified support offering from Pyramid and Oracle.
5.) *Feature:* Pyramid will extend its existing Affiliate Support Program, which offers a single point-of-contact for support services, to include more services that support VLDB and mission-critical customers.

Benefits: Integrated service and product support; decreased customer support response times.

"Because of its scalability and performance, Pyramid is an excellent platform for Oracle's very large database customers," said Tom Hildebrand, vice president for Oracle's UNIX RISC products division. "Our customers need a stable applications environment that holds up under the demands of high work levels, and the kind of seamless integration of hardware and software which they enjoyed with their legacy, proprietary systems in the past," he continued. "Pyramid and Oracle's joint Enterprise Solutions Program is setting a new standard for reliability, quality and customer support. It is just one more tangible sign of our commitment to providing the industry's best database solutions for the high-end systems market."

"We operate today in an extremely competitive business environment which makes the efficient utilization of our data repository a critical need of our information systems, said Howard Edels, senior vice president MIS, for CVS, one of the country's three largest pharmacy drug chain retailers with over 1300 stores. That's why we are aggressively moving ahead to implement new transaction processing and data warehousing applications. These environments need to run on platforms which are scalable, highly available and low risk, enabling us to provide a level of service to our customers which creates competitive advantage. The combination of Pyramid and Oracle for our requirements was the "best fit" solution."

more . . .

About Oracle Corporation

Oracle Corp., a $2 billion company with headquarters in Redwood Shores, Calif., is the world's leading supplier of information management software. Oracle develops and market Oracle Media Server and Oracle7 family of software products for database management; Cooperative Development Environment (CDE), a complete set of tools for enterprise-wide, client/server application development; and Oracle Cooperative Applications, packaged client/server solutions for accounting, manufacturing, distribution, human resources and project control. Oracle software runs on personal digital assistants, PCs, workstations, minicomputers, mainframes and massively parallel computers. The company offers its products, along with related consulting, education and support services in more than 90 countries around the world. For more information about Oracle, please contact Oracle's headquarters in Redwood Shores, California at 415-506-7000.

About Pyramid Technology

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# # #

PYRAMID® TECHNOLOGY

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Pyramid and Oracle:

Open Systems That Work

Pyramid Technology and **Oracle Corporation** are leaders in their respective fields of high-availability, fault tolerant systems and relational database management solutions. Both Pyramid and Oracle have distinguished reputations for enabling companies around the world to run business-critical applications in open, distributed environments. Working together—something Pyramid and Oracle have done for years —provides even greater advantage to you and your company.

You can count on complete hardware, software, and support solutions that have been optimized to function at peak performance, and tuned to meet your business computing needs. Perhaps most importantly, Pyramid and Oracle are already collaborating on next-generation technologies to assure you of a future path—no matter how far, or how fast your business grows.

Pyramid and Oracle believe the company they keep says a great deal about the quality of their solutions. In the past 10 years of partnership, Pyramid and Oracle have won new and repeat business from some of the world's most successful corporations, including Bell Atlantic, Churchill Insurance, Electronic Data Systems, Ernst & Young, Dallas/Fort Worth International Airport, Fidelity Investments, Metropolitan Water District of Los Angeles, National Car Rental, Nottingham City Hospital, Standard & Poor's, Toronto Stock Exchange, U.S. Internal Revenue Service, US WEST, and Vodafone. Pyramid and Oracle consistently demonstrate their expertise by delivering highly tuned, on-line transaction processing (OLTP), and decision support solutions for their customers — solutions that can support up to terabytes of critical data and thousands of users.

How vital is collaborative engineering?

Vital to the delivery of these business-critical solutions is the long-term engineering relationship between Pyramid and Oracle. Both companies maintain a complete staff of engineers dedicated to the development, delivery, and support of high-performance products for Pyramid platforms. The mutual support and close collaboration between Pyramid and Oracle guarantee you early access to the most advanced technology. As an example, Pyramid's platform for Oracle7 Parallel Server was delivered more than a year before any other vendor.

"At , our decision t system will ultim pan the globe. Py gives us the open onment, performa e and configuration lexibility that we needed to implement a very large data warehouse. Oracle reduces our in-house developme ffort by providing m of the applicatio s and database m ement components e need to complete ution."

Stephen A leta
Director o ms,
Mass Market S Delivery
US W

Pyramid and Oracle believe in the solutions they provide — so much so that both companies rely on each other's products to run vital parts of their businesses. Pyramid uses Oracle's manufacturing and financial applications to run its worldwide operation. Likewise, Oracle relies on Pyramid's clustered Nile systems to run Oracle Office, an enterprise-wide messaging solution used by 3,000 Oracle employees.

PYRAMID NILE™ ARCHITECTURE WITH ORACLE7 PARALLEL SERVER: A HIGH-PERFORMANCE, HIGH-AVAILABILITY SOLUTION

Knowing that you have an assured growth path — to handle increased user and transaction loads — is vitally important given the fast pace of today's multinational competitive market place. That is why Pyramid and Oracle provide unmatched levels of scalability in their hardware and software solutions, allowing you to efficiently and cost-effectively increase your system's capabilities as your needs change.

What's the advantage of keeping your options open?

Historically, corporations requiring additional computing performance often chose an expensive mainframe upgrade to solve their computing problems. Together, Pyramid and Oracle offer you a superior and cost-effective alternative. By combining advanced relational database technology with enterprise-level servers, Pyramid and Oracle deliver a high-availability, open, scalable computing solution designed to grow with your business.

The Pyramid Nile Series servers are breaking new ground in UNIX performance and scalability. Based on the MIPS R4400 RISC microprocessor, the Nile Series is scalable from two to 16 processors, and supports up to four gigabytes of main memory and up to one terabyte of disk subsystem capacity. As with Pyramid's other enterprise servers, the Nile Series runs Pyramid's DataCenter®/OSx® (DC™/OSx®), the industry's first commercially available UNIX System V Release 4 operating system to provide fully symmetric multiprocessing. The Nile Series running DC/OSx offers you a high-performance, fault-resilient alternative for migrating business-critical applications to open systems.

Clustered Nile systems offer an even higher level of reliability, availability, and scalability by eliminating single points of failure for both hardware and software — allowing you to achieve mainframe capacity and performance at a fraction of the cost. Up to four Pyramid servers can be combined in a Pyramid Reliant® cluster system to provide shared access to a highly available Oracle database. For example, by taking advantage of an advanced failover feature that automatically reconnects users to an operating node in the cluster, a Pyramid cluster running Oracle7 Parallel Server continues normal processing even if one of its systems is out of service.

It's hardly surprising that the world's largest Oracle UNIX customers run their businesses on the Pyramid platforms. In fact, Pyramid has a long history of delivering open systems that support many of the world's largest UNIX databases.

"We chose Pyramid open systems to run MWD's core business functions because their standards-based, SMP platform gives us the high availability and the processing horsepower we need to migrate from our existing mainframe systems."

David Synek
Program Manager
Metropolitan Water District, Los Angeles

Pyramid and Oracle's combined product strategy allows you to take advantage of a broad range of open systems solutions, ranging from applications for end users to system tools, network connectivity, and data access technologies critical to successful enterprise-level computing. This combined with flexibility to leverage new technologies as they emerge, gives you access to the most powerful tools available to run your business.

Pyramid products conform to current specifications established by industry and government standards organizations. The growing industry-wide commitment to open systems means that more data and applications can be shared throughout enterprise networks, increasing productive use of information. Pyramid and Oracle are committed to delivering products that adhere to industry standards for interoperability.

A SUPERIOR CUSTOMER SUPPORT STRATEGY: PYRAMID AFFILIATE SUPPORT

If you're running business-critical applications on your system, you need fast, effective support to back-up these systems if problems arise. In addition to establishing a broad range of service and support capabilities internally, Pyramid and Oracle have teamed up on the service front to offer even higher levels of responsiveness through a fast and effective coordinated support program, called Affiliate Support. Pyramid's innovative Affiliate Support Program — of which Oracle was the first member — provides customers with one-stop coordinated system and database support.

By making a single phone call, you're immediately connected to an experienced, worldwide team of Pyramid and Oracle engineers. Pyramid's worldwide Customer Support and Consulting Services organizations work with Oracle's customer support group to ensure maximum

PYRAMID® TECHNOLOGY

system uptime and optimal performance. What's more, Affiliate Support engineers have access to the most up-to-date technical information for resolving problems with databases, hardware, and system software. To further simplify problem-resolution, the vendor you initially contact will take responsibility for tracking your problem and assuring it is successfully resolved in the shortest time possible.

SHARED VISION OF THE FUTURE

Business process re-engineering and the evolution of open systems are extending the role of corporate computer systems. Today's systems not only are running day-to-day transaction processing applications, but also new information processing applications such as global messaging, decision support and data warehousing, electronic commerce, and work flow and document management.

By building on their mutual successes in high-volume transaction processing and decision support environments, Pyramid and Oracle are already working to implement new information management solutions to meet evolving needs. For example, future massively scalable processing technology from Pyramid will be combined with the Oracle Parallel Server technology to support management of terabyte-sized data warehouses.

Perhaps most importantly, Pyramid and Oracle are committed to working together to map out the future of enterprise-wide information management to assure their solutions keep pace with the growth of your business—today and well into the future.

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Contact the office nearest you for other office locations.

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Oracle and Pyramid

Enterprise Solutions Program

Tom Hildebrand

Vice President

UNIX RISC Products Division

Oracle Corporation

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Oracle and Pyramid ESP

Information Technology Users Prefer Open Systems because of

- Faster Technology Evolution
- Flexibility
- Vendor Independence
- Price/Performance

BUT...

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Open Systems Challenges

- Customer is the Systems Integrator
  - Multiple Vendors' Products Required
  - Limited External Help Available
  - Carries some Integration Risk
- Supporting Mission Critical Applications is Difficult
  - Limited Integrated Systems Management
  - Limited Integrated Administration Tools
  - Lack of Integrated System Testing

Customer Requirements

- Shorter "Time to Production"
  - Interoperability Across Platforms
  - Turn-Key Solutions
  - Reduced Complexity
- Decreased Operational Risk
  - Single Support Point of Contact
  - Vendor Integrated System Testing
  - No Fingerpointing
- Better Personnel Utilization
  - Less Time Spent Integrating Systems
  - More Time Spent Producing Applications

Enterprise Solutions Program Overview

- **Oracle and a Few Selected Systems Vendors**
  - Enterprise Market Only
- **Ownership by a Single Source**
  - Oracle-Pyramid ESP Alliance
- **Integrated Product Development**
- **Mission Critical Support**
- **Enterprise Systems Consulting**
- **Trained Sales Force**

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Integrated Product Development

One Logical Product to the Customer:

- One View Into the Hardware and Software
  - Unified Console
  - Integrated Utilities
  - Unified Diagnostics
- Jointly Optimized and Tuned
- Full System Integration Testing
- Lock Step Regresssion Testing

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Integrated Product Development (continued)

ESP Engineering Center
Redwood Shores, California

- Significant Increase in Dedicated R&D Engineers

- Some Product Areas:
  - Pyramid/Oracle System Management Tools Integration
  - Third-Party System Administration Tools Integration
  - Third-Party Product and Specific Configuration Testing
  - Multi-System Optimization and Performance Tuning
  - Cluster Technology
  - Mainframe Interoperability

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Mission Critical Support

- Single Support Contact
  - Pyramid/Oracle Jointly Own a Problem Until It is Fixed
  - Extensive Support Engineer Cross Training
- Enhanced Priority Processing
- On-Site Audits/Support Engineers Option
- Pre-Staged Systems Configuations in Each Vendor's Support Center

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Enterprise Systems Consulting

- IT Architecture and Design
- VLDB Design and Performance
- Data and Application Migration
- Application-Specific Capacity Planning
- Pre-Staging of Applications
- Backup/Recovery and Disaster Recovery Planning

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ESP: Trained Sales Force

- Technical Configuration/Sizing Guides
- Demonstration Centers
- In-Depth Cross Product Sales Training
- Pre-Sales Engineers Selectively Receive Further Training

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The ESP Program

- Oracle and Pyramid work closely together to address Mission Critical Customer Needs
- Oracle's Commitment to the Pyramid Enterprise Market
- Allows Oracle and Pyramid to Use Open Systems to Solve a Large Number of Mission Critical Environments

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The Oracle and Pyramid Enterprise Solutions Program

"ESP Provides the Technology, Support and Services to Create and Maintain a Robust Open Systems Environment, Capable of Handling True Mission Critical Computing"

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Pyramid Technology

The open systems leader in delivering high-end, large-scale production-proven solutions for business-critical and decision support applications.

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Pyramid Market Focus

- Over 1000 core customers in more than 50 countries
- 4,000 systems installed; 55% Oracle installed base
- 75% of new customer shipments are with Oracle
- 50% Pyramid systems engineers trained on Oracle products
- Pyramid/SNI are #1 open systems UNIX provider in units shipped in midrange ($100K - $1M)

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Pyramid's History of Leadership

- Technology Leadership
  - Superior performance and scalability
  - SMP and RISC
  - Stable SVR4 and high-end UNIX
  - Clustering
- Market Leadership
  - Focus on open systems commercial computing
  - Large system UNIX expertise
  - Partnerships with leading open systems software
- Satisfied Customer Base
  - References
  - Examples of leading edge capabilities

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Global 1000 Customers

Financial Services

- Fidelity Investments
- Toronto Stock Exchange
- Standard & Poor's Compustat
- Novus Financial Corp (Sears)
- Scotia McLeod
- Great West Life
- EDS Credit Union
- Canada Trust

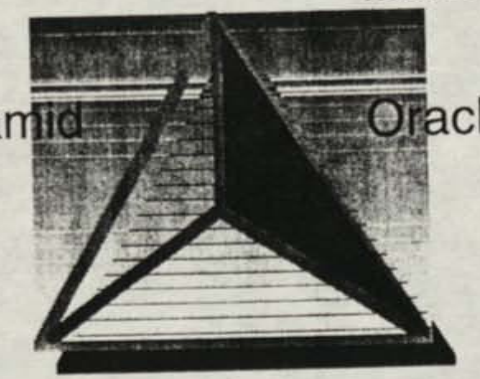
Health Care

- Private Healthcare Systems
- Blue Cross / Blue Shield of Mass.
- Nottingham City Hospital Trust
- U.S. Veterans Affairs
- H. Lee Moffitt Cancer Center
- Oxford Health

Hospitality/ Transportation

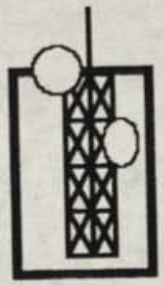
- National Car Rental
- Dallas/Ft. Worth Airport
- Korean Highway Agency

Pyramid



Oracle

References



Telecommunications

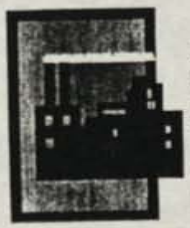
- AT&T
- US West
- Vodafone
- MCI
- Southwestern Bell
- Bell Atlantic

Government

- Internal Revenue Service
- State of California, Public Utilities Commission
- Metropolitan Water District of Southern California
- VA Hines

Retail

- Shopper' s Drug
- AT&T Universal
- British Shoe
- Damark
- CVS



Manufacturing

- Allied Signal
- Detroit Diesel
- G. Heileman
- Wavetek
- Hyundai
- Oracle

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McKesson Corporation

$14B drug distribution company

- Business Problem:
  - Needed to provide customer market intelligence
  - Manage information on 120,000 product items; 4,000 suppliers; 30,000 active customers
- Application:
  - Provide data and analysis to internal users and customers for market and product segmentation
  - Develop decision support information warehouse
- Specifications:
  - 3 node Pyramid Nile cluster - Oracle 7.1 Parallel Server
  - 200 GB data warehouse-growth 650 GB, Oct. '95
  - 3.5 TB goal with MPP direction

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CVS

$4B pharmacy drug chain with 1300 East Coast stores

- Business Problem:
  - Needed highly available, central repository of patient data
  - Needed timely access to accurate customer base data for decision support queries
- Application:
  - Develop on-line, central pharmacy system to maintain patient history and prescription data
  - Develop Rx2000 Data Warehouse for data analysis of customer base, sales planning
- Specifications (in development):
  - Total (5) Pyramid Nile systems - Oracle 7.1 Parallel Server clusters
  - Pyramid Nile 150 for Rx2000 Data Warehouse - 400 GB database
  - Pyramid Nile 150 cluster for pharmacy system - 600 GB database

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US West

US West provides all sales, product development, and marketing throughout their 14 state region

- Business Problem:
  - Competition eroding customer base. Need data to track erosion, identify market need to create competitive product offerings
  - Existing FOCUS application residing on 3 different MVS systems cannot provide enough detail
- Application:
  - Re-engineered MVS/FOCUS application with Oracle 7.1 on Pyramid
  - Developed decision support system to analyze competitive position
- Specifications:
  - 400 GB on-line production data warehouse
  - Pyramid Nile 150 (12 CPUs) system; Oracle 7.1
  - 750 GB Disk storage

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NEWS WIRE

DEC, Tadpole ink notebook deal

AUSTIN, Texas — Digital Equipment Corp. has turned to Tadpole Technology Inc. for expertise in completing its LEAN Alpha AXP "notebook workstation," under a deal announced last week. Digital has been working on the LEAN machine for months, first showing it at Fall Comdex last year and again at DECUS earlier this month running OpenVMS. Expected out by year's end, the notebook will be based on the Alpha AXP DECchip 21066 RISC microprocessor. The Digital-Tadpole partnership is similar to an earlier deal between Tadpole and IBM under which Austin-based Tadpole helped design IBM's RISC System/6000 N40 notebook workstation based on the PowerPC 601 chip. Tadpole also sells its own Sparc-based workstation notebook. — *RW*

AXP-based Mach series arrives

IRVINE, Calif. — Digital Equipment Corp.'s Alpha AXP chip received a boost last week when NekoTech of Irvine, Calif., announced the Mach series of Alpha AXP-based PC workstations and file servers. The desktop Mach 1-166 utilizes the Alpha AXP 21066 chip and offers 70 Specint92 and 105 Specfp92 performance at a price ranging from $3,995 to $8,995, depending on the configuration. The Mach 2-210, for use as a desktop or file server, is based on the Alpha AXP 21064 microprocessor and provides 108 Specint92 and 169 Specfp92 performance at a $6,795 to $12,995 price range. NekoTech is a wholly owned division of Inventory Conversion Inc. in Hampton, N.H., a multimillion-dollar computer equipment reseller. — *RW*

EncinaBuilder program announced

ORLANDO, Fla. — Powersoft Corp. and Transarc Corp. have developed EncinaBuilder, an Encina for Windows interface to Powersoft's PowerBuilder client/server development tool for assembling Encina client applications. The development program, to be announced here at Powersoft's user conference today, is slated for availability later this year and will be sold by Transarc and its distributors. — *RW*

Dell to resell DEC's DLT drives

As expected, Dell Computer announced this month that it will resell Digital Equipment Corp.'s digital linear tape (DLT) drives and minilibraries with Dell's PowerEdge servers. Separately, Avail Systems plans to begin shipping in July a DLT driver for the company's NetSpace hierarchical storage management (HSM) software. Evaluation units of the NetWare-compatible HSM software are available now. In a related announcement, Hewlett-Packard plans to bundle Avail's NetSpace with HP's optical jukeboxes. — *DS*

StorageWorks after IBM market

Having successfully entered the Novell and Sun Microsystems markets with its StorageWorks architecture, Digital Equipment Corp. plans next to attack the channel-attached IBM mainframe market, according to Kirby Wadsworth, manager of StorageWorks product marketing. In the mainframe arena, Digital will compete with vendors such as EMC. Wadsworth also says that Digital has qualified at least one additional disk drive source for each capacity level in its StorageWorks architecture. According to Wadsworth, Digital has solved the problems associated with using volume shadowing on drives from different vendors (see DN&R, May 9, page 54). — *DS*

Database tool vendors flocking to DB/Expo

By Rick Whiting
DN&R News Staff

SAN FRANCISCO — Major releases of client/server development tools from Uniface Corp. and Jyacc Inc. and a wave of tools for accessing and manipulating database information are on tap for the DB/Expo exposition and conference here this week.

Sybase Inc. is also expected to make an announcement in data integration, while Digital Equipment Corp. will reportedly announce a new partnership with an as-yet undisclosed database vendor. Officials from both companies were mum last week on details of the announcements.

Uniface will introduce Uniface 6.0, which is the next generation of its client/server application development tool, to strengthen the company's push into tools for developing enterprise-wide applications. The foundation of the model-driven Uniface 6.0 is a new component-based architecture with an application objects repository at its core for storing application models, data definitions, business rules, processing logic, global objects, and methods.

DB/Expo also will be the site for the first public showing of version 6.0 of Jyacc's Jam client/server development system. The toolset sports a visual object repository for storing such application objects as widgets, bitmap images, and procedures. The newest release also offers a graphical editor and a transaction manager for governing application/database interaction.

Unidata Inc. will take the wraps off version 3.2 of its Unidata nested relational database system with new transaction management, on-line backup, file recovery, and file growth capabilities.

Unidata will also show off Cobol85 Direct Connect technology, developed with Acucobol Inc., which will allow legacy Cobol-based software to interface with Unidata's database system.

Relay Technology Inc. will enter the client/server market with Relay/OpenPort, a PC-based Windows tool that will allow system administrators to move data and data structures from one relational database to another.

PageAhead Software Corp. will announce SimbaEngine C/S 2.1, the vendor's data connectivity product allowing Windows-based PCs to access information through Unix servers using open database connectivity technology.

Ramco Systems Corp. will introduce its Marshal Enterprise Management System (EMS) line of programs for consolidating and managing client/server transaction processing and decision support operations. The product line includes financial, distribution, materials, manufacturing, personnel, and productivity tool applications.

Independence Technologies Inc. will be demonstrating a prototype of its iTran for PDAs, a version of the vendor's middleware system that will allow personal digital assistants to operate within large-scale, transaction-processing networks.

ADB Inc., formerly Object Databases Inc., will announce version 2.3 of its Matisse object-oriented database system. The new release offers embedded SQL with object query language extensions and other performance enhancements.

Excalibur Technologies Corp. will debut the Excalibur Text Recognition Server (ETRS) and Text Recognition Libraries (ETRL) for developers to embed within their software for network-wide retrieval and indexing of text-based data.

And Logic Works Inc. will announce version 2.0 of its Erwin database modeling and design tool with new features that accelerate the design process.

In the hardware department, White Cross Systems Ltd., a new U.K.-based vendor of massively parallel computers, will introduce at the show its 9020 Database Server. And IBM will be unveiling two new servers within its own S/390 line.

Pyramid introduces entry-level Nile 100 server

By Greg Garry
DN&R News Staff

SAN JOSE, Calif. — Pyramid Technology Corp. last week lifted the veil on an entry-level version of its Nile server line. The new system, called the Nile 100, boasts the same feature set and performance characteristics as the Nile 150 server, which the San Jose-based company introduced last October, but has been scaled down for the requirements of smaller businesses that want to join the enterprise server fold, according to the company.

Pyramid officials are positioning the new machine as an entry point for the enterprise and are aiming it at commercial applications like on-line transaction processing.

The 100 is also being promoted as a regional server for larger companies, where it can work as a centralized server for a group of branch offices or for a group of LAN segments within a large facility.

Some market watchers say Pyramid's new system should be able to find a sweet spot in the midrange arena.

"This broadens their potential market," says Norton Greenfeld, director of Unix system research at CI InfoCorp Inc., a San Jose-based market researcher. "It's a very smart move for them. This is really the first system to allow centralized MIS operations to de-centralize effectively."

Others view the Nile 100 as Pyramid's way of solving a cost problem.

"Pyramid definitely needed an entry-level server," says Brian Richardson, an analyst with the Meta Group in Westport, Conn. "The average selling price on the Nile 150 was just too high. I think that they felt they were being left off of a lot of short lists because their list price was much higher [than their competitors']."

The basic Nile 100 model is being priced at $155,000. When the Nile 150 made its debut last fall, Pyramid offered it at prices in the $450,000 range.

The Nile 100 server scales from two to eight 150MHz Mips R4400 CPUs and offers 32KB of primary cache and either 1MB or 4MB of secondary cache per processor.

Greenfeld says the new system also creates a comfortable upgrade path for entry-level users. "It gives them a way to get in at a reasonable entry price and move up if they want to," he says.

The 100 uses the same system bus and the same I/O subsystem as the larger 150, but without the same level of expandability, according to Judson Groshong, director of product marketing for Pyramid.

SNAPSHOT

Who Pyramid Technology Corp. (408) 428-9000

What The Nile 100 server. Entry-level configuration includes two Mips R4400 CPUs with 150 MHz clock rate, 64MB of RAM, 2GB of disk storage, and a QIC-320 1/4-inch cartridge tape drive for backup storage.

Why Fills out the low end of the Nile server family and provides a comfortable price point for small businesses.

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Pyramid Technology Corp. — Second-Quarter Loss as Expected; Do Not Forecast Profitability Until Fourth Quarter

Hold

- Pyramid's execution on expanding its end-user sales channel is falling short of its goals, even though its technology appears to be competitive.
- We are not convinced that Pyramid has enough control over its destiny to produce a profit in the June quarter; thus, we estimate a loss of $0.39 per share for that period.
- We continue to rate the shares Hold and would view improvement in Pyramid's direct sales organization as a measure of improved fundamentals.

Change in Stock Price Since Code Change (28 Feb 94): -52%
Change in S&P 500 Since 28 Feb 94: -4%

Figure 1. Pyramid Technology Corp. — Statistical Abstract

Ticker/Exchange:	PYRD/OTC	Dividend:	—
Price (18 May):	$7 1/2	Yield:	—
52-Week Price Range:	$23-$7	Book Value Per Share:[a]	$9.27
Liquidity Code:	5	Shares Outstanding:	13.4 Million
Previous Investment Code:	Hold	Market Capitalization:	$100.5 Million

	EPS			P/E		Calendar P/E Rel.
	Fiscal	Previous	Calendar	Fiscal	Calendar	to S&P 500
1992	$(1.78)					
1993	0.67					
1994E	(1.07)	$(0.61)	$(1.11)	NM	NM	NM
1995E	0.50	—	0.56	15.0	13.4	96%

[a] Balance sheet figures as of March 31, 1994. E Salomon Brothers Inc estimate. NM Not meaningful.
Note: All data in this report refer to Pyramid Technology Corp.'s fiscal year ending September 30, unless otherwise noted.

Figure 2. Pyramid Technology Corp. — Annual Model, 1989-95E (Dollars and Shares in Millions[a])

	1989	1990	1991	1992	1993	1994E	1995E
Revenue	**$103.9**	**$179.7**	**$227.9**	**$192.2**	**$233.7**	**$220.1**	**$275.8**
Cost of Revenue	46.2	83.3	121.4	123.5	132.1	136.7	158.3
Gross Profit	57.7	96.4	106.6	68.7	101.6	83.4	117.5
Research and Development	14.6	20.3	24.3	28.4	27.8	27.9	30.2
Marketing, General and Admin.	33.1	54.1	65.8	64.7	64.4	74.4	78.0
Operating Income	10.0	22.1	16.5	(66.5)	9.3	(18.9)	9.3
Other Income (Exp.), Net	1.7	2.4	1.2	(0.2)	0.3	(0.1)	0.0
Pretax Income	11.6	24.5	17.7	(66.6)	9.6	(19.0)	9.3
Income Tax	3.3	7.6	5.7	(6.9)	1.0	2.5	1.9
Net Income	8.4	16.9	12.0	(59.7)	8.6	(21.4)	7.5
Earnings Per Share	**$0.96**	**$1.61**	**$1.01**	**$(4.99)**	**$0.67**	**$(1.07)**	**$0.50**
Shares Outstanding	8.7	10.4	11.9	12.0	12.9	14.0	15.0
Margin Analysis							
Gross Margin	55.5%	53.6%	46.8%	35.7%	43.5%	37.9%	42.6%
R&D as a Pct. of Revenue	14.1	11.3	10.7	14.8	11.9	12.7	10.9
Mktg., Gen. & Admin. as a Pct. of Revenue	31.9	30.1	28.9	33.7	27.6	33.8	28.3
Operating Margin	9.6	12.3	7.2	(34.6)	4.0	(8.6)	3.4
Pretax Margin	11.2	13.6	7.8	(34.7)	4.1	(8.6)	3.4
Tax Rate	28.4	31.0	32.2	10.4	10.0	(13.1)	20.0
Net Margin	8.1	9.4	5.3	(31.1)	3.7	(9.7)	2.7
Percentage Change							
Revenue	30.2%	73.0%	26.8%	(15.6)%	21.6%	(5.8)%	25.3%
Pretax Income	NM	NM	(27.8)	NM	NM	NM	NM
Net Income	NM	NM	(29.0)	NM	NM	NM	NM
Earnings Per Share	NM	67.7	(37.3)	NM	NM	NM	NM
Financial Indicators							
Accounts Receivable	$28	$50	$53	$37	$51	$52	$75
Stockholders' Equity	70	154	175	118	138	118	126
Book Value Per Share	8.21	13.85	15.27	9.69	10.59	8.69	9.03
Long-Term Debt to Equity	0.0%	0.0%	0.0%	0.0%	0.4%	2.2%	3.1%
Current Ratio	3.4	3.5	3.1	1.9	2.4	2.1	2.1
Quick Ratio	2.4	2.4	2.0	1.1	1.5	1.4	1.5
Return on Assets	9.4%	8.7%	5.4%	(33.9)%	4.5%	(11.9)%	3.7%
Return on Equity	12.0	10.9	6.9	(50.7)	6.3	(18.2)	5.9
Accts. Receivables Days Sales Outstanding	84	80	81	65	76	76	87
Revenue Per Employee (000s)	$144	$160	$191	$173	$231	$232	$276
Current Number of Employees	723	1,126	1,193	1,110	1,011	950	1,000
Depreciation and Amortization	$6	$17	$19	$31	$30	$32	$34
Additions to PP&E	11	36	26	23	22	22	24
Free Cash Flow	3	(3)	(4)	(38)	9	(18)	11
Pretax Cash Flow	7	4	2	(64)	10	(15)	13
Cash Flow	15	33	31	(29)	40	14	44
Cash Per Share	2.06	3.61	2.64	2.20	2.28	1.78	1.46

[a] Except per-share and per-employee amounts. E Salomon Brothers Inc estimate. NM Not meaningful. PP&E Property, plant and equipment. R&D Research and development.

Note: Fiscal 1992 earnings per share are shown on a reported basis because of restructuring charges.

Source: Salomon Brothers Inc.

in the process, the company lost many direct salespeople. Now the company has a young sales team on board that does not have much in the order pipeline. There has been no growth in the direct sales channel because Pyramid has lost as many salespeople as it hired. Basically, the company stated that it lost about one year's worth of sales in its plan to reach a sales mix of 80% direct and 20% indirect. However, Pyramid's products are very healthy, and the sales teams can only become more effective. Pyramid plans to boost its direct sales by 25% over the next 12 months, a very good indication of the pipeline potential available to the company if it executes correctly.

PYRAMID EXPANDS NILE SERIES WITH LOW-END SYSTEMS

Pyramid announced the Nile 100 on May 16, the newest addition to the company's Nile Series Enterprise Server Line. The Nile 100 is targeted at Fortune 2000 companies, offering them a scalable entry point for both business-critical on-line transaction processing and decision support/data warehouse information management solutions. The Nile 100 also can function as a regional server for larger companies, providing a central computing resource for branch offices or for local area network (LAN) segments within a large facility. Prices begin at $155,000 for a basic configuration, which includes two CPUs and 64 megabytes of memory.

Figure 3. Pyramid Technology Corp. — ES Series and Nile Series Specifications

	MIS-2 ES	MIS-4 ES	MIS-12 ES	Nile 100	Nile 150
CPUs	2-4	2-8	2-24	2-8	4-16
Cache	9-18 MB	9-36 MB	9-108 MB	2-32 MB	16-64 MB
MIPS	64-128	64-256	64-768	270-1,080	540-2,160
Processor	MIPS R3000	MIPS R3000	MIPS R3000	MIPS R4400	MIPS R4400
Memory (Min-Max)	32-256 MB	32-512 MB	32-1024 MB	64 MB-2 GB	128 MB-4 GB
Disk	1 GB-23 GB	1 GB-250+ GB	1 GB-250+ GB	2 GB-250+ GB	2 GB-1+ TB
Ethernet Connections	4	8	8	8	16
Number of System Bays	1-2	1-3	1-3	1-2	2-5
Environment	Office	Computer Room	Computer Room	Office & Computer Room	Computer Room
Operating System	DC™/OSx®	DC/OSx	DC/OSx	DC/OSx	DC/OSx
I/O Slots	5-14 XTEND®	10-36 XTEND	18-36 XTEND	26 XTEND	72 XTEND
Power	115/208V	208V	208V	220V	220V
Entry Price	$72,500	$115,000	$215,000	$155,000	$370,000

CPU Central processing unit. GB Gigabyte. I/O Input/output. MB Megabyte. MIPS Millions of instructions per second.
Source: Pyramid Technology Corp.

INVESTMENT OPINION

As Pyramid indicated on March 30, the ongoing reduction in sales to its traditional original equipment manufacturer (OEM) customers (Siemens/Nixdorf, Sharpe, Olivetti, Hyundai, and AT&T) was the primary reason behind its second-quarter loss. At AT&T, internal pressure continues to buy systems from NCR. TMAC revenue is not included in AT&T OEM revenue (which came in below $2 million), but TMAC revenue (approximately $4.5 million) was modest in the most recent quarter — March historically has been the weakest quarter. On the brighter side, the company said that its new OEM partners, EDS and ICL, are on solid ground.

In addition to the ongoing reduction in OEM sales, the buildup of the direct sales force and longer sales cycles at Fortune 500 accounts also contributed to the difficult quarter. However, we cannot ignore the growing competition in the SMP UNIX world. Specifically, IBM is slated to announce Pegasus (based on the PowerPC microprocessor) in September, signaling its entry into the UNIX SMP market. Pegasus will be offered in one-, two- and four-processor configurations, and the potential exists to increase the configuration to eight processors within 12 months of its introduction. No specifics are available on price and performance, which is a good reason for the traditional IBM-oriented Fortune 500 accounts to wait.

We are not convinced that Pyramid has enough control over its destiny to produce a profit for the June quarter; thus, we estimate a loss of $0.39 per share. We forecast a loss of $0.03 per share for the September quarter. For full year 1994, we forecast a per-share loss of $1.07. We believe that the company will garner earnings per share of $0.50 for fiscal 1995. We continue to rate the shares Hold.

COMMENTS ON THE QUARTER

Pyramid incurred a nonrecurring charge of $4 million in the second quarter, or $0.30 per share. This charge was split 60% for cost of goods sold and 40% for operating expenses. Thus, on an operating basis, Pyramid incurred a loss of $0.89 per share versus the reported loss of $1.19.

Total revenue of $46.5 million declined by 20% year to year. Product revenue of $30.1 million was split among $15 million from U.S. direct, $3.2 million from U.S. indirect, $6 million from sales in Europe, and $5.9 million from sales in Australia and Asia-Pacific. The United Kingdom was dominant in the European sales figure. British Shoe, one of the largest retailers in Europe, became a Pyramid customer during the quarter. Australian Telecom was also a good customer in the quarter.

A couple of good domestic wins during the quarter included Standard & Poor's/Denver, where Pyramid systems will run the Oracle Parallel Server. It took Pyramid ten months to beat out Sequent, Hewlett-Packard and Digital for the business. MCI was another large customer during the quarter.

Direct revenue accounted for 70% of the total, and indirect accounted for 30%.

We expect that gross margins, which decreased to 27.1% in the quarter from 42.8% a year ago and 41.6% in the prior quarter, will return to around 40% as revenue returns to normal levels. We believe that this will take two to three quarters to unfold.

The company has reduced its work force by 5%-10% since it announced its second-quarter loss on March 30.

COMMENTS FROM ANALYSTS' MEETING

Pyramid held a very upbeat analysts' meeting on April 28, although it was poorly attended. The company's developmental partners (EDS, ICL and Oracle) made a series of presentations. A user/customer panel featured Fidelity, among others. However, the near-term outlook remains tough.

There seems to be a major inconsistency between the company's rhetoric and its financial results. It appears that the products are healthy and that customers are embracing them worldwide. However, Pyramid has fallen quite short in implementing its plans to invest in a direct sales channel for high-end UNIX-based enterprise servers. We believe that it is appropriate to continue evaluating Pyramid's ability to execute on its new direct sales distribution channel strategy. In fact, Dick Lussier, chairman and chief executive officer, stated that Pyramid has lost a year in its three-year goal of achieving $500 million in revenues. At this juncture, we do not know how realistic that goal is; however, the company's products are competitive at the high end, and they are having a significant impact on some of the Fortune 500-class customers.

Other Comments

- Pyramid is focused on six markets: manufacturing, government, financial, hospitality, health care, and telecommunications.

- The company's revenue per employee objective is $300,000. Its current run rate is $229,000.

- Average selling prices for systems have been at the $275,000 level.

- The company has made good progress over the past year (the first) in the relationship with EDS. EDS signed approximately $7 billion of new orders at 84 data centers in full year 1993 and $3 billion in the March 1994 quarter, during which it helped customers in their transitions to nonproprietary operating environments. Pyramid and EDS have jointly closed 12 deals, thus far including Detroit Diesel, National Car Rental, Hospitality Franchise Systems, Axiom Pharmaceutical Distributor, and Blue Cross.

- Fujitsu is marketing the Nile system in Spain and Australia.

- Comments from the customer panel were very positive, and they included representatives from Fidelity, Cott Beverage and Oracle. In a ten-vendor analysis, Fidelity chose Pyramid to replace Fidelity mainframes with Oracle data base management solutions. Two major applications are in production, and eight other development efforts are under way.

- John Chen, president, outlined the scenario that has negatively affected the company. First, Pyramid's indirect partners were becoming more distant, and Pyramid decided to embark on a campaign to build up its direct sales. The company did not realize the length of sales cycles for big systems and that it needed teams to sell to CIOs and CEOs. Pyramid needed to replace seven out of ten sales executives on a worldwide basis;

Investment Code (for a six- to 12-month time horizon)

U.S. equities are coded against the S&P 500; Japanese equities are coded against the Tokyo Stock Price Index (TOPIX); equities from other countries are coded against the appropriate local index.

Buy: Expected to outperform the market. **Hold:** Expected to match the market. **Underperform:** Expected to underperform the market.

Liquidity Code (based on 20 prior trading days)

U.S. stocks are coded based on a descending scale of 1-5, with 1 representing the most liquid quintile of the S&P 500 based on the dollar value of shares traded. The quintile ranges are printed each week in the *Salomon Research Weekly*.

Salomon Brothers Inc and/or its affiliates ("the Firm") have an investment banking relationship with Pyramid Technology Corporation. Within the past three years, the Firm has managed or co-managed an equity offering for Pyramid Technology Corporation. The Firm usually makes a market in the securities of Pyramid Technology Corporation. The Firm actively trades in the securities of Pyramid Technology Corporation for customers' accounts and for its own accounts. The Firm also may issue options on securities of Pyramid Technology Corporation and may trade for its own accounts in options that have been issued by others. We, accordingly, may at any time have a long or short position in any such security or in options on any such security. As of May 17, 1994, the Firm held a long position in the common shares of Pyramid Technology Corporation.

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Pyramid Technology's woes lead to latest round of layoffs

Pyramid's business can be affected greatly by loss in providing high-end computer servers to a small group of customers

By MARY HAYES

Pyramid Technology Corp., a struggling computer manufacturer, has laid off up to 100 people within the past few weeks, said sources within the company.

As of Wednesday, the company had yet to make a public disclosure of the layoffs. And officials did not return phone messages inquiring about the layoffs.

A Pyramid manager said the company, which is publicly listed by NASDAQ, laid off nearly 100 employees. Pyramid employed 1,011 full-time workers as of Sept. 30, according to documents filed with the Securities and Exchange Commission.

Pyramid's problems, said analysts, are related to declining business from the company's original-equipment manufacturer (OEM) partners. Pyramid, however, did not mention layoffs in a recent conference call with analysts.

Pyramid has lost a lot of business to American Telephone & Telegraph Co., said Johannes Severiens, an analyst with Dakin Securities in San Francisco. Pyramid makes high-end computer servers that range in price from $100,000 to $2.5 million, so the loss of just one order can have a significant impact on the company.

"The AT&T business probably will not come back very much," Mr. Severiens said. In addition, the company has faced slower business from customers in parts of the world that are now sacked by recession, including Europe and Japan.

San Jose-based Pyramid has hired Wright Associates, a San Jose-based outplacement firm, to help employees develop resumes and find jobs. A Wright Associates employee said workshops were held for laid-off Pyramid employees last Monday and Tuesday.

One former Pyramid employee, who was laid off shortly after reporting to work on April 7, was told that the workshops were for Pyramid employees, and there were at least 40 spots available for the workshops. The employee said layoffs took place in manufacturing and administration.

There is no set number at which a publicly traded company must report layoffs, said SEC spokesman John Heine. Each company determines whether investors would see such information as pertinent to investment decisions. An investor who later finds out that a company did not disclose layoffs, and believes the information was important, could bring litigation against the company.

Pyramid reported March 30 that it expected revenues for the quarter ended April 1 would be about 15 percent lower than revenues of $58 million for the second quarter of fiscal 1993, and that Pyramid expected a "significant loss" for the quarter.

That announcement came after the close of the stock market. But Pyramid's stock opened at $8 a share the next morning, down from $11.75 the day before, and dipped to a 52-week low of $6.88 a share. Pyramid's stock closed at $8.25 a share on April 13.

"The obvious result is they will have to bring costs into line," Mr. Severiens said. "Layoffs could be massive, but I'd be surprised. They had a massive layoff a year ago."

Nonetheless, Mr. Severiens said he believes Pyramid will make a comeback this year, and believes the stock is presently undervalued.

For its first fiscal quarter ended Dec. 31, Pyramid reported profits of $635,000, or 5 cents a share, on revenues of $60 million, compared with profits of $468,000, 4 cents, on revenues of $35.1 million a year ago.

Pyramid had profits of $8.6 million on revenues of $233.7 million in 1993, but lost $59.7 million on revenues of $192 million in 1992.

CORRECTIONS & AMPLIFICATIONS

Actel Corp.

On the April 4 list of largest Silicon Valley public companies, the net income for Actel Corp. was reported incorrectly. The company reported net income of $5 million for fiscal year 1993. Atmel, which was mistakenly listed in the April 11 corrections & amplifications, reported net income of $30 million for the 1993 calender year, as correctly stated in the April 4 list.

Sun serving South African users

By STEFANI SOBERS

Sun Microsystems Computer Corp. last week announced it has opened an office in South Africa.

Sun's first office in that troubled nation will serve as a central marketing and support site for the company's rapidly growing customer base and five South African business partners: RISC Solutions, Large Scale Systems, Lonnet, Rightsizing Technologies and Vector Network Computers.

"It is a rich country with more potential than many realize," said Peter Kirwan, international trade and business consultant and professor at the Institute of International Studies in Monterey.

Political turbulence in South Africa could make Sun's decision risky, but company officials say the timing is perfect. "Many businesses saw enormous growth opportunities in 1991 after the U.S. sanctions were lifted," said Penny Bruce, spokeswoman for Mountain View-based Sun Microsystems.

Stuart Keirle, senior vice president of Circle International, an importer-exporter based in San Francisco, said political turmoil seems to be decreasing, as economic opportunities are increasing. "You can never tell what the future will bring," he said. "In the business world, you have to take risks and I think Sun made a wise choice."

Other Silicon Valley companies have done business in South Africa and results have been good. For example, electronics giant Hewlett-Packard Co.'s distributor, Hiperformance Systems Limited, operates three offices in that country.

Abie Fullard, a South African national, will head the office as regional manager. Sun had been planning the office for more than a year.

Sun has been successful in South African banking and finance, transportation, geographic information systems and education. Its University of Witwatersrand has computers from Sun and its largest game reserve, Kruger National Park, uses Sun equipment to manage its wildlife resources. South African insurance companies Price Forbes, Liberty Life and IGI Life use Sun systems.

default we found ourselves servicing the telecom industry," Corrigan says. The company hopes to exploit that position and expand into the emerging consumer segments as well.

Robert Ristelhueber

SYSTEMS

Pyramid drives another nail into mainframe coffin

Pyramid Technology Corp., a San Jose manufacturer of high-end Unix-based systems, will drive another nail into the mainframe coffin this month when it unveils a new top-of-the-line family, code-named Jolt. Company executives expect the new symmetric-multiprocessing (SMP) systems to further tempt corporate information technology managers to abandon their mainframe equipment for the order-of-magnitude cost savings Jolt would provide. If these managers do so, Jolt also would keep Pyramid's growth on track as it powers away from a disastrous financial performance in fiscal year 1992.

A year ago, Pyramid was stunned by a loss of $59.7 million on revenue of just $192.2 million, down 16 percent from 1991. The decline came in large part because Pyramid's sales to its largest customer, **AT&T**, fell from $41 million in fiscal year 1991 to $25 million, according to estimates by Salomon Brothers Inc. in New York, NY. Additionally, revenue anticipated from a $1.4 billion Internal Revenue Service contract won by AT&T—with Pyramid as its main supplier—was delayed for nine months while **IBM** and **Lockheed Corp.** unsuccessfully contested the award.

Pyramid's group manager of product strategy Steve Champion says the company is working on a massively parallel design for 1995.

However, Jolt is expected to help propel Pyramid to a 20 percent increase in revenue in its current fiscal year, to $286 million, and a 70 percent increase in net income, to $17.9 million, according to John Jones Jr., a Salomon Brothers analyst.

The new high-margin Jolt systems incorporate the 64-bit R4400 microprocessors sold by **MIPS Technologies Inc.**, the Mountain View, CA, subsidiary of **Silicon Graphics Inc.**, also in Mountain View. The Jolt systems will initially utilize a 75-megahertz version of the R4400, but will move to a 150-MHz part next year, according to Pyramid's Steve Champion, group manager of product strategy. The systems will scale from one to 16 processors, will support up to 1 terabyte (1 trillion bytes) of disk storage, and will provide a high degree of "fault resilience," Champion says. The Jolt systems will cost from about $300,000 to about $2 million. The top end will be roughly competitive with mainframes selling for as much as $10 million.

Even the most powerful Jolt system won't meet everyone's needs, Champion admits. "Some customers are pushing the limits of SMP disk support and I/O throughput beyond what a 16-processor Jolt system can provide." To satisfy these demanding customers, Pyramid is developing a massively parallel computer system that will incorporate large numbers of R4400 chips or a next-generation million-instructions-per-second CPU. Pyramid's massively parallel system is slated to go on sale in 1995.

Dwight B. Davis

WORKSTATIONS

NEC has big plans for MIPS's R4400

NEC Corp., Tokyo, has ambitious plans for the R4400, the 64-bit microprocessor it licenses and is codeveloping with MIPS Technologies Inc. in Mountain View, CA, contends a new report from Domicity Ltd. in Toronto. NEC will offer the chip for a wide variety of computer markets from low-priced desktop PCs to mainframe-class symmetric multiprocessors. NEC, Motorola, Digital Equipment, and Sun Microsystems are aggressively positioning their own microprocessors as cheaper and lower power alternatives to Intel Corp.'s Pentium processor as the platform for running the Windows NT operating system from Microsoft Corp., Redmond, WA.

Currently NEC is marketing a parallel processor based on eight NEC Vr4400 chips. Almost ready for sampling is a three-piece chip set developed with Acer Group, Taiwan, that would allow PC makers to sell a 64-bit PC running NT for less than $4,000.

Copies of the $1,895 report are available from Domicity at (416) 366-5337.

TRADE

France threatens to scuttle chip-import tariff relief

French government officials are adding European electronic components to the list of endangered products France wants to protect under a new General Agreement on Tariffs and Trade (GATT). The call for continuing the 14 percent import tariffs on many ICs underscores new concern that Europe's weakened semiconductor companies need time to recover and that they will lose more market share inside the European Community if the agreement lowers duties too quickly.

In the last three years, Europe's chip

4-21-91

Pyramid Server Uses Mips Chip

Network Server Supports Open Systems Standards, Proprietary Protocols

By Joshua Greenbaum

MOUNTAIN VIEW, CALIF. — **Pyramid Technology Corp.** last week rolled out a multiprocessor network server based on the Mips Computer Systems Inc. RISC processor and the Unix System V.4 standard from Unix System Laboratories Inc.

The MIServer S series, priced from $93,000 to $348,000, uses up to 12 Mips processors in a server that supports open systems standards as well as a wide assortment of proprietary communications protocols.

With this combination, Pyramid wants to capture a share of the growing client/server transaction processing market, which requires close connectivity with many mainframe data sources that will not be replaced with open systems, said Pyramid chairman Richard Lussier.

In addition to offering the full range of connectivity available in Unix System V.4, the MIServer S series supports IBM's SNA and BSC communications protocols. The server also supports up to 512 direct asynchronous lines and can incorporate Ethernet controllers as standard equipment. Other connectivity options include NFS and X.25.

"It's our job to fit into [the customer's] computing strategies, not the other way around," said Lussier.

The S series MIServer, which runs Pyramid's multiprocessor DC/OSx implementation of Unix System V.4, also supports AT&T's Tuxedo transaction processing monitor.

Pyramid has no plans to migrate users to the S series from its recently released MIServer T series, which is based on Pyramid's proprietary RISC implementation. Instead, the company will sell the S series to new users that need either the full 300-MIPS power of the S series or the standards supported by the server, according to Pyramid vice president of strategic programs Ross Bott.

Lussier: Pyramid wants a share of the client/server TP market.

The S series features a three-bus architecture optimized for specific tasks. The CPU and memory buses operate at 80 Mbytes per second. The Xtend bus, which connects the processing units with the I/O processors, runs at 40 Mbytes per second.

Pyramid can be reached at (800) 289-7973.

FEB - 1 1994

Pyramid offers mainframe-alternative, fault resilient open server

San Jose, Ca. - Pyramid Technology Corp. has introduced its new generation of fault resilient open system servers for business-critical applications.

The Nile Series is the company's formal introduction into enterprise computing, providing Fortune 500 companies with twice the computing power of Pyramid's current product line at roughly the same price.

The Nile Series' architecture, a RISC-based symmetric multiprocessing (SMP) environment, offers industry leading scalable performance, increased functionality, improved price/performance and higher capacity. The Nile Series provides data center-class hardware and software features to promote data integrity, application availability and system serviceability as well as flexibility and low cost inherent in open systems. It is compatible with industry standards and supports a rich suite of third party solutions.

The system's fault resilience provides the ability to automatically recover a configuration from most single points of failure. Enhancements to Pyramid's DC/OSx operating system, system wide error detection capabilities and automatic self tests also provide the reliability needed for fault resilient computing.

Fault resilience is further ensured through the system's configurable redundancy and automatic recovery features, redundant array of inexpensive disks (RAID) and N+1 power and cooling subsystems.

Pyramid's newest family of enterprise servers also has been designed for on-line maintenance and repair to allow "hot" insertion of replacement components, allowing problems to be fixed with minimum impact to users.

Additional serviceability features include an error reporting network that gathers intelligent information about the health of the system and then continually monitors the information. Comprehensive on-line and off-line remote consulting/analysis gives users convenient access to preventative maintenance, configuration and system management information.

The first system in the Nile Series, the NS150, is based on the MIPS R4400 processor running at 150MHz. Initial configurations range from four to 16 CPUs with total performance ranging from 440 to 1760 MIPS. Single system performance is estimated at an excess of 1000 transactions per second. Overall, the first Nile Series system has a single thread performance of more than twice that of Pyramid's current product line.

In addition, Pyramid is one of the first companies to provide a 64-bit hardware platform which offers higher performance in handling large numbers of users.

The performance and availability features of the Nile Series are further enhanced with Pyramid's cluster technology which provides new continuous availability even during failure/recovery and maintenance procedures. Clusters of up to four Nile Series servers extend the range of performance beyond any other open system solution. Clustered systems also ease migration from one product generation to the next.

The Nile Series supports up to 4GB of memory and 1TB of direct connected disks. Together with faster primary and secondary caches, multiple memory controllers and a faster, wider system bus, these features allow the Nile Series to handle extremely large volumes of data effectively and efficiently.

Pricing for entry-level enterprise configurations with 500 MIPS, 256MB memory, 10GB of disk, Ethernet, TCP/IP and Pyramid's SVR4-based DC/OSx for 256 users starts at less than $450,000. Customer shipments of the Nile Series began in July 1993. Volume production began in October.

NEWS + REVIEW, NOVEMBER, 1993

IBM PC Company announces suite of enhanced servers

Somers, NY - The IBM Personal Computer Company unveiled a suite of PS/2 Server 85s and 95s.

Leveraging Intel's Pentium technology and integrating IBM's newest technological achievements, this enhanced family of servers provides high performance, advanced-availability, scalability and security.

To boost server performance the IBM PC Company uses a new IBM-developed SynchroStream technology that enables the IBM systems to break through the traditional bottlenecks that plague server designs. The SynchroStream controller synchronizes data traveling between major subsystems and allows it to stream in parallel, at full bandwidth, to each subsystem concurrently. SynchroStream technology and the Pentium processor are also available to current owners of PS/2 90 and 95 systems through processor upgrades. In addition, certain models of the new PS/2 Server 95 take advantage of the sophisticated RAID-5 data guard technology with the IBM SCSI-2 RAID controller. This technology gives customers the ability to remove and replace a disk while the system is in operation without losing data and will automatically reconstruct data on a standby resident spare disk in the event of a disk failure.

The entire PS/2 Server 85/95 line incorporates sophisticated technology to ensure high levels of data reliability and peak server system performance. These technologies include error correction code (ECC) memory ensuring data reliability and system availability; Level 2 write-back cache to maximize system performance, and a SCSI-2 (Small Computer Systems Interface) fast-and-wide controller enabling data transfer rates of up to 20MB/second.

In addition, the new IBM PS/2 servers feature eight expansion slots and up to nine drive bays for configuration flexibility and specialization, and C2-level security features.

PS/2 Server 85 and 95 memory is expandable up to 256MB. Both the IBM SCSI-2 Fast/Wide controller and the IBM SCSI-2 RAID controller exploit 40MB data streaming to provide industry leadership SCSI-2 performance.