

A newsletter for Novadyne
customers who use a
variety of hardware and
operating system
platforms.

Issue 1

Third Quarter 1993

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Introducing NovaLine

A newsletter for Novadyne customers

Welcome to the premiere issue of *NovaLine* – a newsletter for customers of Novadyne. Some of you may recall our previous newsletter entitled *On-Line*, which was focused mainly on REALITY®-based and PICK®-based systems.

With the introduction of *Systems Performance Management*, Novadyne's methodology for ensuring optimum performance on multiple system platforms, the idea of a cross-platform newsletter seemed appropriate. And so *NovaLine* is born.

In this issue we'll hear from experts in a variety of hardware and software fields, including RDBMS, Motorola, DOS, Sun®, UNIX®, MDISI®, and REALITY®. In future issues, we'll include articles on other areas, including DEC® and Tandem®.

We'd also like to hear from you. Tell us what you think of the premiere issue of *NovaLine* and Novadyne's *Systems Performance Management* – your thoughts are important to us and may be helpful to other users. □

Announcing REALITY on UNIX!

REALITY X is now available to those who want to maintain the "look" and "feel" of your current REALITY system but take advantage of the features and capabilities of UNIX!

REALITY X provides current McDonnell Douglas REALITY-based customers the easiest transition to UNIX available today. In fact, due to the high degree of compatibility between REALITY 7.0 and REALITY X, migration utilities are not even required. It is necessary only to save the REALITY database using "file save" and restore it on the new UNIX system.

REALITY X is available on Motorola's Series 8000 systems. These systems are based on industry standard architecture and the most popular form of UNIX – AT&T. The Motorola 8000 family of systems provides you unmatched system price/performance and system reliability second to none for a cost of ownership of up to half of what you may be paying today!

Please call your dealer for additional details or call your Novadyne Regional Sales Manager at the number below to further discuss this alternative:

Eastern Region	Rod Jones	(908) 574-0739
Southern Region	Dick Waechter	(813) 894-2422
North Central Region	Jeff Penn	(708) 285-0707
Western Region	Tom Sheehan	(714) 668-5777

This column will bring you up-to-date on new offerings, enhancements, and features of our current RDBMS (Relational Data Base Management System) releases.

The following are the current (as of 7/1/93) RDBMS levels supported for Sun and Motorola platforms:

Hardware Platform	System O/S Release	VMark uniVerse 6.3.4.3/7.3.1.2	UniData 2.3/3.1	REALITY 3.1/4.0
Sun	Sun 4.1.3 (Solaris 1.0)	Current/NA	Current/NA	NA
Sun SuperSPARC	Solaris 2.1	Current/NA	NA/5/93	NA
Sun SPARCcenter 2000	Solaris 2.2	Current/7/93	NA/9/3/93	NA
Motorola (All)	V.3	Current/NA	Current/NA	Current/NA
	V.4	NA/7/93	NA/10/93	Q3U93/Q1

Note: STREAMS drivers for the Novaport Asynch Expander have been updated to work with all current Sun OS releases.

The following are new features to be expected in uniVerse release 7 and UniData release 3:

VMark uniVerse

The major changes in release 7 center around the addition of SQL as a query language for accessing data in a uniVerse database as well as the underlying support functionality this implies. VMark's uniVerse has been totally re-engineered to support the following:

- Multifile queries
- Nested subqueries
- Query optimization
- Expressions on the query command line
- A new data type, NULL
- Transaction management
- Integrity constraints
- Database security
- Storage of arbitrary binary data

Release 7 also contains enhancements designed to increase application developer productivity:

- BASIC object code portability across all supported uniVerse platforms
- An optimization phase for the BASIC compiler
- A shared memory analysis tool
- Additional file usage statistics

And, additional features to enhance system administration

- Online Backup/Restore
- uvfixfile utility

Release 7 is upwardly compatible with release 6. Release 6 applications will run on release 7 without recompiling the BASIC programs or resizing files. ☐

UniData Release 3

Unidata, Inc. continues to improve functionality, integrity, usability and interoperability of its UniData relational data base management system environment. This release incorporates client/server functionality, opening the system to network computing and the power of database services. Features of release 3 are:

- Bulletproof file system
 - File integrity
 - Dynamic files
 - Improved space reclamation
 - Large files
 - Binary images
- Open database services
 - PC client support
 - UniData SQL server
 - Server gateways
 - Unibasic API client
 - UniDataUs open file system & network file access
- Comprehensive system administration
 - UniData System Administration Manager (USAM)
- Additional highlights
 - Reduced memory requirements
 - UniData on-line help system
 - Host language interfaces

For additional information on VMark uniVerse or UniData products contact your VAR or Novadyne. ☐

Motorola Corner

Operating System Levels

Motorola systems can be ordered with System V Release 3.2 currently. The new "unified" UNIX called System V Release 4 will unite the Berkeley version with the AT&T version and throw in Xenix® features as well. Motorola has System V Release 4 version 3 available now, but there are many missing features! As a result we suggest that you wait for the fully featured version 4 which is due out in the next few months. Also remember that UniData, uniVerse and REALITY X are not finished with their port to SVR 4 as of this writing. Keep watching for an update as the RDBMS vendors complete their ports.

Hardware Development

Motorola continues to develop the new MVME197 CPU with even faster response time than the current models available today! We expect to see the new CPU announced sometime in late third quarter 1993. Watch for more information as it becomes available.

PC LAN Connectivity

Motorola provides PC LAN connectivity over ethernet using a product called SMB/ix SERVER. Many features are offered and here are just a few:

1. UNIX system as a file server
2. UNIX system as a print server
3. Virtual Terminal capabilities (DOS users can access UNIX applications)
4. Print to the PC parallel printer
5. Concurrent Ethernet and Token Ring support

This product is perfect for those users who do not have a PC Network in place already. You can build your network around your Motorola system and have the advantage of sharing resources between the DOS and the UNIX environments. For more information contact your VAR or Novadyne. □

DOS Corner

PC Support Center

Did you ever want to call someone to ask how to do something in a DOS application? Did you ever want to call someone and ask about DOS commands or DOS system setup?

Well Novadyne has a complete PC Support Center staffed with people who are experts in DOS and DOS applications. For a small fee you can get support for your PC users so that they can be more productive and get the most out of their PC applications. For more information contact your VAR or Novadyne.

Current Products We Sell and Support

Here is a list of product that we sell and support today:

1. Novell Networks
2. Microsoft Applications (we are a Microsoft Distributor)
3. TERMiTE
4. REALLINK
5. PCs
6. Laptops

MS-DOS® 6.0

The current level for MS-DOS is 6.0, which was just released. MS-DOS 5.0 is the next latest level which most of you should be oper-

by Frank Di Carlo

Did You Know?

A recent survey by Microsoft Corp. revealed that there are some 250,000 personal computers installed in Russia, that have a 286 processor or higher, capable of running Microsoft Windows.

Microsoft AO, the company's Moscow subsidiary predicts this number is expected to double during the next year.

A Windows Expo/Moscow '93 will be held in November, where a Russian-language version of Windows will be exhibited, along with other Windows programs and hardware.

No details about prospective participants are available, although organizers claim this will be a major event in the Russian software industry with extensive participation. □

by Frank Di Carlo

TERMiTE Update

TERMiTE has a new version available, that is a Windows version. It specifically allows integration of REALITY data into Windows applications such as Excel, Lotus for Windows and many others.

This expands the horizons of an already robust product for Terminal Emulation and file transfer. Contact your VAR or Novadyne for a free demonstration today! □

Call the Novadyne PC Support Center at (800) 272-1122, today for all of your PC support needs.

Sun is currently shipping two different operating systems:

- SunOS 4.1.3 (Solaris 1.3)
- SunOS 5.2 (Solaris 2.2)

Solaris 1.X is based on Berkeley UNIX and Solaris 2.X is based on AT&T UNIX. What does all this mean to you? If you are upgrading to Solaris 2.X, be prepared for a major change in your procedures. An example would be if you are accessing your 1/4" tape drive, the old name for your tape drive was **/dev/rst0** the new name is **/dev/rmt/0h**. If you have a choice, SunOS 4.1.3 is a much more stable software level.

Layered Products

Sun provides many layered products to do a variety of things. Below is a short description of the most common four. These products are all supported by Novadyne.

Online: Backup Co-Pilot 2.0 Product Features:

- Fast, continuous and smooth online data backup and restore
- Manages a tape library of up to 100,000 tapes
- Network administration can occur from any site, for any site, on an enterprise-wide network
- Enables system administrators to remotely monitor and control multiple simultaneous backup operations
- Provides quick file restore capability of backup files
- Provides unattended backup, even for large operations
- Enables users to restore their own files

Online: DiskSuite 2.0 provides three key capabilities:

1. Disk mirroring for data availability
2. Data striping across disks and controllers for higher I/O throughput
3. Support for creation and extension of UNIX file systems larger than 2 GB

Netware Sunlink 1.0:

- Enables SPARCsystems to act as servers in Novell PC networks
- Transparent access to Solaris file, print, terminal services for NetWare client PCs (DOS, Windows, OS/2)
- Will provide basis for application vendors (e.g. RDBMS vendors like VMark) to develop high-performance Solaris back-ends for PC networks

PC-NFS 5.0 Product Features:

- Allows PC users to easily connect to a Sun based system and other NFS systems, while working in their familiar Microsoft® Windows™ and MS-DOS environments. Full support for Microsoft Windows 3.X

support including Windows for Workgroups - Provides a fully integrated Windows environment.

- Novell NetWare coexistence allowing PC-NFS and Netware clients to simultaneously share the same Ethernet card - maximizes a users investment.
- Supports MS-Windows Sockets Application Programming Interface (API), allowing an MS-Windows network application written to the API to run unchanged on any TCP/IP network that supports Windows Sockets - users may run a wider range of off-the-shelf applications on TCP/IP networks than ever before.
- Provides Terminal Emulation utilities - Users may run remote host applications from their PCs through VT52/VT100/VT220/VT320 terminal emulation
- PC clients may make their hard disks accessible to other clients on the network with the File Transfer Protocol Application (FTP) - enhances file sharing over the network.
- Supports the NetBIOS interface - Allows users to take advantage of a greater number of custom and commercial PC network applications. □

Novadyne and Sun System Migration

Novadyne provides end users complete hardware systems and support services, with a long history of providing client server systems to end users through our own operating environment. In addition, Novadyne is a Sun Master VAR, specializing in the migration of PICK customers into the UNIX environment.

In response to customer needs, in late 1991, Novadyne introduced a high-capacity serial device controller to attach multiple serial devices on a Sun system – the Novaport Asynch Expander™. When upgrading to a Sun Microsystems computer, Novadyne's Novaport allows ease-of-migration of existing serial devices to the new system. This is particularly beneficial when there are extensive serial connectivity needs, since Novaport supports the greatest number of serial devices per (Sun) SBUS slot in the marketplace today.

With the latest announcement of the Sun SPARCcenter® 1000/2000 systems, greater connectivity is more important than ever, to leverage the power of the SuperSPARC® processor(s). And, the Novaport Asynch Expander is fully compatible with the Sun Solaris 2.X operating system, required to support the SPARCcenter systems.

If numerous serial devices are required when migrating to a Sun Microsystem, only Novaport can provide the connectivity range needed, cost-effectively. Call Novadyne at (800) 926-6823 for more information. □

Current OS Releases and Patches

Listed here are the most current Operating System (OS) revisions and patch levels for each supported system. Novadyne Systems Performance Management is responsible for installing all REALITY Operating System patch tapes.

If your computer system is under maintenance with Novadyne, OS patches will be installed as a value-added service at a time mutually agreeable with you and Novadyne. If you don't have the current patch tape installed for your particular Operating System, please contact your Field Engineer through Central Dispatch to schedule a time for installation. Systems not under Novadyne maintenance may have OS patches installed on a T&M (Time and Material) basis.

Series	Release	Patches (PP=Paper Patches)
4700	4.3RevD	PP1-2
6000	2.3RevD	RevC Tape (includes PP 1-175)
	1.1RevD	RevB Tape
	7.0RevP	Block Tape 5 Courtesy Tape C
	7.2	Available Qtr4 1993
6000	2.4RevA	RevA Tape (includes PP 1-175)
Enhanced	7.0RevP	Block Tape 5 Courtesy Tape C
9000	5.3RevD	RevD Tape (includes PP 1-157)
	1.3RevC	RevA Tape
18	6.0RevF	RevC Tape (includes PP 1-165)
	7.0RevP	Block Tape 5 Courtesy Tape C
	7.2	Available Qtr4 1993
14/400	2.3RevD	RevA (includes PP 1-215)

REALITY 7.2

Novadyne will announce availability of REALITY 7.2 during the 4th Quarter of 1993. Here is a brief overview of some of the many new features that will enhance existing 7.0 users on both Spirit M6000 and Series 18 systems:

- INDEXING of file data sections. You can build indexes and then access them through new or modified DATA BASIC commands, i.e. READNEXT, READPREV, SELECT and POSITION.
- Enhancements to the LOOP and FOR-NEXT constructs in DATA BASIC.
- Sequential PERFORMs of SELECTs, which do not have a RTNLIST clause will retain the list generated by the first SELECT and pass it to the next statement PERFORMed without a PASSLIST clause.
- NSELECT works off an active select list returning the item-ids which are in the list but not in the file.
- XSELECT works off an active select list returning the item-ids which are in the file but not in the list.
- Enhancements to the WORKSPACE command.
- Terminal Definition Maintenance (TDM) has been modified to have all terminal types variable (no longer hardcoded in the operating system). Updating an item will not affect users until they log off and back on again.
- BLIST and BVERIFY have been enhanced.
- T-DUMP and T-LOAD accept binary data.
- ASSIGN has two new options:

- W - waits for the tape to come on line
- L - leave the tapes loaded, until all tapes have been written once. If the tape system attempts to wrap around and write on the first tape, then all units will be unloaded. Thereafter, each reel will be unloaded on completion of rewind.
- Mask Character (MCx) masks will retain any delimiters within the string being converted, except for MCP which will convert any internal delimiters per the rules of that mask.
- TANDEM connect the user's port to the named port with all input and output passing to or from that port displaying on the Tandem port. You can send a message to the target port. You can feed data to the target port and you can also force it into the basic debugger. A new verb ALLOW-TANDEM enables or disables tandem on a target port (normally disabled).
- TAPETODISK and DISKTOTAPE allow you to make a binary identical image of any tape. It is limited to single reel tapes only.
- SAVE verb shows running statistics (current file number, amount of data saved, reel number and current account) on status line of terminal.
- STAT-FILE management and file reallocation aids are included.

Product literature will become available through your Dealer/VAR or Novadyne. □

This column will offer some helpful commands that you can use on all UNIX platforms.

Is your disk full?

Have you ever had your disk partition fill up on you and you don't know what's taking all the space? The command below will list the largest 40 files on your system (remember that a directory is considered a file to UNIX).

```
du -a | sort -r -n | head -40
```

The listing you see from the command is displayed in kilobytes. From this listing, you should be able to see what directory or file is taking all the space.

Moving files?

Have you ever wanted to move some directories across partitions or disks? The mv command won't let you and you don't want to copy because the owners and permissions would be wrong. The command below will move a directory called DEMO to another partition/disk which on our system is mounted as disk1.

```
tar cf - DEMO | (cd /disk1; tar xpBf - )
```

The files now exist in the DEMO directory as well as in the directory /disk1/DEMO. The owners and permissions will be the same on both files. □

Systems Performance Management

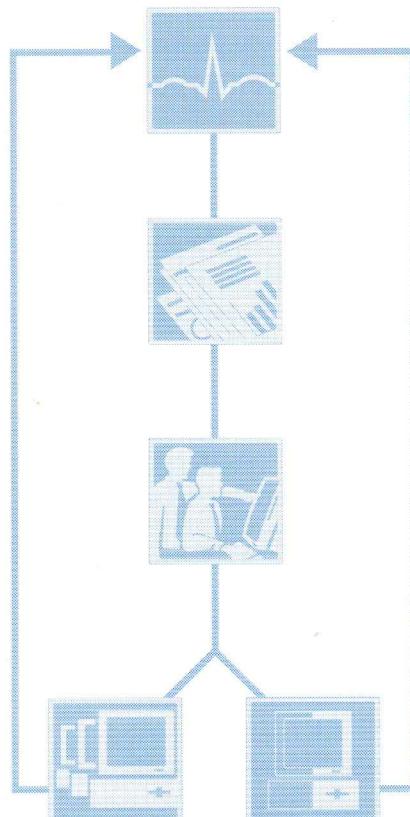
Our methodology for optimum information system performance

Systems Performance Management is Novadyne's methodology for providing optimum performance from your system. This methodology is based on five dynamic and perpetual processes called *Monitoring, Reporting, Advising, Restore, and Refresh*. Taken together, the activities involved in these processes create a proactive performance management information cycle that continually provides you with system performance data.

These processes start with the monitoring of your systems with sophisticated hardware and software tools which create a set of management reports and enable proactive system problem resolution. On a scheduled basis, we will review your system performance statistics with you and discuss recommendations on how to improve system performance and availability.

You, our customer, are the central focus of this methodology, and our goal is to provide you with the ability to predict, manage, and control the ever-changing information system environment. This results in a peaceful state of mind, that we call Quiet EnjoymentSM, which allows you focus on your business.

In the coming months we'll tell you more. Or, call us here at Novadyne if you'd like more information on *Systems Performance Management*. □



Process Cycle.

Industry News...

The FCC has ruled that Regional Bell Operating Companies (RBOCs) could provide video dial tone services into the home starting with one or two channels of video over the present twisted pair of phone lines and later more channels over fiber optic cables. The RBOCs could use their new privilege to provide interactive multimedia services. Instead, the RBOCs plan to compete with current cable television and will deliver one or two channels of video programming over the existing lines with the newest compression technologies.

Both the cable and telephone industries see the provision of multimedia services as the real growth area. They must find ways to nurture the programming needed to make that a reality.

One believer in this scenario is IBM, which will be providing equity capital to the nation's largest cable operator, Telecommunications Inc. of Denver, with over six million subscribers. TCI will provide integrated multimedia products and services at bandwidths of 150 megabits per second (Mbps) and higher. IBM's multimedia spokesman, David Hannah, has said that by 1996, IBM will be able to provide a box on top of your television set that will run at 10 million to 20 million instructions per second. He also said that the unit will be priced in the \$1,000 range. □

Service Information

Novadyne Central Dispatch

(800) 876-6823

24 hours / 7 days

Our charter is to provide proactive, value-added services designed to deliver a continuously predictable high level of performance and availability to our customer's information processing resources – whether they are host, client-server, or networks.

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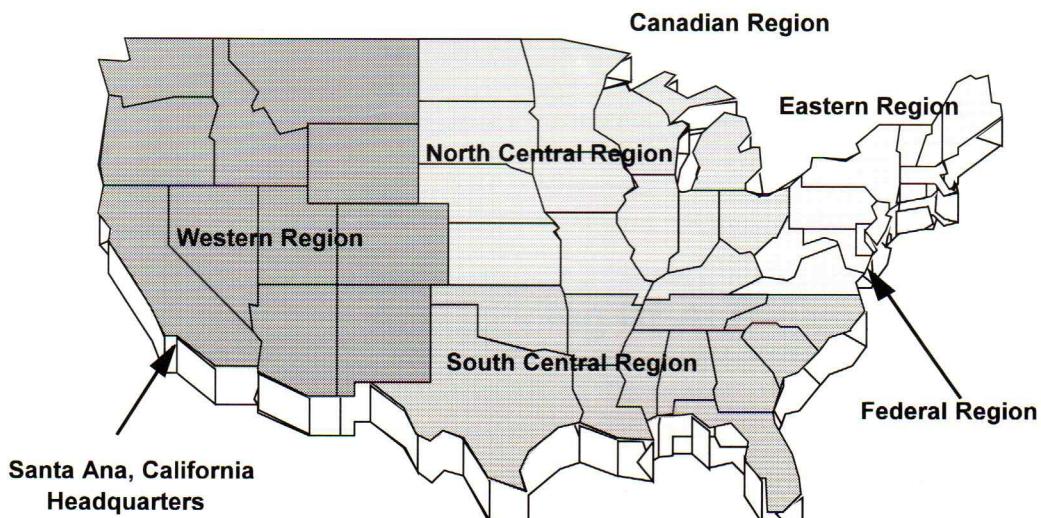
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Novadyne is organized with the concept of providing maximum responsiveness and service to its customers. While corporate headquarters are located in Santa Ana, California, services are delivered by our six operating regions located throughout the United States and Canada. Each region is headed by a General Manager and organized to focus all its resources and capabilities to ensure maximum customer satisfaction.



Our 700 professionals located in over 80 offices nationwide, repair and maintain mainframes, minis, workstations, micros, communications networks and peripheral devices for end users, original equipment manufacturers, and resellers. Novadyne also provides software support for UNIX, VMS, Open VMS, McDonnell Douglas' REALITY, MS-DOS, and Novell Netware®.

Please call us for all of your performance and service needs. ☐

NOVALine

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NOVADYNE
Systems Performance Management

Announcing REALITYCheck!

REALITYCheck™ is a low cost, highly efficient multi-function system management tool that continually monitors system resources, automatically enhances system integrity, and provides critical system management data.

The many features of REALITYCheck are achieved through interprocess communication between the master and three slave processes, providing maximum system efficiency. This results in a system overhead of well under one percent of your REALITY CPU. The services of REALITYCheck are available from any active terminal on the system and operate in a completely unattended mode.

REALITYCheck is compatible with McDonnell Douglas Computer Systems running REALITY OS level x.3 or later.

Monitoring Features

Continuous System Status Monitoring

The operational status of each critical system component is checked against user-definable performance criteria at user-definable intervals (thresholds).

The critical system resources monitored include:

- Memory
- Disk and Tape
- GFEs
- Stopped Processes
- I/O Bus
- Overflow Table
- P-LAN
- S-LAN

Each status check is recorded for operator review and analysis from any terminal on the system.

Continuous UPS Status Monitoring

REALITYCheck is compatible with the Exide Electronics line of Uninterruptible Power Supply products. In the event of a sustained power outage, REALITYCheck will perform an orderly shutdown of the system.

System Integrity Features

The following features substantially enhance your system's integrity:

- Automatic Personal Notification
- Automatic Call Home Feature
- Automatic Self Test

System Management Tools

REALITYCheck also offers these tools for system management:

- Transaction Logging Status Reporting
- File-Save/Verify-Save Status Reporting
- Resource Utilization Snapshot Reporting

In concert with Novadyne's *System Performance Management* philosophy for optimum availability of your information system resources, REALITYCheck is a vital tool.

To order REALITYCheck or for more information, please call Novadyne through our NovaDirect catalog sales department at (800) 926-6823. □



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