NOVADYNE℠

Technical Operations

ON-LINE

Published for System Software Users

Novadyne Computer Systems, Inc. Santa Ana, Ca.

Volume 4 Number 4 4th Quarter 1991

LOGON:

Like To See Your Name In Print?

What person or company doesn't like to see their name in print? One way to see *your* name in print is to send us your questions or ideas that can be addressed in *ON-LINE*. We are always looking for ways to improve and one way is to be specific in answering questions that may provide help to numerous customers. If you have questions, chances are others have the same questions.

So right now, take the time to write to us with that question that keeps popping up and maybe you will see it answered in the next issue of *ON-LINE*.

And speaking of those who write, a warm thank you is extended to all who have written to say "Thanks" for the things we are doing right. We always enjoy hearing from you.

- Editor

Highlights inside ON-LINE

What Is Needed When A Call Is Placed

Are all the facts at hand when a call is placed to Central Dispatch? When Central Dispatch answers a call they need the serial number of your system, telephone number to contact you and of course your first and last name. They are also in need of a brief description of the problem being reported. And when an analyst calls you back, please have the following information:

1. A modem in working condition.
2. The modem number and baud rate.
3. Have all passwords ready (SYSPROG, Modem, Accounts, etc.).
4. The current release level of system and patches installed.
5. The current release level of applications and patches if appropriate.
6. What has been going on with the system recently?

This information will help save valuable time.

- Editor

MARKETING

Novadyne Announces PC Integration for REALITY

PC Integration

The role which the personal computer has played in bringing computing capabilities to individuals continues to be one of the major breakthroughs in the data processing revolution.

This PC explosion has created several new challenges. Foremost among these is the need for these PC's to tap into existing data bases. This is the issue of PC Integration. Individuals requiring

information in a central computer want to maintain the functional use and responsiveness of their workstations. Typically, PC's are scattered throughout an organization and function independently of other data processing operations. Often these PC's are located side by side with CRT's used for communicating with the central system.

Information from one system is not available to the other and must be recreated or reentered for use by the other system. This duplication of equipment and effort is costly and counter-productive. Organizations faced with the need to integrate these two operating environments and convert data from a Host file structure to and from a DOS file structure have had the use of asynchronous file transfer, data conversion and terminal emulation packages for some time.

These products offer a functional solution. However the slow transfer rate supported by asynchronous links effectively limits their use to inquiry tasks. The REALITY product line now offers a new set of products that expands the use of terminal emulation, file inquiry and file transfer to PC's over local area networks.

The PC Integration (PCi) products from McDonnell Douglas provide full integration of personal computers with REALITY based host systems. These products include support of direct LAN connections and communications.

In addition there is an Application Programmer's Tool Kit which consists of function libraries for MS Basic, C and Windows all accessible through powerful distributed programming commands. Contact your authorized Novadyne Reseller now for more details on these powerful new productivity tools.

- Hugh J. Sheean

Corporate Video Is Created By Marketing Communications

Beginning in early May, the Marketing Communications department began working on the creation of a Novadyne corporate image video intended to communicate the Novadyne story to a cross section of viewers.

Primarily intended as a sales promotion tool, the video will also be used to relate the Novadyne story to employees, VARs, dealers, and to existing customers who have not had the opportunity to visit any of the Novadyne offices.

We selected a hi-tech video group with extensive experience in corporate image video production. Following input sessions, a script was developed and the actual shooting began. Many departments within the company, as well as a number of our existing customers participated in this production.

The final product is approximately seven minutes in length and features a satisfied DEC customer -- Copley Publishing, as well as two McDonnell Douglas equipment users -- The City of Huntington Beach and Kenwood Electronics. Northern California-based field engineer, Clinton Yokley, was featured in the video.

Chief Executive Officer, Bert Novak, also highlights the company dynamics which set Novadyne apart from the competition.

Copies of the video have been provided to all Novadyne field offices. If you would like to see the video, please call Novadyne at (800) 876-6823.

- Pat Dwight

For Your Information

You will find tabled below maximum and minimum configurational details for the Series 6000, Series 9000 and Series 18 product line.

Model Nos.	Introduced	ROS	CPU	MIC Rating	Memory Min-Max	Disk Min-Max	Ports	Tape
Series 6000 Tower:								
6310	Jun-85	1.1	1X	2	.5-1MB	40-120	8-16	40MB-1/4"CTD
6320	Oct-84	1.1	1X	2	.5-1MB	40-120	8-16	40MB-1/4"CTD
6325	Jun-85	1.1	1X	2.7	.5-1MB	40-120	8-16	40MB-1/4"CTD
6410	Jul-86	2.3	2X	3	.5-2MB	47-225	8-32	40MB-1/4"CTD
6415	Jan-87	2.3	2X-P-LAN	3	.5-2MB	47-225	8-32	40MB-1/4"CTD
6420	Jul-86	2.3	2X	4.5	.5-2MB	47-225	8-32	40MB-1/4"CTD
6425	Jan-87	2.3	2X-P-LAN	4.5	.5-2MB	47-225	8-32	40MB-1/4"CTD
6400	Jan-88	2.3	2X-P-LAN	6	.5-2MB	75-225	8-32	40MB-1/4"CTD
6450	Jan-88	2.3	2X-P-LAN	6	1-4MB	140-420	16-60	40MB-1/4"CTD
6401	Jan-89	2.3	2X-P-LAN	6	1-2MB	75-225	8-60	40MB-1/4"CTD
6402*	Jun-89	2.3	2X-P-LAN	6	1-4MB	75-225	16-60	2xPE+150MB-1/4"CTD
6404*	Sep-89	2.3X	GAL-P-LAN	10	1-4MB	140-420	8-120	2xPE+150MB-1/4"CTD
6408*	Nov-90	ROS7.0	GAL-P-LAN	15	4-8MB	140-900	8-120	2xPE+150MB-1/4"CTD

Model Nos.	Introduced	ROS	CPU	MIC Rating	Memory Min-Max	Disk Min-Max	Ports	Tape
6520	Oct-84	1.1	1X	2.7	.5-1	40-120	Aug-48	2x1/2"PE+1/4"CTD
6630	Jun-86	2.3	2X	4.5	.5-1	75-485	Aug-48	2x1/2"PE+1/4"CTD
6635	Jan-87	2.3	2X-P-LAN	4.5	.5-2	75-485	Aug-48	2x1/2"PE+1/4"CTD
6640	Jun-86	2.3	2X	6	1-2	75-485	16-64	2x1/2"PE+1/4"CTD
6645	Jan-87	2.3	2x-P-LAN	6	2-4	75-485	16-64	2x1/2"PE+1/4"CTD
6655	Jun-86	2.3	2X-P-LAN	6	2-4	335-485	16-64	2x1/2"PE+1/4"CTD
6680	Jun-86	2.3	2X-P-LAN	6	2-4	420-1400	16-96	2x1/2"PE+1/4"CTD
6600	Jan-88	2.3	2X-P-LAN	6	2-4	120-1400	16-120	2x1/2"PE+1/4"CTD
6602*	Jun-89	2.3	2X-P-LAN	6	2-4	140-1400	16-120	2x1/2"PE+1/4"CTD
6604*	Jun-89	2.3	GAL-P-LAN	10	2-4	140-1900	16-120	2x1/2"PE+1/4"CTD
6608*	Nov-90	ROS7.0	GAL-P-LAN	15	2-4	140-1900	16-120	2x1/2"PE+1/4"CTD
Series 18/600:								
18/600-11*	Mar-89	ROS6.0	1X	11	4-16	300MB-4.5GB	32-300	4xPE or GCR
18/600-18*	Jun-88	ROS6.0	1X	18	4-16	300MB-4.5GB	32-300	4xPE or GCR
18/600-24*	Jun-88	ROS6.0	1X	24	4-16	300MB-4.5GB	32-300	4xPE or GCR
18/630-15*	Jul-90	ROS7.0	1X	15	4-16	300MB-4.5GB	32-600	4xPE or GCR
18/630-22*	Jul-90	ROS7.0	1X	22	4-64	600MB-10GB	32-600	4xPE or GCR
18/630-30*	Jul-90	ROS7.0	1X	30	4-64	600MB-10GB	32-600	4xPE or GCR
18/645*	Nov-90	ROS7.0	1.5X	45	16-80	600MB-10GB	32-600	4xPE or GCR
Series 9000/9200:								
9000	Jul-83	1X		5.6	.5-2	260MB-1GB	8-128	4x1/2"PE
9100/9110	Jan-85	5X		5.6	1-4	260MB-1GB	8-128	4x1/2"PE
9208	Jan-85	5X		11	1-4	260MB-1GB	8-208	4x1/2"PE
9220	Jan-86	5X		4	2-4	260-520MB	16-64	2x1/2"PE
9230	Jan-86	5X		7	2-8	260MB-1GB	16-96	2x1/2"PE
9240	Jan-86	5X		11	2-8	260MB-1GB	16-128	4x1/2"PE
9250	Sep-85	5X		14	2-8	260MB-1GB	16-208	4x1/2"PE
9225	Jan-87	5X		7	2-8	260MB-1GB	16-96	4x1/2"PE
9235	Jan-87	5X		11	2-8	260MB-3.2GB	16-128	4x1/2"PE
9245	Jan-87	5X		11	2-8	1-4GB	16-128	4x1/2"PE
9255	Jan-87	5X		14	2-8	260MB-3.2GB	16-208	4x1/2"PE
9265	Jan-87	5X		14	2-8	1-4GB	16-208	4x1/2"PE
9211	Jan-88	5X		11	2-8	260MB-4GB	16-208	4x1/2"PE
9214	Jan-88	5X		14	4-8	260MB-4GB	16-208	4x1/2"PE
9299	Jan-89	5X		14	4-8	260MB-4GB	16-208	4x1/2"PE

*** Currently available systems upgrades and add-ons offered for all products.**

- Hugh J. Sheean

STARPOWER

Causes Of Printer Pauses During Printing

Trouble with your printer? Is it pausing during the print job? Can't locate the problem? The following article addresses these issues and the possible causes.

'I' Option In Spooler

When a print job has the 'I' option (in SP-JOBS menu, the 'OP' column), you are telling the SPOOLER to print the job a 'line- at-a-time' as it is generated from the requesting terminal. In other words as the process is generating a line of code, it (I)nstantly prints it. The terminal cannot be used for anything else at that time. The intermittent pausing of

the printer may be more noticeable on a high speed printer.

Disk/Memory Errors

The system logs memory and disk errors via the SPOOLER. When the SPOOLER is logging a lot of these errors, you will notice that the parallel printers (as well as spooling data to tape) will have intermittent pauses during output. (This would apply only to systems prior to 7.0)

If the system is logging disk errors you will probably notice that other processes may be 'hanging'. If there are hard disk errors confined to one location, any process that is accessing that portion of the disk will halt. If this happens, ampersands (&&&) will appear on the terminal screen. If the disk errors are due to a controller problem, the process(es) that hang will be more random.

Junk In The Data

'Junk' in the data being printed can cause a printer to print 'garbage', especially if the printer is character or case sensitive. For example, your data may have upper and lower case as well as special commands, i.e., underlining in word processing, and you print to a printer that only recognizes upper case. Your results may not look the way you expected or the item may not print at all.

File Sizing

Poor file sizing can cause any process on the system to slow down to a near halt. If someone starts a process that does heavy processing in a poorly sized file, you will probably notice that all processes have slowed down considerably including the SPOOLER.

Timeslice (This Is Probably The Most Overlooked Possibility)

Did someone change the TIMESLICE to speed up another process? You may find that a process has a TIMESLICE of 250 (which is much too high) while everyone else has a TIMESLICE of 4. To determine the timeslice of each process enter "TIMESLICE (A" at TCL.

- Susan Ewing and Cherylnn Pope

PGM

DATA/BASIC Commands Utilizing The General Asynchronous Driver

This is the final article concerning DATA/BASIC on 7.0. Please reference previous issues of *ON-LINE* for detailed articles on other DATA/BASIC Commands. This article will address the General Asynchronous Driver.

GENERAL ASYNCHRONOUS DRIVER

From time to time the need arises to have control or communication between a program and a device. DATA/BASIC now offers this control through the use of the General Asynchronous Driver. The commands provide connection and disconnection to the devices, the ability to write to or read from the device and setting of some control functions. Following is a list of the DATA/BASIC statements that can be used:

ATTACH	Issues a request to the Session Manager to create a circuit to an asynchronous device.
DETACH	Disconnects a circuit.
GET	Reads data from device attached to circuit.
GETCOUNT	Returns number of characters in typeahead buffer.
PUT	Writes data to device attached to circuit.
PUTCONTROL	Raises or drops RTS and DTR signals.

The example below is a program that drives a modem device whose port is defined in the ROUTE-FILE. The ROUTE-FILE is described in the "*Guide to Networking*" manual. For purposes of illustration, the modem is connected to port 10. An item in the ROUTE-FILE must be present to define the device (port) to which it is attached.

The item name defining the device found in the ROUTE-FILE has been arbitrarily named 'GAD.PORT'. Attribute 001 indicates character mode type. Attribute 002 indicates the controller. Attributes 3, 4 and 5 should be null. Attribute 006 indicates the port number to which the device is attached.

```
001 C
002 PLAN*1
003
004
005
006 10 (FOR PORT 10)
```

In the program, we start by issuing an ATTACH statement which causes the Session Manager to create a circuit to the device. The Session Manager assigns a port number to the variable VAR. (All further references to the circuit are to this variable.) Next the modem signals are set. Using PUTCONTROL a '3' sets RTS and DTR. We can now send our data to the modem. We begin with sending the modem control characters along with the phone number to dial. The STMT variable contains the modem control along with the phone number and ends with a carriage return linefeed. A GET statement is issued to receive data back from the modem. A timeout is set to wait 60 seconds, timeout is in 1/10 second increments, before ELSE clause is taken. At completion, the circuit is disconnected with a DETACH statement. Should an error occur, the program goes directly to detach the device. This program is for illustration only.

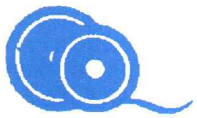
Example program:

```
STMT ='AT7771212':CHAR(13):CHAR(10)
ATTACH "GAD.PORT" TO VAR SETTING ERR ELSE
 PRINTERR ERR
 GO 900
END
PUTCONTROL "3" ON VAR ELSE
 PRINT "CAN'T SEND PUTCONTROL"
END
100 PUT STMT ON VAR SETTING ERR ELSE
PRINTERR VAR
 GO 900
END
GET REC FROM VAR FOR 600 SETTING ERR ELSE
 PRINTERR ERR
 GO 900
END
STOP
900 DETACH VAR SETTING ERR ELSE
 PRINTERR ERR
 STOP
END
END
```

- Gary Moote

"ROS"

Current OS Releases And Patches



The following table contains the most current Operating System (OS) revisions and patch levels for each supported system. Novadyne Computer Systems, Inc. has assumed responsibility for installing all patch tapes for Dealer/VAR and branch customers.

If you do not have the current patch tape installed for your particular Operating System, please contact your Field Engineer (FE) through Central Dispatch to schedule a time for installation.

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 4 Courtesy Tape C
6000 Enhanced	2.4RevA	RevA Tape (Includes PP 1-175)
	7.0RevP	Block Tape 4 Courtesy Tape C
9000	5.3RevD	RevD Tape (Includes PP 1-157)
	1.3RevC	RevA Tape
	7.0RevP	Block Tape 4 Courtesy Tape C
18	6.0RevF	RevC Tape (Includes PP 1-165)
	7.0RevP	Block Tape 4 Courtesy Tape C

- Mike Bingman

Wide Area Networking On REALITY 7.0

The article in the previous *ON-LINE* described the Local Area Network (LAN) capabilities of Reality 7.0 (LANs), i.e., the ability to logically connect Series 6000 and Series 18 systems to share data files and peripherals. All of these capabilities are also available in a Wide Area Network (WAN) using the X.25 controller board set (the "XCC") and software.

Using the XCC, two systems can be connected point to point via a phone line. They can then share files, etc., the same as if they were on a LAN. Alternatively, you can connect any number of systems

via a Public Data Network (PDN) such as TYMNET to form a large network. Each system in the network can communicate and share data with any other system on the network.

Capable of simultaneously running on four channels at up to 48 K/bps, the XCC provides three primary functions: **Remote Logon, Remote File Access, and X.25 PAD capability.**

The first two functions, Remote Logon and Remote File Access, were discussed in detail in the *ON-LINE* article called Local Area Networking. For in depth information, please refer to that article in Vol.4 No.3 page 8.

Remote Logon provides the capability of logging on to an account that actually resides on a different system. For instance, even though a terminal may be physically connected to System A, it can still logon to an account that resides on System B.

Remote File Access enables a process residing on one system to access files on other systems on the WAN.

X.25 PAD (Packet Assembler/Disassembler) functions allow the XCC to directly interface with other X.25 products and services. Virtually any X.25 device can communicate with the system through the XCC, albeit with varying degrees of user programming.

The XCC allows you to locate your systems in different geographical locations while still giving you easy access to the files. To minimize data traffic you would generally do most of the data processing on the local system, while only passing the necessary data to the other systems.

For instance, if you have several sales branch locations, you can put a Series 6000 or small Series 18 into each branch. These local systems would handle the cash registers, local inventory handling, word processing, etc. The main system at head-quarters would create national inventory reports, process network wide E-mail, etc, by using the files on each remote system. The programs (and the users) can treat the remote files just like they would a local file. The XCC also supports Transaction Logging. This means that you can mirror image two systems separated by several miles. With a LAN you can mirror image two systems, but the systems would probably have to be in the same building. While this is useful in the event of hardware failure, it would not be of any help if the building burned down, or there was an electrical outage.

By connecting the systems through a PDN (like Tymnet), users can make a local connection to their local PDN site, and then connect to either remote system. Thus, if one system becomes inaccessible, users can instantly switch to the other system.

So, with the XCC, not only do you have all the functions of a local area network spread globally, but you also have the security of instant disaster recovery.

● Richard Yeh

APPS

Current Application Overlays

The following matrix provides you with the release level of Application Overlays required by each supported Series and OS. It is important that you know which Overlay you should obtain prior to a planned upgrade .

For example, if you are upgrading a Series 9000 from 5.1 to 5.3, which uses REALCALC, then you will need to obtain the corresponding Overlay release (REALCALC 2.1C) before upgrading.

Application Overlay	Series 4700	Series 6000	Series 9000	Series 18	Series 14/100
A*L*L 1.1	4.3	1.1	1.3	N/A	N/A
A*L*L 1.2	N/A	2.3,2.4	5.3	6.0	2.3 D.4
(Paper Patches 1-59)					
A*L*L 1.3E		7.0		7.0	
(Block Tape 1)					
PCmicroREALITY 2.1	4.3	2.3	1.3,5.3	6.0	N/A
REALCALC 2.1C	4.3	1.1,2.3,2.4	1.3,5.3	6.0	2.3 D.4
REALCALC 2.1E		7.0		7.0	
REALGRAPH 1.0C	4.3	1.1,2.3,2.4	1.3,5.3	6.0	2.3 D.4
REALGRAPH 1.0D		7.0		7.0	
REALLINK 2.1 Rev. 4	N/A	2.3,2.4	5.3	6.0	N/A
REALLINK 2.1 Rev. 6		7.0		7.0	
REALISM					
DEVELOPER 1.0A	N/A	2.3,2.4	5.3	6.0	2.3 D.4
SHELL 1.0A	N/A	2.3 5.3	6.0	2.3 D.4	
REALISM 1.0 Rev. 2		7.0		7.0	
REALITY Integrated					
Office 2.3	4.3	1.1,2.3,2.4	1.3,5.3	6.0	N/A
(Overload Patch Tape Rev B -- 2.3, 5.3 and 6.0 O/S only)					
REALITY Integrated					
Office 2.3 Rev. B		7.0		7.0	
WORDLINK 1.4C	N/A	2.3,2.4	1.3,5.3	6.0	N/A
WORDMATE 2.1C	4.3	1.1,2.3,2.4	1.3,5.3	6.0	2.3 D.4
(Overload Patch Tape Rev A and Paper Patches 1-7)					
(Overload Patch Tape Rev B -- 2.3, 5.3 and 6.0 O/S only)					
WORDMATE 2.1E		7.0		7.0	
TRANSACTION LOGGING 1.2		N/A	2.3,2.4	5.3	6.0N/A

● Janet Altman

WORDMATE

Horizontal Formatting

The WORDMATE editor contains some very useful tools that can aid in formatting documents. These tools, along with an understanding of basic printer dynamics, will enable you to format documents on screen, without having to print them each time to confirm or inspect changes made. In this article we will look at horizontal formatting which is defined as "the left to right appearance of the printed page."

First, consider the dynamics of the typical printer. Every printer has what is referred to as an "unprintable zone." This is an area around the border of the page on which the printer is unable to print. It is caused by basic mechanical constraints of the print mechanism and exists, to some extent, in all laser, dot matrix and impact printers. The unprintable zone is usually no more than one half inch and no less than one quarter inch.

Now look at a typical video display terminal. Most terminals have a screen width of 80 characters. It is no coincidence that the maximum number of characters that can be printed on one line of an 8.5 inch piece of paper is also 80.

WORDMATE defaults to a pitch of 10. Pitch refers to the number of characters per inch (CPI). By employing some simple division, we can divide the 80 characters by ten characters per inch, and are left with 8 inches and one quarter inch on each margin (the unprintable zone) left over. Thus we have accounted for the full 8.5 inches across the page. This exercise also tells us that each character consumes one tenth of an inch at 10 CPI, including inter-character spacing.

So let's put this new found knowledge to work. Suppose we want a document with one-inch margins. When entering the WORDMATE Ruler Mode, the cursor is sitting at print position 1 regardless of where the left margin happens to be set. Remember that this is actually one quarter inch in from the edge of the paper. So to create a true one-inch left margin, move the cursor to the right seven or eight spaces. Since seven characters is .70 inch, adding the unprintable zone creates a .95 inch margin. Eight spaces yields a 1.05 inch margin. We said we were going to have one-inch margins left and right so if you press the 'B' key in the ruler mode, Both the left and right margins will be set to the same value.

Earlier it was mentioned that WORDMATE defaults to a pitch of 10 or 10 CPI. WORDMATE also supports pitches of 8 through 15 inclusive. The pitch command works in such a way that it changes the pitch for an entire line. In other words, the same line of text cannot have more than one pitch selected. To change the pitch you must be in the INPUT mode and the cursor must be at the left margin. The following example has a pitch of ten and the ruler was changed to accomodate the 8 PITCH and indentation. The ruler is now set for left margin at 11 and right margin at 53.

```
\PITCH 8
    All text following this will
    print at 8 CPI until another
    PITCH command is used to
    change it to a different
    value. Variable pitches will
    only work on printers that sup-
    port this feature. Remember
    that all output to the ter-
    minal is done at 10 CPI regard-
    less of the pitch selected in
    the document.
```

When using a pitch that is different than 10, it may be necessary to adjust the ruler if more than 80 characters are to be printed on a single line. For example, if the pitch is changed to 12, then a potential exists to print 96 characters on a single line (12 CPI X 8" = 96). In order to accommodate the full 96 characters, the ruler must also be 96 characters wide.

NOTES:

If the end of your document is set for a different pitch than the default you will need to use the pitch command to reset the default pitch to 10. Otherwise your printer will continue to print in the newly defined pitch setting.

The "/" command in the WORDMATE editor is very useful for determining the exact cursor position. By striking the "/" key in the Edit mode, current cursor positioning information will be displayed across the bottom of the screen. To identify the print position of the cursor, read the number to the right of "Column". This number represents the horizontal orientation of the cursor starting with position 1, *not* the left margin.

With this information, it is possible to draw a direct relationship between what is seen on the screen and what will be printed on the paper. A ruler with one tenth inch gradations is also helpful in formatting documents.

In the next issue we will cover vertical formatting.

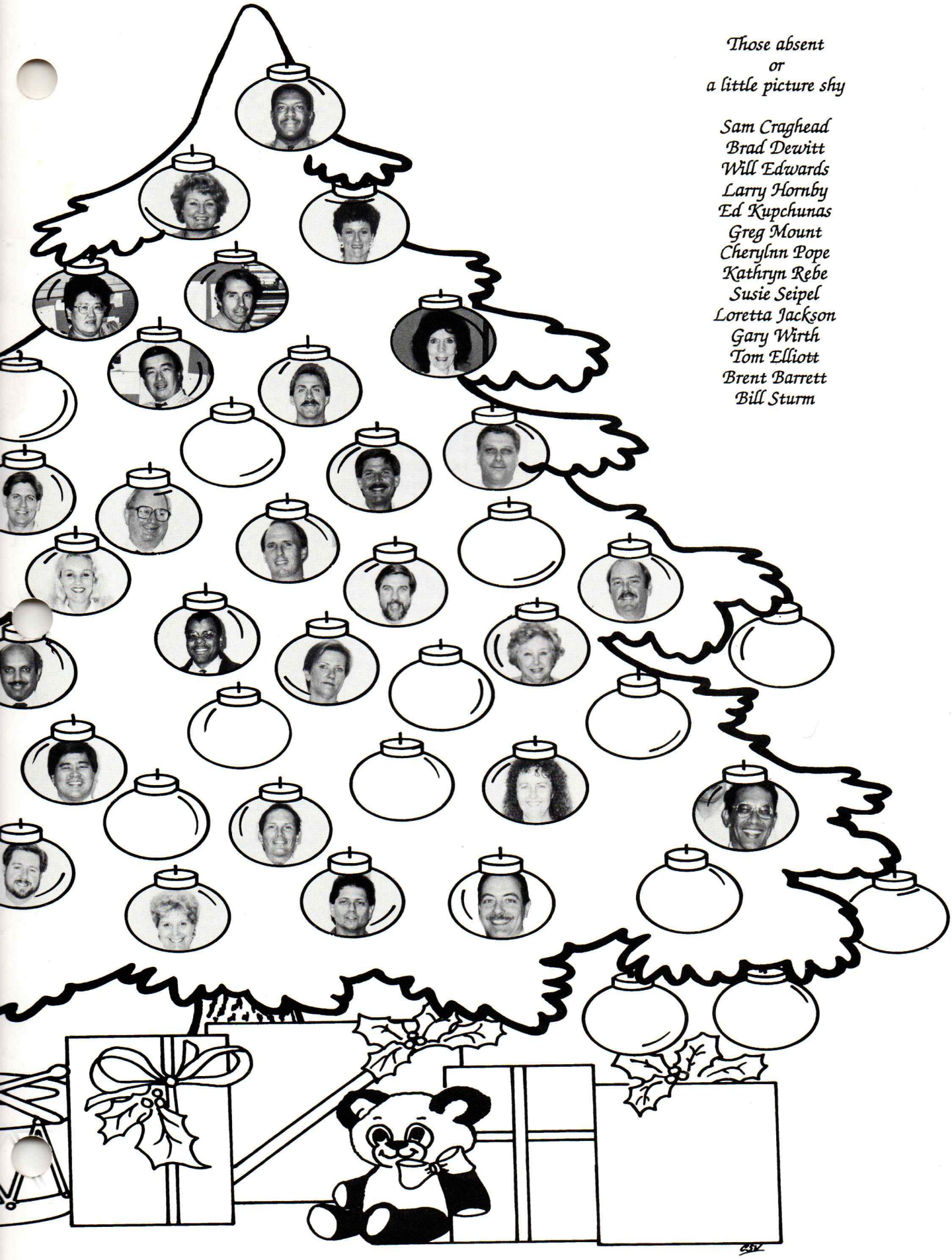
- Steve Gill

Season's Greetings

From
NOVADYNE'S Technical Operations Product Support Department

From left to right
starting at the top
of the tree are:

Van Harris
Terry Smithton
Jeana Dillon
Joyce Uyeno
Gary Moote
MaryLou Janisch
Richard Yeh
Steve Gill
Mike Bingman
Steve Moore
Craig Steigler
Bob Aull
Mike Rorman
Sue Ellen Ewing
Jim Smith
Keith Peterson
Brian McKinstry
Niki Jhaveri
Randy Jordan
Janet Altman
Ann Connelly
Jan Heppert
Mark Onoda
Ralph Montalvo
Debbie Latorre
Ray Van Sluis
John Warren
Nick Starr
Nancy Whitney
Joe Kelly
Frank DiCarlo



Those absent
or
a little picture shy

Sam Craghead
Brad Dewitt
Will Edwards
Larry Hornby
Ed Kupchunas
Greg Mount
Cherylnn Pope
Kathryn Rebe
Susie Seipel
Loretta Jackson
Gary Wirth
Tom Elliott
Brent Barrett
Bill Sturm

REALLINK

REALLINK on 7.0

Please note that when installing Block Tape 4 on a 7.0 System, Mode 1482 gets changed. Since this is a REALLINK mode the following needs to be done to be able to use REALLINK.

From TCL in SYSPROG,

```
:COPY RL-MODES SM-1482 SM-1484 SM-1487 (O)
TO: (SYSTEM-OBJECT

:MLOAD SYSTEM-OBJECT SM-1482 SM-1484 SM-1487

:MVERIFY SYSTEM-OBJECT SM-1482 SM-1484 SM-1487
```

Please note the (O) is the letter O.

- Terry Smithton

COMMS

Current COMMS Releases

Shown below is a Product/Release matrix describing the current release of software for the various communications products.

Any software fixes which may be required will only be produced for the most current release.

If you plan to upgrade your system to the next hardware system or operating system release, contact your local dealer or analyst to make sure you have the required communications software prior to the upgrade. If in doubt, have your dealer or analyst contact the Novadyne Computer Systems, Inc. Communications Support Group at (800) 678-3399.

COMMS PRODUCT RELEASE	Series 4700	Series 6000	Series 9000	Series 14	Series 18
MCC 3.1 (Rev 4)	N/A	1.1	N/A	N/A	N/A
MCC (2.3) 3.1 (Rev 5)	N/A	2.3	N/A	N/A	N/A
MCC (6.0) 3.1 (Rev 3)	N/A	N/A	N/A	N/A	6.0
MCC (7.0) 4.1 (Rev 4)	N/A	7.0	N/A	N/A	7.0
HSCC (SNA) 2.0 (Rev 5)	N/A	7.0	N/A	N/A	7.0
SLAN (Ethernet)	N/A	7.0	N/A	N/A	7.0
XCC (X.25) 2.1 (Rev 1)	N/A	7.0	N/A	N/A	7.0
FTU 1.2 (Rev I)	4.3	1.1, 2.3	1.3, 5.3	2.3	6.0
FTU 1.3 (Rev G)	N/A	7.0	N/A	N/A	7.0
M3800 (2780) 1.3 (A)	4.3	N/A	1.3, 5.3	N/A	N/A
M3800 (SNA) 5.3 (A)	4.3	2.3	1.3, 5.3	N/A	N/A
5750 (TCL COMMS) Rev 2	N/A	N/A	1.3, 5.3	N/A	N/A
2602 BISYNC	4.3	N/A	N/A	N/A	N/A

NOTES:

The MCC software for 7.0 systems consists of two tapes: 1) MCC software in INSTALL format; 2) 2780-TERMLIB-BASE in ACCOUNT-SAVE format.

The SLAN software is included on the 7.0 Sysgen tape. The software requires a "Virtual Port License" available from your dealer or VAR.

In addition to the software tape, X.25 also requires a "Virtual Port License" available from your dealer or VAR.

5750 Communications Software no longer resides on the Sysgen tapes. If you require this software, have your dealer or VAR contact the Novadyne Computer Systems, Inc. Communications Support Group.

2602 Bisync runs only on Series 4700 systems. The software is included on the Series 4700 4.3 Sysgen tape.

- Richard Yeh

Penril Ethernet Vlan

The Penril VCX-1000 Data Switch used for Local or Wide Area Networking (LAN or WAN), now has available, a "VLAN" PCB which operates as a gateway to Ethernet LANs, providing a terminal server function.

If you've been thinking you would like to tie in an existing or proposed Ethernet LAN to your Virtual Circuit eXchange (VCX) network, this is your solution. Your users can gain access to modem pools, X.25 links, Public Data Networks (PDNs) such as Tymnet, or other network resources. DEC hosts running LAT or PCs running TCP/IP can now be connected through the VCX network to McDonnell Douglas computer system hosts running X.25 or async ports from nearly any device.

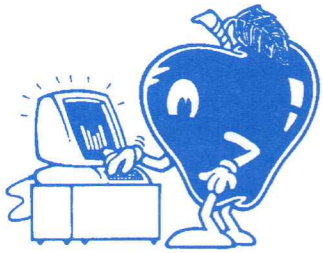
VLAN is IEEE 802.3 compatible using 10base5, 10base2 and 10baseT wiring (respectively, Thick, Thin and Unshielded Twisted Pair). All three interface connectors are on the PCB, switch selectable. TCP/IP and LAT transport layer protocols can run concurrently with up to 120 virtual circuits configured.

For details or other information, contact your dealer or Novadyne's Network Support Group at 800-937-6682. (800-YES- NOVA)

- Steve Moore

SERIES 7000

Disaster Recovery



This document outlines a procedure for interim processing when a natural disaster occurs at your Series 7000 site. Planning for this should begin as soon as possible after your system is installed.

The first step is to find a site where you can process while your system is inoperable. A reciprocal agreement with another user is probably the easiest solution. It is not necessary that the other user have the same size system that you do. It is required that they have the same feature selects loaded. Since most of our users have only the minimum feature selects loaded, this is usually not a problem. If Novadyne is not affected by the disaster, we will always have a system available for our users.

In order to move your operation to a different facility, you need to be very familiar with how your work is keyed and transferred to tape. Is your data output into another group? If so, does it interfere with the other users data? Are there files that are stored in different groups? If you validate, is it done in the same group or a different one? It isn't easy to transport your department to a new site but in times of disaster you really do not have a choice. With careful planning beforehand, it can be accomplished with a minimum of confusion.

An up-to-date tape with a group "O" save of all your formats, files, keybasic, basic, quickstarts and reformats (that are necessary to key and also transfer your data) should be stored at an off-site facility that is accessible 24 hours a day. Arcus is a nationwide company that does this for many large companies. The cost is minimal and if you have a mainframe, they probably are already using this type of service. If your company doesn't want to pay for off-site storage, it is advisable to at least keep a copy at home.

In addition to a save tape, you should have a hard copy listing of all your devices. These will probably have to be set up manually since all users do not have the same devices. For this time only you should plan on all of your operators keying under one account name. Their statistics will be combined with those of the company's system you are using, since the Series 7000 only supports one keyevents file. Unless you plan on writing a program to separate your operator's stats from the others, there is no way to keep them apart. It is better to get your work completed and bypass stats for that time only.

If a disaster occurs, remember to turn off all parts of your system before you leave, even if the power is off. This will prevent the boards in the system from getting "fried" if there is a surge of power when it goes back on. With any luck at all you may never need to use this procedure but remember, "forewarned is forearmed."

- Ann Connelly

14/100

Eagle Spreads Its Wings

Up to now, the Series 14/100 system supported the REALITY Operating System concurrent with DOS on the ST506 and ESDI disk drives running on IBM 286/386 AT systems or approved clones. Typically the customer would provide the system, and a 14/100 kit was sent to them to be integrated.

A new Series 14/200 will soon be available from Novadyne, which will be a complete integrated system, based on the REALITY coprocessor with SCSI peripherals on a 386/33 MHZ platform.

Customers only need to select options available to them and will no longer have to integrate systems. In addition, the system will now be available with on-site support and of course the standard software support.

The 14/200 comes standard with the following:

- Tower configuration
- 80386/33 Mhz (convertible to 486)
- 64KB SRAM Cache Memory
- 4Mb Main memory
- 3.5" Floppy
- 8 REALITY ports
- 2 serial/ 2 parallel I/O ports
- 1/4" 150Mb SCSI tape drive
- SVGA graphics monitor
- Reality 2.3 Compatible Co-processor
- 150 Mb SCSI disk
- MSDOS 5.0

The 14/200 can run applications from DOS and REALITY concurrently, which means that up to 16 users can work in the REALITY Database Management System running their REALITY applications, while the operator at the keyboard of the 14/200 can either be an additional REALITY or DOS user. Port zero can switch environments with a "hot key" (Alt F10) from REALITY to DOS and run DOS applications without disturbing the REALITY users.

The REALITY system is compatible with current REALITY 2.3, 5.3 and 6.0 Operating Systems releases, and the File Transfer Utility is included with the package to enable data transfers from your current McDonnell Douglas host computer. Included with the REALITY system is the DOS-Bridge. With this tool kit, DATA/BASIC programs may be written which interact directly with the DOS files. Application programs that are available for the 14/200 are: WORDMATE, REALCALC, REALISM and ALL. Stay tuned for information on additional performance and feature enhancements in the future.

- Sam Craghead and Ray Van Sluis

DIRECTORY

DIRECTORY OF ARTICLES

Many of you have expressed an interest in having a directory of articles published in *ON-LINE*. For your convenience, we will provide this listing in the fourth quarter of each year.

The articles are categorized according to the *ON-LINE* "column heading" under which they were published.

As our list gets longer every year the technical expertise and resources available thru Novadyne's Technical Operations is readily apparent. We are committed to Customer Satisfaction.

This library of articles is available to all licensed Novadyne Software Customers. If you are missing past issues please contact the Editor and we will send missing issues promptly. The analysts seem to refer to articles published in *ON-LINE* and therefore it is suggested that *ON-LINE* be given a dedicated binder.

- Editor

CUSTOMER ED.

NEW COURSE OFFERINGS

For readers who are considering getting into the SUN environment, Novadyne is pleased to announce two new courses. The first course, Introduction to the SUN Operating System, is designed for those requiring knowledge of the file systems, basic commands, electronic mail and the vi editor. Sun System Manager is primarily for those responsible for system and file maintenance, including backups and restores and user information.

Additionally our Introduction to UNIX course has been expanded to cover both BSD and System V versions of UNIX.

For additional information regarding these courses, please call Jim Lau at (714) 566-2195.

- Jim Lau

CUSTOMER EDUCATION SCHEDULE

		FEB.				MAR.					APR.				MAY				JUN.				
	COURSES OFFERED	3	10	17	24	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29
NOVADYNE	INTRO TO REALITY O/S 5 Days $1000/Person						SA									CH							
	7.0 ROS SYSTEM ADMIN. 4 Days $800/Person							SA															
	INTRO TO DATA/BASIC 5 Days $1000/Person								SA														
	PROC PROGRAMMING 3 Days $600/Person																CH						
	ROS SYSTEM ADMIN. 5 Days $1000/Person				SA																		
	LX2200/UNIX 5 Days $1000/Person											SA									SA		
	UNIDATA 5 Days $1000/Person													SA								SA	
	UNIX(BSD) 5 Days $1000/Person		SA																				
DISCOVERY	INTRO TO PICK/REALITY 4 1/2 Days $900/Person			TA				BO				DC											
	ADVANCED PICK/REALITY 4 Days $900/Person	DC												DC								TA	
	ACCELERATED PICK/REALITY 4 1/2 Days $995/Person				DC																		
	SYSTEM INTERNALS 4 Days $995/Person								DC														
	APPLICATION PROGRAMMING 4 Days $900/Person														DC								
	ADVANCED APP. PROGRAMMING 4 Days $900/Person																		DC				
	ACCEL. APP. PROGRAMMING 5 Days $995/Person						DC																
	ASSEMBLER PROGRAMMING 4 Days $950/Person			DC																			
	INTRODUCTION TO UNIX 5 Days $1000/Person									DC										DC			

LOCATION CODES: BO = BOSTON; CH = CHICAGO; DC = WASHINGTON,DC; SA = SANTA ANA, CA; TA = TAMPA, FL.

NOTES: All classes begin on Monday unless otherwise indicated. The following courses are available upon request: ALL 1.2, PCmicro-REALITY, REALCALC, REALGRAPH, REALISM (Shell and Developer), REALLINK, REALITY Integrated Office, WORDMATE, Series7000 Reformatting and Quickstarts, Series 7000 Basic Programming, Data Communications, and Advanced DATA/BASIC. Please call Jim Lau at (714) 566-2195 for more information.

GooFiEs

Technical Operations

ON-LINE

Published for System Software Users

Published quarterly by Novadyne Computer Systems, Inc. Technical Operations Department for users of McDonnell Douglas Computer Systems.

Terry Smithton, Editor
Ann Connelly, Assistant Editor
Will Edwards, Technical Advisor
Pat Dwight, Production Consultant
Joanie Lanham, Production
Licia Moote, Cartoonist

Please write to the Editor, ON-LINE, 1700 East St. Andrew Place, Santa Ana, CA 92705-6560.

Novadyne Computer Systems, Inc.
1700 E. St. Andrew Place
Santa Ana, CA 92705-6560

ADDRESS CORRECTION REQUESTED

BULK RATE
U.S. POSTAGE
PAID
NEWPORT BEACH, CA
PERMIT NO. 243