New Products

VP BASIC-2 RELEASE 1.8

Release 1.8 of 2200VP BASIC-2 replaces all previous versions of 2200VP BASIC-2. Release 1.8 is required for formatting disk platters on the 2260C. Listed below are the system changes since Release 1.7. The following files on the system platter differ from Release 1.7:

"@@" — VP OS & BASIC-2 interpreter

"@MOVE"— move system files utility (new). This program moves the specified system files to a user-specified platter.

A. System Enhancements

1. MVP Statements

Release 1.8 supports all 2200MVP BASIC-2 language features. Thus, MVP programs can be loaded and executed on the 2200VP. The MVP statements behave as if on a single partition, single terminal MVP with the following exceptions:

a. ERR A08 results if $INIT is executed.

b. $OPEN and $CLOSE can be used to hog or unhog a disk if the disk address is specified; the device type specified must be 3 or B. $CLOSE with no parameters will NOT release all hogged disks, as it does on the MVP.

c. There is no broadcast message. The $MSG statement can be executed, but the message will not be displayed when RESET is pressed. The $MSG function returns a value of HEX(00).

2. LOAD RUN

The default platter specification for LOAD RUN has been changed from 'F' to 'T'; that is, the platter to load from is specified by the device type

in the #0 slot of the device table. For example,

```
:SELECT DISK B10
:LOAD RUN
```

loads and executes the program "START" from the device designated B10.

3. New $GIO Microcommands

The $GIO command repertoire has been expanded to include:

$C3h_3h_4$	—	same as $C6h_3h_4$ except WR before CPB
$81h_3h_4$	—	same as $80h_3h_4$ except WR before CPB
$83h_3h_4$	—	same as $82h_3h_4$ except WR before CPB
$870\,0$	—	same as $860\,0$ except WR before CPB
$870\,h_4$	—	same as $860h_4$ except WR before CPB
$89h_3h_4$	—	same as $88h_3h_4$ except WR before CPB
$8Bh_3h_4$	—	same as $8Ah_3h_4$ except WR before CPB ·

4. ERR P48

Error #48 (Illegal Device Address) is now recoverable using the ERROR statement.

5. CONTINUE

CONTINUE is now legal in a multi-statement immediate mode line; however, it must be the last statement on the line.

B. Corrected Anomalies

1. Attempting to save a program or data file on a platter with 0 index sectors (e.g., a platter which has just been formatted) now results in ERR D85.

2. The editor no longer turns the cursor off and on during cursor manipulation in Console Input,

INPUT and LINPUT operations. This is important for certain remote teminals connected to a non-buffered communications controller.

Please contact your local Wang analyst for a copy of this release.

MVP BASIC-2 RELEASE 1.3

Release 1.3 of 2200MVP BASIC-2 replaces all previous MVP BASIC-2 releases. Release 1.3 is required for formatting disk platters on the 2260C. Listed below are the system changes since Release 1.1. The following files on the system platter differ from Release 1.1:

"@@"	—	MVP OS & BASIC-2 interpreter
"@GENPART"	—	Partition generation utility
"@PSTAT"	—	Partition status display utility (new)
"@MOVE"	—	Move system files utility (new). This program moves the specified system files to a user specified platter.

A. System Enhancements

1. $PSTAT

The new partition status function, $PSTAT, returns the current status of the specified partition. The status information includes a user-defined status message, operating system type (VP or MVP), operating system release number, partition size, terminal number, global name, ERR function value, and I/O device currently in use. See the description of $PSTAT on the following pages for a complete description of the status parameters.

$PSTAT should be used if a program need distinguish between the VP or MVP operating system. A $GIO status request strobe to the terminal CRT (/005) in order to determine the system type (as described in Release 1.1) is no longer supported; this method does not work properly with VP's containing MXD's.

2. LIST DT

LIST DT has been extended to display the Master Device Table following the partition's current device selections.

3. $BREAK!

A new parameter, '!', has been added to the $BREAK statement. $BREAK! puts the partition "to sleep" permanently; the CPU skips processing this partition. $BREAK! can be used to end the execution of a global partition without requesting the terminal. Thus subsequent execution of '$RELEASE TERMINAL' will not attach the terminal to the global partition.

If it becomes necessary to attach the terminal to a permanently put-to-sleep partition, '$RELEASE TERMINAL TO' the partition can be executed to attach the terminal. RESET must be pressed in order to 'wake up' the partition.

4. System Reconfiguration

$INIT has been modified to allow system reconfiguration without powering the system off and then back on.

5. LOAD RUN

The default platter specification for LOAD RUN has been changed from 'F' to 'T'; that is, the platter to load from is specified by the device type in the #0 slot of the device table. For example,

```
:SELECT DISK B10
:LOAD RUN
```

loads and executes the program "START" from the device designated B10.

6. DEFFN @PART " "

Executing the DEFFN @PART statement with the name equal to all spaces declares that the partition is NOT global. Other partitions cannot select (via SELECT @PART) this partition for global operations.

7. SELECT @PART " "

Executing a SELECT @PART statement with the name equal to all spaces selects the originating partition (i.e., #PART) for global operations. The originating partition need not be defined to be global. SELECT @PART " " is useful when a partition needs to refer to its own global variables or when global text needs to call subroutines in the calling partition.

8. $GIO to a Disk

$GIO is now legal for certain disk operations. In

particular, $GIO can be used to hog or unhog the disk on those systems with disk multiplexers:

$GIO/310 (4580) — hog disk /310
$GIO/310 (4500) — release disk /310

$GIO hog and unhog have been added for 2200T and 2200VP compatibility. They are equivalent to $OPEN/310 and $CLOSE/310. $GIO is also legal for formatting 2260C disk platters.

9. New $GIO Microcommands

The $GIO command repertoire has been expanded to include:

$C3h_3h_4$	—	same as $C6h_3h_4$ except WR before CPB
$81h_3h_4$	—	same as $80h_3h_4$ except WR before CPB
$83h_3h_4$	—	same as $82h_3h_4$ except WR before CPB
870 0	—	same as 860 0 except WR before CPB
$870 h_4$	—	same as $860h_4$ except WR before CPB
$89h_3h_4$	—	same as $88h_3h_4$ except WR before CPB
$8Bh_3h_4$	—	same as $8Ah_3h_4$ except WR before CPB

10. ERR P48

Error #48 (Illegal Device Address) is now recoverable using the ERROR statement.

11. RESET Disks

When RESET is pressed on any terminal, all disks not currently in use are reset. In particular, RESET now extinguishes the error light on a Diablo disk after power on. RESET can also be used to reset a floppy disk after a formatting error.

B. Corrected Anomalies

1. The error message indicating that the 30 ms. timer, used by the operating system for determining when to switch execution to another partition is malfunctioning, has been changed from 'VECM 0000' to 'TICK'.

2. ERR S13 resulted from program resolution if a global program contained a MAT statement, occurring after the DEFFN @PART statement, explicitly redimensioning a non-global one

dimensional array. The array should have been ignored since it occurred after the DEFFN @PART statement. The error could occur in any of the following statements: MAT REDIM, MAT READ, MAT INPUT, MAT CON, MAT ZER, or MAT IDN.

3. LIST S' listed only the first page of output.

4. Selecting a non-existent MXD for print operations could cause the system to hang up when print was executed. Power off and on was required to restore system operation. Now ERR 48 is returned if the MXD does not exist.

5. If a memory overflow error (ERR A01) occurred during program loading, the disk might not be released for use by other partitions.

6. On MVP systems with disk multiplexers, disks can be hogged in 1 of 2 modes: by 80-bit of disk address set to 1 or by $OPEN. If a disk unit is hogged in one mode, hogging another disk in the other mode could change the hog mode of the first unit. This conflict has been resolved.

7. LIST T occasionally found erroneous matches following HEX literals.

Please contact your local analyst if you require a copy of this release.

GBS

Caution —

There is a common practice in GBS that, when accepting alpha input to be strung into a key, the receiving field is first initialized to zeros and then the rest of the field is filled with the entered data. This is illustrated in the following example:

```
DIM C9$ 5
INIT (30)C9$
STR (C9$,6-LEN(Q6$)) = Q6$
```

The operator should be discouraged from entering leading spaces or the installing vendor should modify the appropriate logic so that keys initialize to blanks rather than zeros.

By using the above technique, it is possible for the operator to enter leading spaces into Q6$ and have them retained by the system. However, there are many places where the system assumes that the smallest value of a field is equal to zeros. To illustrate this point, envision a situation where the system performs a KFAM "findold" on a key of

zeros to determine a starting point for sequential processing. If the operator has entered leading spaces, then in some cases, the system will never find the record.

MOD IV Payroll

The hard disk version of MOD-4 Payroll is officially released. If you are a licensed GBS vendor and have a need for the payroll software, you may now order it through your local Wang analyst. Please note that if you want the set-up instructions for MOD-4, you should order the new "GBS Technical Guide (Hard Disk)" which now contains the complete GBS system. You may also wish to order the new "Sample Reports" manual and "Introducing GBS." The two updated documents now contain information on the full GBS package, modules 1-4, and GBS for Wholesale Distribution.

In the near future, the diskette version of Module 4 and the 2231W-2 printer changes for both hard disk and diskette, will be released. This will complete the GBS package for the T and VP processors. Information on the development of the MVP version will be presented in future issues of the Newsletter as it becomes available.

GBS Survey and Configurator

Recently a new GBS document was distributed to the Wang salespeople and field analysts. This document, the "GBS Customer Survey & Configurator," is designed to be used by the vendors as well as Wang sales representatives.

The survey is divided into two parts. Part 1, which is in booklet form, is to be filled out with the prospect. It contains a "Business Application's Survey Form" which requests general information about the prospect, i.e., company name, contact, product line, present processing method, software vendor name, etc. Next is a note to the prospective GBS customer explaining the function of the survey and configurator. This is followed by several pages of specific questions concerning volumes, throughput, and requirements for each application. Finally, there are two worksheets to be completed with the data compiled through the survey. One worksheet calculates storage requirements for the hard disk version of the package and the other calculates the same information for the diskette version. Sample timings are included to help judge throughput requirements.

In addition to the survey questionnaire, there is a "pull-out" section for use by the vendor or Wang representative *only*. This section has a note of explanation about each survey question. It tells why the survey question is asked (i.e., "used to calculate throughput," or "used for storage calculation") and it also lets you know what GBS will or will not handle without modifications. It is our intention with this document to help you quickly decide whether a prospect's needs can be met with the GBS system.

If you are a licensed GBS vendor and wish to obtain copies of the Configurator, they may be ordered through your local Wang analyst.

General Accounting for the 2200VS

In Newsletter #8 we announced our new program to provide the five key general accounting applications for the VS System. These are Accounts Receivable, Accounts Payable, Order Entry/Inventory Control, General Ledger and Payroll.

A brief progress report on the program:

- A new 12-page brochure has been developed and released to the field sales organization (#700-4573)

- The live software for Accounts Receivable is now available to licensed vendors, directly from Mini Computer Business Applications in Los Angeles, CA.

- Demo Accounts Receivable software is available to all Wang offices having a VS system.

- Demo Accounts Receivable software is available to all licensed software vendors directly from MCBA.

- Accounts Receivable software was the key application package demonstrated on the Wang VS at the N.C.C. show in Anaheim, CA.

- Accounts Payable is scheduled to be available in late July with Order Entry, General Ledger, and Payroll following at monthly intervals.

All technical documentation has been released and is in the hands of your Wang District Analyst. For detailed information on any of the applications concerning acquiring a license, please contact your analyst.

Recent Publications

The following items have been released from Lowell between March 1, 1978 and June 30, 1978.

DATA SHEETS

2260C Fixed/Removable Disk Drive Data Sheet (700-4692)
2200 Burroughs Emulation Software Utility Data Sheet (700-4705)
2200 Teletype Emulation Software Utility Data Sheet (700-

4704)
3741 Emulation Software Utility Data Sheet (700-4708)
2780/3780 Emulation Software Utility Data Sheet (700-4709)
Word Processor 5595-9 Optical Character Recognition(OCR) Option D.S. (700-4713)
2741 Emulation Software Utility Data Sheet (700-4706)
Easyform III Software Utility Data Sheet (700-4714)
Hasp Multi-Leaving Emulation Software Utility Data Sheet (700-4707)
Word Processor 25 Data Sheet (700-4683)
5595-4 Asynchronous Communications Option Data Sheet (700-4733)
Word Processor 5, Model I Data Sheet (700-4734)
Word Processor 5, Model II Data Sheet (700-4735)

MANUALS

Word Processor Sort Option Operating Instructions (700-4672)
2200MVP Introductory Manual (700-4693)
Word Processor Telecommunications User Manual (700-4686)
SARS Attendance Introductory Manual (700-4701)
GBS-Mod IV (Disk) System Manual (700-4710)
Word Processor Optical Character Recognition(OCR) Option User Manual (700-4712)
2200 HFAM Hashed File Access Method User Manual (700-4721)
2281P Printer/Plotter User Manual (700-4716)
GBS-Mod IV (Disk) Operator's Manual (700-4729)
2200 Time and Record Keeping System System Manual (700-4724)
Word Processor Mathpak Applications Operating Instructions (700-4732)

ERRATA SHEETS

2200MVP Basic-2 Reference Manual Addendum (700-4080.01)
2200 Plotter Utilities Manual Addendum (700-3838.01)

MISCELLANEOUS

Word Processor System 5 Configuration (700-4720)
GBS-Mod IV Master File Input Forms (700-4745)

PRODUCT BULLETINS

#167 Word Processor Optical Character Recognition(OCR) Option

#169 Refinements to the Word Processing Systems
#170 Word Processor System 5
#171 Word Processor 5581WC Wide Carriage Printer

REPRINTS

2270 Diskette Drive Data Sheet (700-3677D)
2200MVP Introductory Manual (700-4693A)
Word Processor Operator's Reference Guide (700-4465A)
Word Processor Mathpak Option User Manual (700-4671A)
Word Processor Sort Option Operating Instructions (700-4672A)
GBS-Mod III (Disk) System Manual (700-4283A)
2209A Nine Track Tape Drive User Manual (700-4358A)
3740 Diskette Compatibility Software User Manual (700-4369B)
Word Processor System 25 Configuration (700-4685A)
2232B Digital Flatbed Plotter Data Sheet (700-3194G)
Word Processor System 20 Configuration (700-3913C)
Word Processor System 30 Configuration (700-3914C)
2251 Line Printer Data Sheet (700-4028C)
GBS-Mods I-IV (Disk) Technical Guide (700-4101B)
Client Accounting System Sample Reports Manual (700-4608A)
2231W Line Printer User Manual (700-3877B)
Word Processor 10A Data Sheet (700-4170C)
Word Processor Accessories Data Sheet (700-4109C)
GBS Sample Reports Manual (700-4196A)
2200 Integrated Support System User Manual Release 2 (700-3657D)
2281 Printer User Manual (700-4264A)
PCS-II Introductory Guide (700-4255B)
Introducing GBS (700-4186C)
2200 General Program Library GLBR 22 (700-3118D)
2261W Line Printer User Manual (700-4271A)
Word Processor System Security Option Operator's Instructions (700-4673A)

The following is now considered on the obsolete literature list. It can no longer be obtained from the stockroom.

700-0606 520/600 Vol. 1 Program Library (PRINT)
700-0882 600 Vol. 134 Analysis of Variance Regression Analysis
700-0884 600 Vol. 139 Program Library
700-3193 633/733 Paper Tape Editor Data Sheet
700-3207 2200B Basic Language Specifications
700-4405 2236 User Manual REPLACED BY 700-4693
700-0829 600 Programming Electronic Calculator Manual
700-3807 2200 Installation Guide

700-4382 WP 5528 Communication Controller Data Sheet REPLACED BY 700-4657

700-4491 WCS Computer System Price List Canada REPLACED BY 700-4678

700-4494 PCS Price List Canada REPLACED BY 700-4678

700-4639 WCS 50/60/80 Price List REPLACED BY 700-4675

700-4640 2200VS Price List REPLACED BY 700-4675

700-4637 2200VS Price List Canada REPLACED BY 700-4676

700-4638 WCS 60/80 Price List Canada

700-0337 Policies & Benefits Booklet

700-4176 WP-30 Power-On Procedures

700-0603 200/300 Series Service Manual

700-0752 1200 Cleaning Instruction for Tape Head

700-4164 2200 Auto Mate III Installer Guide

700-4387 2200 Patient Billing System User Manual

700-3459 2200 General Utilities Part II Manual

700-4168 Spark Competitive Bulletin

700-4191 Programmer Reprint Watson Company

Trade Show Exhibit Schedule

AUGUST 1, 1978

August

1	Albuquerque Chamber of Commerce	Albuquerque, NM
2 - 4	South Carolina Association of Counties	Myrtle Beach, SC
3 - 8	1978 Lawyers' Exposition of ABA	New York, NY

September

7 - 9	1978 ACSM California Conference	San Diego, CA
11 - 13	Canadian Industrial Communications Assembly Conference and TC Exposition	Toronto, ON
13 - 16	Hawaii/Industrial Show	Honolulu, HI
14 - 16	Florida Society of Professional Land Surveyors	Sarasota, FL
19 - 21	National Catholic Development Conference	Chicago, IL
21 - 23	Mid-America Printing Exposition and Conference	Kansas City, MO

22 - 23	The Philadelphia Lawyers Show	Atlantic City, NJ
25 - 26	Management of an Accounting Practice Conference	Kansas City, MO
26 - 28	Klondike Industrial and Business Show	Edmonton, AB
27 - 30	Public Accountants Society of Ohio	Cincinnati, OH
28 - 29	Trade Fair II	Albuquerque, NM

October

12 - 14	Massachusetts Association of Land Surveyors and Civil Engineers	Provincetown, MA
15 - 19	Financial Managers Society for Savings Institutions	Honolulu, HI
16 - 19	Info '78 (National)	Chicago, IL
17 - 19	ACSM — ASP Fall Convention (National)	Albuquerque, NM
20 - 22	Massachusetts League of Cities and Towns/Massachusetts Selectman's Association	Hyannis, MA
24 - 26	IWP Fall Symposium (National)	St. Louis, MO
31 - Nov. 2	Southwest Business Services and Equipment Exposition	Houston, TX
31 - Nov. 2	Word Processing and Office Equipment Trade Show	San Francisco, CA

November

3 - 5	Florida Business Education Association	Sarasota, FL
7 - 9	Federal Computer Conference	Washington, DC
14 - 16	Office Systems and Equipment Exposition	Philadelphia, PA
15 - 17	3rd Annual Baltimore Industrial Show	Baltimore, MD
20 - 21	Seventh Annual Word Processing Equipment Exposition	Washington, DC

26 - 28	1978 Congress of Cities and Exposition	St. Louis, MO
28 - 30	Canadian Computer Show	Toronto, ON
28 - 30	Boston Business Equipment & Services Expo	Boston, MA
30 - Dec. 2	Professional Land Surveyors of Oregon	Grants Pass, OR

December

| 13 - 16 | Office Products & Environment Sales Expo '79 | Philadelphia, PA |

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1979
March

| 13 - 14 | Federal Office Equipment Exposition | Washington, DC |
| 28 - 30 | Word Processing Exposium '79 | Lake Geneva, WI |

April

3 - 5	Chicago Land Business Expo	Chicago, IL
9 - 12	Interface '79 (National)	Chicago, IL
30 - May 2	1979 Accounting Show and Conference	New York, NY

June

| 4 - 7 | 1979 National Computer Conference (National) | New York, NY |
| 19 - 21 | '79 AFCEA | Washington, DC |

Sept.

| 6 - 8 | Graphic Arts '79/The Charlotte Show | Charlotte, NC |

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80 x 24 CRT Option

The 80 x 24 CRT Option is designed to display up to 1920 characters of data or program text on a maximum of 24 lines, each 80 characters long. The 80 x 24 CRT Option is available as Option 60A on the PCS-II, Option 66 on the 2200 Work Station and Option 33 2226B/2210B for system consoles. It is a standard feature on the 2236D Interactive Terminal.

Please Note:

When the 80 x 24 option is installed in a system, it is the CRT controller that is changed, not the CRT chassis, although the CRT must be adjusted to accept the full 80 x 24 format.

Many benefits accrue from the use of the 80 x 24 CRT Option. The print on the CRT appears smaller and sharper, making the display easier to read. With the expanded line length and increased number of lines, more information can be put on each line and more lines of information can be displayed. This expanded format is easier to scan, and program listings can be searched faster. In addition to the above, the 80 x 24 Option also features an expanded character set, two additional control codes (Hex 05- Cursor on and Hex 06 Cursor off), and underlining of displayed characters. A sample program to underline characters on an 80 x 24 display is illustrated below.

```
10 DIM N$25
20 Input "ENTER NAME", N$ :REM Keyboard Entry
30 ADD  (STR(N$,1,LEN  (N$))80)  :REM  Underline
Characters
40 PRINT N$          :REM Print Underlined Response
```
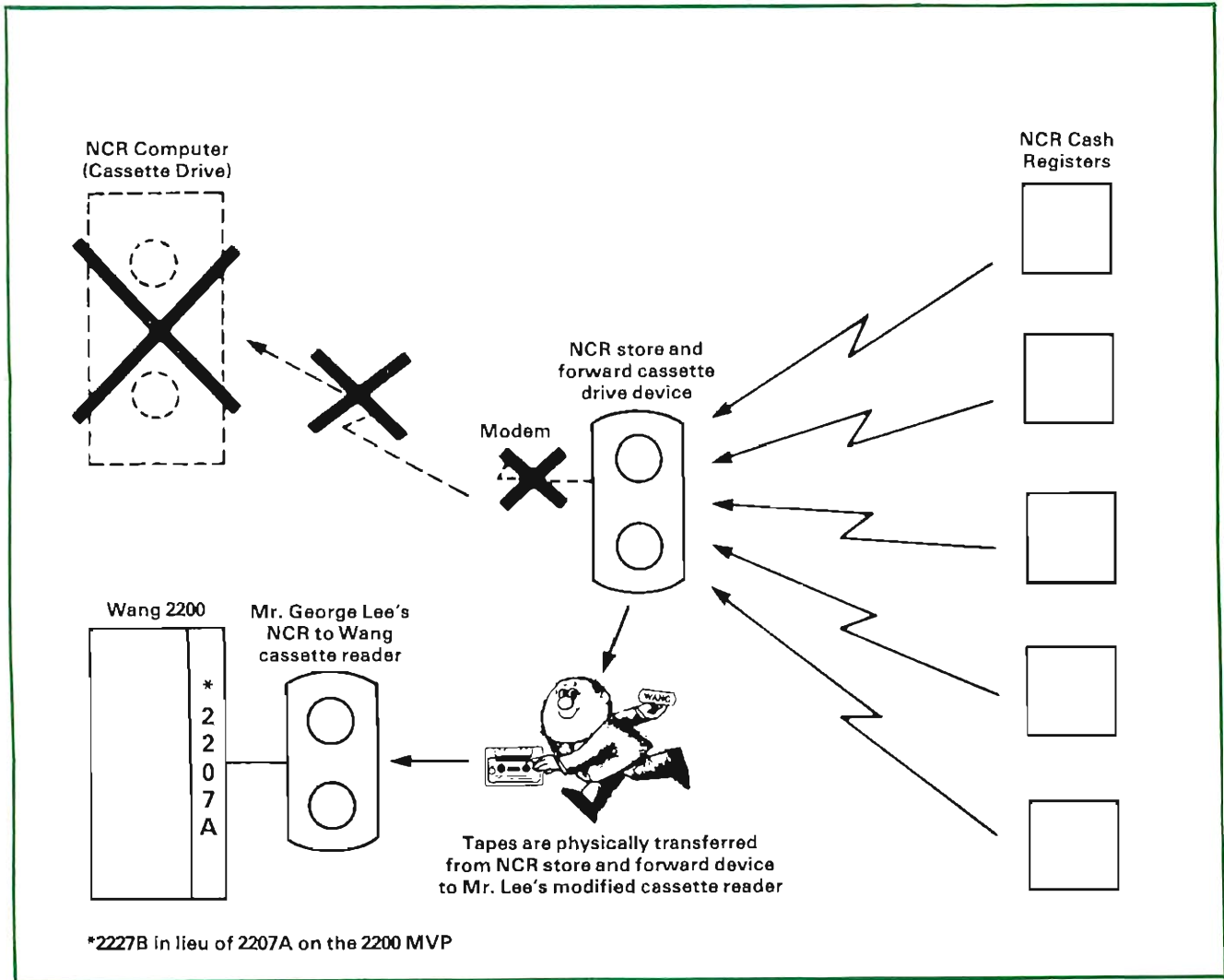
NCR Cash Register/Wang Computer

Mr. George Lee of GTL Associates has developed a device which allows data stored on NCR store and forward cassette tapes to be read into a Wang System 2200. Mr. Lee's device resembles a standard tape reader and can be in-

terfaced to a 2200 system through a 2207A controller board.

A typical example of the use of the GTL device might be the following: A major account utilizes NCR cash registers to give both sales information to customers as well as save data to be used at a later time for inventory, sales forecasting, and tax information. These NCR cash registers are interfaced to an NCR store and forward device which subsequently telecommunicates to an NCR computer in the account's home office. This store and forward device is also equipped with a tape cassette drive. The 2200 provides a more powerful cost efficient alternative to the above.

*2227B in lieu of 2207A on the 2200 MVP

For futher information concerning the GTL device, please contact:

Mr. George Lee
GTL Associates
68 Bradley Road
Braintree, MA 02184
(617) 288-0058

Formatting the 2260C Rigid Disk

The recently announced 2260C rigid disk has some important differences from its stable-mate, the 2260B. The major changes are in the area of controllers, furniture and formatting.

The 2260C controller comes as part of the purchase package. It is a totally new design, fits into a standard CPU I/O slot and requires two cable connections. This means that the 2260C does not need, and will not work with, the 22C11 or 22C03D controllers.

The new disk is self-contained and designed to be table mounted; consequently the disk enclosure is not required, nor is one available.

Another change is the removal of the format switch from the disk unit. The 2260C models are formatted by means of software. A free-standing utility which will operate on these disks connected to a T, VP or MVP is available. The manual on the 2260C disk unit also contains the $GIO statement information necessary to format the disk via keyboard entry.

Points of Clarification

1. The Graphic Utility System (GUS) is not offered on minidiskette.

2. It is assumed that in order to double the life of the 2221W and 2261W printer ribbons, one merely removes the ribbon, turns it over, and replaces it with the spools on the opposite spindle. It is further believed that turning the ribbon over exposes 50% of unused ribbon because the printer head(s) only utilizes the top-half of each ribbon.

    In reality, the ribbon is cocked at an angle to reduce friction and movement. Therefore, the printer heads utilize approximately 70% of each ribbon. Turning the ribbon over will expose less than 30% of unused ribbon and printer output is patchy and sparce.

3. In the past, the 2236D could not be extended beyond 1000 feet. We are now able to offer the 2236D with up to 2000 feet of cable. The cable may be ordered in 200 ft increments above 1000 feet.

    Example

    120-2236-12 = 1200 feet
    120-2236-14 = 1400 feet

Plotter Pen Housing 2232B

Lately there has been a lot of confusion concerning the upgrade of the 2232B Plotter Pen Housing to accommodate the new plastic pen inserts. The following information should clarify these changes:

The Black Plastic Pen Insert (725-0465-7) is no longer manufactured and, therefore, is no longer available to Wang users. The Black Plastic Pen Insert is being replaced by a new Blue Plastic Pen Insert (725-0456-8).

However, the blue plastic pen insert is wider in design than the black plastic pen insert and consequently does not fit into the old adaptor sleeve assembly (279-0067). Therefore, a new adaptor sleeve assembly (279-0067-1) has been designed to accommodate the new pen insert.

Unfortunately, the new adaptor sleeve does not fit the old inner sleeve unit (461-3155). Thus, a new inner sleeve has been manufactured (461-3339).

An upgrade is now available to upgrade existing 2232B units with the new pen housing . . . . Part Number 200-0232-1. This upgrade includes:

    1 Black Inner Sleeve (461-3339)
    1 Adaptor Sleeve Assembly (279-0067-1)
    1 Blue Plastic Pen Insert (725-0465-8)
    1 New Pen Assembly

Photo depiction key (from left to right)

1. Ink Pen Housing

2. Top of Pen Housing

3. Inner sleeve (black)
   Old Part — 461-3155
   New Part — 461-3339

4. Adaptor sleeve assembly
   Old — 279-0067
   New — 279-0067-1

5. Blue Plastic Pen Insert
   New Part #725-0465-8
   (Please note: Blue Plastic Pen Insert replaces Black Plastic Pen)*

6. Black Plastic Pen Insert (Please note: Black Plastic
   * Part #725-0465-7   Pen Insert is no longer
                           available due to a change in
                           the manufacturer's
                           specifications)*

7. Mars Standard Pen Insert

2200MVP CONVERSION KITS

Recently Wang announced upgrade capability for 2200VP to 2200MVP systems. In addition to the basic conversion kit (200-0200-3) we are also providing a number of optional conversion kits to allow existing 2200 Series equipment to run on the 2200MVP. The following discussion should answer any questions you have concerning this matter.

The one conversion kit *required* for all 2200VP to MVP upgrades is the 200-0200-3. This kit provides the necessary printed circuit boards and controllers for converting the VP processor, one printer, one floppy and one hard disk to run as a 2200MVP. It does not include a 2236 terminal or 2230MXD controller. These devices must be ordered separately. The 200-0200-3 includes the following:

- 2200VP Processor to MVP Processor upgrade
- Diskette drive upgrade to 2270A-D
- Double controller (22C11) — Controls one system printer and one disk device (diskette)
- Modified disk controller — (22C03D)
- MVP Operating System Software

If a customer does not have a floppy disk on his 2200VP, he must still pay the full price for the conversion kit and order a 2270 separately. The 2270 will be field upgraded to a 2270A-D with the 2200-0200-3 conversion kit. The double controller (22C11) is a new addition to our product line and now replaces the 22C02 and 22C03-D controllers that were delivered with initial 2200 MVP systems.
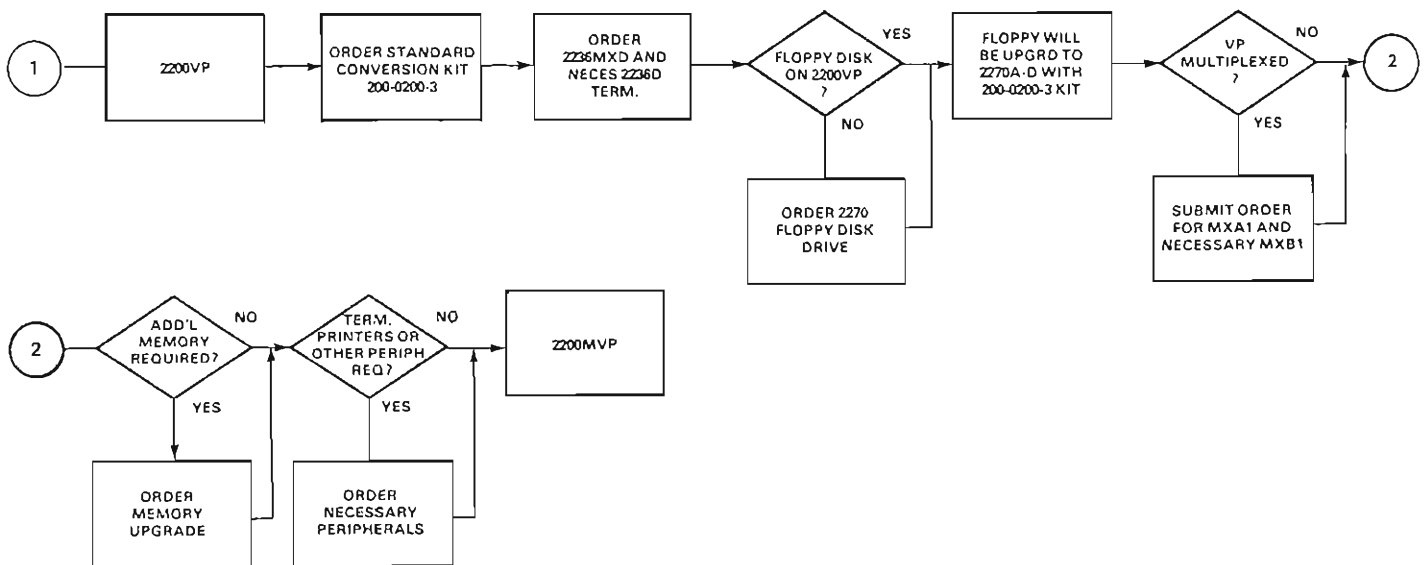
Other conversion kits now available are as follows:

CONVERSION KIT DESCRIPTION	*ORDER #
2236 to 2236D Conversion Kit	200-0236-D
2236MXC to 2236MXD Conversion Kit	177-2236-3
2270-1, -2, -3 to 2270A-1D, -2D, -3D Conversion Kit	200-0270-D
2270A-1, -2, -3 to 2270A -1D, -2D, -3D Conversion Kit	200-0270-AD

No conversion kits are provided for converting peripheral controllers. If additional controllers are needed beyond what is offered with the VP to MVP conversion kit (200-0200-3), they must be ordered separately from the standard Wang Price List.

If you have any other questions concerning equipment conversion, please call the Technical Information Center.

* Prices available through your local Wang office.

▇▇▇ Software Package Listing ▇▇▇

The trend toward cross-licensing of software packages is on the increase. The number of vendors cross-licensing and the number of requests from vendors looking for available packages has indicated that there is considerable interest in this method of doing business.

Thus, we have instituted the "Software Package List." The list will be printed each month in this newsletter, and listings entered will be repeated until we are told that they are no longer valid. Each entry is classified by industry, in generic rather than SIC code format. Your comments and suggestions are welcome and encouraged.

Accounting (GENERAL)

VENDOR:	Computer Consultants of Alaska 4546 Business Park Boulevard Anchorage, AK 99503
CONTACT:	Phyllis Fast
TELEPHONE:	(907) 274-0021
APPLICATION:	A/R System I
DESCRIPTION:	System provides user with reliable control of A/R. Besides billing statements, system produces an aged trial balance, account master lists, S/A, cash flow analysis, a write-off accounts list, and a billing edit list. User has direct control over chargeable amounts, service fees, and discounts on each account. Transactions are keyed into batches on diskettes, then posted to the data master disk for processing after editing and correcting the batches. Optional programs include product S/A, dunning notices, and mailing labels.
MINIMUM H/W CONFIGURATION:	2200T-4 (16K) 2270-2
VENDOR:	Computer Consultants of Alaska (same as previous)
APPLICATION:	A/R System II
DESCRIPTION:	System provides user with quick, reliable, open entry invoice system. User is able to mark specific invoices as paid; and each billing statement lists

the unpaid invoices, whether they occur in the current billing period or not. Billing statement will also display current aged trial balance of client's account. Other output includes billing edit list, aged trial balance, account master lists, S/A, cash flow analysis, and a write-off accounts list. Optional programs include salesmen's commission reports, S/A, mailing labels, and dunning notices.

MINIMUM H/W CONFIGURATION:	2200T-4 (16K) 2270-2
VENDOR:	Computer Consultants of Alaska (same as previous)
APPLICATION:	Certified Payroll
DESCRIPTION:	Originally for job cost and construction oriented business, but works for most. Output-union reports, J/C distribution reports, payroll checks, certified payroll reports, displays employee files. Files include year-to-date earnings and deductions w/emp. data. Pay each emp. unlimited number of rates within pay period. Processes up to 30 different unions w/several dues calculations. Items subject to frequent changes, i.e., FICA, under operator control by tables. In active use since 1974.
MINIMUM H/W CONFIGURATION:	2200T-4(16K) < 125 employees = Floppy Disk ≤ 6,000 employees = 10 Meg Disk
VENDOR:	Computer Consultants of Alaska (same as previous)
APPLICATION:	General Ledger
DESCRIPTION:	Based on dual entry bookkeeping, provides 2 major reports — balance sheet, income statement. Also an analytical tool to define financial position of company. Employs 2 data files — chart of accounts that stores 37 months' transactions, journal entry file. Depending on requirements and

system purchased, journal can derive data from payroll, inventory, equipment, depreciation, A/P, and A/R files. Recommend mimimum of once a week posting, more often if tighter control is necessary. Records updated at EOM and all figures are accumulated continuously, except income totals, which are set to zero at end of year.

MINIMUM H/W CONFIGURATION:	2200T-4 (16K), 2270-2
VENDOR:	Computer Consultants of Alaska (same as previous)
APPLICATION:	Inventory Control
DESCRIPTION:	Keeps complete records on up to 20,000 items. Orders, receipts and sales are recorded then posted to update on-hand, on-order, and sales quantities in inventory master file. Back order file maintains complete information on back orders and special orders and alerts operator of necessary action. Capable of determining cost of goods by LIFO, FIFO, or Average Cost method. Permits monitoring cross-referencing parts to allow substitution part sets to individual items, and automatic flags on entered cost or price changes. Expandable to include EOQ, ROQ formula ordering as well as many of the more sophisticated inventory techniques.

MINIMUM H/W CONFIGURATION:	2200T-4 (16K), 2270-2
VENDOR:	Computer Consultants of Alaska (same as previous)
APPLICATION:	Complaint File Management
DESCRIPTION:	Keeps track of complaints by case number, type of complaint, the location by grid number, offender of property owner, investigative officer, and court action status. Maintains up to 1,021 cases at any one time. Closed cases can be tranferred to a historical file from which analytical abstracts may be taken. As an aid to prevent

duplication of corrective action, system will search for similar complaints. If there are none, it will generate a new case file.

MINIMUM H/W CONFIGURATION:	2200T-4 (16K), 2270-2
VENDOR:	J. R. Cornelison Systems, Unlimited 6161 North May, Suite 4W Oklahoma City, OK 73112
CONTACT:	J. R. Cornelison
TELEPHONE:	(405) 843-1474
APPLICATION:	Genasys General Accounting System
DESCRIPTION:	Payroll, Accounts/Payable, Accounts/Receivable, Universal/Input, General/Ledger, Inventory, Checkwriter, Capital/Assets, interactive flow-through. Nearly all input is to Universal/Input which is capable of preliminary Trial/Balance reporting, adjusting HNO. File updating accepts data from EASY automatically.

MINIMUM H/W CONFIGURATION:	WCS/30 w/floppy, F/R disk, printer. July release on GENASYS EASY presently running w/T/C 360C software approximately 5,000. Hardware configuration customized according to numbers of accounts (all options considered).
VENDOR:	Manlius Valley Enterprises, Inc. P. O. Box 232 Manlius, NY 13104
CONTACT:	James J. O'Keefe, Jr., President
APPLICATION:	Order entry, inventory control, purchasing, accounts payable invoicing, accounts receivable, credit and financial reporting.
DESCRIPTION:	Well established and thoroughly tested system written in RPGII. Modular in design it allows the software system to be configured to the user's needs. Handles multi-location inventory multi-state payroll, and multi-company or divisional organization.

MINIMUM H/W
CONFIGURATION: 2200VS system capable of supporting RPGII. Disk storage as required by data files.

VENDOR: Productive Resources, Inc.
115 Northwest 15th Street
Corvallis, OR 97330

CONTACT: Judy A. Witt, Customers Relations

TELEPHONE: (503) 757-7225(or 6)
(503) 752-5704(24 hrs.)

APPLICATION: Payroll Processing

DESCRIPTION: Mini-Mis Payroll System is an 8-K package that can batch process a variety of payroll at once. Each employee is assigned a data file that is automatically updated as payrolls are processed. Payroll checks are printed with details (customized checks available) and time summary and tax reports are furnished. Up to 5 types of pays can be customized for each employee in addition to salary, regular and overtime. Includes W-2 (forms available) and 941 information, FICA, and Federal Tax.

MINIMUM H/W
CONFIGURATION: Dual minidiskette PCSII with a 31W printer. WCS/20 with a printer.

Agricultural

VENDOR: J. R. Cornelison Systems, Unlimited
6161 North May, Suite 4W
Oklahoma City, OK 73112

CONTACT: J. R. Cornelison

TELEPHONE: (405) 843-1474

APPLICATION: E.A.S.Y. Elevator Accounting System

DESCRIPTION: Grain Accounts/Payable, Settlement/Records, Scale/Tickets, Purchase/Contracts, Warehouse/Receipts, Position, Sales/Contracts, Load/Outs, Board (futures) Transactions, Checkwriter. Interactive flow-through compatible with GENASYS (below).

MINIMUM H/W
CONFIGURATION: PCSII, 2 floppy, printer to WCS/30 2-10 megabyte disks with high speed printer. Software price range 3,600-9,600 depending on options.

VENDOR: J.R. Cornelison Systems, Unlimited (same as previous)

APPLICATION: E.A.S.Y. T/C Telecommunications Option to E.A.S.Y.

DESCRIPTION: Remote entry of Scale/Tickets, Miscellaneous Input, Warehouse Receipt Redemption, Check Request, Checkwriter, return of file updates for purchase/contracts, settlement/records, check register, position, average purchase price, average sale price, warehouse receipts.

MINIMUM H/W
CONFIGURATION: Home office-WCS/40 with T/C. Remote-PCSII with T/C.

Automotive

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Auto Dealer Package

DESCRIPTION: Computes and saves data for sale of automobiles. Designed to meet Alaska's requirements, the system computes values of loans including 10-8 percent interest rates. Includes programs to type such forms as loan contracts, title applications, etc.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-2

Construction

VENDOR: Arden Business Consulting, Ltd.
926 Roslyn Boulevard
North Vancouver, BC Canada V7G IP3

CONTACT: Nick Arden

TELEPHONE: (604) 929-7614

APPLICATION: Job Costing, Accounts Payable, Accounts Receivable, Multi-union Payroll, Multi-company General Ledger.

DESCRIPTION: Fully integrated systems utilizing keyed access files. Emphasis is on ease of use by inexperienced operator, including extensive data validation. Orientation is on-line (c.f. Batch) transaction processing, well documented at user and program level. Job costing includes breakdown of job activities, with each activity having several cost categories. Full multi-company features. Job cost types, payroll rates and deduction; and benefits are table-driven for easy customizing.

MINIMUM H/W
CONFIGURATION: 24K-T Dual Floppy

Education

VENDOR: Compleat Computer Solutions
382 Hitching Post Drive
Orange CT 06477

CONTACT: Dr. Michael Zabinski

TELEPHONE: (203) 795-9069

APPLICATION: Student Test Scoring System

DESCRIPTION: System scores up to 250 tests consisting of up to 100 questions, and each test may have up to 4 parts. System uses custom printed mark sense cards with 2 to 5 responses (true/false, or A, B, C, D, E) per question. Questions may be weighted, results curved. Many reports including grade distribution, bar charts, means, standard deviations, item-analysis.

MINIMUM H/W
CONFIGURATION: 16K core, 1 floppy disk, card reader, line printer. Cost — $300.

VENDOR: Compleat Computer Solutions (same as above)

APPLICATION: Student Grade Reporting (Grades 8-12)

DESCRIPTION: System designed to maintain files used to store course information, student data and grade records. System generates the following reports: Proof (edit) grade lists, quarterly and end-of-year report cards, class ranking, academic deficiency lists, also cumulative class ranking, permanent record labels and grade distribution tallies by teacher, by course. The system is compatible with the student attendance system.

MINIMUM H/W
CONFIGURATION: WCS-20, 16K core, 3 floppy disk drives, card reader, and a 112-column printer.

VENDOR: Compleat Computer Solutions (same as previous)

APPLICATION: Student Scheduling (Grades 8-12)

DESCRIPTION: System designed to store on diskette the student course selections, school master schedule, course structures, teacher and room assignments. Diskette is then sent to the Wang Data Center where the actual scheduling reports are generated.

MINIMUM H/W
CONFIGURATION: WCS-20, 16K core, 3 floppy disk drives, card reader and a 112-column Printer.

VENDOR: Compleat Computer Solutions (same as previous)

APPLICATION: Student Attendance (Grades 8-12)

DESCRIPTION: System maintains a file of absentees, tardies, and dismissals by student and by date. System generates daily attendance, tardy, and dismissal reports as well as quarterly and year-to-date reports. System capable of responding to inquiries about a specific student's attendance record and lists all the dates on which the student was absent since the start of the academic year. System is compatible with the student grade reporting system.

MINIMUM H/W
CONFIGURATION: WCS-20, 16K core, 2 floppy disk drives, a marksense/punched card reader, and a 112-column printer.

Engineering

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Highway Grade and Staking

DESCRIPTION: Calculates the elevations and offsets of points to be staked for various courses of material in highway construction. It computes elevations for vertical curve data as well as super elevations and transitions from horizontal curve data. The program allows for variable curve thicknesses, curbs, non-standard transitions, etc. This program is compatible with our Volumetric Earthwork program for template generation and can also be interfaced to a plotter.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-1

VENDOR: Computer Consultants of Alaska (same as previous)

APPLICATION: Geodetic Geometry

DESCRIPTION: This disk-oriented survey system includes a complete coordinate geometry, survey and traverse package with disk storage and file management.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-1

VENDOR: Computer Consultants of Alaska (same as previous)

APPLICATION: State Plane Conversion

DESCRIPTION: System converts state plane coordinates to geodetic position and vice versa. It computes scale factors and convergence angles. Specify which state or U.S. possession desired. Point storage for disk or tape is completely compatible with CCA's geodetic geometry program.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-1

VENDOR: Computer Consultants of Alaska (same as previous)

APPLICATION: Volumetric Earthwork

DESCRIPTION: Computes quantities of material excavated or deposited along a specific route when cross-section surveys have been taken before and after the movement of materials. The disk oriented version has automatic file cataloging and storage procedures. There are adequate special functions for modifications and correction of erroneous input. Special template options or custom modifications are optional.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-1

Financial

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Mortgage Management

DESCRIPTION: Designed as control system for housing finance corporation that doesn't service its own mortgage portfolio, but purchases mortgages from a seller servicer which continues to service mortgage for a fee. Provides distributions of mortgage investment portfolio with regard to interest rates, mortgagor name, and pledged bond issues of series. Reports include delinquency reports, amortization of discounts, and cash flow projects

based on current portfolio performance projected over the entire life of the mortgage. Records transactions by a debit or exception method. Half-inch mag tape can be used to transfer information from servicer to your system through tape drive.

MINIMUM H/W
CONFIGURATION:

VENDOR: Computer Consultants of Alaska (same as previous)

APPLICATION: Stock Ownership Registration

DESCRIPTION: Designed to keep track of ownership of corporate stock and audit corporate elections. Can maintain registration data on eligible stock owners, voting or non-voting; calculate number of votes each proxy holder represents; determine a quorum; print ballots for each stockholder attending annual meeting in person; and tally results of election. Output includes voter master lists, registration lists, ballots, mailing lables, proxy forms, and election returns. Originally written for Arctic Slope Regional Corporation and tested at their 1977 Annual Meeting.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-2

General

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Mail List I — Mail List II

DESCRIPTION: Mail List I maintains list of names, addresses, and identifiers from which it produces a variety of lists and mailing labels. 10 identifiers of 6 characters each. Virtually no limit to number of categories or means of selecting for printout. Easily modified to meet most needs. Unlimited file size drains

diskettes. Unlimited file size limits system to diskette only. 1023 addresses/diskette. Mail List II has more streamlined classification system, but not as versatile as Mail List I. Quite a bit faster than ML-I but limited to 6,000 addresses.

MINIMUM H/W
CONFIGURATION:

Government

VENDOR: On-Site Computer Systems
P.O. Box 622
Savannah, GA 31402

CONTACT: G. Harn

TELEPHONE: (803) 726-5363
(912) 354-0851

APPLICATION: Water ad Sewer Billing System/Accounts Receivable/Payroll

DESCRIPTION: System provides complete accounts receivable for utility billing of water and sewer billing for small to medium municipals. Documentation available with complete overview of system. License fee $500.

MINIMUM H/W
CONFIURATION: WCS-20-4, Dual Flexible disk, 2221-W.

VENDOR: On-Site Computer Systems (same as previous)

APPLICATION: Tool or equipment allocation and control.

DESCRIPTION: System provides on-line control of tool/equipment inventories, which may be issued for later recall. Maintains inventory by issue location accountability as to who has been issued an item, how long he has had it. Terminals check items in and out and inquiry on tools or employee data.

MINIMUM H/W
CONFIGURATION: WCS-30 VP-8, 10 or 20 meg, 2221W, 2228B'S. Terminals are Bell DS-40/3, 1200 baud dedicated lines. Maximum

terminals system will support = 30 at 10 per 2228B port. License fee $5,000.

Hotel/Motel

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Hotel Reservations/Room Management

DESCRIPTION: Provides hotels with accurate records regarding the availability of rooms and their current occupancy status. Every room is stored in the computer, including meeting rooms, current occupant, room prices, and availability. In addition, maintains a list of current reservations by room, date, type of room, and name of party, along with quoted room price. Optional package allows computer to print individual room bill at check out, and adds the bill to A/R. Bill can include bar and restaurant charges as well as tips and room fees.

MINIMUM H/W
CONFIGURATION: 2200T-4 (16K), 2270-2

Medical

VENDOR: Thomas M. Carpenter, Systems Engineer
703 North Avenue P
Clifton, TX 76634

CONTACT: Thomas M. Carpenter

TELEPHONE: (817) 675-6253

APPLICATION: Medical Accounting and Billing

DESCRIPTION: Complete Accounting and Billing application designed for individual physicians as well as multi-physician group practices; itemized patient statements; third party claim forms (insurance) including Medicare, Medicaid, Blue Cross/Blue Shield and AMA Standard; aging Shield, lists and automatic notification, detail accounting and statistical reports, and diagnosis/procedural analysis are some of the main features.

MINIMUM H/W
CONFIGURATION: Triple Floppy WCS-20 with 16K "T" processor and 2231W Printer.

NOTE: Seven current installations including internal medicine, radiology (2), family practice, cardiovascular, ear-nose-throat, and neuropsychiatric.

VENDOR: On-Site Computer Systems
P.O. Box 622
Savannah, GA 31402

CONTACT: G. Harn

TELEPHONE: (803) 726-5363
(912) 354-0851

APPLICATION: Obstetrics Patient Profile Monitor for Term of Pregnancy.

DESCRIPTION: System provides O.B. doctors on-line data for each patient term of pregnancy. With terminals in delivery room any doctor can view patient history on-line. Terminals communicate at 1200 baud, dedicated line to WCS-30 via polling processor. License fee — $1,500.

MINIMUM H/W
CONFIGURATION: WCS-30-4, 10 MEG, 2227B's remote PCSII's as needed with 2227B, 2200T-4 polling processor.

Miscellaneous

VENDOR: Computer Consultants of Alaska
4546 Business Park Boulevard
Anchorage, AK 99503

CONTACT: Phyllis Fast

TELEPHONE: (907) 274-0021

APPLICATION: Aircraft Maintenance Management

DESCRIPTION: System keeps accurate, up-to-date

records of rotable, time rated aircraft componets. Stores data such as component location, date and reason for removal, and more. User can produce parts lists by code number, location, part number, as well as aircraft ID code. Component reliability reports can also be printed. Approved by Federal Aviation Agency and in active use since 1974.

MINIMUM H/W
CONFIGURATION: 2200T-4, 2270-2

VENDOR: Computer Consultants of Alaska (same as previous)

APPLICATION: Inspection Documents Control

DESCRIPTION: System will print and maintain accurate records of inspection procedures and the types of inspections to which they apply. The system is currently used to print aircraft inspection forms for "visits" on Nihon YS-11A aircraft. Forms should be signed and submitted to the Federal Aviation Agency. The system saves considerable time and money over manually operated systems.

MINIMUM H/W
CONFIGURATION:

VENDOR: Mini Max Data Systems, Inc.
4646 Poplar, Suite 240
Memphis, TN 38117

CONTACT: Pat Montgomery

TELEPHONE: (901) 767-6942

APPLICATION: Exterminators — Accounting Management Information

DESCRIPTION: System name: "EXSYS". Functions: Accounts Receivable, Scheduling, Customer Inquiry, Management Information, Chemical Control, Form Letters. Target Companies: $250K to 3M annual sales volume.

MINIMUM H/W
CONFIGURATION: 2200T-4, 60C-1/2, 31W-1. VP-8 recommended. 3 screen MVP-16 has been installed.

Printing

VENDOR: Printing Systems (Pty) Ltd.
P.O. Box 48535 Roosevelt Park
2129 Transvaal
Republic of South Africa

CONTACT: Austin Daly

TELEPHONE: Johannesburg 726-3008

APPLICATION: For Administration and Management System

DESCRIPTION: The following functions are undertaken: — Estimating, Work tickets, Wages, Debtors, Creditors, General Ledger, Stock Control, Production Control, Cost Recovery.

MINIMUM H/W
CONFIGURATION: 16K Dual Floppy

Programming Support and Utilities

VENDOR: Arden Business Consulting, Ltd.
926 Roslyn Boulevard
North Vancouver, B.C. Canada V7G IP3

CONTACT: Nick Arden

TELEPHONE: (604) 929-7614

APPLICATION: Line Editor "Simple"

DESCRIPTION: Very simple, self-documenting line editor used to prepare letters, forms, documentation by computer or non-computer operators-features full "T" edit capabilities, plus 18 other special functions (additionally 10 screens of instruction) and fast print — system all core-resident — "crude but effective."

MINIMUM H/W
CONFIGURATION: 8K — A with Edit ROM

VENDOR: Productive Resources, Inc.
115 Northwest 15th Street
Corvallis, OR 97330

CONTACT: Judy A. Witt, Customers Relations

TELEPHONE: (503) 757-7225(or 7226)
(503) 752-5704(24 hrs.)

APPLICATION: Word Processing

DESCRIPTION: Each page contains 14 names and addresses (up to 5 lines and 62 characters) or 868 characters of text. Any number of pages may be concocted together. For example, a minidiskette for PCSII may contain either 952 customers' names and addresses or 71,176 characters of text. Triple these numbers for floppy. Fully documented (36 pages), shipped with sample data.

MINIMUM H/W
CONFIGURATION: PCSII (8K) with dual minidiskette drive, printer or output writer or WCS/15 (8K) with dual floppy. Single disk version is also available but not recommended.

VENDOR: Productive Resources, Inc. (same as previous)

APPLICATION: Program Debugging Aid; Emergency Data and Program Fix-up.

DESCRIPTION: PRI Disk Editor (PRIDE) is a versatile 8-K-byte editor that lets a programmer get into any program or data disk and display the content of any sector in text, hexadecimal, or both forms. String search, replace, and remove can be performed locally or globally and use either a character string or hexadecimal string. Printer and output writer copies are available. The program occupies only 8-K and may be made to reside in core with other PRI software.

MINIMUM H/W
CONFIGURATION: PCS-II (8K), or WCS-15.

VENDOR: Productive Resources, Inc. (same previous)

APPLICATION: Decompressed Program Listing for an 8-K CPU.

DESCRIPTION: Program Lister will let the user give a series of names of programs to be decompressed and listed on a line printer. The program will verify the existence of the requested program files on the disk and then prints a Table of Contents and listing of all programs on the list using decompressed format. Special characters are printed preceding the statement atoms to facilitate debugging, and the CRT lists statement numbers appearing in each statement.

MINIMUM H/W
CONFIGURATION: PCSII (8K). A cruder version is available for 2200B (4K).

Travel

VENDOR: TMS Technical Marketing Service, Inc.

CONTACT: L. Turi

TELEPHONE: (212) 697-6965

APPLICATION: Travel Agency Management System (Travel Guide)

DESCRIPTION: A computerized business system for use by travel agents.

MINIMUM H/W
CONFIGURATION: WCS-30, 2200T CPU, 16K, 3/I/O slots. 2260B Fixed/Removable Disk Drive (10 megabyte), 2226 CRT. Two 2231W-1 Line Printer.

CUSTOM/ACCOUNTING/WORD PROCESSING/RECORD MANAGEMENT SOFTWARE

Sales and Inventory systems; Disbursements, Job Accounting and Payroll Record keeping; Financial Reporting; Document and Text Assembler (D.A.T.A. 1500 and 2500); Professional Time and Billing; Record Management System-installed nationwide and in Canada.

S.P.E.E.D./W.C.S.

Subroutines and Programs for the Economical Efficient Development of Wang Computer Software — cuts application software development and maintenance time and labor costs by 80 percent.

WANTED: ASSOCIATE VENDORS to sell and/or represent software products and services.

WANTED: Software packages "almost ready for market." We will complete, test, debug, document, and market any or all under the negotiated contract.

THE OFFICE MANAGER, INC.
P.O. Box 88067
550 Industry Drive
Seattle, WA 98188
(206) 575-0946

MEDICAL ACCOUNTING AND BILLING

This is a complete accounting and billing application designed for individual physicians as well as multi-physician group practices. Itemized patient statements, third party (insurance) forms, aging lists and automatic notification, detail accounting and statistical reports, historical (Major Medical) activity reports, and diagnosis/procedural analysis are some of the main features.

The patient master is randomized and available for review or update at any time. It is a full sector record with fields such as insurance-filed date, statement date, last payment date, and balance of account automatically maintained by the system. Support files such as diagnosis, procedure description, fee schedule, procedure code, etc., are customer maintained.

Mr. Thomas M. Carpenter
703 North Avenue P
Clifton, TX 76634
(817) 675-6253

WORD PROCESSING AND CLIENT SERVICING SOFTWARE

CWP — A completely revised version of the 8K software we licensed to Wang for use with LIFELINE and TIME/CHECK. Operating on all Wang disk systems with 16K memory (VP's included), the package provides text editing in both "page" and "document" modes, random access to a 4000-line Glossary/Mailing List and a Client File Maintenance and Servicing package.

CWP was designed to handle tasks from spec writing to mass mailings and is easily modified for use in conjunction with other software. It is priced competitively, and cross-licensing agreements are available.

SOFTWARE SYSTEMS COMPANY
14827 Ventura Blvd., Room 226
Sherman Oaks, CA 91403
(213) 995-0456

WANTED: Associate vendors who see a market for their product in Africa.

Write to: MAGUS
               P.O. Box 50148
               Randburg 2125
               Republic of South Africa

THREE D/ONE

A New Computer Application Software Development Method THREE D/ONE is a methodology based on 15 years of experience in improving the process of *d*esigning, *d*eveloping, and *d*ocumenting computer application software.

Many features of the THREE D/ONE method are designed to provide benefits for everyone that comes in contact with the application software development process.

The system analysts and programmers who actually use the method as a development tool realize many of the advantages in their day-to-day work. There is more time for creative thinking because the THREE D/ONE method eliminates, or at least lightens, the burden of a lot of the mundane, routine work they're normally required to do. Basically, their work is made easier for them because the documentation is standardized.

Another major benefit to the programmers/analysts is the improvement in communication with the users of their systems, and with their own non-DP oriented management.

Now, for the first time, DP management and system designers have the ability to successfully estimate, measure, and control the development process, because the method includes a unique time accounting feature.

A major feature of THREE D/ONE is that it makes the system development process auditable. Auditors, both internal and external, who understand this method can easily review any work-in-process where the method is being used. They are assured that all of the documentation is current and complete, that all data elements, files, records and reports are properly identified and cross-referenced, and that the appropriate security keys are in place.

Auditors who have reviewed the THREE D/ONE method have stated that everything else being equal, they would recommend a computer system that uses this method.

THREE D/ONE is constructed as a self-learning programmed instruction (P.I.) course. The system designers are first presented with the Overview, and at each step (procedure) there is a reference back to the "road map" so that they always know where they are in the process. They're then shown what has to be done in that procedure, what the parameters are, and why it's being done that way. They then simply answer questions in a Workbook made up of questionnaires, and that Workbook becomes an element of the controlled documentation library. Then, as in any good P.I. course, they review the work done, where they are in the process, and then proceed to the next procedure. *At that point, their documentation is current and complete through that step.*

A very general benefit accrues to any non-DP oriented people that come in contact with the THREE D/ONE method: It's an excellent educational tool for the uninitiated. It helps users, auditors, management people, and any others to understand the problems and the progress for the system development process. This means considerable improvement in the communications between such people and the EDP development team and results in faster system implementation, fewer misunderstandings, and improved results.

The standardization of the development process lowers the cost of system support activities. The computer manufacturers or system house trouble-shooters have a complete and immediate understanding of the project status and method being used, so that considerable time is saved in analyzing any problem.

In summary, THREE D/ONE provides many benefits to everyone involved in the design, development, and documentation of application software. It helps users to understand the system development process and their responsibility in supporting it. It increases the creativity and productivity of the systems development staff. Auditors are able to validate the system designs and data integrity. And, finally, corporate, financial and EDP management has a tool with which to measure and control the system development process.

Any organization involved in computer application system design can afford the manual version of THREE D/ONE — it's priced at only $995. Increases in staff productivity will pay for that on just one project.

Further information can be acquired from Sabar, Incorporated, at 5636 San Fernando Road, Glendale, CA 91202, (213) 240-8640.

COMPUTER PUBLICATIONS

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Last Minute Item

2260BC Disk Drive

This month we are announcing a new fixed/removable cartridge disk drive called the 2260BC. This new drive is functionally identical to the 2260C with one exception: the 2260BC provides for disk multiplexing.

The only physical difference between the 2260C and the 2260BC is in their respective controllers. The 2260BC uses a new controller, the 22C13, which has an additional connector slot into which a cable from the 2230 MXA-1 is attached. Unlike the 2260B drive, where the 2230 MXA replaces the 22C02 disk controller in multiplexed configurations, the 2230 MXA-1 occupies a separate I/O slot on the Central Processor. The 2260BC includes a cabinet/stand into which the drive is subsequently mounted.

For those customers who need multiplexing capabilities and have a 2260C drive already installed, we are pleased to announce an upgrade kit for 2260C to 2260BC conversion. The upgrade kit includes a replacement 22C13 controller, cables, and a new cabinet/stand. The part number of this conversion and the price of the upgrade will be announced in a future memo. First deliveries of the 2260BC and the new upgrade conversion kit will be September of 1978.

Also, we would like to notify the field concerning the 2232B digital flatbed plotter as a supported peripheral in the 2200MVP. Because most 2232B applications require heavy number-crunching processing prior to plotting, and often times this processing takes several hours to complete, the 2200MVP is ideally suited for applications involving this device. The inherent power and speed of the MVP will allow a single partition to process data for subsequent digitizing while leaving the remaining partitions free for other processing tasks.

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TITLE: **WANG SYSTEMS NEWSLETTER**

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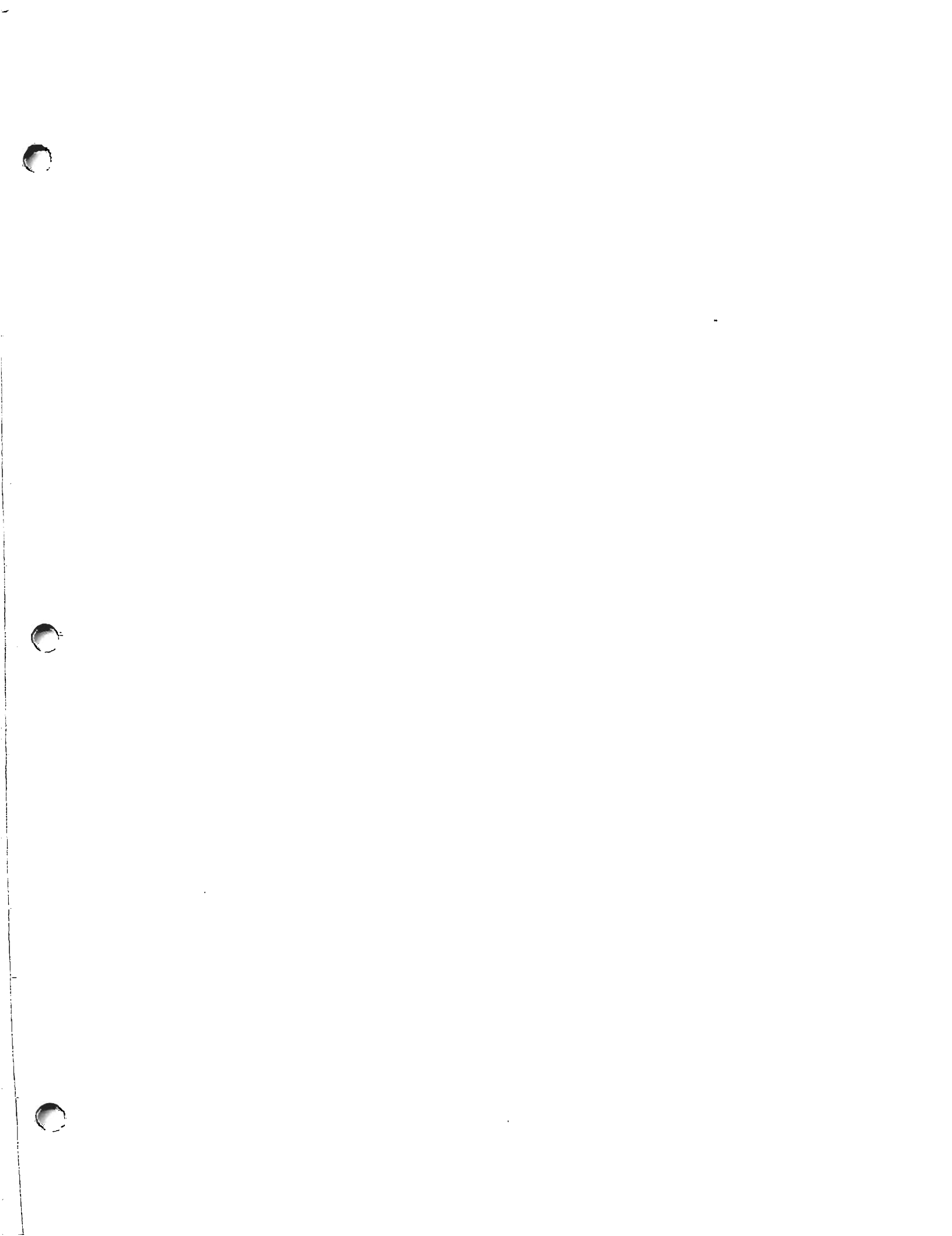   ADDRESS_____
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History: Dr. An Wang earned his Ph.D. in Applied Physics at Harvard University. His early work in magnetic core memory development contributed to one of the giant steps that made computers a part of modern life. Reliable, large-capacity memory was one of the biggest needs that had to be filled before the computer could become a commercial reality.

Wang Laboartories, Inc., then started in 1951, with the idea that we could find new and better ways to fill information handling needs.

Since then, we have grown to a $135 million company, listed among the top growth businesses in the United States.

Our main manufacturing facility is located in Tewksbury, Massachusetts. Another facility in Burlington houses the Wang Data Center.

To accommodate Wang's rapid growth, we recently relocated our administrative headquarters and research and development operations from Tewksbury to a new facility in Lowell, Massachusetts, which almost doubles available floor space.

In North America, we serve our customers through over 100 Wang-staffed sales and service centers.

Our worldwide business operations employ some 4,200 people among them 1,800 highly trained sales and systems specialists and customer engineers. We maintain 50 Wang-owned sales and service offices in 17 countries and are represented in 48 additional countries.

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