

SOURCE DATA

THE DATAPOINT SOFTWARE NEWSLETTER

No. 1

June 1, 1979

New for you from Datapoint

Important Datapoint software developments take place constantly. And, unless you're in the know, you may not be getting your money's worth from your Datapoint systems. Now, the latest Datapoint Software information is available in one publication--*Source Data*. *Source Data* will keep you informed of all new Datapoint software developments, as well as the latest revisions of previous releases.

It is our aim to provide you with--

- clear, concise explanations of Datapoint Software products (operating characteristics, system descriptions, etc.)
- helpful hints to save time (and money)
- easy-reading summaries of Datapoint's latest software program releases
- greater understanding of the choices available to you to help solve your data processing needs

And we would like to hear from YOU! *Source Data* can provide the forum for communicating your software successes to your colleagues around the country. And we welcome letters to the editor.

The first copy of *Source Data* is yours free. We hope it will convince you of the importance of this document to your data processing operations.

Don't miss out! If you haven't already sent in your subscription application and \$18.00 remittance - please do so now. It will cover you for the next year.

Yes, I want to be in the know. Send me a year's worth of *Source Data*, the Datapoint Software Newsletter. I enclose \$18.00 to help cover publication and shipping costs.

Name _____ Company _____

Address _____ Telephone _____

City _____ State _____ Zip _____

Date _____

DATAPOINT CORPORATION, #M-71
9725 Datapoint Drive
San Antonio, Texas 78284

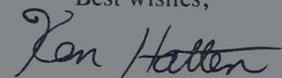
Editor's Note

We sincerely hope that you will find *Source Data* not only interesting, but also helpful and informative. In this day and age of almost constant and seemingly endless product advances, there seemed to us a void in keeping you, the Customer - our most valued asset - up-to-date on Datapoint developments. My staff and I are dedicated to filling that void. We also look forward to hearing from "you". Tell us what you would like to see in upcoming issues! Maybe you have through your experiences some helpful hints and ideas that you would like to communicate to other users? Communication should flow both ways. I welcome letters to the editor and will publish them.

I cordially invite you to subscribe if you haven't done so already.

See you in two months with our next issue.

Best wishes,



Ken Hatten
Source Data

Ordering Software

For programmed software.....

To order any of the Datapoint programmed software in this newsletter or in the Software Catalog, contact your Datapoint salesman or your local sales office.

For supplies and documentation ONLY.....

Supplies such as ribbons, blank disks and tapes, or documentation such as brochures and user's guides may be ordered directly from: Software Services - MS#VO5

Direct order is available **only** for supplies and documentation. **Any** programmed software order **must** be placed through your local Datapoint sales office.

If you have any questions about your software, or any problems with it, your Datapoint salesman is the individual to contact.

New Field Developed Software Catalog

A completely new edition of the *Field Developed Applications Software Catalog* is currently being assembled. The applications software listings in the new catalog have been submitted by Datapoint's Domestic Sales Representatives. The new catalog will list and describe over one hundred software programs, and is due to be available from Datapoint Software Distribution on May 15 (Document #60306, price to be announced later).

Initially, editions of the catalog are due to be published every ninety days after the first printing to allow for new additions. Included in later editions will be listings of applications software developed by independent software

firms experienced in marketing and installing Datapoint systems, in addition to listings of the Domestic Sales Representatives. Entries will be cross-referenced to aid in finding software listings applicable to your needs.

For further information about listing software in the catalog, contact:

Marketing Programs
Attn: Applications Group
9725 Datapoint Drive - MS#M82
San Antonio, Texas 78284

DATAPOLL® 1800

If you have one or more Datapoint processors (it makes no difference as to model type), and you want them to talk to one another: then you should seriously consider DATAPOLL - one of the easy-to-use communications packages that requires no programming.

A DATAPOLL "master" station can poll an unlimited number of "slave" (remote) stations, and collect data from or distribute data to those slave stations. The slave station program can execute data transmission in an unattended mode (essential if communicating after work hours to take advantage of the lowest possible line charges). Standard telephone lines or dedicated lines facilitate the data transfer.

Data can be transferred to or from cassettes, magnetic tape, diskettes, or disks, while maintaining file compatibility. Data can also be transferred directly to a printer; or, to reduce line charges, data can be sent to a file with the directive that it be printed later after communications are complete.

DATAPOLL also provides a comprehensive error-checking facility to insure that data is transmitted and received correctly.

DATAPOLL represents such a diverse set of communications solutions that it would be perhaps best to take a look at what is available on just one system - the 1800.

DATAPOLL 1800 is a series of six programs written specifically for the Datapoint 1800 processor. These programs are compatible with all current versions of DATAPOLL:

DPDMP18 Asynchronous Disk Master Program for the 1800 system. This program is used to collect data from the slave stations, and distribute data back to the slave stations. Files can be transferred between the 1800 and cassette or disk systems, or a mixture of both.

DPDSDMP18 Synchronous Disk Master Program for the 1800. This program is the same as DPDMP18, but is for synchronous communications systems.

DPMTM18 Asynchronous Magnetic Tape Master Program for the 1800 system equipped with a magnetic tape drive. Data is received from the slave stations, and is recorded on magnetic tape in a predefined format.

DPSMTM18 Synchronous Magnetic Tape Master Program for the 1800. This program is the same as DPMTM18, but is for synchronous communication systems.

DPDSP18 Disk Spooling Program for the Datapoint 1800. This is an unattended automatic spooling program for the 1800 which can be used with any of the asynchronous communications.

DPSDSP18 Synchronous Disk Spooling Program. This program is the same as DPDSP18, but is for 1800 systems using synchronous communications.

Features included in the DATAPOLL 1800 are:

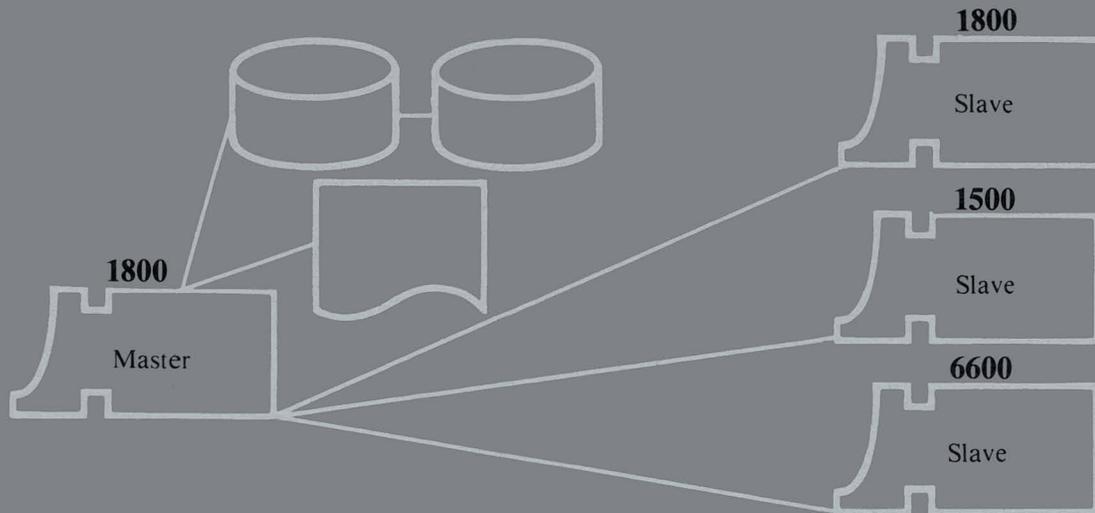
- console logging
- automatic dialing
- security password
- multivolume disk file support

Minimum hardware requirements for the DATAPOLL 1800 include:

Synchronous	Asynchronous
1800 processor	1800 processor
64K memory	64K memory
1 diskette module	1 diskette module
Modem--Bell 201 or Equivalent	9022 power supply 9402 communications adapter/modem

The 1800 processor has built-in synchronous communications facilities.

Typical DATAPOLL on the Datapoint 1800



Converting applications to the Datapoint 1800

New Datapoint 1800 users may want to convert applications from another Datapoint system to the 1800. There are several options available to move the data files and programs physically from currently-used system(s) to the 1800's dual-density diskettes.

DCCONV18

DCCONV18 is a utility program which copies files between 1800 dual-density diskettes and single-density diskettes. This is the only 1800 utility which recognizes diskettes recorded at single density. This program operates only on the 1800, and requires no special system configuration or equipment. DCCONV18 can copy files from single to dual density, or from dual to single density - DCCONV18 automatically detects which type of diskette is in use. Single files, selected groups of files, or entire diskette contents may be copied from one diskette to the other.

COPYFILE

COPYFILE is a utility program for copying files to the resident Disk Operating System (DOS.G for the 1800) from a disk that runs under another DOS. COPYFILE

operates in one direction only - it will copy files to the 1800 dual-density diskettes from other disk drives. This utility recognizes all disk types, and is the fastest way to transfer files to the dual-density diskettes.

ARCTM

If the 1800 is part of an Attached Resource ComputerTM system, the program ARCOPY can copy files between the ARC system disks and the 1800's dual-density diskettes. (The diskettes are used off-line.) ARCOPY is similar to COPYFILE in operation, but the direction of copy can be specified, as ARCOPY is bidirectional.

COMMUNICATIONS

A communications program such as DATAPOLL can also be used to move files to the 1800 dual-density diskettes. File conversion using communications programs also provides bidirectional capabilities, but is generally slower than any of the above methods.

Helpful Hint - Saving time on ISAM adds

Would you like to save processing time when adding large groups of records to an ISAM file when the group falls between two existing records in the file?

Many times (especially in a batch environment), it is necessary to add numerous records that fall logically between two records on the ISAM database. If the records to be added are presorted before being entered in the computer system, a substantial amount of time can be saved by sorting them in *descending* sequence.

The following chart shows the savings in processing time when the record group is sorted in descending rather than ascending order. (The results shown are for DATASHARE[®], but this method is equally effective with COBOL, RPG, etc.) Notice that as the number of added records increases, the saving in processing time rises dramatically.

Continued on next page

Interpreter	# of added records	Transaction % time difference
DS45500 1.6	100	12%
DS55500 1.1	100	20%
DS45500 1.6	200	21%
DS55500 1.1	200	31%
DS45500 1.6	500	43%
DS55500 1.1	500	50%
DS45500 1.6	1000	76%
DS55500 1.1	1000	78%

Transactions occurred on a Datapoint 5500, single cartridge, 1K buffer, DOS.A, ISAM key size=10

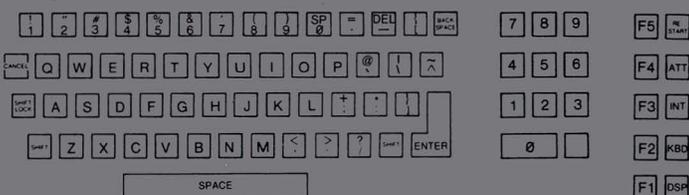
The time savings when the records are sorted in descending order is a result of fewer accesses necessary to determine the correct location of the key in the index. If the record keys being added are in ascending order, every key previously inserted must be read before the new one can be added. However, if the keys are in descending order, the previously inserted keys will not be read. With a large number of added records, this can save substantial processing time.

A special feature found on Datapoint's 1500, 1800, and 3800 processors are the programmable function keys. These five keys are labeled F1 through F5 on the keyboard, and make it possible to implement specially programmed features or operator conveniences with the touch of a key.

The five keys are used in conjunction with DATABUS[®] using the *KEYIN* and *GOTO* statements, and enable the user to control the execution of the application. Control may be transferred to a different part of a program by simply pressing a function key; or, one program may be exited and another started.

The function keys may also be programmed for tab or cursor positioning, as well as other interactive tasks which simplify the operator's job.

Standard keyboard on Datapoint 1500, 1800, and 3800 processors.



Function keys

Among the special attributes of the Datapoint 1500 which increase its versatility and power is the concurrent jobs feature. This software package (included with the 1500) allows the processor to effectively perform two operations at once.

The multitasking operating system for the 1500 is DOS.H. It is capable of supporting two jobs simultaneously - entering or processing data while concurrently executing print or communications tasks.

JOB15 is the program which divides the resources of the 1500 into the user job area and the concurrent job area. The *user* job is the normal batch job, while the *concurrent* job is a specialized one that can run at the same time.

To run as a concurrent job, a program must be designed as such. The following are used:

- CCDP15 Concurrent Datapoll-provides concurrent communications with other Datapoint processors.
- PRINT15 Concurrent print spooler-lists a file to the printer.
- CC378015 Concurrent IBM 3780 Emulator-remote batch terminal emulator.
- CC278015 Concurrent IBM 2780 Emulator-remote batch terminal emulator.

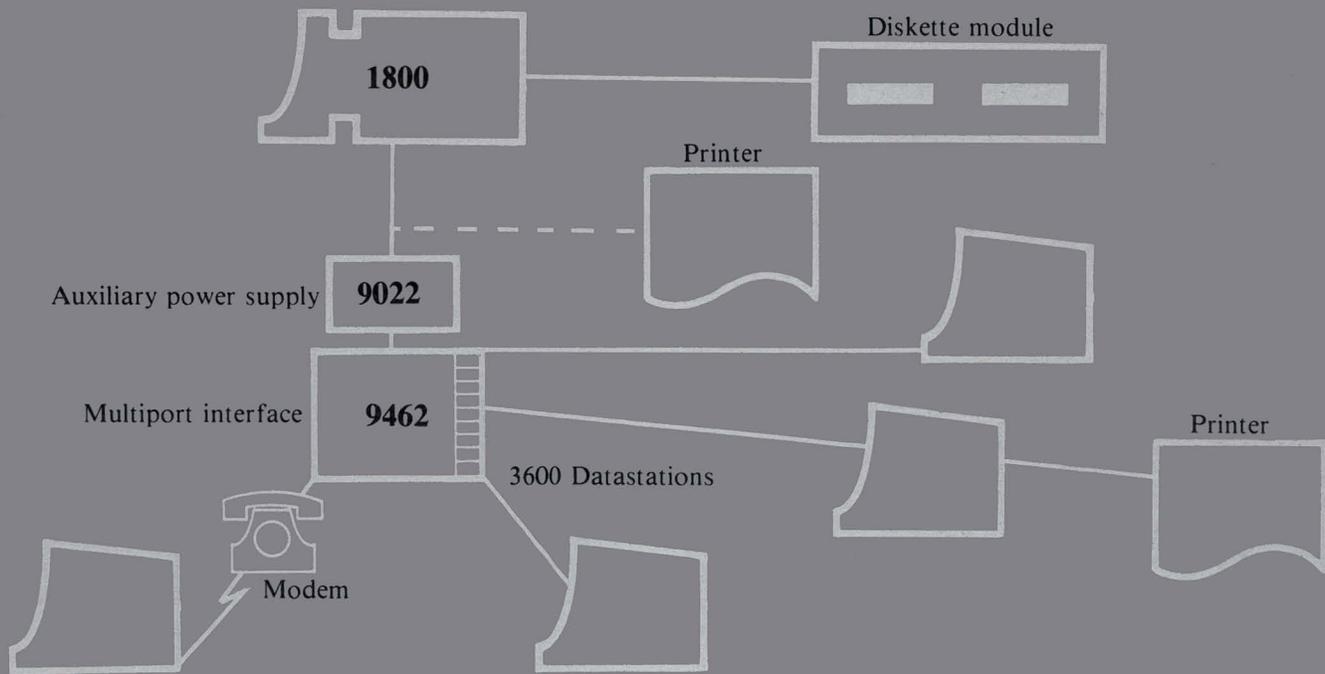
Datapoint's DATASHARE is a multiuser, multi-tasking business timesharing system. It is now available in a system designed especially for smaller users - 1800 DATASHARE 5.

Expansion from a single-user 1800 system to a multi-user 1800 DATASHARE system is accomplished simply by adding the 1800 DATASHARE 5 software (DS51800), a 9462 multiport communications adapter, a 9022 auxiliary power supply and the 3600 workstations.

The 1800 DATASHARE 5 system provides for a mix of batch and interactive processing, all under the control of a DATASHARE program. The system can incorporate up to four workstations executing the same or different applications programs concurrently. As an alternative, DATASHARE may use the 1800 keyboard and console display as a fourth terminal. This enables the user to configure the system to best suit his data processing needs.

Continued on next page

A Typical 1800 DATASHARE Configuration



A typical 1800 DATASHARE operation

An example of diskette-based DATASHARE operations could include a wide range of activities. Data entry, data processing, file maintenance and telecommunications can all occur at different times of the day, or function concurrently (excluding communications). For example, operators might use the Datastations to enter data for business files - order entry, inventory, etc. Later, these same terminals could direct the execution of applications programs, such as report generation, file editing, or inventory control. Users share common access to all files stored in the system (within the limits of user-defined security). At certain times of the day, the DATASHARE system could be used to process remote disk files over telephone-line connections using DATAPOLL, MTE, etc.

An example of 1800 DATASHARE performance

1800 DATASHARE was tested against DATASHARE on the 1170 (diskette-based 5500 processor) and DATASHARE on the 4220 (hard disk-based 2200 system). Three levels of disk activity were tested, involving varying levels of complexity (ISAM look-ups, etc). Other conditions also tested were:

- A. data entry
- B. a series of arithmetic instructions
- C. heavy displays

As you can see, the 1800 performs well.

1800 DATASHARE response time (in seconds)

		Low Disk Activity	Medium Disk Activity	High Disk Activity
A	1170	4.05	3.90	5.67
	4220	2.43	3.62	5.28
	1800	1.55	2.99	5.39
B	1170	5.16	6.12	7.98
	4220	2.45	3.56	5.34
	1800	1.75	4.24	7.61
C	1170	4.13	3.89	5.95
	4220	2.49	3.71	5.62
	1800	1.63	3.33	6.11

The 1800 DATASHARE 5 software is compatible with larger DATASHARE configurations. Because of this, users can later expand their data processing facilities without jeopardizing prior software and training investments.

1800 DATASHARE 5 software -

DS51800	- Model #40369, 1 Dual Density Diskette (\$25.00)
DS51800	
DSGEN	- Model #40396, 1 Dual Density Diskette (25.00)
DSTEXT	

User's Guides -

DS51800	- Model #50404 (\$7.00)
DS51800	
DSGEN	- Model #50429 (\$13.75)
DSTEXT	

The Channel Adapter family - an overview

If you have an IBM 360/370 or equivalent mainframe, how is it performing?

- Is the mainframe operating at full capacity?
- Will you need to upgrade soon? (Another \$150,000-\$200,000?)
- Are reports reaching user's desks on time?
- Do you have applications which need to be operative in a short time?
- If you currently have a communications network, is it adequate for future growth?

Datapoint's Channel Adapter products are ready to come to your aid--helping you and your hardworking mainframe!

What is the Channel Adapter?

The Channel Adapter, in conjunction with its associated Datapoint processors and software, performs the function of a control unit. The Channel Adapter is a modular unit which connects directly to the byte multiplexer channel on the IBM system, and under control of the Datapoint software, appears to the mainframe as various IBM unit record devices. The devices emulated are:

254OR	card reader
254OP	card punch
1403N1	line printer
1052A	alternate console

Depending on the software package used, the Channel Adapter is capable of emulating two or more of these devices concurrently.

How does the Channel Adapter help your MAIN-FRAME?

The Channel Adapter extends your mainframe's useful life. It reduces mainframe overhead, thus enabling the timely collection and distribution of data. It can reduce processing reruns, and can greatly enhance your mainframe's processing resources.

How does the Channel Adapter help you?

The Channel Adapter adds powerful capabilities to the mainframe system at low cost and with minimal disruption of current operations. It protects your mainframe hardware and software investments and avoids costly upgrading. Channel Adapter products are available for a wide variety of applications which include:

- Remote job entry
- Batch data transfer
- On-line data inquiry and update
- Data collection and distribution
- Message switching

Briefly, these are the software packages currently available, which will be discussed in detail below.

- *DCIO* provides the mainframe with high-speed access to Datapoint disk files under mainframe applications program control.
- *MLCI* allows interactive access and medium speed batch transfer between a DATASHARE system and a mainframe applications program.
- *DASP*TM provides remote job entry, data collection and distribution, and message switching services by handling all teleprocessing activities to the Datapoint remote workstations.
- *CHIOUR* is a batch data transfer utility program.

DCIO - Datapoint's Direct Channel Interface Option

Efficient sharing of data

With ARC: The Direct Channel Interface Option (DCIO) is a combination of software and hardware which provides a simple, cost-effective means to connect an IBM 360/370 or equivalent mainframe to a Datapoint ARC system. DCIO directly and easily combines the resources of the host computer with a large variety of Datapoint processors, enabling all to share a common database. The possible variety of applications is almost endless.

As a Stand-Alone: DCIO can also be used in stand-alone or off-line environments in conjunction with DATASHARE--Datapoint's Business Timesharing system--for local or remote interactive data processing. For batch-oriented data collection systems, a DATAPOLL network is available to use in conjunction with DCIO. Datapoint hardware and software combinations can also easily accommodate systems which are functionally mixed (interactive and batch).

Advantages of DCIO

With ARC: With DCIO, the numerous advantages of attached processing are extended to the IBM mainframe. DCIO provides mainframe application programs with access to ARC's data files and various dispersed processors. ARC enables any variety of data processing tasks to be performed on any number of the independently functioning applications processors. The ARC file processors manage all data file storage and retrieval chores on a common database.

With DATASHARE, DATAPOLL or ARC: The mainframe can execute application programs in COBOL, BASIC, RPG, PL/1, or any language which uses unit record equipment, while using data stored in the Datapoint system database. These host programs are

capable of reading and/or writing files on the *Datapoint* system using either random or sequential access methods.

The host computer operates independently from the Datapoint system, performing its assigned tasks. However, when access to the common database is required, data transfer can occur at high speed through DCIO. The mainframe is only aware that data is being entered on an extremely fast unit record device.

The mainframe is the controller in the DCIO system. All file access on the Datapoint system is initiated and controlled by the mainframe application program. This facilitates the scheduling of the mainframe resources, and eliminates mainframe operator handling of magnetic tape, card input and printer output.

For example.....with an ARC system

The DCIO system affords the IBM user a wide variety of applications in attached processing. For example, the host computer could be executing batch programs written in COBOL which require transaction data files stored in an adjacent ARC system. The ARC disk file is opened

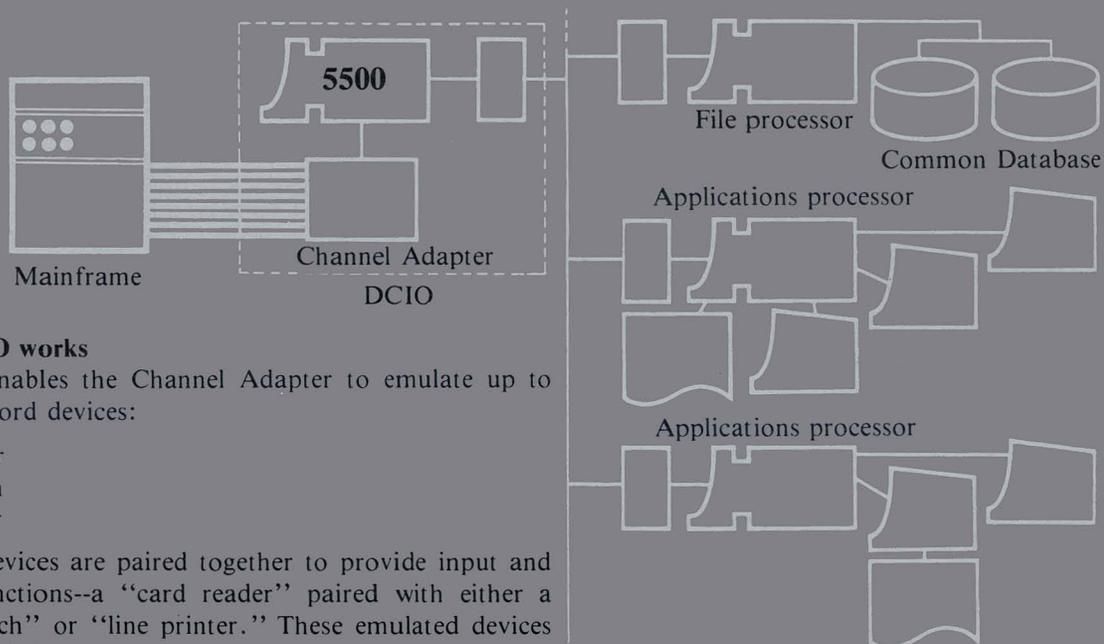
by writing an "open command" to the emulated printer or punch. Before data transfer begins, DCIO presents to the COBOL program a record reflecting the completion status of the "open command." This completion status is presented as a card from the emulated card reader.

At the request of the COBOL program, DCIO retrieves data from the ARC data base. Data is presented to the mainframe program as cards from the emulated card reader--to the mainframe, DCIO appears as a very fast unit record device.

When the COBOL program is completed, it directs output to DCIO--data is written to the emulated printer or punch. Again, the mainframe sees DCIO as a very fast unit record device. The output is written to a file in the ARC common database and is available to other authorized users. A "close command" is written to the emulated printer or punch, and the COBOL program terminates.

DCIO can be used off-line with DATASHARE in a similar manner.

A typical DCIO/ARC system



How DCIO works

DCIO enables the Channel Adapter to emulate up to 16 unit record devices:

- card reader
- card punch
- line printer

These devices are paired together to provide input and output functions--a "card reader" paired with either a "card punch" or "line printer." These emulated devices may be added or deleted without hardware changes using the software configuration file. Transferring data via the emulated unit record devices eliminates IBM teleprocessing complexity, overhead and expense. It also eliminates manual media generation and handling.

The maximum number of Datapoint files that may be accessed simultaneously by the host system through DCIO is 16 - eight input and eight output files. Up to eight programs running on the host system may access the DCIO system concurrently. On the other hand, a single applications program may use all eight device pairs.

DCIO monitors all disk file activity on the processor screen. All file activity is logged with a time and date stamp, which provides data for job scheduling analysis and accounting.

DCIO implementation

The Channel Adapter is simply and easily installed. It attaches directly to the byte multiplexer channel on the IBM mainframe. DCIO does not disturb current operations, and requires no software revisions. DCIO utilizes a minimum of a Datapoint 5500 Advanced Business Processor with 48K bytes of user memory in addition to the Channel Adapter.

The DCIO link provides a high-speed Datapoint system/mainframe interface. This link results in greater operating efficiency--the host and Datapoint computers are dedicated to the tasks which they perform best.

MLCI-- MULTILINK™ Channel Interface

Extending the mainframe's power

Datapoint's MULTILINK Channel Interface (MLCI) is an easily implemented way of adding interactive processing capabilities to an IBM 360/370 (or equivalent) system, without the economic overhead of traditional teleprocessing systems.

Each MLCI provides the mainframe with access to as many as 24 local and/or remote concurrent users. These users, in return, have access to the database and processing resources of the mainframe. MLCI provides interactive processing capabilities, and yet--

- requires no host teleprocessing hardware or software
- imposes no host teleprocessing overhead
- imposes no terminal support responsibilities on the mainframe

Mainframe/DATASHARE Dialogue

The MULTILINK Channel Interface is comprised of Datapoint hardware and software. An integral part of each MLCI system is a DATASHARE Business Timesharing system. DATASHARE permits the simultaneous execution of independent programs, each with its own Datapoint terminal. MLCI is designed specifically for transaction processing in the multi-program, multiterminal DATASHARE environment. All DATASHARE users operate from a common database, using a common file structure; therefore, data is readily retrievable for use anywhere within the DATASHARE system.

All interactive access functions are controlled by a DATASHARE applications program, thereby removing the terminal support responsibilities from the mainframe.

How MLCI works

The Channel Adapter is attached directly to the byte multiplexer channel on the IBM Mainframe. This provides the interactive link between the DATASHARE system and the mainframe application program(s). A single mainframe application program can serve multiple MLCI systems.

The MLCI program permits the Channel Adapter to emulate two devices: a card reader and a line printer.

The mainframe application program sees MLCI as extremely fast unit record equipment--it simply reads "cards" and prints "lines." The mainframe interface is reduced to nothing more than an applications program written in COBOL, RPG, PL/1, etc.

Terminals in the DATASHARE/MLCI system may be selectively chosen for interaction with the mainframe program.

- Data can be directed from any DATASHARE terminal to the mainframe application program.
- The mainframe application program can direct output back to the sending terminal.
- Output can be directed to a DATASHARE terminal other than the one sending data.
- All output can be directed to a specified terminal.

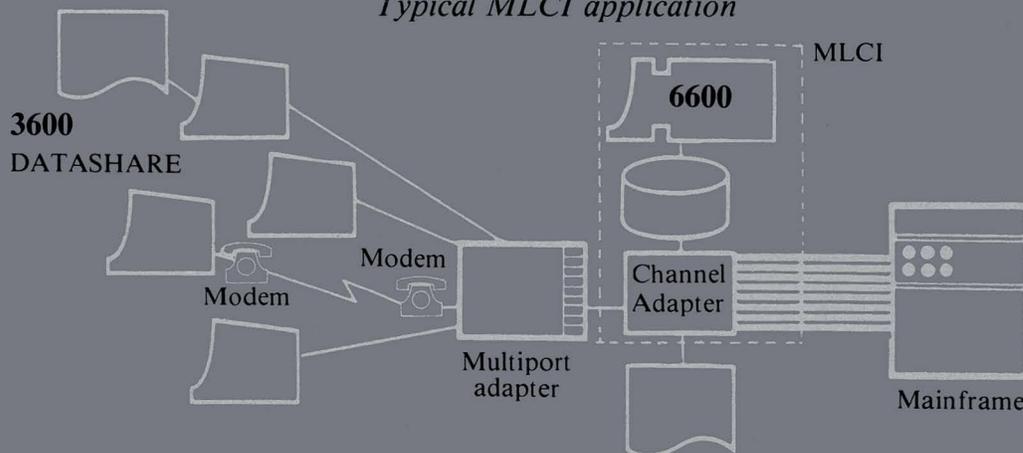
Sharing the data

MLCI also provides for batch exchange of information, allowing the results of DATASHARE and mainframe applications to be easily transferred between the two systems.

- MLCI users can have direct access to the mainframe database.
- Mainframe users can have access to MLCI database information.

This allows the user timely access to accurate information and permits real-time updating of the mainframe database. Transfer of data to and from the mainframe proceeds concurrently with other terminal functions.

Typical MLCI application



An example....

Through MLCI, a user can extend the power of the mainframe in a variety of ways. For example, a DATASHARE user entering address changes can access the customer's information in the mainframe database. The customer file is up-dated by entering the change of address. The new data is then transferred back to the mainframe database. The output (if desired) may be

printed on the host system printer, the DATASHARE system printer, or on the appropriate DATASHARE terminal printer. As this inquiry/update process takes place, other data processing tasks can be completed, such as order entry, report generation, inventory, payroll, etc. Remote locations can engage in any of these tasks at the same time, using remote workstations, with all teleprocessing functions handled by MLCI.

DASP™ - Datapoint Attached Support Processor

Painless remote job entry

The DASP system is a combination of hardware and software which allows IBM 360/370 or equivalent systems to implement (or expand) remote batch communications. The DASP system, together with remote Datapoint systems, can provide a totally automatic communications network.

DASP performs all necessary telecommunications management, and yet it--

- requires no teleprocessing software on the host computer
- requires no teleprocessing hardware on the host computer
- requires no modification of the IBM system
- imposes no communications overhead

DASP--mainframe interface

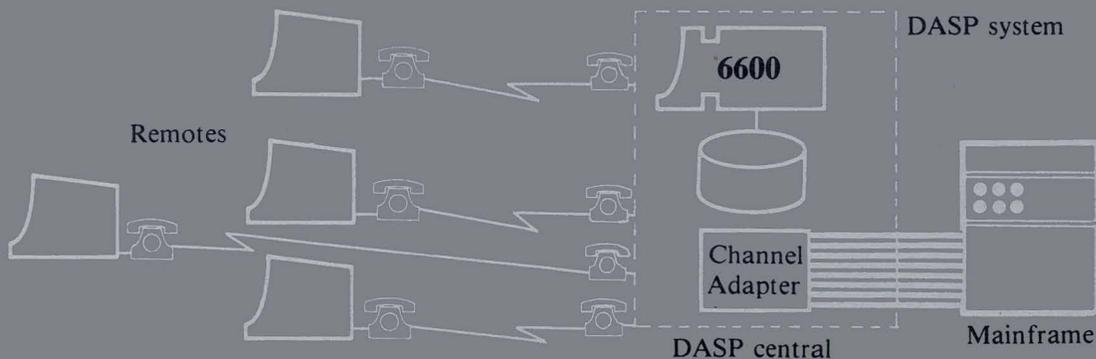
The Channel Adapter is attached directly to the IBM mainframe byte multiplexer channel.

The DASP system appears to the host system as an extremely fast unit record device. Therefore, any job that can be executed on the host system using unit record equipment can also be submitted through DASP.

The software permits the Channel Adapter to function as--

- card reader
- card punch
- line printer
- alternate console

Typical DASP application



DASP central functions

DASP-central controls up to four telephone lines simultaneously using Datapoint 9481 Communications Adapters. All input to and output from the host computer runs through the Channel Adapter. DASP performs numerous functions:

DASP is a spooling system. It collects input from the remote terminals and passes it on to the mainframe via the Channel Adapter. Likewise, it collects output from the host and spools the data to local disk storage for subsequent transmission to remote Datapoint systems. Only after all data is received and stored on local disk, is it forwarded to the host or remotes. This provides a

reliable system to eliminate costly re-transmissions.

DASP can also act as a scheduler. Any input file or output file residing on the DASP spooled disk can be held from transmission to remotes (or submission to the host) until a specified time. The scheduling of jobs and telephone use provides maximum service to remote users. To take advantage of the lowest available telephone rates, output delivery can be scheduled during non-business hours.

DASP is a message switching system. Files can be sent from one remote processor to DASP

Continued on next page

central for subsequent routing to another remote site without mainframe involvement.

DASP is a communications manager. It can support communications on up to four leased or dial-up telephone lines. DASP can also support automatic calling and answering units. This enables DASP central to initiate outbound calls to remote processors for delivery of output data.

DASP provides for remote job entry. Remote users may submit jobs to be run on the host, and have the output automatically returned, or routed to any processor in the DASP network.

DASP is a data collector and distributor. Data can be submitted from the remote systems to update the mainframe database. The current information can then be distributed to the remotes for timely access by all users.

DASP remote communication

A variety of Datapoint processors are available for remote system use with DASP. Remotes can range in size from simple, single-user remote job entry stations to complete, multiuser business data processing systems. Configuration flexibility provides a system which meets current needs and provides for future growth.

Remote communication with DASP central occurs only with another Datapoint processor which is running the Remote User Program (RUP). Although a RUP processor is used primarily to communicate with DASP central, it can also communicate with another Datapoint processor running RUP. No applications programming is involved since RUP services the remote work stations while DASP central controls all mainframe interfacing.

RUP is an emulator program which provides support for the various peripheral devices used for transmitting or receiving data. These devices include--

- card reader
- 7 or 9 track magnetic tape
- disk or diskette
- printer
- cassette
- console

RUP uses a simultaneous communication technique called multileaving. To the user, the RUP processor appears to transmit and receive files and console messages simultaneously. This technique allows the telecommunications line to be used most efficiently.

DASP in a nutshell

DASP is installed simply and easily. The Channel Adapter is attached directly to the byte multiplexer channel on the IBM mainframe, without disturbing current operations. Operation is easy and efficient, with DASP handling all teleprocessing tasks, appearing to the mainframe only as extremely fast unit record devices.

DASP utilizes a Datapoint 6600 Advanced Business Processor with 120K bytes of user memory in addition to the Channel Adapter.

CHIOUR - Channel input/output unit record utility

CHIOUR is a utility program for the Datapoint Channel Adapter. The Channel Adapter attaches directly to the byte multiplexer channel on an IBM 360/370 or equivalent system.

CHIOUR provides for the emulation of up to 16 unit record devices--

- card reader
- card punch
- line printer
- alternate console

The ability to emulate a 1052 console can prove to be an extremely useful feature. If an IBM mainframe's 1052 console goes down, the entire system is down too, unless there is an alternate console available.

- CHIOUR provides an operator-controlled facility for rapid data transfer between the Datapoint processors and the mainframe.
- CHIOUR also serves as an on-line system diagnostic tool.

Channel Adapter pricing

A special Channel Adapter software program is now in effect. Any order for a Channel Adapter may be accompanied by an order for any or all of the Channel Adapter software packages at media charges* only! This special program also includes dropping maintenance charges for all these software packages.

The special software program is in effect on all orders date stamped by Order Entry on or before July 31, 1979. For orders that contain no Channel Adapter hardware, or are received after July 31, 1979, software prices are listed in the following chart.

Channel Adapter prices

Model	Purchase	1yr.	2yr.	3yr.	Rent	Maint.	Inst.
9426**	\$7500	\$260	\$230	\$209	\$325	\$65	\$125
9427***	\$7500	\$260	\$230	\$209	\$325	\$65	\$125

Software prices without hardware order or after July 31, 1979

Model	Description	Paid-up Fee	Lease	Maint.
9806	DCIO	\$500	\$20	\$5
9809	DASP	\$500	\$20	\$5
9810	MLCI	\$500	\$20	\$5
205503	CHIOUR	\$15 (media)	N/A	N/A

*Media Charges - 1 DMF Cassette - \$15.00

**Free-standing cabinet

***Mounted in standard Datapoint processor console

Note - licensing requirements remain in effect.

Systems planning considerations

(This article was submitted by a Systems Engineering District Manager as an aid for planning a new or expanded computer-based system. Although it is very detailed, it is such an important topic that we did not want to lose anything by abridging the story.)

- - -Are you planning a new system?
- - -Is your existing system inadequate?
- - -Will your data processing needs keep pace with your business growth plans?

If any of these important questions are facing you and your company, the following list can help you and your EDP team in determining the requirements for planning your new system. Not all the points will apply to every business system, but the more of these areas you are able to fully define, the more you can be assured that your new data processing system will match your needs, now and in the foreseeable future.

- I. *Describe the general system requirements.*
 - II. *Define all major areas of data flow within each system.*
 - III. *After each flow area is defined, all of the different types of transactions associated with it must be defined. This encompasses:*
 - A. How many people are involved with each of these transactions?
 - B. What is the time frame after which these current transactions may be converted into history?
 - C. How much data must be gathered for each transaction? (Characters) (Numbers)
 - D. How many of these transactions will arrive at the system on a daily, weekly and monthly basis, on an average? How do the transactions arrive? (Data entry, tape, communications lines?)
 - E. What is the peak time of the week, month and year and what will be the peak load in terms of quantities of each transaction?
 - F. Define which transactions are time critical and which are not time dependent.
 - G. Define the transactions considered to be on-line or batch processed.
 - H. Define the basic flow of each transaction (i.e., which of the transactions are initiated, which files would be accessed, which files would be updated and where the original data would be stored).
 - I. Define the level of complexity of each transaction so that storage requirements and CPU power can be estimated.
 - J. What is the maximum space required on disk to store all transactions.
 - K. Calculate the overall number of transactions that will arrive at the system on a per minute, hourly, daily, weekly and monthly basis on average (whatever time span relates to your type of application).
 - L. Calculate the same as above but for peak periods.
 - M. Calculate an overall transaction rate, in either a per second or per minute form, so that system loading may be considered.
- IV. *Describe the number of data entry devices necessary for the system, their location, major function and transactions associated with them.*
 - V. *Describe all batch operations, for example: month-end closing or payroll check printing. Estimate their duration, files accessed, lines printed and frequency of use.*
 - VI. *All special forms should be considered, for example: complexity of design, programming problems, type of printer and ease of use.*
 - VII. *Batch data volumes should be calculated and combined with on-line areas and scratch work areas (for sorts and spooling, etc.) for a general idea of storage requirements.*
 - VIII. *As a customer, you should project growth based on the system defined above so that allowances may be established in the initial system and projected hardware/software growth can be budgeted.*

Continued on next page

IX. When doing space and performance calculations, file access techniques and data storage techniques must be considered. For example: ISAM files are very key-length dependent (i.e., the longer the key - the more storage required and the longer the access of each record). In consideration of data storage techniques, data compactness may be improved by using space compression and record compression. For example: in Direct accessing, many times only one record resides in

a physical sector on disk. If the file is designed properly many times several records will fit on one sector, thereby multiplying your data storage density.

After examining all the above areas which apply to your business, you, your EDP team, and your Datapoint representative will have the information necessary to configure hardware and software which will support your system needs.

Software Program releases - (from Sept. '78 thru latest available)

Name/ Release Date	Description	Purpose	Release Items	
			Model	Item
DCTEXT 2.1 Release 14 Oct. '78	DCTEXT is a DOS utility program which provides efficient text file transfer between various input/output media including printers, magnetic tape, card readers, disks, console, cassettes.	Corrects problems replaces DCTEXT 1.1	50231 20324 20325	User's Guide \$3.00 1 Cassette* 1 Diskette*
DPLOG 2.1 Release 22 Nov. '78	DPLOG is a DATAPOLL asynchronous system master program with console logging for disk systems equipped with a magnetic tape. DPLOG will dial a pre-defined list of telephone numbers, and either write data from the slave station to magnetic tape, or read data from tape to the slave station.	New Software Package	50196 50397 20554 20555	System's Guide \$2.50 User's Guide \$1.00 1 Cassette 1 Diskette
MLUN200 2.1 Release 3 Nov. '78	This is an external communications interface for DATASHARE. It permits connection of a DATASHARE system to a Univac mainframe, using the Uniscope line discipline. MLUN200 supports from 1 to 24 DATASHARE users using synchronous communications, and appears to the Univac mainframe as Uniscope terminals.	Corrects problems cancels MLUN200 1.1	50294 20421 20422	User's Guide \$3.00 1 Cassette 1 Diskette
UNITRX3 3.2 Release 11 Dec. '78	UNITRX3 is a teletype terminal emulator which will run under a Disk Operating System (DOS). It handles communications over a 202 modem in half-duplex at baud rates up to 1200.	Corrects problems cancels UNITRX3 3.1	50213 20296 20386	User's Guide \$4.00 1 Cassette 1 Diskette
RPGPLUS1 1.1 RPGPLUS2 1.1 RPGPLUS3 1.1 RPGPLUS4 1.1 Release 2 Jan. '79	Datapoint Relocatable RPGPLUS is a version of PRGII tailored to use the features of the "5500" type processor. Programs using this system will compile and execute significantly faster than those produced by PRGII. PRGII is upward-compatible to RPGPLUS. **Permanent License Fee - \$2000 Monthly Lease - \$50 Monthly Maintenance - \$15 (required)	No Software Cancelled Media Charges: 25MB disk - \$275 10MB disk - \$150 2.5MB disk - \$95 3 Dual density diskettes - \$30	9803-001 9803-002 9803-003 9803-004	1 25 MB Disk** 1 10 MB Disk 1 2.5 MB Disk 3 DDD Can be loaded on customer's disks for no media charge.

*Prices--1 DMF Cassette - \$15.00/1 Diskette - \$20.00/1 Dual Diskette - \$25.00

<i>Name/ Release Date</i>	<i>Description</i>	<i>Purpose</i>	<i>Release Items</i>	
			<i>Model</i>	<i>Item</i>
DS5 Slave 1.1 <i>Release</i> 15 Jan. '79	DS5 SLAVE is the remote station interpreter for use with DATASHARE 5. DS5 SLAVE will execute programs written in DATABUS in conjunction with the central DATASHARE 5 station.	New Software Package	50352 20488 40318 20568	User's Guide \$4.75 1 Cassette 1 DDD 1 Diskette
ML37700 2.1 <i>Release</i> 8 Sept. '78	MULTILINK Line Handler is a communications interface for MULTILINK. ML3770 allows MULTILINK to emulate IBM 3770 terminals on a multipoint binary synchronous line for communication with an IBM system.	Corrects problems cancels ML3770 1.1	50270 20387 20388	User's Guide \$1.50 1 Cassette 1 Diskette
ML377018 2.1 <i>Release</i> 8 Sept. '78	Same as ML3770, but for the Datapoint 1800 processor.	Corrects problems cancels ML377018 1.1	50353 40319	User's Guide \$2.00 1 DDD
CHIOUR 1.1 <i>Release</i> 25 Sept. '78	The Channel Input/Output Unit Record Utility program for the channel adapter provides for the emulation of up to 16 unit record devices. (See article in this issue for more details.)	New Software Package	50367 20503	User's Guide \$2.25 1 Cassette
MLCI 1.1 <i>Release</i> 15 Oct. '78	MULTILINK Channel Interface uses the channel adapter to allow interactive access and medium speed batch transfer between a DATASHARE Business Timesharing system and a mainframe applications program. (See article in this issue for a detailed description.)	New Software Package	50366 9810 50379 9806	User's Guide \$3.00 ** Paid-up fee - \$500 monthly lease - \$20 monthly maintenance - \$5 (required)
DCIOV1 1.1 <i>Release</i> 25 Sept. '78	The Direct Channel Interface Option provides the mainframe with high-speed access to Datapoint disk files under mainframe applications program control. (See article in this issue for a detailed description.)	New Software Package	50240 20339	User's Guide \$1.75 ** Paid-up fee - \$500 monthly lease - \$20 monthly maintenance - \$5 (required)
EMG115 3.1 <i>Release</i> 4 Nov. '78	This program allows a Datapoint processor to respond as a Honeywell G-115 terminal when on-line to a Honeywell GRTS-355. This emulator accepts input from disk or console, and can route output to printer or disk file.	Corrects problems cancels EMG115 2.1	50280 20399 20401 40367	User's Guide \$1.25 1 Cassette
MLDC1000 1.4 <i>Release</i> 17 Nov. '78	MLDC1000 emulates a remote job entry (RJE) station on large scale Burroughs computers (such as 6700/7700) using Burroughs newline RJE discipline.	Corrects problems cancels MLDC1000 1.3	50193 20273 20314	User's Guide \$1.25 1 Cassette 1 Diskette 1 DDD

**Prices--*

- 1 DMF Cassette - \$15.00
- 1 Diskette - \$20.00
- 1 Dual Diskette - \$25.00

<i>Name/ Release Date</i>	<i>Description</i>	<i>Purpose</i>	<i>Release Items Model Item</i>
DCT2000D 1.3 <i>Release</i> 12 Dec. '78	This program is a disk-based emulator which duplicates the on-line communication facilities of the Univac DCT 2000 terminal. It can support card reader, printer, magnetic tape, keyboard, CRT, cassette, and disk.	Corrects problems cancels DCT2000 1.2	50237 User Guide \$2.00 20348 1 Cassette 20349 1 Diskette
DPS15M 3.4 <i>Release</i> 5 Apr. '79	Master program for the 1500 DATAPOLL diskette system using synchronous communications. This program is used to collect data from the slave stations and distribute data back to those stations using the DATAPOLL communications package.	Corrects problems cancels DPS15M 3.3	50301 User's Guide \$3.00 50203 System's Guide \$4.00 40272 1 Diskette
DPS15S 3.4 <i>Release</i> 5 Apr. '79	Disk spooling program for the 1500 DATAPOLL diskette system using synchronous communications. This is an unattended automatic spooling program for the 1500 which can be used with any of the synchronous master programs in the DATAPOLL communications package.	Corrects problems cancels DPS15S 3.3	50300 User's Guide \$3.00 50203 System's Guide \$4.00 40271 1 Diskette
DBML18 1.2 <i>Release</i> 22 Jan. '79	The 1800 DATABUS MULTILINK program is a standalone DATABUS interpreter with internal and external MULTILINK facilities. It operates on either an 1800 or 3800 processor, and can perform I/O from the console, printer, data communications, or a "phantom" port.	Corrects problems cancels DBML18 1.1	50342-1 User's Guide \$4.50 40309 1 DDD 20480 1 Cassette
DCBACKUP 2.2 <i>Release</i> 3 Jan. '79	This tape backup system is a set of programs to save data for security and historical purposes. ANSI labeled tapes are initialized, selected files or an entire disk is copied to tape, and files are restored to disk from tape.	Corrects problems cancels DCBACKUP 2.1	50266 User's Guide \$3.00 20378 1 Cassette
ARCSTAT 1.1 <i>Release</i> 3 Oct. '78	ARCSTAT provides statistical data for the analysis of ARC system file processor performance. Statistics are displayed on the processor's CRT or may be written to disk for subsequent printing or analysis.	New Software Package	50383 User's Guide \$2.50 20527 1 Cassette
CCDP15 4.1 <i>Release</i> 4 Apr. '79	This is the concurrent slave program for the 1500 processor in the DATAPOLL communications series. CCDP15 operates automatically in an unattended mode and can be used with any of the synchronous DATAPOLL master programs.	Adds new features cancels CCDP15 3.1	50326 User's Guide \$1.00 40292 1 Diskette

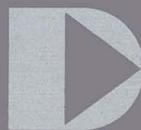
*Prices--
1 DMF Cassette - \$15.00
1 Diskette - \$20.00
1 Dual Diskette - \$25.00

Miscellaneous program releases

<i>Name/ Release Date</i>	<i>Description</i>	<i>Purpose</i>	<i>Release Items</i>	
			<i>Model</i>	<i>Item</i>
DISK1800 1.1 <i>Release</i> 6 Dec. '78	Diagnostic for 1800 diskette.	New Software Package	50390 40356	User's Guide \$1.50 1 DDD
KEY1800 1.1 <i>Release</i> 19 Oct. '78	This is an 1800 keyboard diagnostic which tests the alphanumeric keyboard keys, keyboard number pad, and function keys.	New Software Package	50387 20533 40353	User's Guide \$.60 1 Cassette 1 DDD
DSP1800 1.3 <i>Release</i> 19 Mar. '79	Diagnostic for the 1800 display logic and screen.	Corrects problems cancels DSP1800 1.2	50385 20530 40351	User's Guide \$.45 1 Cassette 1 DDD
UNITAP 1.1 <i>Release</i> 22 Dec. '78	Magnetic tape diagnostic.	New Software Package	50381 20525 20561	User's Guide \$3.00 1 Cassette 1 Diskette
TST6600C 1.1 <i>Release</i> 28 Sept. '78	This is a processor test program for the 6600/6000. It will test the processor's instruction set and memory.	Adds new features cancels TST6600 1.3	50286-1 20519	User's Guide \$1.00 1 Cassette
COMM1800 1.1 <i>Release</i> 4 Oct. '78	Exercises all modem and auto call unit control inputs/outputs: and SDLC, BISYNC, GENSYC, and asynchronous communications disciplines by using a loop back connector attached to the COMM. plug on the rear of the machine.	New Software Package	50389 20535 40355	User's Guide \$.50 1 Cassette 1 DDD

*Prices--
1 DMF Cassette - \$15.00
1 Diskette - \$20.00
1 Dual Diskette - \$25.00

DATAPOINT CORPORATION



The leader in dispersed data processing™

 **DATAPOINT CORPORATION**
9725 Datapoint Drive
San Antonio, Texas 78284

BULK RATE
U.S. POSTAGE
PAID
SAN ANTONIO, TEXAS
PERMIT NO. 1001