

OUT-THINK™

The Datapoint Marketing Newsletter

"Out-thinking our competition to help your customers out-think theirs"

No. 27

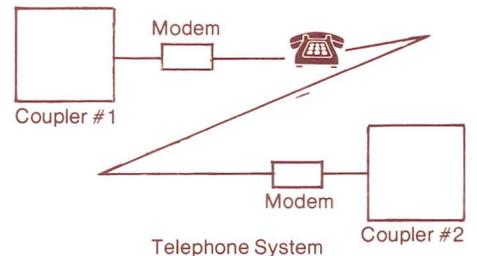
September 1980

Ethernet and ARC™ - What's the Difference?

A Problem in Search of a Solution

In companies which have more than one computer system the problem of linking them together to exchange data has been troublesome.

The common method has been to pretend they are geographically separated and let them communicate over telephone connections using standard modems. In short, if you



wanted your system to talk to the system three floors below you'd use the same techniques as if you wanted to talk to the computer in Los Angeles.

That doesn't sound too bad since most machines can use IBM or Teletype format data communications, but the machines are generally limited to 9600 Baud or about 100 characters/second. When the task involves sending 10 million characters, you could be on the phone quite a while.

Some folks realized this was just too slow and rigged up a direct computer-to-computer link.

These essentially home-brew methods could transfer data fast, but only the technicians could run them, since the interchange software generally was not supported by the manufacturer. Point-to-point was about the limit since adding more users raised the complexity and programming ante.

Enter Xerox, DEC and others

The Xerox folks long had considered this lack of a local high speed link

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DATASHARE® 6 Announcement Does the "Big Apple"

The DATASHARE 6 system with its powerful AIM™ software access method was formally announced at a September 17 press conference at Marriott's Essex House in New York City. The press conference was attended by members of the trade press and analysts, and included presentations by Jonathan Schmidt, Vice President for Advanced Product Development, Gerry Cullen, Vice President of Corporate Communications and Dick Ponton, Director of Sales Support.

Gerry Cullen opened the presentation by providing a brief overview on Datapoint Corporation's background, revenue growth, product line and organizational structure. He also extended an invitation to attend the November 14 introduction of another new system, which will also take place at the Essex House in New York City.

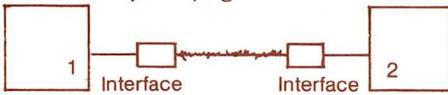
The DATASHARE 6 system was introduced to the press by Dick Ponton, using a slide presentation format. Dick covered the history of the DATASHARE system, noted a number of its more important user features, and described the enhanced features available with the DATASHARE 6 release. Highlighted in the slide presentation was AIM software, and

the significant capabilities it provides as a data access method. A number of slides were included which covered practical applications of the AIM access capability and the various search arguments which can be implemented. Dick's presentation was closed with a discussion of the numerous businesses which can benefit from the AIM access technique and a description of how the DATASHARE 6 system fits into Datapoint's product line.

Jonathan Schmidt, who is responsible for the development of AIM software, followed with a nuts and bolts explanation of how the AIM concept has evolved and developed. Jonathan finished with a detailed question and answer session followed by a demonstration of the 1819 system retrieving data from large data files via DS6/AIM software. The product was well received and a considerable amount of positive trade press is anticipated.

The cooperation and dedication of several groups helped make this successful announcement possible, but a special thanks should go to those in Software Development, Software Support, Master Order Scheduling, and Customer Service/NYC.

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bothersome since it made linking up their office machines very clumsy.

Additionally, users didn't like the idea of having to dial up the computer on the other side of the room to exchange data and the advent of communicating word processing machines only fueled the fire.

Ethernet Will Breathe - Some Day

Xerox, not wanting to miss such a golden opportunity, decided not only to unite their own gear but also the rest of the world as well. The goal could be considered a short-range high-speed communications channel. When you want to send something you just put it on the bus and away it goes.

Remember the pneumatic mailing tubes department stores used to use to send papers around? Ethernet is an electronic version of that.

How it Works

Read this text lifted from Computer World 12/17/79. (If you bog down skip it and go to the next section.)

"Ethernet is a passive, coaxial cable-based transmission bus to which a wide variety of smart and dumb terminals can be attached via transceivers. The system also accommodates digitized voice transmission. It was designed for a single building complex - such as an office or industrial park - containing large numbers of on-line terminal devices.

"Using baseband digital transmission, the Ethernet cable can carry up to 10M bit/sec. Through one or more 'gateways' the network connects its users to long-distance telephone circuits and other outside networks.

"Possibly the most appealing feature of Ethernet, aside from a high bit rate, is its elimination of the cost and complexity of conventional switching. Instead each terminal contends for a place on the cable. But through use of a patented 'collision recovery' system embedded in the transceiver, the effects of interference are largely eliminated.

"Each transmitted bit must travel to the receiving station and back again within a given time interval. If this does not happen, it is assumed that a collision with another message has occurred and the bit is retransmitted.

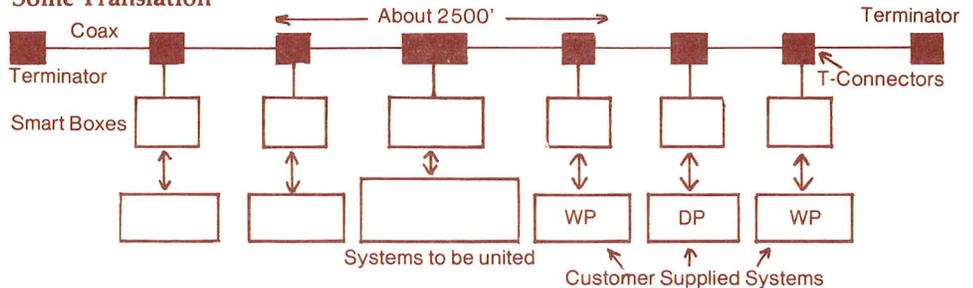
"A random delay is programmed into each terminal's transmission

control system to prevent the same thing from happening again. According to Liddle (David Liddle, vice-president for system development in Xerox's Office Products Division), this scheme is the main reason for Ethernet's high throughput.

"Bits are packetized before being transmitted and each packet contains a 48-bit address field that is large enough to give every receiver a unique identification. The transceiver is programmed to accept only those messages containing specified address codes and to ignore all others.

"The formatting of the packets is performed by a very large-scale integrated VLSI microprocessor-on-a-chip that typically is part of the terminal device interfaced to the cable. Since the chip is completely self-contained, it does not have to borrow memory or processing capability from any intelligent terminal to which it may be connected."

Some Translation



The system looks fairly straightforward, except when you consider what it has to do. First, some sort of device has to monitor and control the data on the bus, the coax, which is a complex task in itself. Second, the device that sends and receives the data has to be fairly complex and an error checking, buffering and some sort of protocol or format conversion will be necessary.

At this point it isn't specified whether the Intel-developed microprocessor will be part of an accessory box that users can buy or if the microprocessor will have to be engineered inside the terminal equipment which will be used in the Ethernet. The problem of who buffers the incoming data is also left unresolved.

Other problems remain. First, what type of data will the actual Ethernet smart box interface transmit and receive?

An actual specification for the project has yet to be issued. It really isn't clear what the device will send and receive or in what manner.

Now for the Hard Part

What has not been the subject of much discussion in the press, nor by the people who plan to hook it up, is how you make the computer or the word processing system send and receive the data.

If you look closely you will notice that there is no outlet in the back of your system that says, "Plug Ethernet in here" and there is no software package or communication routine that says, "Ethernet send/receive routines". There is no standard on how Ethernet file data is to be transmitted across the bus. For example how does an HP using ASCII fixed length non-compressed files send data to a Wang EBCDIC compressed file? Who does the compress/recompress routines? How will security be handled? Will the request by Ethernet coming in allow you to access all files? Or just a few?

There really is no answer to all these questions. Like any other com-

munications discipline, the user will have to write, or have the vendor supply, a resident or parttime communications package to send or receive Ethernet data just like any other communications port, and provide security, do file conversations and take care of all the housekeeping activities that go along with the package.

One computer user said, "If you walk up to me and hand me a modem, a telephone, an interface, and a minicomputer and tell me, 'We now have the essentials to communicate', I'd reply, 'You have about 10% of what is necessary.' The other 90% of the work comes from writing good software that doesn't bomb and drive the users crazy." That's the situation Ethernet is in right now.

It's a Long Way from an ARC

As Datapoint has said many times the coax is probably the least significant part of the ARC system. During the ARC announcement this was probably the most visible and most discussed aspect. The press in-

terpreted it as the first working computer system that could become the wired office. In that respect the coax is magic.

But the difficult part is not easily understood and that's the real difference between ARC and Ethernet systems.

The really hard part of making a bus oriented computer system operate comes with the software. Running under DOS each user participating in the ARC system can access common files, and use printing resources, and communications resources without having to worry with bus addresses, physical locations of files, or who is using those files at the moment.

The ARC system is so complete that, completely unlike Ethernet, ARC users begin programming at their terminals literally from the moment the system is up and running.

There is no need to worry about where machines are physically located, what languages correspond to what file structures, and security or privacy access structures. Users with ARC systems have been long accustomed to adding processors to the bus as their needs dictate, leaving the rest of the system completely intact running as fast as it did before additional processors were added.

An ARC system's beautiful file handling capability really shows its strength in complex transaction processing requirements. Where batch and transaction processing are intermixed, multiple users are opening and closing and using and modifying multiple files. The ARC software handles this all smoothly with never a deadly embrace and never the requirement for files to be converted while operations are performed.

Coupled to this, the full integration of word processing and data processing means you see the true strength of ARC, not as a piece of coax with some transceivers on it but as a completely unified operational software package that allows users to get their ARC system up and rolling and producing work, rather than an endless job of trying to create software to send and receive.

In summary, the ARC system is a unified, modular, multi-function computer system. Ethernet is a coax communication channel.

Gerry Cullen

Credit Department Presents Achievement Awards

The Marketing Division Credit Department recently celebrated the successful conclusion of an intensive collection campaign which produced \$70.6 million in cash receipts during the fourth quarter. The most impressive accomplishment of the campaign was the collection of \$30.2 million in July, shattering the previous monthly collection record of \$22 million established in April, 1980.

In a special presentation, William Davis, Regional Manager Gulf Coast Region, was awarded the Credit Department's first annual "Outstanding Receivables Management Award". Steve Haber, Director Credit and Collections presented the award and Davis accepted on behalf of the entire Gulf Coast Region. This award acknowledges consistent cooperation and contributions by a Field Marketing Organization in the area of Receivables Management. Throughout FY 1980, the employees of the Gulf Coast Region personified the Datapoint ideal of teamwork.

Awards were also presented to the Credit Department's most outstanding achievers. Awards for "Individual Achievement" were presented to Lee



McCarty, Nick Dehlinger, and Kathy Gunnell. Richard Dickson, Regional Manager, and his group (Lee McCarty, Steve Clark, Lou Monceli, Sue Corvelle, Mary Holbrook, Linda Macias, Jan McNew) were honored for their team achievements.

The overwhelming success of the Receivables Management Program demonstrates the accomplishments made possible by active cooperation between the various groups within Datapoint.

Achievement Club 1980 in Puerto Rico

September 13, 1980 marked the opening of the long awaited Achievement Club trip at the fabulous Cerromar Beach Hotel in Puerto Rico. In attendance were 118 sales employees and 25 home office personnel and their spouses.

The agenda for the trip included: business meetings; sumptuous dinners; an exciting "Fiesta Jibaro"; tours of the El Yunque Rain Forest, San Juan, the El Commandante Race Track, and (of course) the Bacardi Distillery; and a little friendly competition in volleyball, tennis and golf.

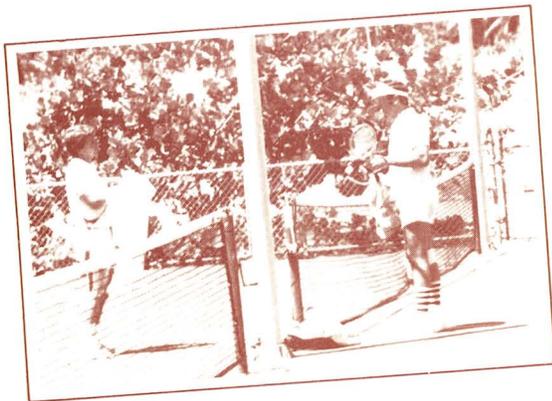
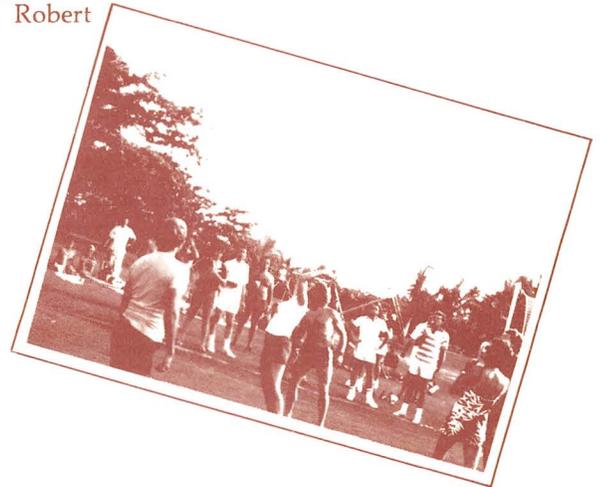
Rich Pape and his wife walked away with the majority of the tennis awards - they won the mixed doubles and Rich won the men's singles. Ladies' doubles tennis champions were Linda Beckman and Dee Griffin. In volleyball, awards were presented to Neil Pietrangeli for the North Central Region and Mrs.

Loretta Barthel for the North East Region. The golf awards went to Charles Croom and Harry Bonds for Men's Low Gross (they tied with 76) and the ladies' champion was Julia O'Conner.

Excitement culminated in the inevitable Farewell Banquet, complete with audio visuals, ice carvings, dance bands and awards presentations. Awards included; Top DPD Salesperson - Dennis Doonan; Top Office Systems Salesperson - Andrew Waite; Top Branch - San Antonio - Jack Jones; Top Region - Southeast - Charles Croom along with John Thornton; and Rookie of the Year - Peter Schofield. A surprise award was given by the Customer Service Division to Bob Cowen as Top Professional for 1980.

President's Club Awards were also presented. First Year members are Richard Durham, Craig Kent, Frank Livni, Edmond McNamara, Don Prifogle, Roger Schauf, and Peter Schofield. Second year members are Charlie Barzilla, Bill Bunce, Robert Beck, Louis-Armond EttetGui, Jim Rowse, Andrew Waite, and Ray Zilka. Third year members are Robert

Cowen, Robert Crowley, and Duane Engelhardt. Fourth year members are Mike Bazany and Dennis Doonan. Fifth year members are Jim McGill, Tom Martinez, and George Rangitsch.



Schmidt on DATASHARE 6

This is an interview with Jonathan Schmidt, Vice President for Advanced Product Development. The questions are presented by an Out-Think reporter.

Q: DATASHARE 6 software is the newest release in the DATASHARE line, and it comprises two enhancements. It makes the DATASHARE system more efficient, and it has a new data access technique with AIM software. Why is the DATASHARE system so popular? How has this release made it better?

A: The DATASHARE system has been very popular because it's so easy to use. The user finds it simple and predictable and knows exactly how he can get his job done. He knows that the DATASHARE system will do the job, and will do it as fast as necessary.

Q: How is DATASHARE 6 software different in terms of productivity and features from the last DATASHARE release?

A: DATASHARE 6 software has been undergoing much tightening up and remodeling of critical software areas, and outside of the AIM feature that's the biggest factor. DATASHARE 6 software incorporates the many improvements in the DATASHARE system's internal structure that have been made during its ten-year evolution.

Q: Will users see a speed enhancement with DATASHARE 6 software?

A: All of the DATASHARE improvements were made independently and added together over the years. DATASHARE 3 software had some improved features, DATASHARE 4 had some, and DATASHARE 5 had some. DATASHARE 6 software is a

reorganization and rethinking of each of these features. Each one was taken apart and redone to make it compatible with every other feature. The memory management is much faster. The utilization of larger memory is much more powerful and much faster, the searching is defined, the overhead to search is defined, and the presence of a desired disk image in the memory buffers is much more efficient and less burdensome.

Q: What would you recommend for users who have 60K 6600 or 120K machines? Do you recommend they go to the 256K memory?

A: Yes, they need the speed, but that's a delightful alternative right now. We really have turned memory into power, and the user will notice a jump in speed in the memory. The cost of the memory is insignificant compared to the performance he can get.

Q: Because the machine's memory is more efficient to manage now, is that correct?

A: Now we can equate memory with power and speed. When you get memory, you get power and speed far beyond its cost, in proportion.

Q: How does DATABUS® language differ from other languages?

A: It's easy for the user to do what he wants to do with the program and the computer system. DATABUS language gives even the newest user the comfort to use his computer system as he wishes, but it protects him from getting into trouble.

Q: It's difficult to pin sales of a DATASHARE system to any one reason, but would you say that the DATASHARE system's simplicity of use is its hallmark?

A: The DATASHARE system will

almost guarantee functionality of the results of trying to program a problem. For example, we arranged the memory so that a port always has the memory he's expecting. And he has the resources he's expecting. No port can interfere with another port by depriving him either of time or of memory, or interfering with his files. no port can take another port down.

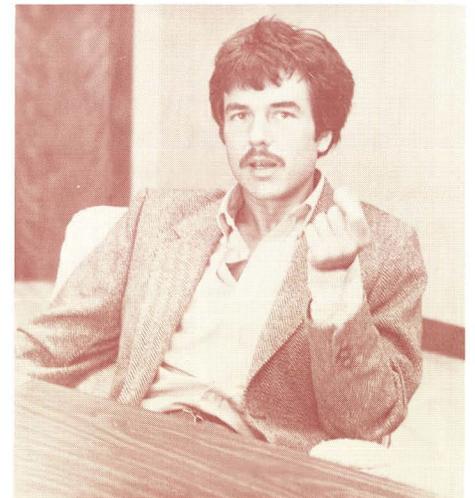
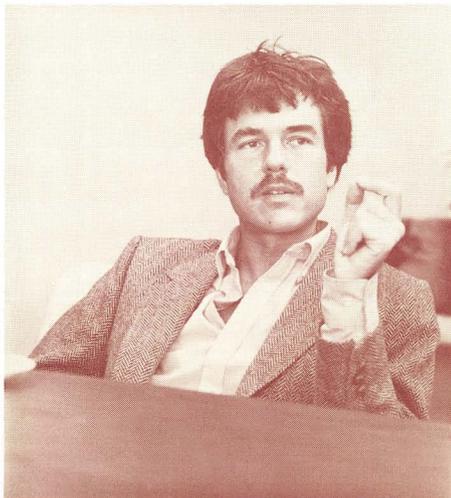
Q: Would you say that one of the reasons that the DATASHARE system has been successful is that the user's chance of success with the system is better than with any other system?

A: I don't know of any other system that compares, even among the largest around. In the more extensive key disk systems, there are larger screens and more features, and they had the bulk of sales for the last four or five years. We compete with these systems very well. We had a customer only last week who replaced a key to disk system with a DATASHARE and wrote an emulator to do exactly that same function. The DATASHARE system predictably provided and easily handled the key entry rates the customer needed.

Q: There are now an estimated 30,000 DATASHARE installations. A lot of languages have been added to the company's capabilities: COBOL, RPG and BASIC. Yet DATABUS seems to persevere. The number of users grows every year, even though we have added other languages. Will this trend persist? With the advent of multi-language multi-processing systems besides the DATASHARE system that are capable of running other languages, what do you think the DATASHARE future is?

A: The future of the DATASHARE system is quite good, and gets even better with AIM software. With the AIM feature the complex burden of

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1980 Brand Preference Survey of the data communications market*

Each year *Data Communications* magazine makes their Brand Preference Survey available to the data communications marketplace. The purpose of the survey is to determine the companies considered "best" for 45 product categories. For each product, respondents were asked to name the company they felt was "best" in each of five rating areas: 1.) Prefer to do Business with; 2.) Best Technology in Product; 3.) Best Price/Performance Ratio; 4.) Best Service Organization; 5.) Most Informative Literature.

In six of the 45 product categories, several respondents named Datapoint as "best". The product category in which Datapoint made the highest ratings compared to other companies named was "Terminals, Intelligent (Programmable)". Of the five rating areas for this product category, Datapoint was rated highest in Best Price/Performance Ratio, and listed among the top five companies in all of the other rating areas.

1980 Data Communications Brand Preference Survey

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	Prefer to do Business with		Best Technology	
	Total Respondents Answering	Purchase Decision Makers	Total Respondents Answering	Purchase Decision Makers
DDP Systems				
BASE OR 100 PCT.	185 100.0	137 100.0	185 100.0	137 100.0
IBM CORP.	47 25.4	32 23.4	42 22.7	27 19.7
DIGITAL EQUIPMENT CORP.	28 15.1	23 16.8	27 14.6	19 13.9
HEWLETT-PACKARD CO.	19 10.3	11 8.0	22 11.9	13 9.5
TEXAS INSTRUMENTS	10 5.4	7 5.1	10 5.4	6 4.4
DATA GENERAL CORP.	9 4.9	7 5.1	9 4.9	9 6.6
WANG LABORATORIES INC.	7 3.8	5 3.6	9 4.9	8 5.8
SPERRY UNIVAC	6 3.2	5 3.6	9 4.9	8 5.8
BURROUGHS CORP.	5 2.7	3 2.2	5 2.7	6 4.4
PRIME COMPUTER INC.	4 2.2	4 2.9	7 3.8	6 4.4
DATAPPOINT CORP.	3 1.6	3 2.2	6 3.2	6 4.4
FOUR-PHASE SYSTEMS INC.	3 1.6	3 2.2	3 1.6	4 2.9
NIXDORF COMPUTER CORP.	3 1.6	3 2.2	3 1.6	3 2.2
HONEYWELL INFORMATION SYSTEMS	3 1.6	2 1.5	3 1.6	2 1.5
NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 AND SYGORT)	3 1.6	2 1.5	3 1.6	2 1.5
NCR CORP.	3 1.6	1 0.7	2 1.1	2 1.5
HARRIS CORP.	2 1.1	2 1.5	1 0.5	1 0.7
TANDEM COMPUTERS	2 1.1	2 1.5	1 0.5	1 0.7
APPLIED DIGITAL DATA SYSTEMS INC.	2 1.1	1 0.7	1 0.5	1 0.7
CUMMINS-ALLISON CORP.	2 1.1	-	1 0.5	-
BASIC FOUR CORP.	1 0.5	1 0.7	1 0.5	-
INGOTERM CORP.	1 0.5	1 0.7	1 0.5	1 0.7
VEG. INFORMATION SYSTEMS INC.	1 0.5	1 0.7	1 0.5	1 0.7
PERKIN-ELMER	1 0.5	1 0.7	1 0.5	1 0.7
PUNKER RAMO	1 0.5	-	-	-
OTHER	3 1.6	3 2.2	5 2.7	5 3.6

Minicomputers

	Total Respondents Answering	Purchase Decision Makers	Total Respondents Answering	Purchase Decision Makers
BASE OR 100 PCT.	237 100.0	182 100.0	237 100.0	182 100.0
DIGITAL EQUIPMENT CORP.	60 25.3	45 24.7	74 31.2	58 31.9
IBM CORP.	34 14.3	25 13.7	29 12.2	24 13.2
HEWLETT-PACKARD CO.	33 13.9	25 13.7	21 8.9	15 8.2
DATA GENERAL CORP.	17 7.2	11 6.0	18 7.6	10 5.5
DATAPPOINT CORP.	10 4.2	8 4.4	13 5.5	12 6.6
WANG LABORATORIES INC.	8 3.4	7 3.8	11 4.6	8 4.4
HONEYWELL INFORMATION SYSTEMS	7 3.0	7 3.8	8 3.4	8 4.4
PERKIN-ELMER (FORMERLY INTERDATA)	7 3.0	6 3.3	9 3.4	7 3.8
SPERRY UNIVAC	6 2.5	4 2.2	8 3.4	6 3.3
TEXAS INSTRUMENTS INC.	4 1.7	4 2.2	6 2.5	4 2.2
PRIME COMPUTER INC.	4 1.7	3 1.6	5 2.1	4 2.2
MODULAR COMPUTER SYSTEMS	4 1.7	3 1.6	4 1.7	3 1.6
PERKIN-ELMER (FORMERLY INTERDATA)	4 1.7	3 1.6	5 2.1	4 2.2
TANDEM COMPUTERS	4 1.7	3 1.6	4 1.7	3 1.6
BURROUGHS CORP.	2 0.8	2 1.1	4 1.7	3 1.6
CADD SYSTEMS CORP.	2 0.8	2 1.1	3 1.3	2 1.1
COMPUTER AUTOMATION	2 0.8	2 1.1	3 1.3	-
BASIC FOUR CORP.	2 0.8	1 0.5	2 0.8	2 1.1
AM JACQUARD SYSTEMS	1 0.4	1 0.5	2 0.8	1 0.5
CALIFORNIA COMPUTER PRODUCTS INC.	1 0.4	1 0.5	2 0.8	-
INGOTERM CORP.	1 0.4	1 0.5	1 0.4	1 0.5
NCR	1 0.4	1 0.5	1 0.4	-
PRIME COMPUTER INC.	1 0.4	1 0.5	1 0.4	-
NIXDORF COMPUTER CORP.	1 0.4	-	1 0.4	-

Word Processors, Communicating

	Total Respondents Answering	Purchase Decision Makers	Total Respondents Answering	Purchase Decision Makers
BASE OR 100 PCT.	159 100.0	116 100.0	159 100.0	116 100.0
IBM CORP.	38 23.9	29 25.0	39 24.5	27 23.3
WANG LABORATORIES INC.	32 20.1	20 17.2	34 21.4	23 19.8
DIGITAL EQUIPMENT CORP.	18 11.3	17 14.7	18 11.3	15 12.9
VYDEC INC.	8 5.0	7 6.0	9 5.0	6 5.2
DATAPPOINT CORP.	7 4.4	6 5.2	8 5.0	4 3.4
DATA GENERAL CORP.	7 4.4	5 4.3	7 4.4	6 5.2
FOUR-PHASE SYSTEMS INC.	7 4.4	4 3.4	5 3.8	5 4.3
HARRIS CORP.	3 1.9	2 1.7	5 3.1	3 2.6
RAYTHEON DATA SYSTEMS	3 1.9	2 1.7	3 1.9	2 1.7
SYKES DATATRONICS	2 1.3	1 0.9	3 1.9	2 1.7
HEATH CO.	2 1.3	-	2 1.3	2 1.7
AM JACQUARD SYSTEM	1 0.6	1 0.9	2 1.3	-
BILLINGS COMPUTER CORP.	1 0.6	1 0.9	1 0.6	1 0.9
DATAPRODUCTS CORP.	1 0.6	1 0.9	1 0.6	1 0.9
PLESSEY PERIPHERAL SYSTEMS	1 0.6	1 0.9	1 0.6	1 0.9
ARTEC INTERNATIONAL	1 0.6	-	1 0.6	-
CADD SYSTEMS CORP.	1 0.6	-	1 0.6	-
CENTRONICS DATA COMPUTER CORP.	1 0.6	-	1 0.6	-
COMPUGRAPHIC CORP.	1 0.6	-	1 0.6	-
CROWN COMMUNICATIONS INC.	1 0.6	-	1 0.6	-
OTHER	9 5.7	8 6.9	7 4.4	7 6.0

In the product category "Word Processors, Communicating", Datapoint was again among the top five companies in each of the five rating areas.

Datapoint also scored high in the "Minicomputers" category, being the fifth most frequently named company in rating areas 1, 4, and 5. It ranked seventh in area 3 and ninth in area 2.

For the category "DDP Systems", Datapoint was the number five company in areas 2 and 5, and in the top 10 for the other rating areas.

Respondents named Datapoint in the product category "Terminals, Batch" often enough to make it the number three company in rating area 2 (Best Technology), and in the remaining rating areas, kept it in the top half of the companies named.

Another category in which Datapoint was named was "Terminals, Remote Job Entry". Again it remained in the top half of all five rating areas.

This survey was conducted by McGraw-Hill Research for *Data Communications* magazine. The sample of 4,500 individuals receiving the survey was taken from *Data Communications*' circulation list. The results are based on a total of 1,254 replies.

Best Price/Performance Ratio

Best Service Organization

Most Informative Literature

	Total Respondents Answering	Purchase Decision Makers		Total Respondents Answering	Purchase Decision Makers		Total Respondents Answering	Purchase Decision Makers
BASE OR 100 PCT.	185 100.0	137 100.0	BASE OR 100 PCT.	145 100.0	137 100.0	BASE OR 100 PCT.	185 100.0	137 100.0
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IBM CORP.	16 9.6	6 4.4	DIGITAL EQUIPMENT CORP.	27 14.5	22 16.1	DIGITAL EQUIPMENT CORP.	76 44.1	21 15.3
TEXAS INSTRUMENTS	14 7.6	11 8.0	HEWLETT-PACKARD CO.	18 9.7	11 8.0	HEWLETT-PACKARD CO.	25 13.5	17 12.4
DATA GENERAL CORP.	13 7.3	10 7.3	DATA GENERAL CORP.	7 3.9	7 5.1	DATA GENERAL CORP.	9 4.9	7 5.1
HEWLETT-PACKARD CO.	12 6.5	7 5.1	TEXAS INSTRUMENTS	7 3.9	4 2.9	DATAPPOINT CORP.	8 4.3	8 5.8
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WANG LABORATORIES INC.	9 4.9	6 4.4	SPERRY UNIVAC	3 1.6	2 1.5	TANDEM COMPUTERS	4 2.2	1 0.7
HONEYWELL INFORMATION SYSTEMS	7 3.8	4 2.9	WANG LABORATORIES INC.	3 1.6	1 0.7	BURROUGHS CORP.	3 1.6	3 2.2
NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA LOG AND SYCOR)	6 3.2	5 3.6	BASIC FOUR CORP.	2 1.1	2 1.5	PRIME COMPUTER INC.	3 1.6	3 2.2
SPERRY UNIVAC	5 2.7	5 3.6	FOUR-PHASE SYSTEMS INC.	2 1.1	2 1.5	FOUR-PHASE SYSTEMS INC.	2 1.1	2 1.5
PERKIN-ELMER	4 2.2	3 2.2	NIXDORF COMPUTER CORP.	2 1.1	2 1.5	HARRIS CORP.	2 1.1	2 1.5
TANDEM COMPUTERS	4 2.2	3 2.2	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA LOG AND SYCOR)	2 1.1	2 1.5	NCR CORP.	2 1.1	2 1.5
FARRIS CORP.	3 1.6	3 2.2	PRIME COMPUTER INC.	2 1.1	2 1.5	SPERRY UNIVAC	2 1.1	2 1.5
BURROUGHS CORP.	3 1.6	2 1.5	RAYTHEON DATA SYSTEMS	2 1.1	2 1.5	APPLIED DIGITAL DATA SYSTEMS INC.	2 1.1	1 0.7
BASIC FOUR CORP.	2 1.1	2 1.5	NCR CORP.	2 1.1	2 1.5	INCOTERM CORP.	2 1.1	1 0.7
NIXDORF COMPUTER CORP.	2 1.1	2 1.5	FARRIS CORP.	1 0.5	1 0.7	NIXDORF COMPUTER CORP.	2 1.1	1 0.7
APPLIED DIGITAL DATA SYSTEMS INC.	2 1.1	1 0.7	INCOTERM CORP.	1 0.5	1 0.7	RAYTHEON DATA SYSTEMS	2 1.1	-
NCR CORP.	2 1.1	1 0.7	PERTEC COMPUTER CORP.	1 0.5	1 0.7	BASIC FOUR CORP.	1 0.5	1 0.7
INCOTERM CORP.	1 0.5	1 0.7	TANDEM COMPUTERS	1 0.5	1 0.7	THE SPALLEN CORP.	1 0.5	1 0.7
OLIVETTI CORP. OF AMERICA	1 0.5	-	MOHAWK DATA SCIENCES CORP.	1 0.5	-	VEC INFORMATION SYSTEMS INC.	1 0.5	1 0.7
PERTEC COMPUTER CORP.	1 0.5	-	OTHER	1 0.5	1 0.7	PERKIN-ELMER	1 0.5	1 0.7
RAYTHEON DATA SYSTEMS	1 0.5	-				BUNKER RAMJ	1 0.5	-
OTHER	5 2.7	5 3.6				MOHAWK DATA SCIENCES CORP.	1 0.5	-
						OTHER	1 0.5	1 0.7
BASE OR 100 PCT.	237 100.0	182 100.0	BASE OR 100 PCT.	237 100.0	182 100.0	BASE OR 100 PCT.	237 100.0	182 100.0
DIGITAL EQUIPMENT CORP.	55 23.2	43 23.6	IBM CORP.	76 32.1	59 32.4	DIGITAL EQUIPMENT CORP.	66 27.8	47 25.8
DATA GENERAL CORP.	29 12.2	20 11.0	DIGITAL EQUIPMENT CORP.	53 22.4	39 21.4	HEWLETT-PACKARD CO.	40 16.9	34 18.7
HEWLETT-PACKARD CO.	21 8.9	19 8.2	HEWLETT-PACKARD CO.	28 11.8	21 11.5	IBM CORP.	31 13.1	23 12.6
WANG LABORATORIES INC.	15 6.3	11 6.0	DATA GENERAL CORP.	12 5.1	8 4.4	DATA GENERAL CORP.	15 6.3	10 5.5
IBM CORP.	13 5.5	7 3.8	DATAPPOINT CORP.	10 4.2	7 3.8	DATAPPOINT CORP.	12 5.1	10 5.5
TEXAS INSTRUMENTS INC.	11 4.6	10 5.5	HONEYWELL INFORMATION SYSTEMS	5 2.1	5 2.7	WANG LABORATORIES INC.	7 3.0	4 2.2
DATAPPOINT CORP.	11 4.6	8 4.4	TEXAS INSTRUMENTS INC.	5 2.1	5 2.7	HONEYWELL INFORMATION SYSTEMS	6 2.5	6 3.3
PERKIN-ELMER (FORMERLY INTERDATA)	9 3.4	9 4.4	NCR	5 2.1	4 2.2	TEXAS INSTRUMENTS INC.	5 2.1	5 2.7
MODULAR COMPUTER SYSTEMS	7 3.0	6 3.3	FARRIS CORP.	3 1.3	3 1.6	PRIME COMPUTER INC.	3 1.3	3 1.6
BASIC FOUR CORP.	6 2.5	6 3.3	PERKIN-ELMER (FORMERLY INTERDATA)	3 1.3	3 1.6	MODULAR COMPUTER SYSTEMS	3 1.3	2 1.1
HONEYWELL INFORMATION SYSTEMS	6 2.5	6 3.3	BURROUGHS CORP.	3 1.3	2 1.1	TANDEM COMPUTERS	3 1.3	2 1.1
PRIME COMPUTER INC.	5 2.1	5 2.7	BASIC FOUR CORP.	2 0.8	2 1.1	SPERRY UNIVAC	3 1.3	2 1.1
COMPUTER AUTOMATION	5 2.1	4 2.2	PRIME COMPUTER INC.	2 0.8	2 1.1	BASIC FOUR CORP.	2 0.8	2 1.1
TANDEM COMPUTERS	5 2.1	4 2.2	SPERRY UNIVAC	2 0.8	2 1.1	FARRIS CORP.	2 0.8	2 1.1
CADD SYSTEMS CORP.	4 1.7	3 1.6	MODULAR COMPUTER SYSTEMS	2 0.8	1 0.5	NCR	2 0.8	2 1.1
NCR	3 1.3	3 1.6	TANDEM COMPUTERS	2 0.8	1 0.5	PERKIN-ELMER (FORMERLY INTERDATA)	2 0.8	2 1.1
GENERAL AUTOMATION	3 1.3	2 1.1	WANG LABORATORIES INC.	2 0.8	1 0.5	RAYTHEON DATA SYSTEMS	2 0.8	2 1.1
HARRIS CORP.	3 1.3	2 1.1	CADD SYSTEMS CORP.	1 0.4	1 0.5	INCOTERM CORP.	2 0.8	1 0.5
BURROUGHS CORP.	2 0.8	2 1.1	COMPUTER AUTOMATION	1 0.4	1 0.5	BURROUGHS CORP.	1 0.4	1 0.5
BILLINGS COMPUTER CORP.	2 0.8	1 0.5	OTHER	1 0.4	-	CADD SYSTEMS CORP.	1 0.4	1 0.5
INCOTERM CORP.	1 0.4	1 0.5				GENERAL AUTOMATION	1 0.4	1 0.5
SPERRY UNIVAC	1 0.4	-				NIXDORF COMPUTER CORP.	1 0.4	1 0.5
OTHER	2 0.8	2 1.1						
BASE OR 100 PCT.	159 100.0	116 100.0	BASE OR 100 PCT.	159 100.0	116 100.0	BASE OR 100 PCT.	159 100.0	116 100.0
WANG LABORATORIES INC.	39 24.5	25 21.6	IBM CORP.	62 39.0	43 37.1	IBM CORP.	47 29.6	31 26.7
IBM CORP.	24 15.1	17 14.7	WANG LABORATORIES INC.	24 15.1	14 12.1	WANG LABORATORIES INC.	28 17.6	17 14.7
DIGITAL EQUIPMENT CORP.	13 8.2	12 10.3	DIGITAL EQUIPMENT CORP.	12 7.5	12 10.3	DIGITAL EQUIPMENT CORP.	15 9.4	13 11.2
DATA GENERAL CORP.	9 5.7	7 6.0	DATAPPOINT CORP.	6 3.8	5 4.3	DATAPPOINT CORP.	9 5.7	8 6.9
DATAPPOINT CORP.	8 5.0	6 5.2	VYDEC INC.	6 3.8	5 4.3	VYDEC INC.	8 5.0	7 6.0
FEATH CO.	8 5.0	4 3.4	DATA GENERAL CORP.	6 3.8	4 3.4	DATA GENERAL CORP.	6 3.8	5 4.3
VYDEC INC.	7 4.4	6 5.2	FOUR-PHASE SYSTEMS INC.	6 3.8	2 1.7	FEATH CO.	6 3.8	3 2.6
FOUR-PHASE SYSTEMS INC.	6 3.8	1 0.9	RAYTHEON DATA SYSTEMS	5 3.1	5 4.3	FOUR-PHASE SYSTEMS INC.	4 2.5	1 0.9
RAYTHEON DATA SYSTEMS	5 3.1	4 3.4	FARRIS CORP.	4 2.5	2 1.7	CENTRONICS DATA COMPUTER CORP.	3 1.9	2 1.7
FARRIS CORP.	4 2.5	3 2.6	CENTRONICS DATA COMPUTER CORP.	2 1.3	1 0.9	FARRIS CORP.	3 1.9	2 1.7
BILLINGS COMPUTER CORP.	2 1.3	2 1.7	BURROUGHS/REDACTON CORP.	1 0.6	1 0.9	COMPUGRAPHIC CORP.	2 1.3	1 0.9
NIXDORF COMPUTER CORP.	2 1.3	2 1.7	MOHAWK DATA SCIENCES CORP.	1 0.6	1 0.9	AM JACQUARD SYSTEM	1 0.6	1 0.9
OLIVETTI CORP. OF AMERICA	2 1.3	1 0.9	NIXDORF COMPUTER CORP.	1 0.6	1 0.9	BILLINGS COMPUTER CORP.	1 0.6	1 0.9
PLESSEY PERIPHERAL SYSTEMS	2 1.3	1 0.9	OLIVETTI CORP. OF AMERICA	1 0.6	1 0.9	BURROUGHS/REDACTON CORP.	1 0.6	1 0.9
SYKES DATATRONICS	2 1.3	1 0.9	PLESSEY PERIPHERAL SYSTEMS	1 0.6	1 0.9	CADD SYSTEMS CORP.	1 0.6	1 0.9
CADD SYSTEMS CORP.	1 0.6	1 0.9	SYKES DATATRONICS	1 0.6	1 0.9	DATA TERMINALS & COMMUNICATIONS	1 0.6	1 0.9
COMPUTER DEVICES INC.	1 0.6	1 0.9	ARTEC INTERNATIONAL	1 0.6	-	RAYTHEON DATA SYSTEMS	1 0.6	1 0.9
LEXITRON CORP.	1 0.6	1 0.9	COMPUGRAPHIC CORP.	1 0.6	-	SYKES DATATRONICS	1 0.6	1 0.9
MEGADATA CORP.	1 0.6	1 0.9	DATA TERMINALS & COMMUNICATIONS	1 0.6	-	ARTEC INTERNATIONAL	1 0.6	-
ARTEC INTERNATIONAL	1 0.6	-	FEATH CO.	1 0.6	-	CROWN COMMUNICATIONS INC.	1 0.6	-
CENTRONICS DATA COMPUTER CORP.	1 0.6	-	OTHER	2 1.3	2 1.7	PLESSEY PERIPHERAL SYSTEMS	1 0.6	-
COMPUGRAPHIC CORP.	1 0.6	-				OTHER	2 1.3	2 1.7
OTHER	9 5.7	9 7.8						

<i>Best Price/ Performance Ratio</i>			<i>Best Service Organization</i>			<i>Most Informative Literature</i>		
Total Respondents Answering	Purchase Decision Makers		Total Respondents Answering	Purchase Decision Makers		Total Respondents Answering	Purchase Decision Makers	
BASE OR 100 PCT.	210 100.0	178 100.0	BASE OR 100 PCT.	210 100.0	178 100.0	BASE OR 100 PCT.	210 100.0	178 100.0
CATAPOINT CORP.	20 9.5	18 10.1	IBM CORP.	56 26.7	46 25.8	HEWLETT-PACKARD CO.	35 16.7	30 16.9
TEXAS INSTRUMENTS INC.	19 9.0	17 9.6	HEWLETT-PACKARD CO.	27 12.9	23 12.9	DIGITAL EQUIPMENT CORP.	27 12.9	19 10.7
DIGITAL EQUIPMENT CORP.	19 9.0	14 7.9	DIGITAL EQUIPMENT CORP.	27 12.9	21 11.8	IBM CORP.	25 11.9	20 11.2
HEWLETT-PACKARD CO.	17 8.1	14 7.9	CATAPOINT CORP.	12 5.7	10 5.6	TEXAS INSTRUMENTS INC.	15 7.1	15 8.4
IBM CORP.	13 6.2	8 4.5	TELETYPE CORP.	9 4.3	9 5.1	CATAPOINT CORP.	11 5.2	10 5.6
FAZELTINE CORP.	10 4.8	10 5.6	TEXAS INSTRUMENTS INC.	8 3.8	8 4.5	WANG LABORATORIES INC.	7 3.3	5 2.8
APPLIED DIGITAL DATA SYSTEMS INC.	10 4.8	9 5.1	HONEYWELL INFORMATION SYSTEMS BURROUGHS CORP.	8 3.8	5 2.8	TELETYPE CORP.	6 2.9	6 3.4
BEEHIVE INTERNATIONAL TELETYPE CORP.	8 3.8	8 4.5	MOHAWK DATA SCIENCES CORP.	4 1.9	3 1.7	BURROUGHS CORP.	5 2.4	3 1.7
WANG LABORATORIES INC.	7 3.3	7 3.9	CODEX CORP.	3 1.4	3 1.7	RAYTHEON DATA SYSTEMS	5 2.4	3 1.7
NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	5 2.4	4 2.2	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	3 1.4	2 1.1	FAZELTINE CORP.	4 1.9	4 2.2
FOUR-PHASE SYSTEMS INC.	5 2.4	3 1.7	RAYTHEON DATA SYSTEMS	3 1.4	2 1.1	NARRIS CORP.	4 1.9	4 2.2
HARRIS CORP.	4 1.9	4 2.2	HARRIS CORP.	2 1.0	2 1.1	CODEX CORP.	4 1.9	3 1.7
CODEX CORP.	4 1.9	3 1.7	RCA SERVICE CO.	2 1.0	2 1.1	FOUR-PHASE SYSTEMS INC.	4 1.9	3 1.7
DATAMEDIA CORP.	4 1.9	3 1.7	SPEKRY UNIVAC	2 1.0	2 1.1	HONEYWELL INFORMATION SYSTEMS	4 1.9	3 1.7
DELTA DATA SYSTEMS	4 1.9	3 1.7	DELTA DATA SYSTEMS	2 1.0	1 0.6	APPLIED DIGITAL DATA SYSTEMS INC.	3 1.9	3 1.7
RAYTHEON DATA SYSTEMS	4 1.9	2 1.1	FOUR-PHASE SYSTEMS INC.	2 1.0	1 0.6	MOHAWK DATA SCIENCES CORP.	3 1.4	3 1.7
BURROUGHS CORP.	3 1.4	2 1.1	INCOTERM CORP.	2 1.0	1 0.6	PERTEC COMPUTER CORP.	3 1.4	2 1.1
MOHAWK DATA SCIENCES CORP.	3 1.4	2 1.1	WANG LABORATORIES INC.	2 1.0	1 0.6	BEEHIVE INTERNATIONAL	2 1.0	2 1.1
HONEYWELL INFORMATION SYSTEMS	3 1.4	1 0.6	APPLIED DIGITAL DATA SYSTEMS INC.	1 0.5	1 0.6	DELTA DATA SYSTEMS	2 1.0	2 1.1
MEGADATA CORP.	2 1.0	2 1.1	BEEHIVE INTERNATIONAL	1 0.5	1 0.6	SPEKRY UNIVAC	2 1.0	2 1.1
TELETYPE CORP.	2 1.0	2 1.1	FAZELTINE CORP.	1 0.5	1 0.6	RACAL-MILGO (FORMERLY ICC MILGO)	2 1.0	1 0.6
ZENTEC	2 1.0	2 1.1	MEGADATA CORP.	1 0.5	1 0.6	CARTERPHONE COMMUNICATIONS CORP.	2 1.0	1 0.6
BILLINGS COMPUTER CORP.	2 1.0	1 0.6	MEMOREX CORP.	1 0.5	1 0.6	MEGADATA CORP.	1 0.5	1 0.6
INCOTERM CORP.	2 1.0	1 0.6	PERTEC COMPUTER CORP.	1 0.5	1 0.6	MEMOREX CORP.	1 0.5	1 0.6
CUMMINS-ALLISON CORP.	1 0.5	1 0.6	TELETYPE CORP.	1 0.5	1 0.6	ZENTEC	1 0.5	1 0.6
MEMOREX CORP.	1 0.5	1 0.6	TELETYPE CORP.	1 0.5	1 0.6	ALANTHUS DATA COMMUNICATIONS CORP.	1 0.5	-
PERTEC COMPUTER CORP.	1 0.5	1 0.6	CARTERPHONE COMMUNICATIONS CORP.	1 0.5	-	DATAMEDIA CORP.	1 0.5	-
SPEKRY UNIVAC	1 0.5	1 0.6	RACAL-MILGO (FORMERLY ICC MILGO)	1 0.5	-	EXTEL CORP.	1 0.5	-
EXTEL CORP.	1 0.5	-	OTHER	6 2.9	4 2.2	INCOTERM CORP.	1 0.5	-
RACAL-MILGO (FORMERLY ICC MILGO)	1 0.5	-				NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	1 0.5	-
OTHER	8 3.8	6 3.4				OTHER	3 1.4	2 1.1
BASE OR 100 PCT.	139 100.0	112 100.0	BASE OR 100 PCT.	139 100.0	112 100.0	BASE OR 100 PCT.	139 100.0	112 100.0
NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	12 8.6	10 8.9	IBM CORP.	40 28.8	31 27.7	IBM CORP.	29 20.9	23 20.5
TEXAS INSTRUMENTS	11 7.9	10 8.9	TEXAS INSTRUMENTS	10 7.2	8 7.1	TEXAS INSTRUMENTS	10 7.2	9 8.0
HARRIS CORP.	10 7.2	6 5.4	HARRIS CORP.	7 5.0	5 4.5	HARRIS CORP.	6 4.3	4 3.6
IBM CORP.	9 6.5	7 6.3	HONEYWELL INFORMATION SYSTEMS	5 3.6	5 4.5	DATA GENERAL CORP.	5 3.6	3 2.7
LEAR SIEGLER INC.	8 5.8	8 7.1	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	5 3.6	5 4.5	BURROUGHS CORP.	4 2.9	4 3.6
BURROUGHS CORP.	6 4.3	6 5.4	BURROUGHS CORP.	4 2.9	4 3.6	RACAL-MILGO (FORMERLY ICC MILGO)	4 2.9	3 2.7
HONEYWELL INFORMATION SYSTEMS	6 4.3	5 4.5	TELETYPE CORP.	4 2.9	3 2.7	TELETYPE CORP.	4 2.9	3 2.7
TELETYPE CORP.	6 4.3	5 4.5	NCR CORP.	3 2.2	3 2.7	FOUR-PHASE SYSTEMS INC.	3 2.2	3 2.7
FAZELTINE CORP.	6 4.3	3 2.7	DATA GENERAL CORP.	3 2.2	2 1.8	HONEYWELL INFORMATION SYSTEMS	3 2.2	3 2.7
CATAPOINT CORP.	4 2.9	4 3.6	RCA SERVICE	3 2.2	2 1.8	MOHAWK DATA SCIENCES CORP.	3 2.2	3 2.7
PERKIN-ELMER	4 2.9	4 3.6	CATAPOINT CORP.	2 1.4	2 1.8	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 & SYCOR)	3 2.2	3 2.7
NCR CORP.	4 2.9	3 2.7	DIABLO SYSTEMS INC.	2 1.4	2 1.8	CATAPOINT CORP.	2 1.4	2 1.8
FOUR-PHASE SYSTEMS INC.	4 2.9	2 1.8	LEAR SIEGLER INC.	2 1.4	2 1.8	INCOTERM CORP.	2 1.4	2 1.8
DATA GENERAL CORP.	3 2.2	3 2.7	FAZELTINE CORP.	2 1.4	2 1.8	ITI COURIER TERMINAL SYSTEMS	2 1.4	2 1.8
ITI COURIER TERMINAL SYSTEMS	3 2.2	3 2.7	SIEMENS CORP.	2 1.4	2 1.8	PERKIN-ELMER	2 1.4	2 1.8
PRIME COMPUTER INC.	3 2.2	2 1.8	COMTEN INC.	2 1.4	1 0.9	PRIME COMPUTER INC.	2 1.4	2 1.8
DIABLO SYSTEMS INC.	2 1.4	1 0.9	FOUR-PHASE SYSTEMS INC.	2 1.4	1 0.9	TALLY CORP.	2 1.4	2 1.8
DOCUMATION INC.	2 1.4	1 0.9	ITI COURIER TERMINAL SYSTEMS	2 1.4	1 0.9	FAZELTINE CORP.	2 1.4	1 0.9
INFOTON INC.	2 1.4	1 0.9	LEAR SIEGLER INC.	2 1.4	1 0.9	NCR CORP.	2 1.4	1 0.9
BEEHIVE INTERNATIONAL	1 0.7	1 0.9	RACAL-MILGO (FORMERLY ICC MILGO)	2 1.4	1 0.9	COMTEN INC.	2 1.4	-
MOHAWK DATA SCIENCES CORP.	1 0.7	1 0.9	CUMMINS-ALLISON CORP.	1 0.7	1 0.9	THE BRAEKEN CORP.	1 0.7	1 0.9
QUEME	1 0.7	1 0.9	DATAGRAPHICS	1 0.7	1 0.9	DIABLO SYSTEMS INC.	1 0.7	1 0.9
AZURDATA INC.	1 0.7	-	MOHAWK DATA SCIENCES CORP.	1 0.7	1 0.9	LEAR SIEGLER INC.	1 0.7	1 0.9
COMTEN INC.	1 0.7	-	PERKIN-ELMER	1 0.7	1 0.9	VARON & ASSOCIATES	1 0.7	1 0.9
RACAL-MILGO (FORMERLY ICC MILGO)	1 0.7	-	TRENDATA CORP.	1 0.7	1 0.9	WESTERN UNION TELEGRAPH CO.	1 0.7	1 0.9
*HEWLETT PACKARD	2 1.4	2 1.8	WESTERN UNION TELEGRAPH CO.	1 0.7	1 0.9	XEROX	1 0.7	1 0.9
OTHER	10 7.2	7 6.3	AZURDATA INC.	1 0.7	-	AZURDATA INC.	1 0.7	-
			BEEHIVE INTERNATIONAL	1 0.7	-	BEEHIVE INTERNATIONAL	1 0.7	-
			DOCUMATION INC.	1 0.7	-	DOCUMATION INC.	1 0.7	-
			INFOTON INC.	1 0.7	-	INFOTON INC.	1 0.7	-
			*HEWLETT PACKARD	1 0.7	1 0.9	RCA SERVICE	1 0.7	-
			OTHER	11 7.9	10 8.9	SIEMENS CORP.	1 0.7	-
						*HEWLETT PACKARD	1 0.7	1 0.9
						OTHER	10 7.2	8 7.1
BASE OR 100 PCT.	191 100.0	159 100.0	BASE OR 100 PCT.	191 100.0	159 100.0	BASE OR 100 PCT.	191 100.0	159 100.0
IBM CORP.	15 7.9	13 6.3	IBM CORP.	65 34.3	53 33.3	IBM CORP.	40 20.9	34 21.4
FOUR-PHASE SYSTEMS INC.	13 6.9	11 6.9	HEWLETT-PACKARD CO.	23 10.5	14 8.8	HEWLETT-PACKARD CO.	20 10.5	16 10.1
HEWLETT-PACKARD CO.	13 6.9	11 6.9	HARRIS CORP.	9 4.7	8 5.0	PERKIN-ELMER	11 5.8	7 4.4
HARRIS CORP.	11 5.8	8 5.0	DATA GENERAL CORP.	9 4.7	6 3.8	CATAPOINT CORP.	8 4.2	6 3.8
NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 AND SYCOR)	8 4.2	8 5.0	TEKTRONIX INC.	7 3.7	4 2.5	DATA GENERAL CORP.	7 3.7	6 3.8
DATA GENERAL CORP.	8 4.2	7 4.4	FOUR-PHASE SYSTEMS INC.	5 3.1	5 3.1	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 AND SYCOR)	6 3.1	6 3.8
TELETYPE CORP.	8 4.2	6 3.8	TELETYPE CORP.	5 2.6	3 1.9	HARRIS CORP.	6 3.1	5 3.1
CATAPOINT CORP.	8 4.2	5 3.1	GENERAL ELECTRIC CO.	4 2.1	4 2.5	SPEKRY UNIVAC	5 2.6	5 3.1
TEKTRONIX INC.	8 4.2	5 3.1	HONEYWELL INFORMATION SYSTEMS	4 2.1	4 2.5	APPLIED DIGITAL DATA SYSTEMS INC.	5 2.6	4 2.5
MOHAWK DATA SCIENCES CORP.	7 3.7	6 3.8	MOHAWK DATA SCIENCES CORP.	4 2.1	4 2.5	MOHAWK DATA SCIENCES CORP.	4 2.1	4 2.5
APPLIED DIGITAL DATA SYSTEMS INC.	7 3.7	5 3.1	NORTHERN TELECOM SYSTEMS CORP. (FORMERLY DATA 100 AND SYCOR)	4 2.1	4 2.5	BURROUGHS CORP.	4 2.1	3 1.9
SPEKRY UNIVAC	7 3.7	5 3.1	SPEKRY UNIVAC	4 2.1	4 2.5	HONEYWELL INFORMATION SYSTEMS	4 2.1	3 1.9
BURROUGHS CORP.	4 2.1	4 2.5	APPLIED DIGITAL DATA SYSTEMS INC.	4 2.1	3 1.9	TELETYPE CORP.	4 2.1	2 1.3
WANG LABORATORIES INC.	4 2.1	3 1.9	BURROUGHS CORP.	3 1.6	3 1.9	FOUR-PHASE SYSTEMS INC.	3 1.6	3 1.9
ANN ARBOR TERMINALS	3 1.6	2 1.3	CATAPOINT CORP.	3 1.6	1 0.6	WANG LABORATORIES INC.	3 1.6	1 0.6
DATA PRINTER CORP.	3 1.6	2 1.3	INFOTON INC.	2 1.0	1 0.6	GENERAL ELECTRIC CO.	2 1.0	2 1.3
HONEYWELL INFORMATION SYSTEMS	3 1.6	2 1.3	COMTEN INC.	1 0.5	1 0.6	CUMMINS-ALLISON CORP.	2 1.0	1 0.6
COMTEN INC.	2 1.0	2 1.3	DATA PRINTER CORP.	1 0.5	1 0.6	DECISION DATA COMPUTER CORP.	2 1.0	1 0.6
DECISION DATA COMPUTER CORP.	2 1.0	2 1.3	DOCUMATION INC.	1 0.5	1 0.6	INFOTON INC.	2 1.0	1 0.6
INCOTERM CORP.	2 1.0	2 1.3	OLIVETTI CORP. OF AMERICA	1 0.5	1 0.6	SYKES DATA SERVICES	2 1.0	1 0.6
OLIVETTI CORP. OF AMERICA	2 1.0	2 1.3	INFOTON INC.	1 0.5	1 0.6	COMTEN INC.	1 0.5	1 0.6
INFOTON INC.	2 1.0	1 0.6	SYKES DATA SERVICES	1 0.5	1 0.6	DATA PRINTER CORP.	1 0.5	1 0.6
GENERAL ELECTRIC CO.	2 1.0	-	DELTA DATA SYSTEMS	1 0.5	-	DOCUMATION INC.	1 0.5	1 0.6
AM JACQUARD SYSTEMS	1 0.5	1 0.6	OTHER	11 5.8	7 5.7	INCOTERM CORP.	1 0.5	1 0.6
DELTA DATA SYSTEMS	1 0.5	1 0.6				INFOTON INC.	1 0.5	1 0.6
DOCUMATION INC.	1 0.5	-				OLIVETTI CORP. OF AMERICA	1 0.5	1 0.6
OTHER	21 11.0	19 11.9				TEKTRONIX INDUSTRIES	1 0.5	1 0.6
						ANN ARBOR TERMINALS	1 0.5	-
						OTHER	8 4.2	7 4.4

Controller's Corner

During FY '80 a significant number of requests were received by the Incentive Compensation Department (ICD) to adjust ISV and/or commission reported values. Realizing that data recorded and compiled by ICD is occasionally tardy and inaccurate due to a manual operation, there are two steps that you must take to help correct this problem. The first and most important step is that you promptly reconcile your commission statements and ISV monthly. Some of the requests were relative to transactions that were six to nine months old!

The second step you should take is to make sure that your requests are in accordance with Marketing Division Policy and Procedure. Informal requests cannot be processed. These efforts on your part will enable ICD to resolve any discrepancies quickly and accurately.

In addition, we are taking specific steps to improve controls, accelerate processing and increase accuracy of data compiled and recorded in ICD.

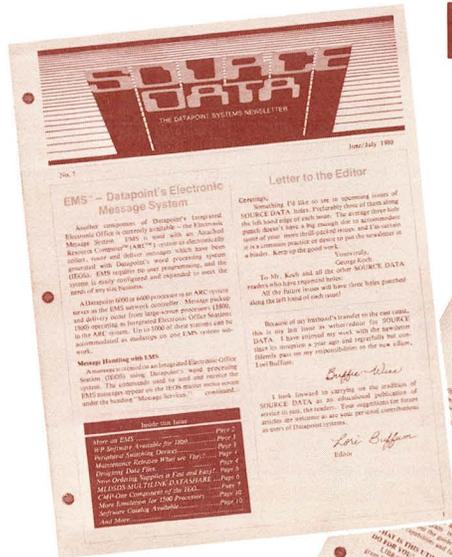
I have redirected several key personnel to work on ICD workflows and procedures. Functional specifications

are being developed for an automated Commission Information Accounting (CIA) System that will reduce errors and improve timeliness of reporting.

Field Marketing input to CIA has been requested and will continue to be incorporated into our specifications. Although it is too early to give you a definite date, we are targeting implementation of CIA for Q3 FY '81.

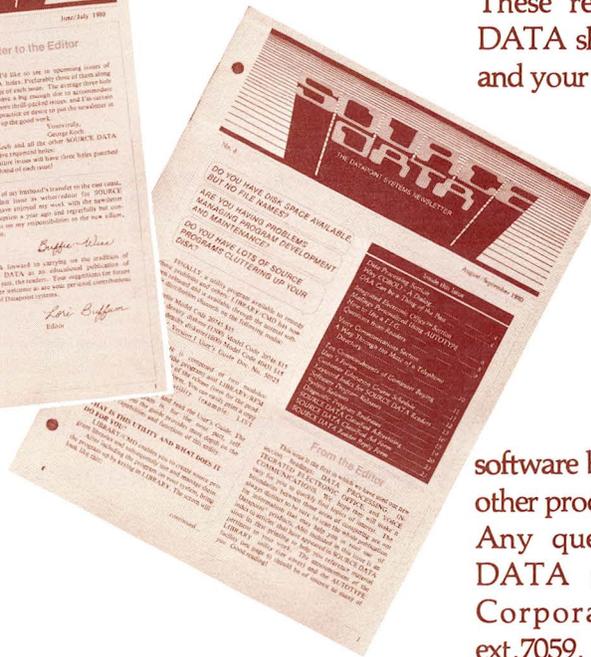
With the ever increasing volume of daily transactions that must be handled by ICD, your suggestions and cooperation will greatly improve the handling of adjustments in the future.

Joe Russo



Look Familiar?

These recent issues of SOURCE DATA should look familiar to you and your customers.



For a limited time, we are offering free trial subscriptions to the Datapoint systems newsletter -- SOURCE DATA.

SOURCE DATA is the Datapoint customer newsletter. Its goal is to inform, educate, and provide a forum for learning to make the best use of Datapoint equipment and software.

It is published bimonthly and covers topics in Data Processing, Voice Communications and the Integrated Electronic Office.™ The articles range

from announcements of new products to tutorials on a particular subject to helpful hints to actual demonstrations of the use of a product.

Our goal is to encourage each Datapoint customer to read the publication and become better educated about the equipment and

software being used and learn about other products that are available.

Any questions about SOURCE DATA should be directed to Corporate Communications ext.7059.

Use the coupons enclosed in this issue of OUT-THINK to add your name or your customers name to our distribution list and begin receiving SOURCE DATA with the October/November issue. Each subscription runs for two years.

The Other Side of Marketing Education

Everyone is aware that Marketing Education offers a broad range of product and skills classes designed to support the general needs of the majority of the sales force. These classes are continually evolving to meet the needs of the marketplace and are offered regularly at Regional Education Centers. But there is another, important side of Marketing Education that is rarely used.

Marketing Education is staffed to support not only the general needs of the Marketing force, but also specific education needs. The staff is capable of presenting ½-to-1-day seminars at the field level to support the special needs of an individual Branch. Topics include:

- Operating and Third-Party Leases
- Time Management
- Account Management Techniques
- DATASHARE Update
- ARC Update
- Cost Justification Techniques
- LDCS™ Overview
- ACD™ Overview

Other topical areas can be developed if needed. The choice is up to the Branch. Specific one-on-one support to the Branches is available to diagnose individual skills needs and to recommend precise activities to correct these problems. In addition, Marketing Education has the resources to recommend topics and materials for in-Branch training programs and, in some cases, can supply the materials.

To use the other side of Marketing Education is simple. A call to Suzie Collier (extension 7012) is all that is needed to begin the process. Sufficient notice is required to allow for the preparation and printing of any materials needed. In addition, the Branch will be asked to defray the expenses incurred. The earlier Marketing Education receives a request, the easier it is to support the need. Specific details can be arranged at the time the request is made.

Marketing Education is a resource that is available to all the Regions and the Branches. The staff is able to support the needs of the field, but the

field must use this resource to achieve maximum benefit. By all means, use

the scheduled classes, but remember the other side of Marketing Education.

Marketing Education Class Schedule October - December

Class	Date	Location
Sales ARC	10/13-17	Atlanta
Dos/DATASHARE	10/13-17	Atlanta
Sales IEOS	10/13-17	New York
Datapoint Representative	10/13-17	San Antonio
Financial Marketing	10/21-23	New York
Financial Marketing	10/21-23	San Francisco
Sales IEOS	10/27-31	Chicago
Large Account Marketing	10/27-31	New York
Sales Orientation	11/3-14	San Antonio
ASR Group II Phase II	11/3-21	San Antonio
Financial Marketing	11/11-13	Atlanta
Products and Markets	11/24-26	San Antonio
Sales IEOS	12/8-12	San Mateo
Sales Orientation	12/8-19	San Antonio
Large Account Marketing	12/8-12	Atlanta

Systems Education Class Schedule October '80 - December '80

Course Subject	Date(s)
DOS/DATABUS	10/06-10, 10/27-31
BASIC ACD	10/06-10
ADVANCED SYSTEMS	12/08-19
COMPANY ORIENTATION	10/13-14, 11/03-04, 12/01-02
CMP PRODUCT UPDATE	10/27-31
COMMUNICATIONS 1	11/03-14
PRODUCT ORIENTATION	10/15-29, 11/05-19, 12/03-17
ADVANCED LDCS	10/20-23
ASSEMBLER 1	11/03-07
SE DUTIES/SKILLS	10/02-03, 10/30-31, 11/20-21, 12/18-19
CMIS	10/13-17, 12/15-19
FORTRAN PROGRAMMING	10/27-31
ADVANCED ACD	12/01-04
DOS/DISK CONCEPTS	11/05-07
BASIC LDCS	12/03-12
COMMUNICATIONS 2	10/20-24, 12/01-05
DOS/ARC	11/10-14
ISL CONVERSION SEMINAR	12/15-19
WORD PROCESSING/EMS™	11/17-21
CHANNEL ADAPTOR	11/17-21
ASSEMBLER 2	10/06-10, 11/10-14
EMS/IEOS	10/06-10, 12/15-19
BASIC PROGRAMMING	10/13-15
COBOL PROGRAMMING	10/20-24
ASSEMBLER 3	11/17-21
RPG PROGRAMMING	12/08-12

For additional information, class descriptions, and student enrollment call Debbie Schilling (Training Coordinator) or Mike Burns (Manager, Systems Education) at 7368.

Crowley Named Product Marketing Manager

Barry Crowley, previously Regional Systems Manager out of San Mateo, has been promoted to Product Marketing Manager for Voice Communications Products. Barry's area of responsibility covers the INFOSWITCH™ Long Distance Control System (LDCS, SHARE™), the Station Message Detail Recorder (SMDR™), the Automatic Call

Distributor (ACD) and the Communications Software Applications (CMS) product areas.

Barry's most recent assignment was as the Regional System Manager for CMP products in the Western Region. He helped build a strong support team in that part of the country. Prior to joining Datapoint, Barry held positions in the telecommunications field with Pacific Telephone, Rockwell

International and Weyerhaeuser Company and has over 30 years of experience in this field.

Barry reports to Earl Steman, Director, Office Systems Product Marketing, who heads up the IEOS, Voice Communications Products and Printers Product Area.

Schmidt on DATASHARE 6 *Continued from page 5*

maintaining the data base's integrity within your program is removed. With that burden removed, the rest of the functions to get your data, to multiply or add the fields, or to print or display the fields, are simple. The DATASHARE system uses a very simple language to deal with the data processing problem.

Q: One of the most exciting developments we saw last year was AIM software in word processing. It created quite a stir in data processing and word processing communities. We now see it embedded in the DATABUS language. What is the AIM facility? What does it do for a programmer? How should a programmer perceive it?

A: AIM software creates a content addressable data file. The user no longer has to worry about a multitude of indices or a complex organization for his data. AIM software was developed to eliminate the congestion in transaction processing that is present in all other pointer or tree techniques. The tree or pointer file has to be locked out for the duration of the time one person is using it. AIM software permits any number of people to use the tree simultaneously, to update it, read it and write it. If someone is updating a file, the only problem another user in that file may have is not being able to see the first user's new records. But there won't be any systems problems.

Q: Do you know of any equivalent systems that offer the same features AIM software offers?

A: There isn't another system that comes close. AIM software eliminates the large and expensive multiple task processes that used to be necessary to index a file. The AIM feature indexes a file in one pass.

Q: AIM software in a DATASHARE system will be delivered sometime this fall to our first non-test customer. What do you think will be the first applications? What will people use the AIM feature for?

A: First old programs probably will be updated so that a lot more of the valuable data is accessible. New systems will be developed quickly because of the ease of their programming. New systems will be programmed to coincide with the company's manual operations without the need to set up multiple indices or structuring the data so that the indexed data is associated together.

Q: Will AIM software open any new market that we haven't been able to approach? If you were a salesman for Datapoint, where would you go that you hadn't gone before?

A: Almost any place that had any data.

Q: Is there a limit to the file size that the AIM feature can work on?

A: The limits are currently set by DOS. AIM software can work with files as large as the operating system can handle.

Q: Does access time decrease as file size gets larger?

A: Yes, but not proportionately. The system works very fast.

Q: Datapoint licenses AIM software only to its Datapoint users. Is the AIM feature proprietary to Datapoint?

A: The technique is proprietary.

Q: Will there be any other computers in the future using AIM-like techniques?

A: I hope not. AIM techniques are specialized and have been honed and trimmed and modified and updated to match our equipment over the last two years.

Q: Why did you name it that?

A: Because it's idealized access technology. The AIM feature accesses the record based on content, not based on locating the record and then recovering the content.

Q: In other words, you used to have to know where the data was before you could get it.

A: That's right. Now we can literally "go fishing" in a database. We don't have to know that data exists before we can find it. It's as if you suggest a clue and the system brings back everything it can find relating to that clue.

Q: Any social changes through this technique?

A: Sure. We can now give a guy a terminal with DS6/AIM software and let him go looking through a parts file or customer list literally without any coaching. The computer's power becomes much more useful because we've removed a lot of the expertise from the operation at a user level.

I can see applications where companies put terminals in the hands of people who weren't thought to have the time or inclination to learn access techniques.

We're also going to make programmers ultimately more efficient because AIM users won't be bugging the staff for special reports when the stuff they need isn't indexed. They'll do a lot of that by themselves using AIM features.

Q: How would you suggest selling AIM software?

A: I don't think the customer will really see or understand what you can do until you show him a demo using a good size database. Then it's amazing to watch his enthusiastic reaction.

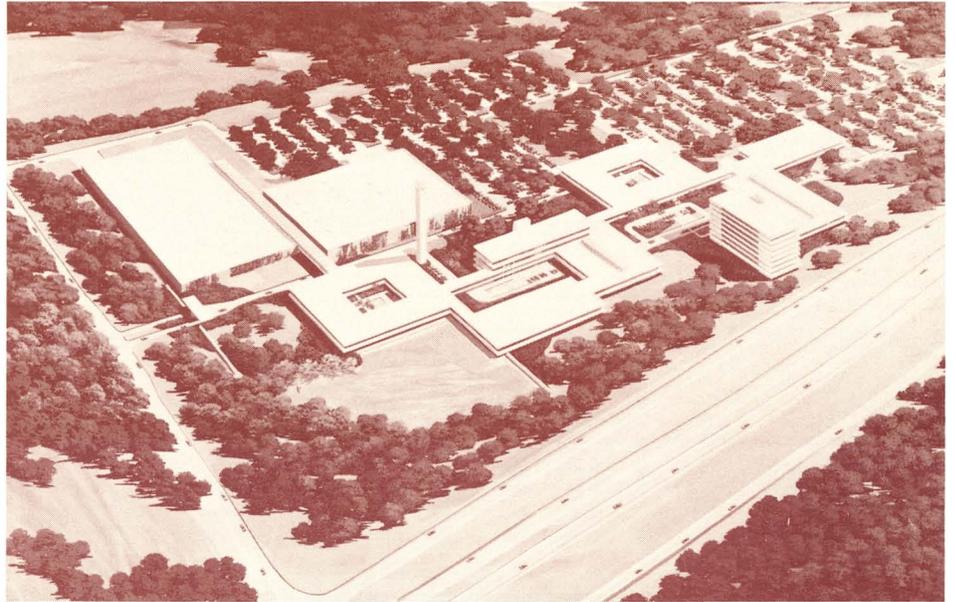
Datapoint Announces Major San Antonio Facilities Plan

September 8, 1980, Datapoint Corporation announced major construction plans that will result in consolidation of its development and support facilities on a site of approximately 120 acres in northwest San Antonio at IH 10 and DeZavala Road.

The preliminary long range plan, revealed at a news conference by Harold E. O'Kelley, president and chief executive officer, includes a campus-style complex of connected buildings totaling approximately one million square feet. According to O'Kelley, "This project will have more economic impact on San Antonio than any other one thing Datapoint has ever done and will be the largest industrial construction project in the city's history."

Although O'Kelley did not release a precise capital construction cost because of the multi-year nature of the project, he did indicate that the eventual investment could exceed \$50 million.

Architectural and engineering work will begin soon with construction expected to begin in 1981. Additional buildings in the campus-style plan will be constructed over a period of several years.



“Willingness to Win”

Datapoint Corporation is approaching the end of its First Fiscal Quarter of 1981 with every sign of establishing the 35th consecutive quarter of increased revenue. This track record runs counter to most things that are happening to our industry, our competitors and our economy. The United States has hit the depths of a moderate to severe recession. Unemployment is high in our country, inflation is rampant, and money costs are, at best, uncertain. Our marketplace is still broad but soft spots have developed in industries that are most susceptible to the effects of a recession.

All these problems are excuses that our competition has used to justify to the outside world recent disappointing order rate and financial performance. In the same difficult times, Datapoint Corporation has continued to post positive results. True, we have advantages over our competition:

1. Our product line is stronger and broader.
2. Our software is more sophisticated and more reliable.
3. Our Customer Service Division is more responsive and more effective.
4. Our Balance Sheet and Income Statement are conservatively stated and more impressive.

These advantages are not the reason that Datapoint Corporation is number one in our industry. Rather, these advantages are a reflection upon a much stronger fiber in evidence at Datapoint Corporation that runs throughout the company and is difficult to quantify on a numerical basis. Simply stated, our employees have a strong willingness to win and a total unwillingness to lose. This stamina, this ethic, this wherewithal to make it happen is found in all areas of Datapoint Corporation. It is found on the assembly line, it is found in our Traffic Department, it is found in

Customer Service. It is found in the Office of the President. Most importantly, it is found in the field. The systems engineers, salespeople, secretaries, MRFA's and managers are all totally committed to exceeding our goals. The ability to sacrifice and work long hours is making a big difference. Knowledge that nothing great in life is achieved without pain is apparent everywhere. The firm understanding that "winning is not everything, it is the only thing" is embedded in all of us.

The employees of Datapoint Corporation have recognized the unique "window in time" that has come upon us to do something singularly important in our professional and personal lives. Our company is and will be first in the 80's. I am truly grateful to have the opportunity to be part of this outstanding championship team.

Steve James

Customer Education Course Schedule

To assist you in enrolling customers in future classes, the course schedule for October through December is shown below. If you have questions about enrollments, contact the San Antonio Education Center, extension 7039.

Course Subject

ADVANCED DATASHARE COURSE	Oct 6-10	Farmington Hills
	Oct 20-24	San Antonio, New York
	Oct 27-31	San Mateo
	Nov 10-14	San Antonio
	Dec 8-12	San Antonio
ATTACHED RESOURCE COMPUTER(ARC)	Oct 13-17	San Antonio
	Oct 27-31	Des Plaines
	Nov 3-7	San Antonio
	Dec 1-5	San Antonio
DATASHARE	Oct 6-10	New York, Los Angeles
	Oct 13-17	Arlington
		San Antonio, New York
		Denver
	Oct 20-24	San Antonio, Des Plaines
	Oct 27-31	San Antonio, New York
	Nov 3-7	San Antonio, Des Plaines, Arlington, Atlanta
	Nov 10-14	San Antonio, San Mateo, Farmington Hills, New York
Nov 17-21	San Antonio, New York	
Dec 1-5	San Antonio, New York	
	Arlington	
	Denver, Des Plaines,	
	San Antonio, New York,	
	San Mateo, Arlington,	
	Atlanta	
DISK CONCEPTS AND OPERATIONS COURSE	Oct 13-17	San Antonio, New York
	Oct 27-31	San Antonio
	Nov 10-14	San Antonio
	Nov 17-21	San Antonio, Atlanta
	Dec 1-5	San Antonio, New York, San Mateo, Des Plaines
	Dec 8-12	Arlington
Dec 15-19	San Antonio	
DISK OPERATING SYSTEM	Oct 6-10	San Antonio
	Oct 13-17	Des Plaines, Arlington
	Oct 20-24	San Antonio, New York
	Nov 3-7	San Antonio
	Nov 10-14	New York, Arlington
	Nov 17-21	San Antonio
	Dec 8-12	San Antonio, New York
INTRODUCTION TO DATAPOINT PROGRAMMING	Oct 6-10	Des Plaines
	Oct 20-24	Atlanta
	Oct 27-31	New York, Farmington Hills
		Arlington
	Nov 3-7	San Antonio, San Mateo
	Nov 17-21	Des Plaines
	Dec 8-12	San Antonio, New York, Farmington Hills
Dec 15-19	San Antonio, Des Plaines	

SNAP3 ASSEMBLER COURSE	Nov 17-21	San Antonio
WORD PROCESSING CONCEPTS AND OPERATIONS COURSE	Oct 6-10 Oct 13-17 Oct 20-24 Oct 27-31 Nov 3-7 Nov 10-14 Nov 17-21 Dec 1-5 Dec 15-19	New York, Arlington San Antonio San Mateo San Antonio New York, Arlington San Antonio, Des Plaines New York, San Mateo San Antonio, Arlington San Antonio, New York
ADVANCED INFOSWITCH LDCS	Oct 20-24	San Antonio
BASIC INFOSWITCH LDCS	Dec 8-10	San Antonio
INFOSWITCH ACD	Oct 27-29	San Antonio
VERSION 4 INFOSWITCH SHARE	Oct 6-8 Dec 1-3	San Antonio San Antonio
ELECTRONIC MESSAGE SYSTEM CONCEPTS AND OPERATIONS COURSE	Oct 6-10 Oct 20-24 Nov 3-7 Nov 17-21 Dec 8-12	San Antonio San Antonio San Antonio San Antonio San Antonio

Marketing Systems

What is Marketing Systems? Well, we're OMS, Billing, Receivables --- Oops! Watch that! We think you're a great bunch out there but you're also the cause of our problems! If you weren't doing such a SUPER job we wouldn't have the incredible volumes and all of these support computer systems would run just fine.

Seriously though, we do appreciate the outstanding job you're doing and we are sympathetic to the frustrations we have caused you. We are presently working to relieve some of those frustrations and let me give you a few indications how:

By October 1 we expected to have a new reports transmission system in place that will allow the daily and weekly reports to be transmitted

directly to each branch at the branch's convenience. This will make it much easier for you to work around your customer demos and will eliminate the delays of going through the regional offices.

We are negotiating with Tymnet, a message switching system, for use with inquiry. Until now you have had only three voice grade lines for inquiry into our systems. This has caused a high level of frustration through poor quality lines and too many "busies". Tymnet will give you nine data quality lines thus significantly reducing the errors and "busies".

We have a number of other improvements "on the drawing board" but I don't want to talk about them until we can give you a firm commitment.

Until then we would like to hear from you with your suggestions, complaints, problems, etc. I promise you a rapid, interested and concerned response. Any of the management team of Marketing Systems will be delighted to take your calls and will take personal responsibility to provide an answer. Some of the names you might want to become familiar with:
Dean Claridge - Manager, Marketing Division Data Center - Ext. 7476.
Ken Klenke - Manager, Management Information Systems - Ext. 7489.
Mike Mills - Manager, Technical Support - Ext. 7387.

Don Titus
Director, Marketing Systems
Ext. 7016, 7018

New Products Offered from Refurb Marketing

This month you will note, in addition to the standard Refurb Product line, we are bundling DATASHARE systems with 300 LPM printers to offer the customer a value packed system to meet their needs going into the new decade.

In addition, under Print Pack 1 and Print Pack 2, we offered customers with installed ARC systems the advantage of picking up multiple 300 and

600 LPM printers to enhance their already powerful ARC systems.

Not to be forgotten is the first time user who now has available the powerful value packed 4520/9232. This offering gives you an excellent new vehicle to provide the customer with the full benefits of DATASHARE allowing print capability at an unprecedented price.

Special ordering instructions are used in the ordering of any bundled

printing system. To keep it simple, we use both the product and system model code numbers in the ordering instructions.

Also, this month you will notice the first appearance of the 4530 in the Refurb Marketing line along with the 5500 processor. It should also be noted that the 3601 Datastation Terminals are once again available from Refurb Marketing.

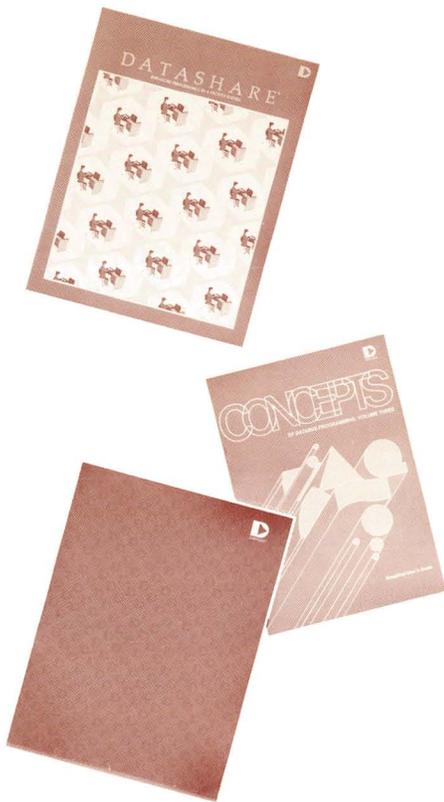
MODEL	DESCRIPTION	QTY.	PRICE	MAINT.	INSTALL.
DATASTATION TERMINALS					
3601	Datastation Terminal		995	20	20
COMM ADAPTORS					
3400	Acoustic Coupler		225	16	20
9401	Comm Adaptor		450	18	15
9402	Comm Adaptor		450	18	15
9404	Comm Adaptor		450	14	15
9408	DATASHARE MODEM, 1200 BAUD TRANSMIT, 150 BAUD RECEIVE FULL DUPLEX		450	18	15
9409	DATASHARE MODEM, 1200 BAUD RECEIVE, 150 BAUD TRANSMIT FULL DUPLEX		450	18	15
9420	Comm Adaptor		450	14	15
9460	Comm Adaptor		450	18	30
TAPES					
9551	9 Track 800 BPI 8.5 in. Reel		4500	70	125
9531	9 Track 1600 BPI 8.5 in. Reel		7500	90	150
!9583	9 Track 1600 BPI 10.5 in. Reel		<u>9000</u>	<u>127</u>	<u>150</u>
DISK SYSTEMS					
4220	2226 Processor, 5 MB Storage (two 2.5 MB Diablo Drives, 1 fixed, 1 removable cartridge), Controller, Multiport Interface, D/S Software, Documentation		9000	193	500
4520	5500 Processor, 5 MB Storage (two 2.5 MB Diablo Drives, 1 fixed, 1 removable cartridge), Controller, Multiport Interface, D/S Software, Documentation	1-3 4-10 11+	17750 16500 15550	224 224 224	650 650 650
4523	5500 Processor, 5 MB Storage (two 2.5 MB Diablo Disks), Controller, DOS Software, Documentation	1-3 4-10 11+	16500 15250 14250	207 207 207	620 620 620
!4530	5500 Processor, 48K Dual Disk and Controller, 20 MB Multiport Comm Adaptor Datashare Software and Documentation	1-3 4-10 11-25 26+	<u>24000</u> <u>22500</u> <u>21000</u> <u>19500</u>	<u>312</u>	<u>700</u>
!4533	5500 Processor, 48K Dual Disk and Controller, 20 MB Datashare Software and Documentation	1-3 4-10 11-25 26+	<u>22750</u> <u>21250</u> <u>19750</u> <u>18250</u>	<u>312</u>	<u>700</u>
4540	5500 Processor, 50 MB Disk Storage, Controller, Multiport In- terface, D/S Software, Documentation		29450	454	1000
4543	5500 Processor, 50 MB Disk Storage, Controller, DOS Software and Documentation		28200	436	970
!4620	6600 Processor, 5MB Disk Storage, Controller, Multiport Interface, D/S Software and Documentation	1-3 4-10 11-25 26+	19950 18700 17700 16200	228	650
!4623	6600 Processor, 5MB Disk Storage, Controller	1-3 4-10 11-25 26+	18700 17450 16450 15000	210	620
4640 /4644	Both: 6600 Processor, 50 MB Disk Storage, Controller 4640: Multiport Interface, D/S Software, Documentation 4644: RIM, ARC Software, Documentation		35500	567	1000
4643	6600 Processor, 50 MB Disk Storage, Controller, DOS Software and Documentation		35250	551	970

MODEL	DESCRIPTION	QTY.	PRICE	MAINT.	INSTALL.
4740	256K Processor, Dual Disks and Controller, 50MB, Multiport D/S Software and Documentation		39100	583	1000
4745	ARC File Processor 256K, Dual Disk and Controller, 50MB, RIM Adaptor, ARC Software and Documentation		39100	583	1000
DISKETTE SYSTEMS					
1131	Diskette 1130 Processor, 1 drive		2500	60	125
1132	Diskette 1130 Processor, 2 drives		2750	79	125
1133	Diskette 1130 Processor, 3 drives		3000	97	125
1134	Diskette 1130 Processor, 4 drives		3250	118	125
1152	Diskette 1150 Processor, 2 drives		10950	83	125
1153	Diskette 1150 Processor, 3 drives		11250	100	125
1154	Diskette 1150 Processor, 4 drives		11550	120	125
1172	Diskette 1170 Processor, 2 drives		11950	85	125
1173	Diskette 1170 Processor, 3 drives		12250	104	125
1174	Diskette 1170 Processor, 4 drives		12550	126	125
9381	Console Diskette Controller, 1 drive		2150	32	50
9382	Console Diskette Controller, 2 drives		2450	52	50
9383	Console Diskette Controller, 3 drives		2750	71	50
9384	Console Diskette Controller, 4 drives		3050	91	50
9385	Freestanding Diskette Controller, 1 drive		2150	32	50
9386	Freestanding Diskette Controller, 2 drives		2450	52	50
9387	Freestanding Diskette Controller, 3 drives		2750	71	50
9388	Freestanding Diskette Controller, 4 drives		3050	91	50
PROCESSORS					
1108	Cassette 1100 Processor, 8K Memory		2200	69	80
2226	2200 Processor, 16K Memory		2400	103	80
!5548	5500 Processor, 48K Memory		10000	178	200
CARTRIDGE DISKS					
9350	Console Front-load 2.5 MB Controller/Drive		2975	85	125
9351	Freestanding Front-load 2.5 MB Controller/Drive		2975	85	125
9354	2.5 MB Extension, Removable Cartridge, (no controller)		2400	52	125
9356	2.5 MB Extension, Fixed Cartridge		2400	52	125
9357	Console Front-load 2.5 MB Controller/Drive, 4K Buffer Memory		3075	78	125
9358	Freestanding Front-load 2.5 MB Controller/Drive, 4K Buffer Memory		3075	78	125
MASS STORAGE DISK CONTROLLER AND DRIVE					
9370	Freestanding 25 MB Mass Storage Drive/Controller		9950	162	250
9371	25 MB Mass Storage Drive Extension		7750	119	125
9373	Console 25 MB Mass Storage Drive/Controller		9950	162	250
BELT PRINTERS					
9291	60 LPM Printer, Parallel Interface		1995	54	125
9292	60 LPM Printer, Serial Interface		1995	54	125
9294	120 LPM Printer, Parallel Interface		1995	77	125
SERVO PRINTERS					
9250	Console Servo Printer		1595	66	125
9251	Freestanding Servo Printer		1595	66	125
FREEDOM PRINTERS					
9231/	80 CPS Freedom Printer (serial)	1-3	1750	38	125
9232	80 cps Freedom Printer (parallel)	4-10	1600	38	125
		11-25	1500	38	125
		26+	1395	38	125
9235/	160 cps Freedom Printer (serial)	1-3	1995	54	125
9236	160 cps Freedom Printer (parallel)	4-10	1850	54	125
		11-25	1725	54	125
BUNDLED SHARE/PRINT					
!4640/9280**	4640 and 300 LPM Printer		41500	697	1150
!4644/9280**	4644 and 300 LPM Printer		41500	697	1150
!4643/9280**	4643 and 300 LPM Printer		40250	640	1120
!4540/9280**	4540 and 300 LPM Printer		34450	584	1150
!4543/9280**	4543 and 300 LPM Printer		33200	566	1120
!Print Pac I**	3800, RIM and three (3) 300 LPM Printers		23000	434	500
!Print Pac II**	3800, RIM and three (3) 600 LPM Printers		38450	626	675
!4520/9232**	4520 and 80 CPS Printer		18500	262	745

****Special Ordering Information**

Those offerings that are bundled need to be ordered as individual line items on Order Entry Form #60719.
 (Example: Print Pac I should be ordered as follows: Model R3810/9260 on two product description lines with R3810 Qty 1, R9260 Qty 3 appearing as individual entries and the bundled price will appear on the second product entry line.)

Trade Shows 1980



New Marketing Support Material Released

A new DATASHARE brochure (Document No. 60260) is available which provides comprehensive information about the benefits, features and expandability of Datapoint's Business Timesharing System. The Associative Index Method (AIM) and its applications are also featured as well as DATABUS, DSGEN, DSTEXT, DATAFORM[®], DATAPOLL[®], DSSLAVE, and MULTILINK[™] as they relate to DATASHARE.

"Concepts of DATABUS Programming, Volume 3" (Document No. 50049) updates and replaces "Advanced Techniques in DATASHARE". This new publication provides detailed information on DATASHARE, including DATASHARE 6, and also offers an in-depth look at AIM.

A new general purpose folder (Document No. 60971) is also available which can be used for consolidating and organizing presentations and marketing literature.

October 7	Roadshow	Oakland, CA
October 9	Roadshow	Sacramento, CA
October 7-9	3rd Annual Midwestern Telecomm Conference	St. Paul, MN
October 15-18	Oil Industry Computer Service Inc.	Odessa, TX
October 19-22	Northeast Classified Ad Managers Assoc.	Newport, RI
October 20-22	Communications Managers Assoc.	Port Cheston, NY
October 26-29	Data Processing Mgrs Assoc. '80 Internat'l	Philadelphia, PA
November 9-12	Matrix	Las Vegas, NV
November 17-19	Southeastern Telecomm. Assoc. (SETA)	Hollywood, FL
November 19-21	Comdex (Conference and Expo for Dealers Distr. and Reps)	Las Vegas, NV
Nov 28 - Dec 4	Marlboro Computer Corp.	Washington, D.C.

1981

January 13-15	Communications Network	Houston, TX
March 24-27	RADIX (U.S. League of Savings and Loan Assoc.)	New York, NY
March 23-25	Office Automation Conf.	Houston, TX
April 5-9	TIMS (American Trucking Assoc.)	Williamsburg, VA
April 12-15	General Info. Systems (TOMA)	Houston, TX
April 21-23	General Info. Systems	Atlantic City, NJ
May 13-25	Internat'l Comm. Assoc.	Washington, D.C.
June 10-14	Matrix	Disney World, FL
July 9-11	Matrix	San Antonio, TX
July 16-19	Matrix	Dallas, TX
August 5-8	Baron Data Systems	San Francisco, CA
October 15-17	Matrix	Washington, D.C.
October 18-21	Matrix	Palm Springs, CA
October 25-28	RADIX (Mortgage Bankers Assoc.)	New Orleans, LA
Oct 30 - Nov 5	Holly Cove (American Assoc. of Blood Banking)	Chicago, IL
November 9-12	RADIX (U.S. League of Savings and Loan Assoc.)	New York, NY

Any OEM, Software, or Industry Representative may rent the demonstration equipment pending availability. Beginning January 1, 1981, due to increased operating cost, the basic fee for using the demo

equipment will be \$800 plus expenses. Please give maximum notice to ensure usage on your desired dates. Contact Ben Hayes, Kent Nutt or Connie Barclay at (512) 699-7059.

Salesperson of the Month

for August

Jim Rowse SMR
Regional Manager Len Julius
Southern Region

Significant Sales for August

Salesperson	ISV	Branch
Fred Frye	820,460	Tulsa
Steve Bostwick	745,565	Detroit
Mike Bazany	699,832	Rochester
John Harper	572,234	NY-Financial
B. Laughinghouse	568,520	Greensboro
Duane Wolfe	419,535	San Francisco
Andrew Waite	411,668	Los Angeles
Joe Metz	389,952	Nashville
Harry Halpin	376,000	Charleston
Fred Levine	349,759	San Francisco
John Durden	308,100	Charlotte
Bob O'Conner	307,200	NY-Commercial
A. Herrera	305,155	San Antonio
W. Woodfield	281,555	Philadelphia
Steve Bostwick	228,452	Detroit
Larry Malang	211,789	New Jersey
Bob Jaffray	208,446	Detroit
Jim McGill	184,013	NY-Financial
Phil Sciobona	183,350	NY-Financial
Craig Kent	176,405	Colombus
B. Laughinghouse	167,860	Greensboro
J. Bainbridge	160,800	Jacksonville
George Rangitsch	157,685	San Francisco
Es Crowley	150,161	Boston
Jim McGill	144,117	NY-Financial
George Rangitsch	142,293	San Francisco
Dan Morris	125,394	Philadelphia
Tom Schuler	121,863	Los Angeles
Bob Rail	112,854	Oakland
Gary Gist	108,565	Tampa
Buddy West	101,436	New Orleans

Revised 45 CPS Product Specification



The product specification for the 45 CPS printer (9601/9602) has been revised to describe the recent enhancements of the printer's firmware. The new specification will be in stock November 1st, and may be ordered from Software Services (model code 60802, price \$1.00).

The firmware enhancements simplify the use of special printer commands by your customer's application programs. Consult Dataflash #230 and Techflash #105 for details.

New Packaging for 1800 IEOS Software

A new packaging plan is now in effect for the current release (1.2) of the IEOS 1800 software. The procedure for installing the "new" software package is now much easier. It is no longer necessary for you or your customers to copy or kill any of the system software files. The model numbers have not changed but the date on the Installation Guide (Model Code 50515) and the diskettes (Model Code 9821, Media No. 20651) is now September.

Ad Schedule

Publication	October	November
Business Week	27 IEO	17 Fleming LDCS
Wall Street Journal	9 IEO	5 IEO
	13 IEO	10 DATASHARE 6
Computerworld	27 DATASHARE 6	24 DATASHARE 6
Communications News	IEO	Fleming LDCS
Datamation		15 DATASHARE 6
Modern Office Procedures		Fleming LDCS
The Office		Fleming LDCS

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DATAPPOINT

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