1st solutions INC.

NEWSLETTER JUNE 15, 1985

TSS MEMORY PRODUCTS.....THE COST OF PRIME COMPATIBLE MEMORIES HAS JUST DROPPED BELOW 50% OF PRIME LIST PRICE.

We are pleased to announce that in addition to our tape and disk sub—systems, we are now delivering our own memory. The *TIME SHARING SOLUTIONS* ® products have the lowest prices ever offered for new Prime Computer compatible memory. In addition to the lowest prices we have a guarantee that can't be beat. These memories are warranted for as long as you own them with 24 hour replacement at no extra charge. Single board capacities range from 1 to 8 million bytes (that's right, the entire address space of a Prime 750 system on a single board).

One of the questions you are no doubt asking is how can we offer so much for so little? It is really very simple. The major cost in most memories was the cost of RAM storage chip arrays. The costs on both the 64k and 256k chips began to collapse late last year. So we went to work bringing the latest in LSI design technology together with truly large scale manufacturing techniques. The combination lowered the boom on manufacturing costs. The market place has caused the price on the RAM chips to collapse to about 25% of the costs of only 8 months ago. Put the two together and you have the answer. One other little thing. These products are not for delivery next year, or next month. You get delivery within 72 hours (except on the 8mb board).

MEGABYTES		LIST PRICE
1	E9	$ 3,495
2	E10	4,995
3	E11	6,295
4	E12	7,995
8	E13	13,995

Now that we have shrunk your memory costs down to something reasonable for the non—ECL machines, we have begun work on memory for the 9750/9950/9955 systems. Watch this space for that announcement.

Some users have asked "why bother with a memory board larger than 2mb"? The reason is that there are some users who need large amounts of memory for certain applications and have small chassis systems (2250, 2550, 250, 450). A 2250 has only 2 slots for memory if you are using any additional controllers. We have a customer in Washington, D.C. with a 2550 that had 4mb (4 Prime 1mb boards). The software that he uses runs much faster if there is a large memory space. We sold him two 3mb memory boards and took two Prime 1mb boards in trade. He is now running an 8mb 2550. A customer in Chicago is running a 5mb 2250 using a 4mb memory board. I am not sure what we will do with the 8mb memory board. Perhaps Prime will announce a desk top system with fewer slots than a 2250.

$500 256KB E4 MEMORIES (USED PRIME) AVAILABLE AGAIN

We again have an inventory of used, 256kb E4 memories. Users of 250, 350, 400, 500, 650, 2501I, 5501I, 4501I and 150 systems can install these boards. The price of $500 is less than Prime charges for maintenance on 256kb boards in six months. Buy a few, install them (we can tell you how), and you have increased your storage at a very low cost. There are a number of places for repairing these boards. We also have some 256kb E6 memories at $750 each. Prime still lists these boards at $6,000 each although I doubt that many are sold at that price.

1ST CLASS AND SUPERSAVER PRICES ON WYSE 50 TERMINALS

We are pleased to announce a new price structure on the popular Wyse 50 CRT's. Some of our customers want terminals that have been tested and burned in. The chances of receiving a defective or problem terminal are slim. If the terminal is not perfect, call us and we will replace it during the first 14 days following shipping. We call this our "1st Class product". The quantity one price is $495.00.

Other users want to buy at the lowest possible price and are willing to send a defective unit to the manufacturer's repair facility for warranty repairs. We call this our "Supersaver product". The quantity one price is $445.00.

The products are identical, the only difference is in the quality of the service. No free cocktails. "Payment with order" customers can deduct an additional 3% from either price. For quantities over 10, call for pricing.

NEW PRODUCT—THE LINK 125 CRT

We have discovered a new CRT that we believe outperforms the WYSE 50. The LINK 125 lists 26 improvements over the WYSE including bi—directional printer port, true terminal emulations, higher character resolution, amber or green display, a pool of 380 characters of programmable, non—volatile function key memory, two display fonts, field or character non—embedded attributes, a two page memory option, and a LOWER PRICE. We are offering these terminals at the introductory price of $445.00 for quantity one. Call for quantity discounts. We have 25 units for evaluation. You pay only freight charges if you don't like the terminal and return it within 30 days.

DUAL PORTING OF DISK DRIVES

Many users are unaware of the dual port feature available on most disk drives. For multiple system installations, dual porting is a feature that can provide a number of advantages over networking. In a two system installation, a dual ported disk drive can be used by either system (not at the same time however). This provides a very efficient method of transferring files, backup and redundancy. A dual port kit for the CDC 340mb disk drive sells for $500.00.

SAVING MONEY

The low prices offered by third party products are saving cost conscious users lots of money. The low purchase prices combined with low (or no) maintenance costs provide for savings that are very substantial. Comparing new Prime hardware lifetime costs with third party alternatives should astound many of you (lifetime cost is the purchase price of the equipment plus five years maintenance.) The comparison below is for all new equipment. Here are a few examples:

PRODUCT	PRIME LABEL LIFETIME COSTS	OUR LABEL LIFETIME COSTS	LIFETIME SAVINGS
1MB MEMORY BOARD	11,200	3,495	7,705
2 2MB VS 4 1MB BOARDS	44,800	10,990	33,810
315MB PRIME VS CDC 340MB	21,800	15,755	6,045
675MB DISK DRIVE	39,000	27,860	11,140
6250BPI TAPE SUBSYS	71,000	38,000	33,000

No allowance has been made for the interest that could have been earned on the capital invested, or, if the equipment were financed, the savings in interest charges.

Here is an offer that should get your attention: Buy two of our 2mb memories, one 675mb disk drive and our 6250bpi Kennedy tape subsystem at Prime's equivalent list prices ($111,000) and we will throw in a Prime maintained 750 processor (experienced), and we will also pay for the Primos license ($15,000). This offer is limited to our supply of 750 processors. Add $22,000 to the $111,000 and we will include a burst mode disk controller, two Prime 1mb memory boards and a 16 line QAMLC board, all experienced and maintainable by Prime. This gives you a total cost of $133,000 for a 6mb 750, with 600mb of disk, a 6250bpi tape subsystem, 16 ports and Primos. Better performance than a 9650 for $23,000 under Prime's list price for a new 2mb, 2550. If you don't need a Prime 750, how about a new Porsche 928 or 2 Cadillac Coupe DeVilles? Porsche and G.M. do not require an operating system license.

For those of you who are interested, this newsletter was prepared (for the most part) on an Apple Lisa with a dot matrix printer.

Thank you for your interest,

Don Shifris

Matt's Column

We are often asked to provide a valuation for used Prime systems, and often, the owner is surprised at how little his system is worth. This column will try to provide you with the basis upon which we provide these valuations. Generally, we attempt to match the system with what comparable performance costs today in a new Prime system. We take both the initial cost and operating (maintenance) costs into account.

Let's look at a few examples. Suppose you have a 2250—014 to sell (1mb memory, 8 ports, a 158mb disk drive and a streaming tape drive). This system has a new list price of $45,400 This is a current machine so comparable performance is a 2250—014. The problem with a 2250 is that there are many remarketers for the product and many of them can purchase a new system at discounts of 30% or more (we are using 30% in this example).The used equipment is probably not Investment Tax Credit qualified for a number of reasons. This is 10% of the price. Just to be even you need a 40% discount. In addition, the Prime supplied software is almost always not transferable . This makes the maximum value of the 2250—014 $12,240 (60% of $45,400 less $15,000 for the Primos license). If you deduct an arbitrary value for the unknowns of buying a used system and perhaps some scare tactics on the part of the competing Prime salesperson, the used 2250 really has almost no market value to an end user. In addition, in most cases the buyers of 2250 systems are first time users purchasing turnkey solutions from a remarketer and/or Prime. They don't even know about used equipment being available. They cannot buy what they don't know about. The typical used 2250 prospect that we talk to is already a Prime user. Because of these problems, we have never sold a used 2250 as a complete system to an end user. The machine is worth much more in parts than it is as a system. The owners of most 2250 systems are afraid to try to sell their system in pieces so they sell them to dealers who part them out.

The next case we will look at is a Prime 850 system. This is a discontinued model whose current performance equivalent is a 9750. If we take a relatively simple system with 4mb, a 75ips tape and 2 300mb disk drives, the example becomes easier to work with. The 9750 in this configuration has a list price of $260,500. Prime systems of this size are often sold at substantial discounts when Prime is in a competitve situation against either used equipment or another vendor in a procurement.

For this example we will use a discount of 20% although we have seen Prime offer to discount a 9750 at 35% at the end of a quarter when up against a used 750. As a used system, under the best of circumstances only part of the purchase price will be qualified for investment tax credit (ITC). Since ITC is a credit against taxes, we view it as an additional 10% discount. The resulting effective cash price is $182,350. The re—license situation gets a little murky here. If this is the first Prime system the buyer is getting, he might have difficulty living without source for Primos and the utilities. If the buyer already has at least one system with source, there is no reason to buy another copy. The difference is that the license with source costs $25,000, the version without costs $15,000. We will give our seller the benefit of the doubt and use the $15,000 figure. Just to be even on the cost/performance side, the 850 system must be priced no higher than $167,250. The news now gets worse. An 850 with 2 300mb removable pack drives carries maintenance costs that are almost $2,000 a month higher than the equivalent 9750 system. If you assume the used system will be in use for 42 months, and the value of money is

12%, you can establish a current cash value of the difference in maintenance costs. This measurement is called Net Present Value and in this example is worth $70,000 (it costs $2,050 per month to pay off a $70,000 loan in 42 months at a 12% interest rate). The net value of the 850 is something around $95,000 assuming we can find an interested buyer. The 850 is not an easy system to sell. We have had a larger system available for a few months with an asking price of $100,000. A buyer needing a system for a short time might pay more because the reduction in value caused by the higher maintenance costs is a function of time. There is also a bottom value of a system that is due to the value of the parts. The 850 system defined here, if the pieces were sold to end users, would gross $75,000 to $100,000 depending on the demand for the 850 CPU board set.

We have identified the factors that are easy to apply numbers to in this situation. To make sense, the deal must save the buyer some money, and he must also be willing to put up with some mental discomfort. Our competitor in these deals is almost always a Prime salesperson who makes his living selling new systems. He will do his best to make the prospect uncertain of the viability of purchasing the used system. The unknowns of used equipment acquisition can be used to the new equipment salesperson's advantage. He is also generally sitting in front of the buyer while we are a voice on the telephone. We have many solid references of customers who have purchased used equipment through us. The more experienced buyer can save his company lots of money this way and appreciates the value of used equipment.

When the values get low enough, it makes sense to take the system apart and sell the pieces individually. For the older systems below the 750, (150, 250, 350, 400, 450, 550, 500, 650) this is exactly what we do.

The last example is a 9955 system. Although we have not had one available yet, the scenario should be as follows: Here we have a current system where the software license is a very small percentage of total system value. The rule of thumb is the 80% of list, less the 10% ITC, the $15,000 Primos license and the $25,000 " mental discomfort" estimate.This is the upper limit on what it would make sense to spend for a used machine. Much more and you can have a new one for the same dollars. This value reduction will vary with the buyer and the willingness of the local Prime branch to compete. It is possible that the 80% of list could be 65% of list, again depending upon how much Prime will discount in order to "buy the sale". The last month of a quarter is not a good time to sell a used system, it is a good time to buy one. Some companies cannot use the ITC or may not be getting a big discount from Prime. It seems that each deal is different.

Some situations lend themselves to a partial splitting up of the system. We recently were involved with a 750 with 5mb of memory, all of it in 256kb memory boards. The maintenance price on the memory boards and the memory extender chassis was almost $2,500 per month (this user was throwing away a lot of money). By replacing the 256kb boards with 1mb boards, the maintenance bill came down $2,000 per month. The out of pocket cost buying used, maintenance eligible 1mb memory boards was only about $10,000. However, this raised the value of the system about $50,000 because of the Net Present Value of the maintenance payments. It took a system whose maintenance costs were making it unsalable and made it into a salable system.

Another thing that happens is that some peripherals are very hard to sell. For instance, if you want a Prime 80mb disk drive you can have one at a very low price. There are very few buyers. The same goes for the 32, 64, and 96mb CMD disk drives. In the current product line, the high speed line printers and 2nd tape drives (drives without controllers) have poor resale prospects. Many users are afraid of used printers and very few have a need for 2 tape drives. These devices were not priced competitively to start with, and few users wanted them in the first place. So you have a high priced product with low demand. This combination spells poor resale value.

In the above examples we have assumed that the equipment is currently eligible for contract maintenance service. Generally the buyer will require this. If the system has been de—installed, or is otherwise off Prime maintenance for more than 30 days life gets complicated.

The circumstances vary from location to location, and depend upon what kind of terms you are on with your local district manager. The buyer may be able to make a deal. If not, figure $750 per board to have the boards brought up to current engineering level and certified by the repair center in Framingham. Peripherals may be a more difficult problem. In general, they will be inspected on a time and materials basis by Prime and brought up to current revision on a time and materials basis. At that point they may be maintenance eligible if you push hard enough. In the worst case they will be serviced on a time and materials basis for 60 days. This entails some risk. If you are unlucky enough to crash a 300mb disk drive and destroy all 20 heads during the T&M period, it could cost as much as $8,000 for repairs. The way we get around this potential problem is to have CDC certify the drive maintainable at the seller's site. CDC does not care about a 60 day period. They want the maintenance business and are not trying to sell new equipment. Prime also wants the maintenance business and sometimes can be convinced that it is in their best interest (they get the maintenance contract) to take the drive immediately on contract.

The largest single problem that the non—maintained equipment presents is the uncertainty. It is not clear what the total costs will be. Confusion and uncertainty are two of a salesperson's best allies, and you can be assured that both will be at work on the prospective buyer.

NEW PRIME COMPATIBLE PRODUCTS

		(2nd Drive)
TSS1-KENNEDY 800-1600-6250 BPI TAPE SUBSYSTEM COMPLETE INSTALLED	$ 24,500	$ 15,000
TSS1-CDC 1600-6250 BPI TAPE SUBSYSTEM COMPLETE INSTALLED	19,700	12,000
TSS1-CDC 1600-3200 BPI TAPE SUBSYSTEM COMPLETE INSTALLED	12,700	7,000
800MB CDC DISK DRIVE, CONTROLLER, CABINET, COMPLETE INSTALLED	28,000	15,000
500MB CDC DISK DRIVE, CONTROLLER, CABINET, COMPLETE INSTALLED	24,000	12,000

CENTRAL SYSTEM EQUIPMENT

TSS-E9 1MB MEMORY BOARD	3,495
TSS-E10 2MB MEMORY BOARD	4,995
TSS-E11 3MB MEMORY BOARD	6,295
TSS-E12 4MB MEMORY BOARD	7,995
TSS-E13 8MB MEMORY BOARD	10,995
1469/1470 CABLES (OUR OWN)	150
1454 CABLE (URC) OUR OWN	160

DISK DRIVES

600MB (CDC9775C)	17,000
PRIME PROM/CABLE KIT	750
TERMINATOR	100
"A" CABLE (PRIME CBL3713)	150
"B" CABLE (PRIME CBL3714)	150
REV18 SUPPORT PACKAGE	275
500 HOUR BURN IN SERVICE	1,850
INSTALLATION BY CONTROL DATA	640
NON-PRIME APPROVED PROM	50
340MB DRIVE (CDC 9715-340) INCLUDING PRIME PROM/CABLE KIT, INSTALLATION, FORMATTING, RACK MOUNT KIT AND BURN-IN	9,995

TAPES (BOX OF 10 REELS)

2400' ALPHA WITH SEAL	130
2400' CDC OMEGA WITH SEAL	160

DISK PACKS

300MB CDC FLAG FREE PACK	735
300MB CDC ERROR FREE PACK	885
80MB CDC FLAG FREE PACK	296
80MB CDC ERROR FREE PACK	345
16MB CDC FLAG FREE PACK	120
16MB CDC ERROR FREE PACK	135
80MB WINCHESTER PACK (1209)	350

PRINTERS

C.ITOH 300LPM	CALL
C.ITOH 600LPM	CALL
SERIAL INTERFACE FOR C.I.600	500
DEC LA100ZA (240CPS R.O.)	1,400

CRT'S

WYSE 50 SUPERSAVER SERVICE	445
WYSE 50 1ST CLASS SERVICE	495
ADDS VIEWPOINT PLUS	465
ADDS VIEWPOINT 60 PLUS	525
LINK 125	445

COMMUNICATIONS EQUIPMENT

MICOM MULTIPLEXORS/MODEMS	CALL
MICOM 2400 BAUD MODEMS	CALL
CTS212AH 212A AUTODIAL MODEM	395
BYTCOM 212A AUTODIAL MODEM	475
CTS 2400 BAUD ASYNC MODEM	595

DISKETTES MANUFACTURED BY C.D.C.

	PER BOX OF 10		
	1-10	11-30	30 PLUS
1244 (IBM PC) DS DD	20.00	18.50	17.50
1242 (APPLE II AND SIMILAR) SS DD	18.50	17.25	16.50
1246 (HIGH CAPACITY) 80TRK/DS	25.00	23.50	22.00
1262 (MACINTOSH) SS DD 3 1/2"	35.00	33.50	32.00
1249 (IBM PC/AT 135TP)	52.50	50.00	48.50

A DISCOUNT OF THREE PERCENT WILL BE ALLOWED ON ALL ORDERS WHICH ARE PREPAID (CASH WITH ORDER)

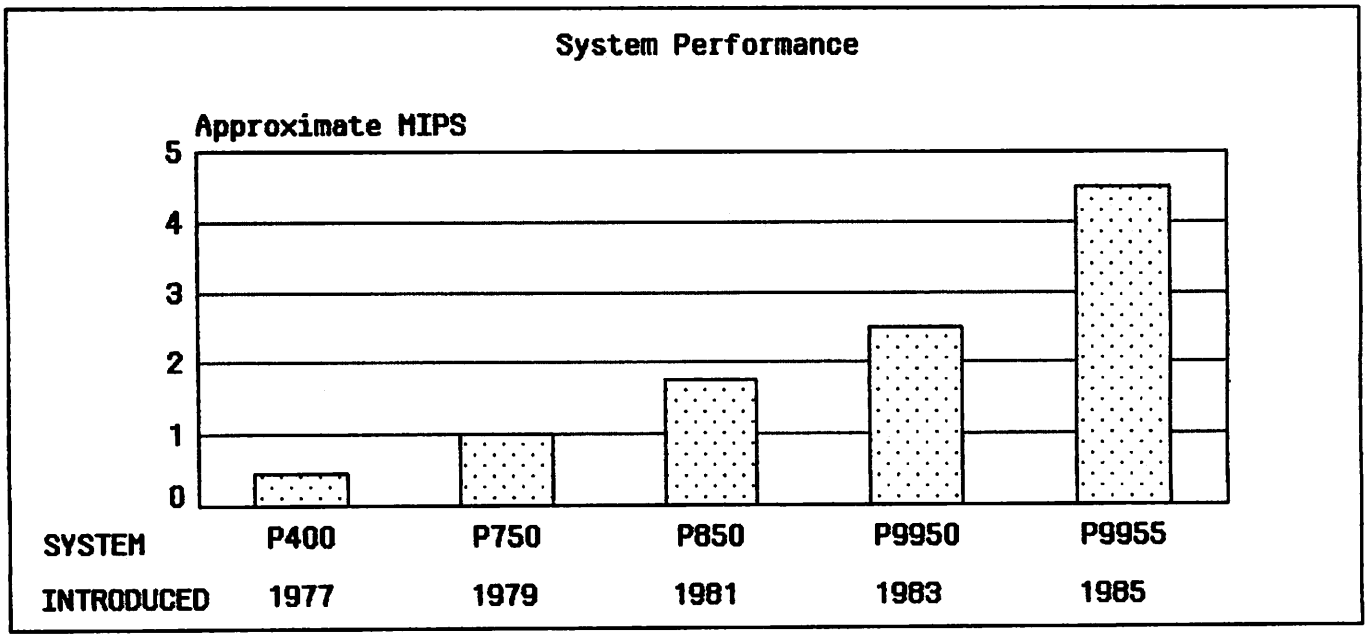
Are You Getting The Performance You Expected with your 9955 System?

If you aren't maybe you should look at your System's Achilles heel. In the 8 years since the first Prime super—mini was sold, the performance has gone from about .45 million instructions per second to about 4.5 million instructions per second. In that same period, Prime Computer supplied mass storage has also changed. The individual disk drive capacities have gone from 300 million to 600 million bytes. The average seek has gone from 30 milliseconds to 23 milliseconds. The latency has gone from 8.3 milliseconds to 8.3 milliseconds. The transfer rate has gone from 1200kb to 1200kb. If you have the feeling your are running a computer of the 1980's with the mass storage technology of the 1970's, you are correct. If you look at the graphs on these pages, you can see what has happened to system performance and mass storage performance on Prime Computer systems.

Timesharing Solutions® has a solution. The revolutionary TSS—2 disk controller is the fastest disk controller you can buy for a minicomputer, not just a Prime minicomputer, any minicomputer. The TSS—2 has been tested and run with the fastest prototype disk drives available today, and it runs them without a hitch. We aren't allowed to talk about the drive marked FUTURE because the manufacturer has not announced it yet, but we have run it! With a TSS—2 not only can you run the fastest drives of today, you will be able to run the fastest drives of tomorrow when they become available.

Technology changes with time, and so does price. It isn't cheap, but you can have the disk controller and the mass storage of the 80's for your Prime systems, for less than Prime wants for the equipment of the last decade. Not only does it cost less to buy, it costs less run, and less to service.

Isn't it time you started running the systems of the 80's with the peripherals of the 80's?



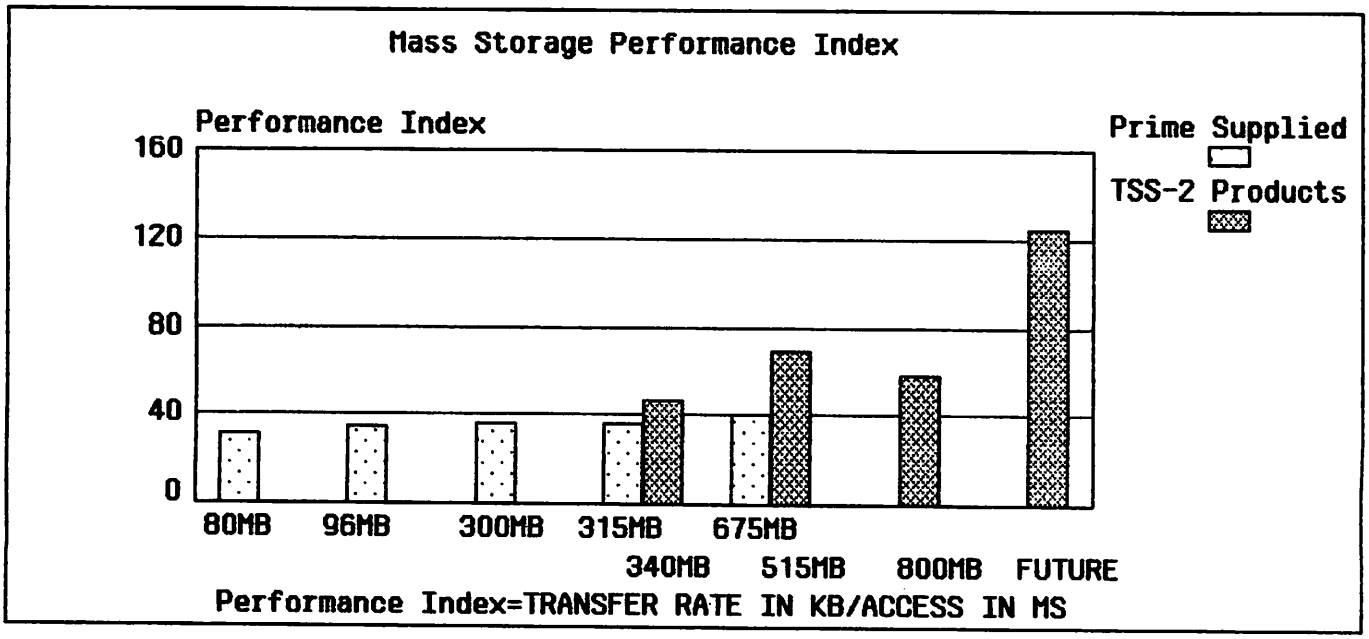
FLASH!!

Timesharing Solutions Disk Controller runs 3000kb disk

After years of research and development at CDC, Time Sharing Solutions has become one of only four companies to receive an unannounced Control Data Disk product. While we cannot comment in general about who else has these units, one is at Cray Research (as in the CRAY 1, CRAY XMP and CRAY 2 computers). We are also prevented from making any more than very generic comments about the equipment. It has a transfer rate of 24 million bits per second (3000kb), which is more than twice as fast as the standard SMD interface drives like the 300mb, 600mb and 315mb drives in use on Prime systems today. The equipment has performance characteristics very similar to the IBM 3380 subsystem, which is IBM's highest performance mass storage system for use on systems such as the 3080 family.

The equipment was delivered to Time Sharing Solutions engineering center last Wednesday (June 5th). A senior Engineering representative from Control Data's Twin City Disk Division arrived Thursday morning to supervise the unpacking and installation. The drive was connected to a TSS—2 disk controller, and was being formatted within minutes. Benchmark and performance studies were underway later that same day. The Control Data official commented that this was the first time anyone had been able to take this product out of the box, connect it, and run it on the first try.

We are very pleased to note that the hardware and software to run the disk drives of tomorrow are running today at ***Timesharing Solutions***. We believe our success in running this product right out of box once again points our continuing leadership role in bringing the latest technology to the Prime user community.



EXPERIENCED EQUIPMENT

COMPLETE SYSTEMS

(PLEASE SEE SYSTEM COMMENTARY ON FOLLOWING PAGES)

#	CPU	MEMORY	---DISKS---	--TAPE--	PORTS	OTHER	PRICE	AVAILABLE
1	9950	8MB	2 4005	3 300 6250 BPI	80		325,000 M	NOW
2	2250	2MB		1 158 CARTRIDGE	24	CALL FOR INFORMATION		
3	250II	2MB	1 4005	1 300 8-16-75	32	CALL FOR INFORMATION		
4	550II	1MB(4)	1 4005	1 80 8-16-75	16	URC AND 300LPM	40,000	NOW
5	450II	1MB(2)	1 4005	1 160 8-16-75	16		45,000 M	NOW
6	250II	75MB	1 4005	1 64 800 PRTC	24		22,000 M	NOW
7	750	2MB(2)	1 4005	1 300 8-16-75	16		75,000 M	NOW
8	550II	2MB(2)	1 4005	1 300 8-16-75	16	PRICED ON MAINTENANCE	45,000 M	NOW
9	550II	2MB(2)	1 4005	1 600 8-16-75	16	PRICED ON MAINTENANCE	55,000 M	NOW
10	750	3MB(6)	1 4005	2 300 8-16-75	80	5602/4/50 CRDRDR	90,000 M	NOW
11	850	5MB(6)	1 4005	1 300 8-16-75	48	VERSATEC V80 PLOTTER	100,000 M	NOW
12	2250	1MB(1)		2 68 CARTRIDGE	8	300LPM/4 CRTS-RENTAL	SEE COMMENTS	

DISK DRIVES AND CONTROLLERS

BURST MODE DISK CONTROLLER	$ 9,000 M
STANDARD DISK CONTROLLER	5,000 M
600MB ON CDC MAINTENANCE	14,000
300MB (PRIME 4472)	5,500 M
96MB IN CPU'CABINET	2,500
300MB (PRIME 4272)-OLDIES-	2,500 M

MEMORY

PRIME 1MB (E8)	4,500 M
PRIME 1/2MB (E7)	3,500 M
PRIME 1/4MB (E6)	750
PRIME 1/4MB (E4)	500
CYBERSYS 3MB (2 AVAILABLE)	6,000 M

PROCESSORS

550II CPU BOARD SET	15,000
550/250II/450I CPU BOARD SETS	5,000
500 CPU COMPLETE (3 BRDS/SOC)	10,000
750 CPU COMPLETE	45,000 M

TERMINALS

ADDS REGENT 25 CRTS (30 AVAIL)	200
ADDS REGENT 40 CRTS (5 AVAIL)	200
TI820-PACKAGE (9 AVAILABLE)	800
PST100 CRTS	500 M

TAPE DRIVES AND CONTROLLERS

PRIME 4522 800/1600-75IPS	$ 10,000 M
PERTEC 800/1600 SUBSYSTEM	4,500
PERTEC 800BPI SUBSYSTEM	1,500

COMMUNICATIONS

16 LINE QAMLC (5154)	4,000 M
PRIMENET NODE CONTROLLERS	3,000 M
5602 MDLC BOARDS (VARIOUS)	3,000 M
ICS1	2,500 M
USED PRIME 1469/70 CABLES	100

OTHER EQUIPMENT

PRINTER CONTROLLERS (3156)	2,000 M
750 LPM PRINTERS /URC	9,000 M
VCP BOARDS (2265)	1,000
PRIME AMLC CABLES (1469/70)	100
VERSATEC CONTROLLER (3009)	1,000
25KVA POWER DIST UNIT	4,500
100 AMP POWER SUPPLIES	750
120 AMP POWER SUPPLIES	1,000
PROCESSOR CABINETS	500
VCP BOARDS (2265)	1,000

ITEMS FOLLOWED BY "M" DENOTE CERTIFIED FOR PRIME MAINTENANCE

COMMENTARY ON COMPLETE SYSTEMS FOR SALE

Please note that in most cases, purchasers of used Prime systems will be required by Prime Computer, Inc. to relicense the operating system (PRIMOS) in order to operate the system. Prime currently charges $15,000 for an executable version of Primos. Source for the utilities and Primos are available if desired for an additional $5,000 each. Any Prime chargeable software which you are currently using on an existing Prime system will also have to be relicensed if you desire to use it on the new system. You cannot move Prime licensed software from one system to another within the terms of the standard Prime license agreement.

The prices which you see here are usually negotiable. Generally, the owner of a system who no longer has a need for it is anxious to sell. We represent the owners of these systems and will bring any reasonable offer to them. Frequently, a copy of a competitive quotation from Prime will convince an owner that he should reduce his price if he really wants to move his system.

SYSTEM 1. PRIME 9950 This system is immediately available and can be upgraded to a 9955 by the owner prior to the sale. The system has 8mb of memory, 2 burst mode disk controllers, 3 CDC maintained 300mb disk drives, a Prime maintained 96mb disk drive, a 6250bpi Prime (Telex) tape subsystem and 5 AMLC boards (80 ports). The system is currently being maintained by Prime (except for the 3 300mb disk drives which are being maintained by CDC). The asking price is $325,000.

SYSTEM 2. PRIME 2250 The owner of this system originally purchased it and 2 others just like it for a specific application that did not work out. They are being priced as maintenance eligible and may even (we don't know yet) come with Primos. In any event, the owner wants to sell them now. Each system has 2mb of Prime memory, a 158mb disk drive, a total of 24 ports (an ICS1 and a 5154), a cartridge tape drive and a Primenet node controller. The systems may be sold in pieces. Call for information.

SYSTEM 3. PRIME 250II This system is owned by the same user of #2 above. The same story except for peripherals. 2mb of Prime memory on 2 boards, 2 5154 AMLC boards (32 ports), a burst mode disk controller with a 300mb disk drive, an 800—1600—75ips Kennedy (Prime) tape subsystem with 2 tape drives and a Primenet node controller. There are 2 of these systems. They may be sold in pieces depending upon buyer interest.

SYSTEM 4. PRIME 550II This system is not on Prime maintenance. It has 1mb of memory on 4 boards, a burst mode disk controller with an 80mb disk drive, a Kennedy (Prime) 800—1600—75ips tape subsystem, a 16 line AMLC board (5154) and a URC with a 300lpm printer. This system is equal in performance to a 2550 (except for COBOL) and is priced by the owner at $40,000. It is presently in use by the owner in west Texas.

SYSTEM 5. PRIME 450II The owner of this Prime Information system no longer has a need for it. It is currently on Prime maintenance, has 1mb of memory (on 2 boards), a burst mode disk controller and 160mb disk drive, a Kennedy (Prime) 800—1600—75ips tape subsystem and 16 ports (5154). This system is equal in performance to a 2550 running Information and is priced at about half of a new 2550. The asking price is $45,000 and is available immediately. The owner will consider a lease arrangement.

SYSTEM 6. PRIME 2501I This system is owned by us. It is currently on Prime maintenance and is priced at $22,000. It has .75mb of Prime memory, a 64mb disk drive and controller, a 16 line AMLC (5154) and a Pertec (Prime) 800bpi tape subsystem. Available immediately.

SYSTEM 7. PRIME 750 This is another system which we own. It is on Prime maintenance and is available immediately. It has 2mb of Prime memory (on 2 boards), a burst mode disk controller and 300mb disk drive, a Kennedy (Prime) 800-1600-75ips tape subsystem, and a 16 line AMLC (5154). Priced at $75,000. This system will out-perform a Prime 9650 by a wide margin (except for COBOL) and is priced at about half of a 9650.

SYSTEMS 8. & 9. PRIME 550II We are selling these systems for a company that no longer needs them. Each has 2mb of Prime memory (on 2 boards), a burst mode disk controller, 16 ports (5154), a Kennedy (Prime) 800-1600-75ips tape subsystem, one system has a 600mb Prime disk drive, the other has a 300mb Prime drive, and they are priced for a quick sale. The 300mb system is priced at $45,000. The 600mb system is priced at $55,000. In addition, each has a 750lpm (upper/lower) printer subsystem. The printers (including controllers) are priced at $9,000 each (currently are listed at $20,500 each by Prime) and will be separated from the systems. The printers are not included in the system prices. We believe that the equipment will be eligible for Prime maintenance. Call for further information.

SYSTEM 10. PRIME 750 This system is in London, Ontario, Canada and is available immediately. It is on Prime maintenance and has 3mb (on 6 boards) of Prime memory, a burst mode disk controller with 2 300mb disk drives, a Kennedy (Prime) 800-1600-75ips tape subsystem, 5 AMLC boards (80 ports), an MDLC (5602, 5604, 5650) board, and a URC with a card reader. It is priced at $90,000 U.S.

SYSTEM 11. PRIME 850 This system is a price-performance bargain. Owned by an eastern university, this 5mb (Prime) system has a burst mode disk controller with a 300mb disk drive, a Kennedy (Prime) 800-1600-75ips tape subsystem, 3 AMLC boards (48 ports), and a Versatec V80 plotter and controller. The system is on Prime maintenance and the asking price is $100,000. Available immediately.

SYSTEM 12. PRIME 2250 This is the first time we have ever had a used system with a letter from Prime that allows transfer of the software licenses as the system moves from user to user. This 2250 has 1mb of memory, 2 68mb disk drives, a cartridge tape, a Printronix 300lpm printer and 4 PST100 crt's. The system is owned by a leasing company. There are 28 months left on the lease at $1,090 per month, with a $3,850 buyout. Software includes Primos, Cobol and Midasplus. The new lessee will have to agree to pay our brokerage fee of $2,500 upon signing the lease. The system is available now. It is on Prime maintenance and located in Phoenix.

We can mix and match. If you require more or less equipment than is offered with a system, we are usually in a position to supply or purchase such equipment in order to make the configuration exactly meet your needs.

THE EQUIPMENT ADVERTISED IN THIS NEWSLETTER IS SUBJECT TO PRIOR SALE.

THE CDC 9715—340 DISK DRIVE

TESTED AND FORMATTED ON A PRIME

PERFORMANCE AND OPERATING COST COMPARISON

	PRIME 4472 (CDC 9766)	PRIME 4475 (CENTURY 315)	CDC 9715—340
USABLE STORAGE (MB)	288	288	314
AVERAGE SEEK TIME (MS)	25	25	20
POWER REQUIRED (VOLTS)	208	115	115
WATTS	1460	400	240
SIZE (INCHES)	36x36x23	10.5x24x19	10.5x30x8.5
WEIGHT (LBS)	550	90	80
LIST PRICE	$21,000	$15,500	$9,995
MONTHLY COST *	345	125	110
LIFETIME COST **	41,700	23,000	16,595

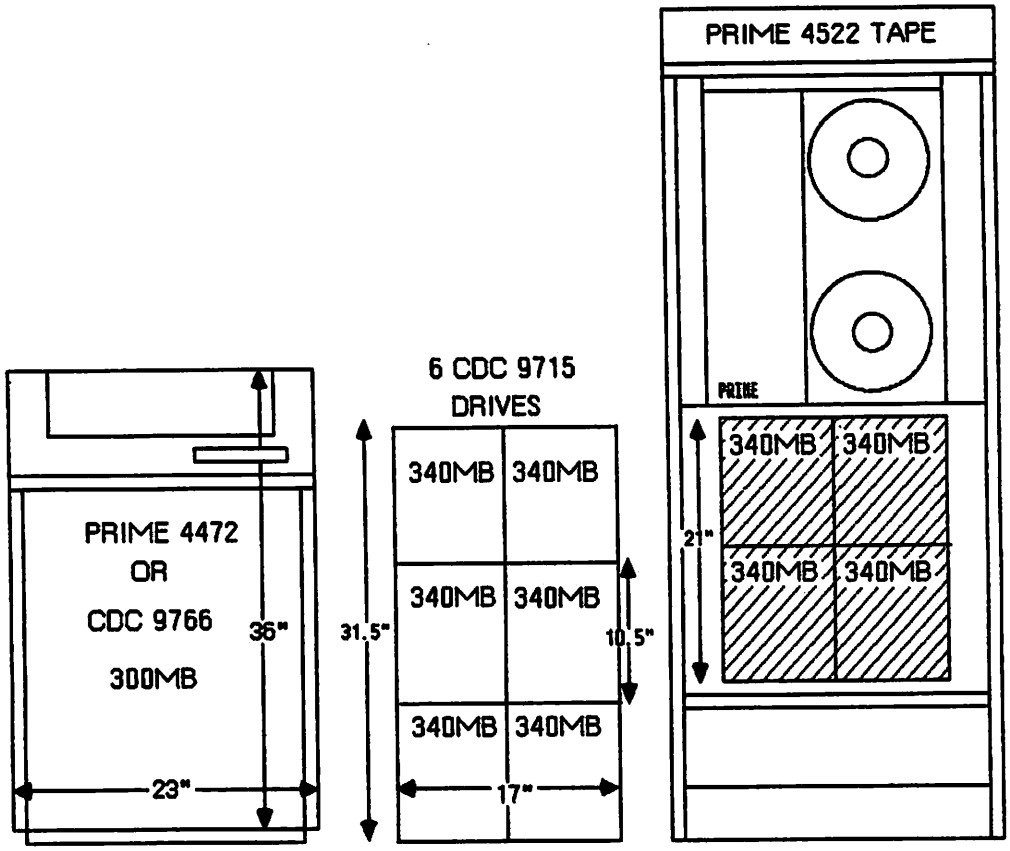
*Monthly cost is defined as the sum of electrical costs (assuming a $ .05 cost per kilowatt hour) and preferred Prime maintenance.

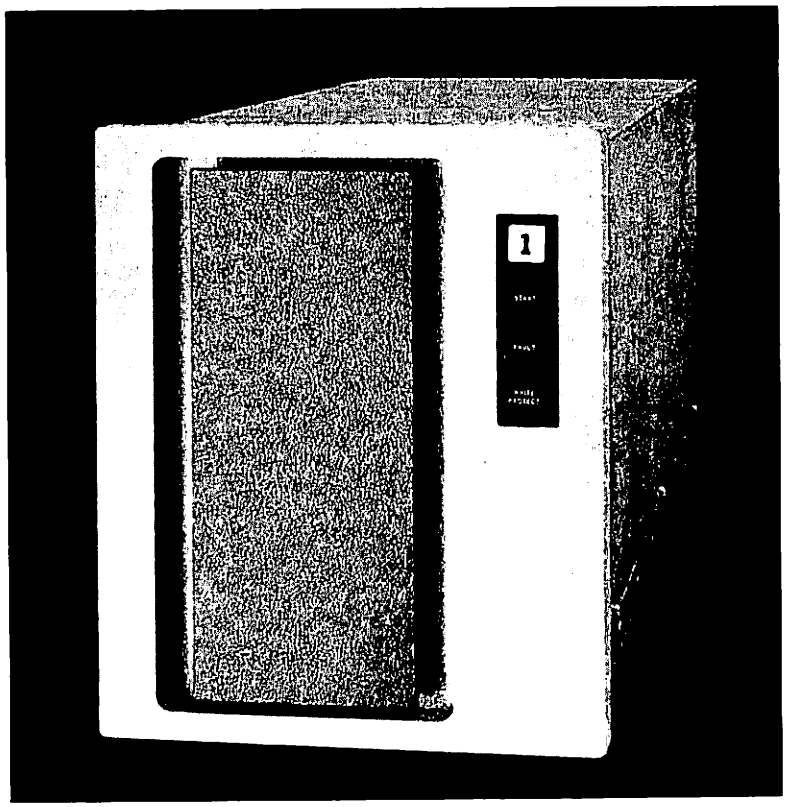
**Lifetime cost is defined as the sum of the purchase price plus all operating and maintenance costs over the nominal life of the product (5 years).

We have sold and installed over one hundred of these drives on Prime systems (most of which are maintained by Prime). Maintenance is provided nationally by Control Data Corporation. This drive has faster access times and more usable storage than the Prime 44XX devices. In addition it requires less power, less space and weighs less. Like all of our Solutions series products, it costs less to buy, less to operate and less to service than competing products.

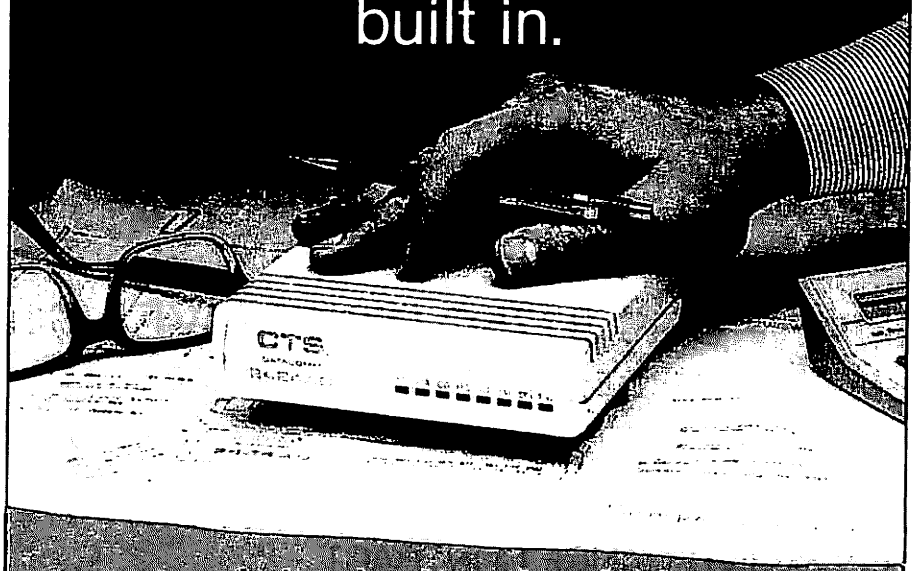
This product is sold on a turnkey basis. The $9,995 price includes the drive, rack mount kit, Prime prom and cable kit (controller upgrade), installation by Control Data Corporation and a 30 day on site warranty. Each drive is fully tested on a Prime Computer system prior to shipping.

The drawing on the next page shows the drive relative to a 300mb in terms of size. It also displays the way the drives are installed in a Prime 50 series tape cabinet. Two of these products occupy the same space as a single Prime 315mb Century.


PRIME 4522 TAPE
PRIME
340MB
340MB
340MB
340MB
21"
6 CDC 9715
DRIVES
340MB
340MB
340MB
340MB
340MB
340MB
31.5"
10.5"
17"
PRIME 4472
OR
CDC 9766
300MB
36"
23"



Before you buy a 2400 baud modem, check the one with 89 years of reliability built in.



Introducing the CTS 2424AD modem

CTS has been manufacturing reliable products since 1896 when we introduced our first hand cranked, wall mounted, wooden telephone. Today, we're introducing a sophisticated, full duplex, autodial, 2400 baud modem, and our promise of reliability stays the same.

The CTS 2424AD modem offers **technological reliability** in its signal processor. Originally designed for more expensive and complex modems, the patent pending CTS signal processor provides integral adaptive equalizing for noticeably clearer, error-free transmissions.

Our 2424AD meets CCITT V.22bis requirements and operates both synchronously and asynchronously at 2400 and 1200 bits per second. Other features include autodial with memory storage of up to ten telephone numbers (40 characters per number).

The CTS 2424AD offers **field reliability** with its two year warranty. And we demand our distributors provide you with the service you deserve.

Brand reliability is important at CTS, because it's important to you. That's why we suggest you check out our 2424AD before you buy a 2400 baud modem. You'll find what's built in to a CTS DATACOMM product is what you're looking for.

$595.00

NEW TO THE INDUSTRY SINCE 1896.

INVENTORY REDUCTION SALE ON BRAND NEW CONTROL DATA 675MB DISK DRIVES

6 AVAILABLE

BRAND NEW CDC 9775C DISK DRIVE $15,300

(PRIME LIST PRICE IS $30,500)

OPTIONS:

INSTALLATION BY CONTROL DATA	600
PRIME CONTROLLER UPGRADE (PROM/CABLE KIT)	750
CDC 60 DAY MAINTENANCE CONTRACT	500

THESE PRICES ARE FOR DRIVES IN OUR INVENTORY ONLY, NO RAINCHECKS. EACH DRIVE WILL BE TESTED PRIOR TO SHIPMENT.

PRIME WILL INSTALL AND MAINTAIN THESE DRIVES IF YOU DESIRE, AS WILL CONTROL DATA CORPORATION. CALL FOR INFORMATION.

We also have avaliable a limited number of burst mode (4005) disk controllers which normally sell for $9,000. If ordered in conjuction with a 9775 we will reduce the price to $8,000 per controller. This offer is limited to existing inventory only.

Prime list price for 9775 (4492—DRIVE ONLY)	$ 30,500
Our sale price including install and controller upgrade	16,650
You save	$ 13,850

Prime list price for 9775 (4491) with controller	$ 39,000
Our sale price including installation	24,650
You save	$ 14,350