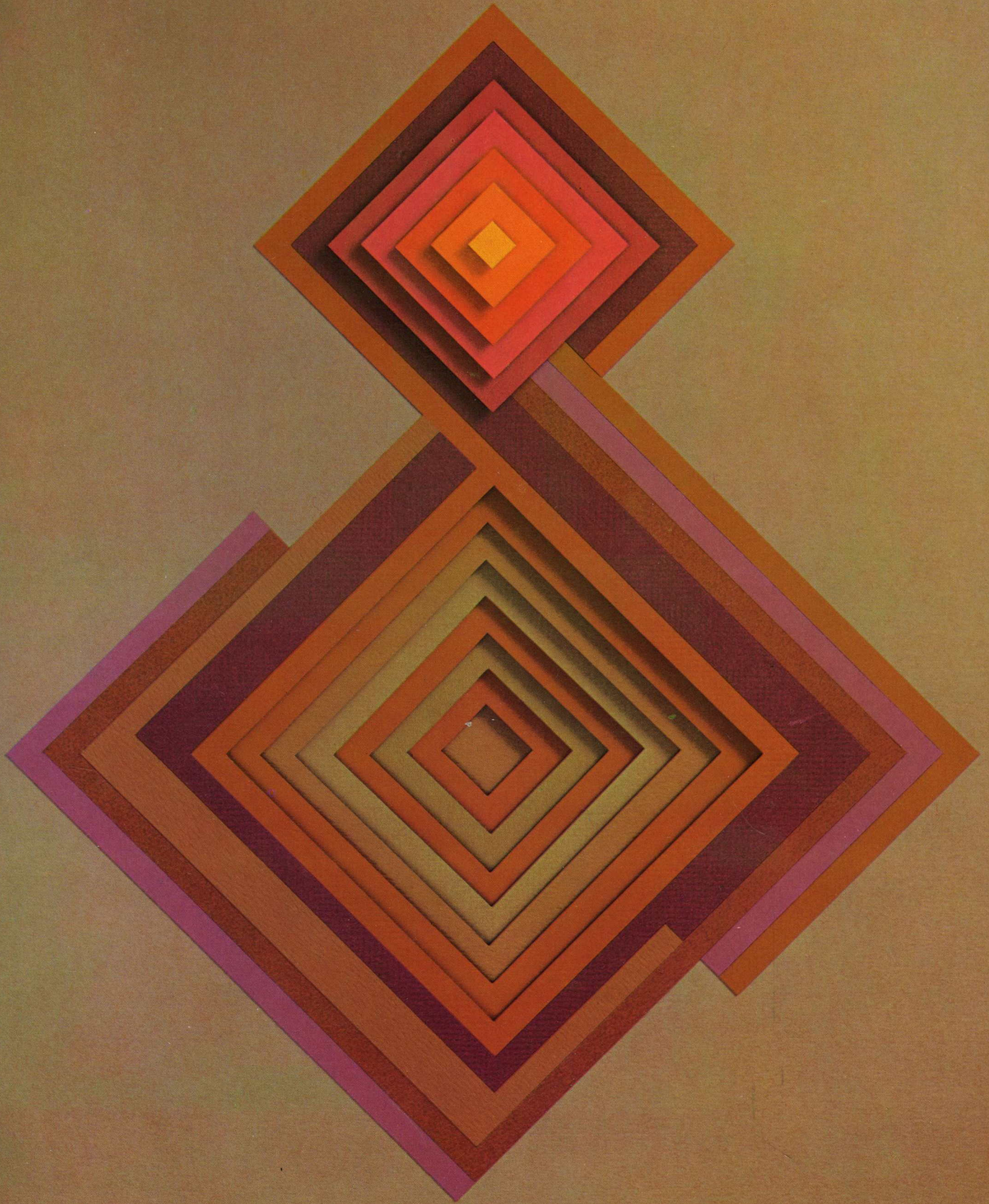


SPERRY UNIVAC Universal  
Terminal System UTS 400.  
The Intelligent Terminal Answer



SPERRY  UNIVAC



EDR AND SAVINGS OPEN AND CLOSED ACCOUNT SUMMARY

UNIVAC  
UTS 400

DEMAND DEPOSIT	NO-OPENED	AMOUNT-OPENED	NO-CLOSED
REGULAR	554	382,076.87	480
SILVER	26	9,542.85	70
DOUBLE DIVIDEND	22	7,468.62	84
CORRECTION	88	224,111.46	135
SHARE CONTROL	80	00	31
-----			
TOTAL	680	543,223.87	780
SAVINGS			
	NO-OPENED	AMOUNT-OPENED	NO-CLOSED
REGULAR SAVINGS	624	652,188.62	900
GOLDEN PASSBOOK	44	161,320.89	23
T R A ACCOUNT	22	98,241.87	66
-----			
TOTAL	690	871,830.72	924

MESSAGE RATE  
MESSAGE PRIORITY  
WAIT  
POLL  
MESSAGE BUSY  
READY  
POWER ON  
ATTENTION

## The Intelligent Answer . . .

Sperry Univac, a pioneer in data communication techniques and equipment, has had long experience in manufacturing and servicing data communications terminals.



Its UNISCOPE 100 and 200 terminals have long been acknowledged as the finest terminal systems of their type in the world. They are used in every type of data communications application, everywhere.



Now Sperry Univac has combined 20 years of experience, growth and dedicated facilities to design the UTS 400 Universal Terminal System.

It takes data communication terminal technology a significant step into the future—and takes you with it.

The UTS 400 offers you unprecedented intelligence in an interactive terminal system.

It is intelligence that gives you processing, programming and storage capability at your remote work sites.

It is intelligence that relieves your central processor of some of its operating burden—and that speeds your communication times even while it is increasing accuracy.

The UTS 400 offers you intelligence that combines capability and versatility, sophistication and simplicity in a system that is the intelligent answer to your communications needs.



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### **Sophistication . . .**

It is sophistication in the best sense of the word.

The SPERRY UNIVAC UTS 400 Universal Terminal System is a general-purpose, intelligent, microprocessor-based, video display and keyboard terminal.

It uses the very latest design concepts to give you capability, flexibility and the most effective terminal system available for the cost.



The UTS 400 is the modular, growth-oriented, future-oriented answer to your needs for an intelligent remote-batch terminal—or cluster of terminals. It gives you the basis for an exceptionally versatile and far-reaching communications network.



And the UTS 400 offers you the benefits of programmability—perhaps the highest expression of its sophistication and flexibility.

You get the security and reliability of a firm-wired system, plus the adaptability of a software system. You can easily tailor certain built-in programs to suit your own needs, and add new ones as well.

The programmability of the UTS 400 extends to such functional areas as security, data validation, arithmetic operations, data formatting, data reformatting and editing.



### **Simplicity . . .**

Along with sophistication, you get simplicity in the UTS 400.

First, the UTS 400 is a logical and compatible upgrade from the highly successful UNISCOPE 100 and 200 terminal systems. That compatibility includes line protocol, functional and peripheral considerations.

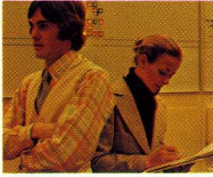
In fact, if you're presently using UNISCOPE 100 and 200 systems in your network, you'll find that they easily interface with the new UTS 400.

The simplicity of the UTS 400 is expressed in terms of operator efficiency, too. It begins with enhanced controls. Once a peripheral has been loaded, for example, your operator can control it without the need to return to the peripherals.

And very little formal training is needed to operate the UTS 400. The keyboard is comprehensive, but easy to use—as you will see later.

And the added controls make the operator's job easier—plus more conducive to higher output.

Finally, many UTS 400 operations are automatic, to eliminate routine, repetition and fatigue, and to increase accuracy.



### More of What You Need . . .

Capabilities to fit your applications—sophisticated but easy-to-use capabilities: that's probably the most important thing to be said for the UTS 400.

But its capabilities don't stop there. The UTS 400 can act as a master station for its own network cluster of up to two "slave" stations.

And with a terminal controller, the UTS 400 can interface up to six "slave" stations on a communication line.

Beyond this, a terminal multiplexer can be used to provide 16 ports of UTS 400 control systems, giving you the ability to attach 96 terminals, in all, to the communication line. More about this later.

With the UTS 400 you get power: you can call up any appropriate program stored in your central computer.

At the same time—via peripherals such as the diskette and cassette systems available with the UTS 400—you can store both programs and data at your terminal.

This kind of versatility in program and data storage gives you the performance and effectiveness you need to fit almost any application, from the simplest to the most complex.

And even though the UTS 400 is itself programmable to suit your needs, you don't *have* to program it to get the benefits of its functional capabilities: they're available to you regardless of how much programming you wish to do yourself.

Moreover, the intelligence available at the UTS 400 terminal both eases the load on your central processor, *and* places programmable control at the location where it can be used most efficiently.









### **Intelligence in Action . . .**

Beyond its ability to take a significant burden off your central processor, the UTS 400—with its built-in microprocessor—virtually eliminates input errors through its programmable functions.

Such functions as automatic field control, right justify, line duplicate and send cursor address are performed automatically, eliminating any chance of operator error.

Automatic peripheral retry is another major capability made possible by UTS 400 intelligence. Error recovery in a peripheral is initiated without the need for operator intervention—and even without the knowledge of the operator unless a hard failure occurs.

Peripheral operations are buffered, as well, via the optional memory in the UTS 400. This permits uninterrupted operator activity during the use of the peripherals.

Self-testing is another important UTS 400 capability. The terminal automatically tests the major portion of your system either when the power is turned on or upon the depression of a switch by the operator at the request of your central computer. You can always be certain that your system is operating correctly.

For timeliness, for accuracy—for daily or hourly updating of files or for either on-line or off-line access to file records—UTS 400 is the answer. It speeds the preparation of input data and routes output data in its correct format to the appropriate peripheral.

In sum, UTS 400 intelligence can mean better and more economical operation, plus increased productivity, to fit all your data communication needs.





## Major Features and Benefits . . .

The screen display of the UTS 400 is large, bright and easy to read. To look at data, you simply scan through your file, using the display. When finished, you dispose of the image. You don't have to spend time or money generating paper.

But when you need printed data, a peripheral printer will give it to you. You can print one screen-content at a time, part of a screen or a whole file—whatever you desire.

Editing data on the screen is quite simply accomplished by using such UTS 400 features as a nondestructive cursor, horizontal and vertical wraparound, tab-setting, field control characters, backward tabulation, line insertion, line deletion, character insertion and deletion, and replacement of characters by overstriking.

The UTS 400 can transmit either synchronously or asynchronously in industry-standard ASCII code. It is capable of transmission speeds of up to 9600 bits per second synchronous and 2400 bits per second asynchronous.

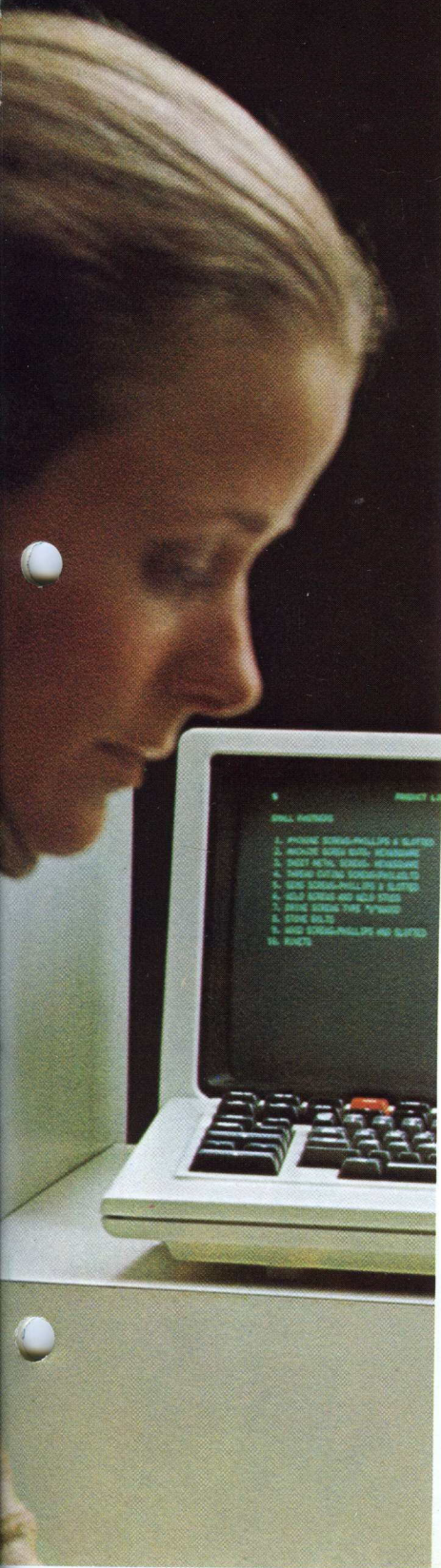
The UTS 400 communications control procedures—formal protocol for the communications process—are complete and comprehensive. These procedures provide simple, straightforward solutions to every communications problem.

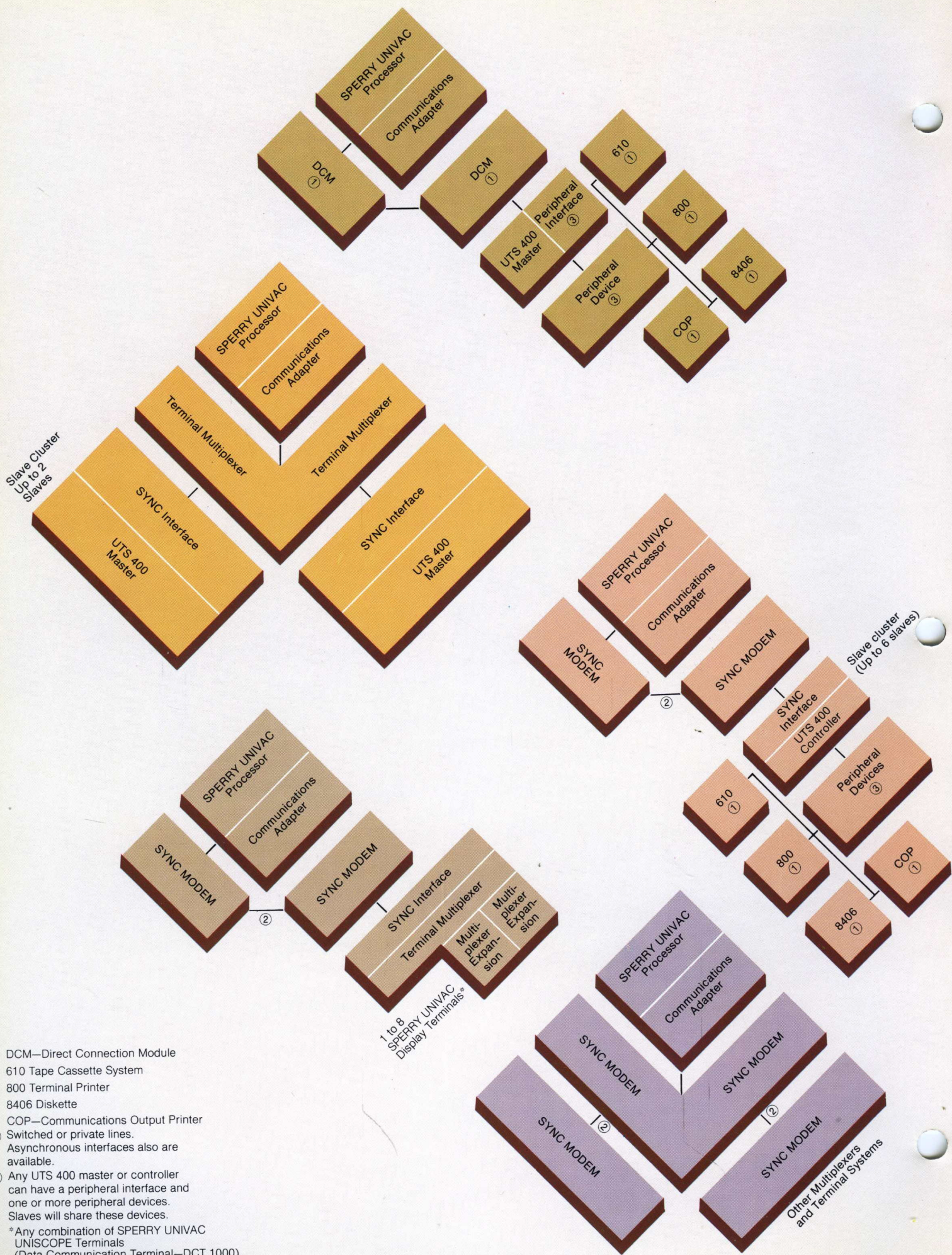


Either the UTS 400 master terminal (or controller slave terminals in a cluster) contains a display-refreshing buffer for each display screen in your network. This buffer makes it possible to continuously display a message completely independent of the communications line, after the initial output from the processor. This independent-operation capability gives you considerable flexibility in arranging station configurations.

The random-access memory in your UTS 400 can function as a data buffer for a cluster, thereby expanding the peripheral data-transfer capabilities of each cluster.

And because the UTS 400 features a *control page*, your operator can use the screen and keyboard for control purposes without destroying any information that might be on the screen.





- ① DCM—Direct Connection Module
- 610 Tape Cassette System
- 800 Terminal Printer
- 8406 Diskette
- COP—Communications Output Printer

- ② Switched or private lines.
- Asynchronous interfaces also are available.

- ③ Any UTS 400 master or controller can have a peripheral interface and one or more peripheral devices. Slaves will share these devices.

\* Any combination of SPERRY UNIVAC UNISCOPE Terminals (Data Communication Terminal—DCT 1000) & (Universal Terminal System—UTS 400)

## UTS 400 Hardware . . .

The basic unit of the UTS 400 hardware is its interrupt-driven microprocessor. It provides an 8-bit data bus, a 16-bit address bus and an instruction set for the microprograms. This microprocessor is actually a general-purpose computer which controls terminal operations through nondestructible programmed logic.

Storage of up to 24K bytes can be provided—a combination of read-only and random-access memory.

Microprograms and switches for system control are contained in the read-only memory. A portion of the UTS 400 memory is programmable, giving considerable versatility and expandability. Additional functions can be added—or existing functions changed—simply by the generation of new programs. Random-access memory can be used for program creation or storage, and can be expanded in 8K increments.

The cycle time of the system is 2  $\mu$ sec, and a 76-instruction set is provided.

A communications module contains all the circuitry required to interface a modem, terminal multiplexer or your central computer. And a peripheral module is available with all the 7- and 8-bit circuitry needed for interfacing the tape-cassette, printer and diskette subsystems that can be connected to the UTS 400.

As can be seen in the configurator (Figure 1), the UTS 400 is a completely self-contained terminal system that can be used either on its own or in a cluster of up to 96 stations via the SPERRY UNIVAC terminal multiplexer.



### Figure 1:

Configuration of SPERRY UNIVAC UTS 400 Universal Terminal System. As a single station, the UTS 400 offers a video display, keyboard, communications interface and peripheral interface for tape cassette, diskette and printer subsystems. In a cluster, up to six keyboard/display "slave" stations can be connected to a terminal cluster controller, sharing their communications and peripheral subsystems. "Slave" stations can be combined in clusters via the SPERRY UNIVAC terminal multiplexer.



6  
PRODUCT LINE

**SMALL FASTENERS**  
1. MACHINE SCREWS PHILLIPS & SLOTTED  
2. MACHINE SCREW NUTS, HEX AND SQUARE  
3. SHEET METAL SCREWS, A & B PHIL & SLTD  
4. THREAD CUTTING SCREWS, PHILLIPS & SLOTTED  
5. SEN SCREWS AND WELD STUDS  
6. WELD SCREWS AND WELD STUDS  
7. DRIVE SCREWS TYPE U & WOOD  
8. STOVE BOLTS  
9. WOOD SCREWS, PHILLIPS & SLOTTED  
10. RIVETS  
11. COTTER PINS  
12. FLAT WASHERS  
13. LOCK WASHERS

**SET SCREWS**  
1. HEX & MULTI-SPLINE SOCKET SET SCREWS  
2. SLOTTED HEADLESS SET SCREWS  
3. SQUARE HEAD SET SCREWS

**SOCKET SCREWS**  
1. HEX & MULTI-SPLINE SOCKET SET SCREWS

**NUTS**  
1. HEX & SQ. MACHINE SCREW  
2. FINISHED HEX  
3. HEX JAM  
4. HEAVY HEX  
5. HEX CASTLE

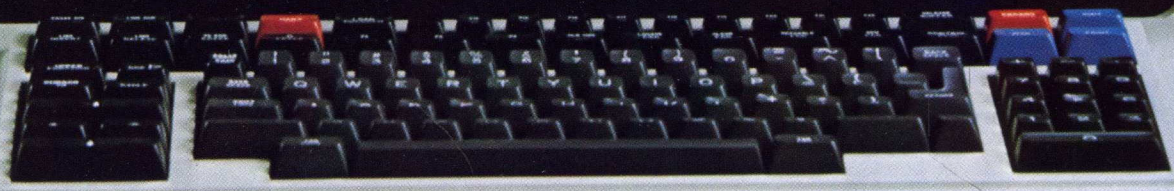
**LOCK NUTS**  
1. ONE PIECE  
2. INSERT TYPE  
3. AND OTHERS

**C.H.E.**  
1. SPRING/SPIROL PINS  
2. BLIND NUTS  
3. SPACERS

**INDUSTRIAL RETAINING RINGS**  
1. EXTERNAL RETAINING RINGS  
2. INTERNAL RETAINING RINGS  
3. APPLICATORS

SPERRY UNIVAC  
UTS 400

MESSAGE WAITING  
MESSAGE INCOMPLETE  
WAIT  
POLL  
AUXILIARY BUSY  
READY ●  
POWER ON ●  
INTENSITY





### **The UTS 400 Display . . .**

The visual display of the UTS 400 is a cathode-ray-tube video device.

Green-phosphor characters appear on a dark background. All characters are bright and sharp and closely resemble printed characters. Each character appears to have equal thickness and equal brightness over the entire screen. Legibility and clarity are the object.

Character brightness can be adjusted by the operator to the preferred level—and a non-glare, flicker-free screen further adds to viewing comfort.

The UTS 400 gives you a wide selection of display capacities: 960, 1024, 1536 or 1920 characters, depending on the screen format you use.

The screen formats available are 12 lines by 80 columns, 16 by 64, 24 by 64 and 24 by 80.

The complete set of 96 ASCII characters, including upper case and lower case alphabetics, can be displayed. Character sets for eight other languages are also available.



### The UTS 400 Keyboard . . .

The keyboard of the UTS 400 is designed for comfortable touch-typing. Because it is similar to that of a typewriter, little additional operator training is required to familiarize operators with the terminal system and its many added capabilities.



All the control keys needed to operate the UTS 400 and to initiate data transfers are located on the keyboard. They are within easy reach of hands placed in the normal typing position. Power and display adjustment controls, plus operating indicators, are located on the front of the UTS 400.

The keyboard of the UTS 400 is either of 64 characters, 96 characters or Katakana/English. Other National variations are available.\*

A keyboard option includes the full set of function keys for terminals requiring added functions. The same range of keyboard selection applies to the foreign languages available, too.

The keyboard includes alphanumeric keys, a numeric pad, editing and cursor control keys, program attention keys and shift keys. Keycap selection is made for the language corresponding to the character generator being used.

\*National Variations:  
Domestic (U.S.)  
Danish/Norwegian  
French  
German  
Spanish  
Swedish  
United Kingdom



SMALL FASTENERS

1. MACHINE SCREWS PHILLIPS & SLOTTED  
2. MACHINE SCREW NUTS- HEX AND SQUARE  
3. SHEET METAL SCREWS- # 0 & PAUL & BELT  
4. THREAD CUTTING SCREWS- PHILLIPS & SLOTTED  
5. GEN SCREWS AND WELD STUDS  
6. WELD SCREWS AND WELD STUDS  
7. DRIVE SCREWS TYPE D & WOOD  
8. DRIVE BOLTS  
9. WOOD SCREWS, PHILLIPS & SLOTTED  
10. RIVETS  
11. CUTTER PINS  
12. FLAT WASHERS  
13. LOCK WASHERS

NET SCREWS

1. HEX & MULTI-OPLINE SOCKET SET SCREWS  
2. SLOTTED HEADLESS SET SCREWS  
3. SQUARE HEAD SET SCREWS

SOCKET SCREWS

1. HEX & MULTI-OPLINE SOCKET SET SCREWS

PRODUCT LINE

NUTS

1. HEX & BOLTMACHINE SCREW  
2. FINISHED HEX  
3. HEX JAM  
4. HEAVY HEX  
5. HEX CASTLE

LOCK NUTS

1. ONE PIECE  
2. TIGHTY TYPE  
3. HD STICKS

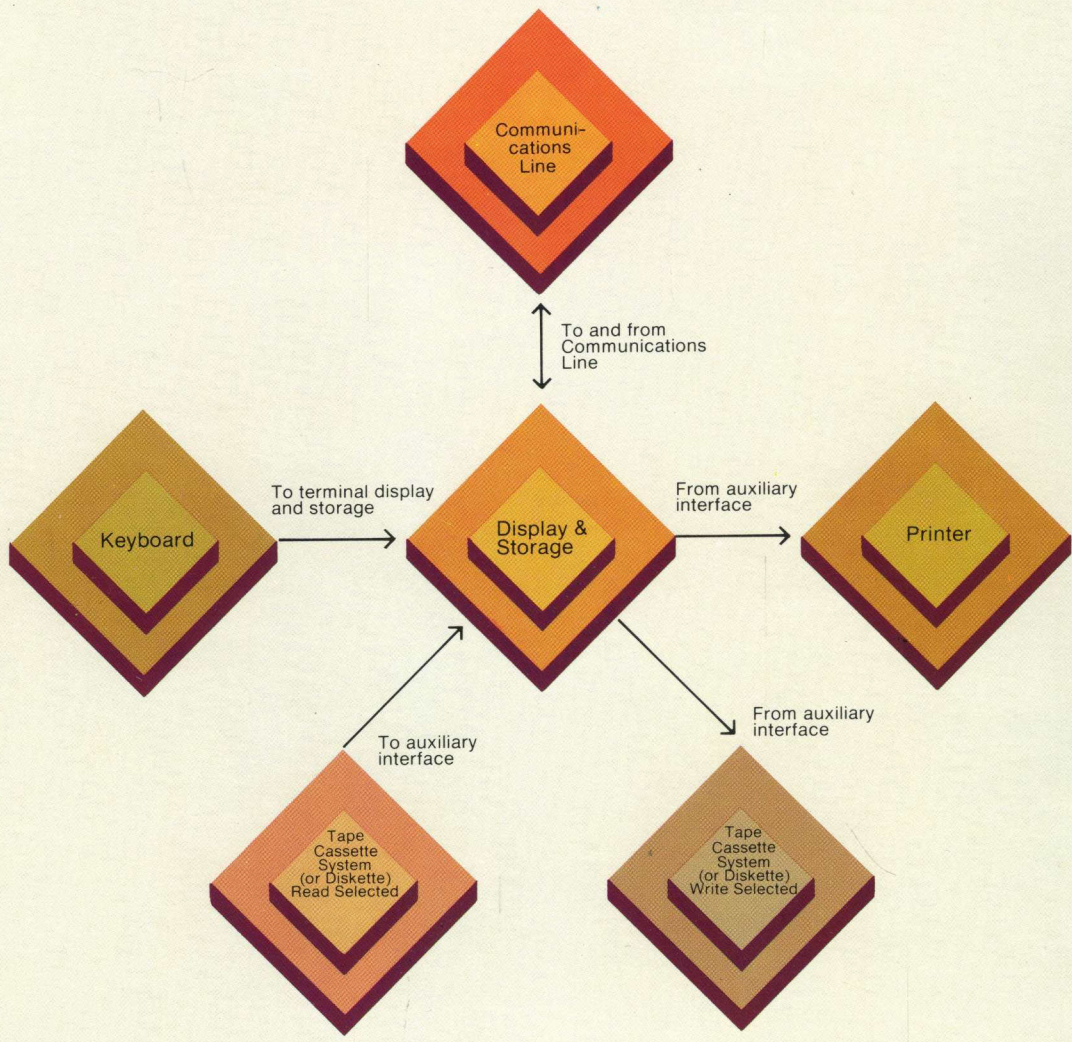
C.H.E.C.

1. SPRING-SPRING PINS  
2. FLND NUTS  
3. SPACERS

INDUSTRIAL RETAINING RINGS

1. EXTERNAL RETAINING RINGS  
2. INTERNAL RETAINING RINGS  
3. APPLICATORS

SPERRY UNIVAC  
UTS 400



## UTS 400 Peripheral Subsystems . . .

Your UTS 400 can be greatly enhanced by the addition of one or more of its associated peripheral devices.

You can choose among the Series 600 magnetic tape cassette system, the freestanding diskette subsystem, the Series 800 terminal printer and the communications output printer. A master station or a cluster of stations can be equipped with any combination of these peripheral subsystems. The data transfer relationship of these devices can be seen in Figure 2.



The Series 600 magnetic tape cassette system gives you off-line file accessibility and extensive off-line file-building capability. It is a desk-top system that writes data onto tape, storing up to 1,440,000 characters with a single loading of the dual cassette transports. The cassette can read from tape to the UTS 400 display, quickly locating the screenful of data you want. It also makes possible large, batch-like transmissions, either to or from the terminal, for the most efficient use of resources and personnel.

The freestanding SPERRY UNIVAC diskette subsystem gives you vast off-line file accessibility and extensive off-line file-building capacity. With this desk-top device you can write data onto flexible disks, or read data upon command from either your UTS 400 or central processor. Each flexible diskette has a recording surface that can contain 256,000 bytes of random-access storage, with two diskettes available per unit. With the diskette you can store partial or complete files as called from your central computer, or maintain working files of current interest, storing them for later transmission to your host processor.

The Series 800 terminal printer uses a non-impact printing method to produce a single copy of the data displayed on your UTS 400 screen. It operates at up to 300 characters per second. Printing in the 80-column format, this desk-top device reproduces the full upper case and lower case ASCII character set in clear, easily readable print.

The freestanding communications output printer, using an impact method, prints data at rates up to 30 characters per second. It can print multiple copies, and accepts various sizes of continuous, sprocketed forms. It too accepts the full ASCII character set, converting lower case to upper case and printing upper case only.



**Figure 2:**  
Data Transfer Relationships of the UTS 400  
and Its Peripheral Subsystems.

### Versatility to Meet Your Needs . . .

From a single station, to a small cluster, to large clusters as can be seen in Figure 3, the UTS 400 is the answer to your data communication terminal needs.

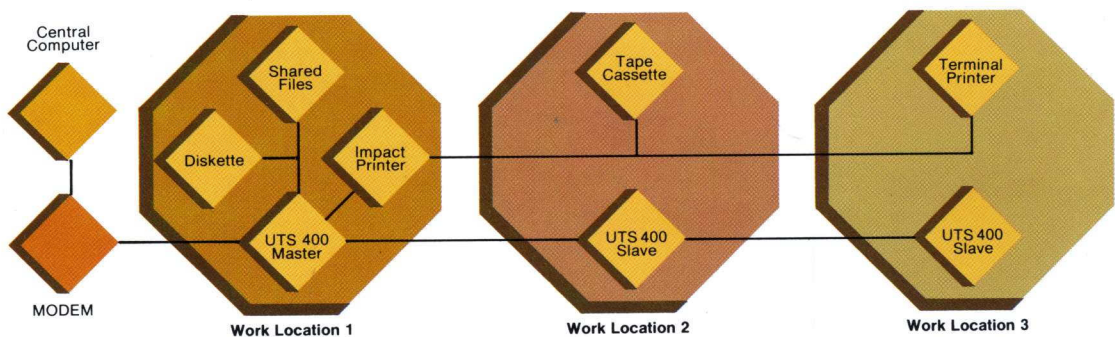
Its intelligence gives you power at the remote work site, helps off-load your central computer, makes work easier and more accurate, gives you the capability and versatility you need.

Built-in functions assure you of reliability, easy maintainability and data integrity.

Sperry Univac, a worldwide leader in data processing systems, assures you of excellence—in hardware, in service, in pricing.

For businesses, industries, hospitals, airlines, government agencies—any organization with large- or small-scale communications needs—the UTS 400 is the intelligent terminal answer.

No other system of its size and type can offer you so much.



**Figure 3:**

UTS 400 Cluster Diversity for Many Applications. You can configure the UTS 400 as a single station, in a small cluster, or in a much larger cluster. Each station or work location—even though part of the total system—retains its own integrity for on-line or off-line applications. For example, the UTS 400 "slave" at work location 3 can communicate with the central computer at will, with the UTS 400 master at work location 1 essentially transparent. All devices anywhere in the cluster can be shared, and off-line file development or maintenance can be performed at any appropriate station.



FMC

FMC

WAITING FOR THE NEXT AVAILABLE

Account No.	Balance	Trans.	Chq. No.	Balance
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000
1000000	1000000	10	100	900000

OLIVETTI OLIVAC

OLIVETTI OLIVAC

UTS 400

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