

**SPERRY UNIVAC Distributed
Communications Processor**

**Featuring TELCON, the
Intelligent Communications
System**





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START STARTED                               TIME 101-00-05
READY                                         DATE 06/27/76
READY                                         WPS/MS/100/73
PULSE TRIP COMPLETE
PROGRAM LOAD COMP ETC
P
SYSTEMS SYSTEM LEVEL 1.0.7
MODE -- MIXED SALT LAW
PROCESSOR C/A 300
PETS ON LINE
P 7
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SPERRY UNIVAC

Heritage 100

TELCON—The Intelligent Distributed Communications System . . .

All too many data communications networks, like Topsy, have "just grown."

The reasons for this random growth instead of intelligent planning are many: the lack of a common structure; the introduction of new concepts on old designs; the incompatibility of older terminals with newer processors and vice versa; the necessity to pull processing power from the central processor and the software modifications that requires; the requirements of individual industries for special terminals; and many more.



Now SPERRY UNIVAC has called upon its worldwide research and development resources in the field of data communications to create a *total* communications system solving the problems of disorder and adding the benefits of exact planning.

The benefits of a planned intelligent distributed communications system are many:

- you can save valuable data-processing resources by decreasing the need for host processing and memory.
- you can heighten overall performance, availability and reliability by dispersing functions among system components.
- you can reduce total costs through better line utilization and better response times.

The comprehensive SPERRY UNIVAC TELCON intelligent communications system gives you all the distributed processing power, network functions and flexibility you need to support an extensive communications environment. Especially in multiple applications use, it gives you the advantages of single-source network software and common processor components.

Importantly, it locates the network intelligence and control where it belongs: in the network. This provides efficiency, topological independence and all the benefits of stand-alone resilience.

The SPERRY UNIVAC TELCON System gives you capability, versatility and growth capacity with economy. It is a system you can *plan* intelligently, and *use* efficiently.

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All specifications subject to change.

The Total System . . .

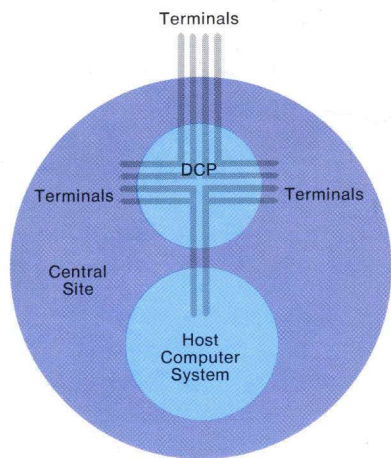


Figure 1: Classical "Star" Communications Network.

The SPERRY UNIVAC TELCON System is the result of two important technological advances in data communications:

- the SPERRY UNIVAC Distributed Communications Processor.
- and the SPERRY UNIVAC TELCON network software.

The Distributed Communications Processor is available in a variety of configurations to meet every need, each with its complete functions and benefits. It takes the data-communications network burden from the host processor, making the total operations more powerful, efficient and economical.

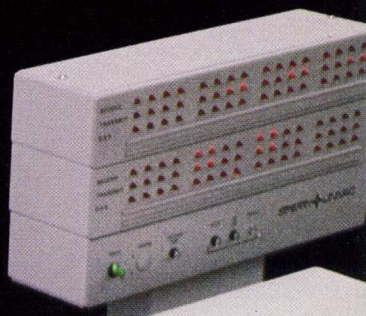
The TELCON network software provides assured control *within* your network, independent of your host processor. It is modular, which allows communications processors to function as intelligent remote concentrators, nodal processors or

front-end processors, as required. With TELCON, you can use any or all of these distributed communications capabilities to satisfy your teleprocessing needs.

And you can grow from your present data-communications system to the most advanced system possible through a number of different paths: the simplest network—or the most complex—can be extended or reconfigured as a distributed communications system by TELCON in a way that meets your cost-effectiveness requirements.

The classical "star" network configuration (Figure 1) can easily evolve through simple configuration changes into a hierarchical distributed configuration (Figure 2) to *total* distributed communications systems (Figures 3A-3C) for more control, greater capability and better economy than you have experienced in the past.





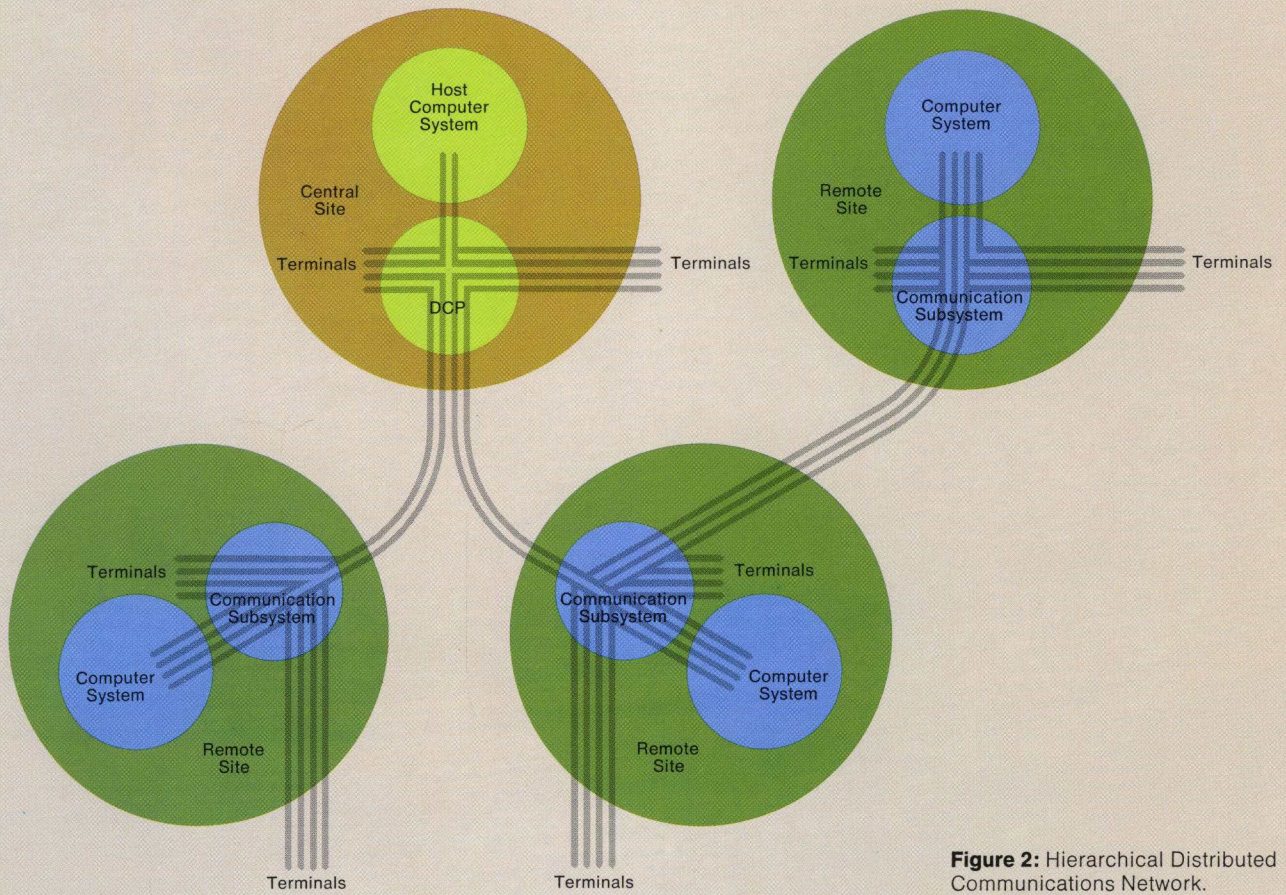


Figure 2: Hierarchical Distributed Communications Network.

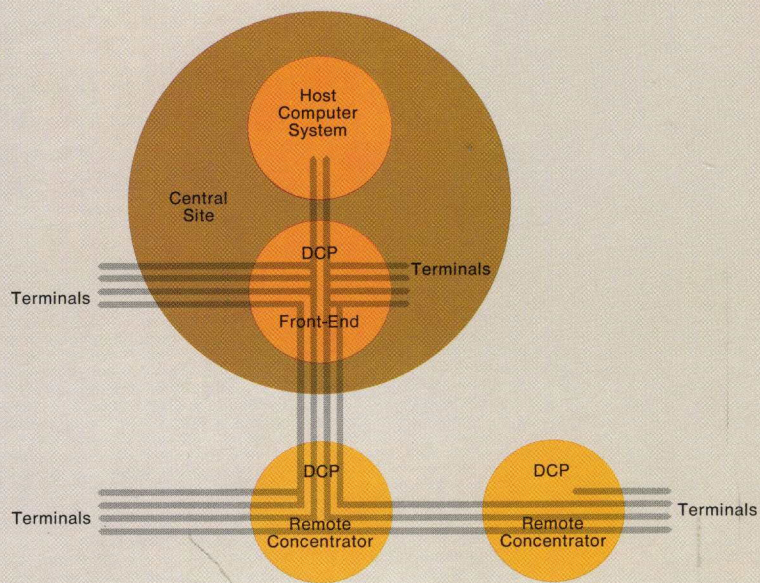


Figure 3A: Hierarchical Network

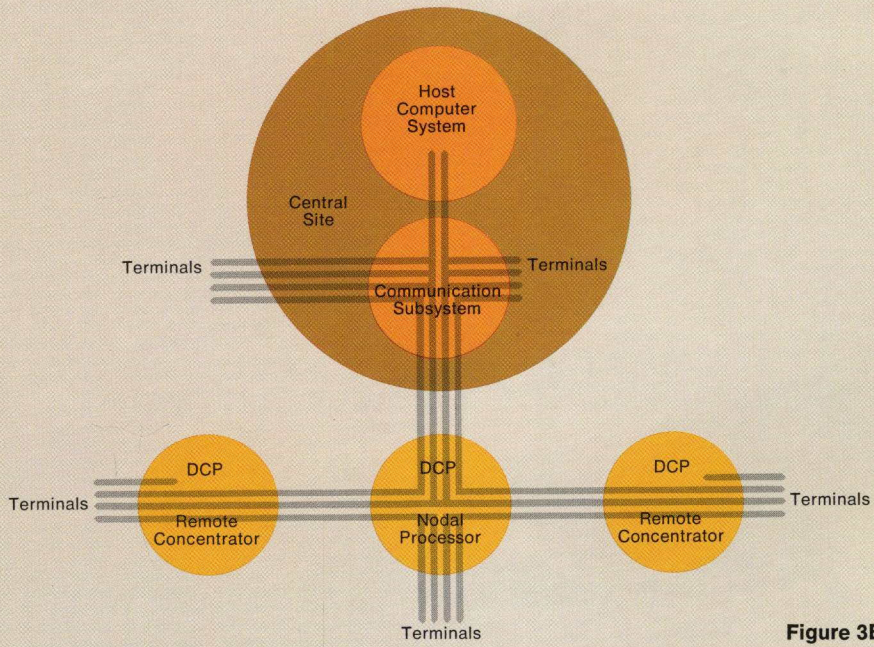


Figure 3B: Distributed Network

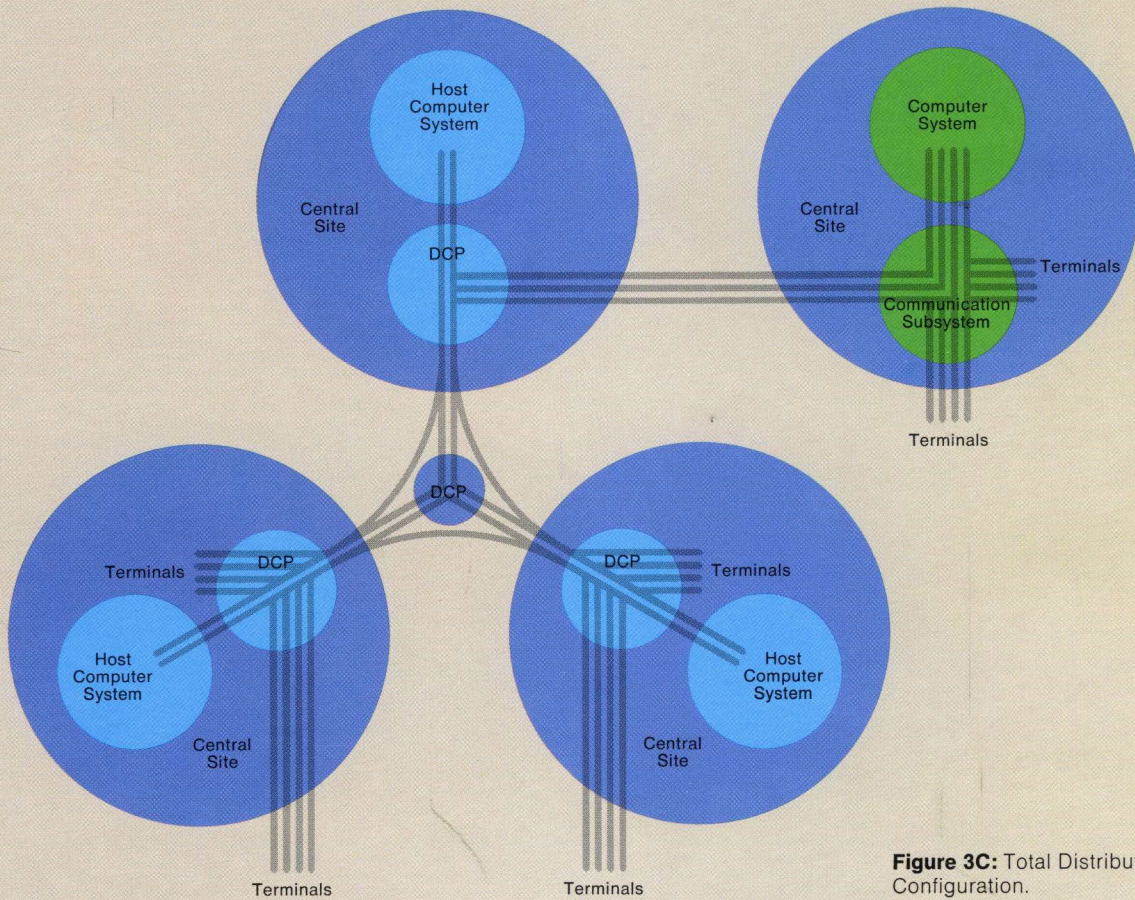


Figure 3C: Total Distributed Configuration.

TELCON Capability . . .

The disk-based TELCON software system gives you a variety of network capabilities. It accommodates direct-channel or communications-line connection to the data-processing host, allowing easy implementation and use. With TELCON, most of your communications functions can be distributed into the network, removing the communications load from your host processor.

You can adopt and use the TELCON system with minimum or no user conversion. Since it separates your network from host processor or terminal components, you can implement a network without modifying your host processor—whatever it might be. Similarly, you can replace or alter both your host processor or your terminals without impacting TELCON.

To enhance the flexibility of the communications range you get with TELCON, we make user programmability an available feature. With our system, you can now have programming capability at the SPERRY UNIVAC Universal Terminal System, the intelligent remote concentrator, the nodal processor or the front-end processor, allowing a complete distribution of functions.

The TELCON software supports a broad range of line terminations, and the Distributed Communications Processor provides extensive resources both to your host processor and to all the terminals connected to your network.

TELCON network software also provides network management functions, scheduling, routing,

message-switching, error-detection and recovery facilities. It permits terminal and device independence through complying with the interfaces and protocols of SPERRY UNIVAC Distributed Communications Architecture.

More than this, with TELCON your terminals can also operate in multi-modes, giving you demand and real-time application support on a single terminal for as many terminals as you have in your network.

TELCON is a multi-tasking, storage-resident or disk/diskette operating system. See Figure 4. It handles a full range of peripherals and communications lines. Two direct interfaces to the host system are supported under the operating system. The Interface Channel Adapter permits attachment to byte-oriented channels, while the Remote Input/Output Controller is used for word channels.

A number of terminal- and line-handlers provides you with the capabilities you need for supporting all the most common SPERRY UNIVAC terminals, as well as a number of selected foreign terminals.

Many network functions are included to provide message control, routing, sequencing, queueing, flow control and management services. There are also provisions for a network control administrator and a network security system. SPERRY UNIVAC 1100 Systems will also support a Distributed Communications Processor cross-assembler for TELCON.

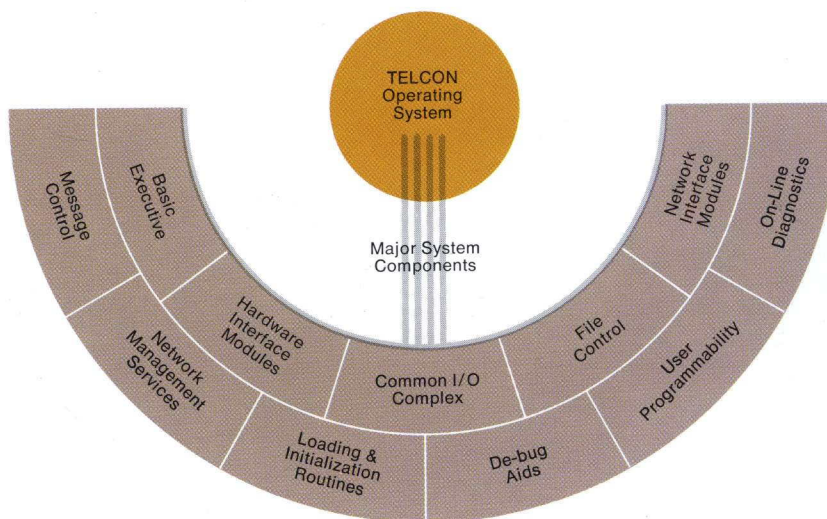


Figure 4: The TELCON System.

Peripherals and Facilities for Growth . . .

A diskette subsystem, disk subsystem, tape subsystem and console are the principal peripherals offered with the SPERRY UNIVAC Distributed Communications Processor.

Diskette subsystems range in capacity from 250 to 500 kilobytes. They are available in single- and dual-diskette configurations. Disk subsystems are available in capacity increments of 10 megabytes up to a total capacity of 40 megabytes.

A tape subsystem is available to suit your requirements, offering 9-track, 1/2-inch tapes with a choice of 800- and 1600-bit-per-inch densities.

A console can be connected either directly to the system or can be a designated terminal within the system. The directly connected console provides a 960-character screen format.

Communications facilities for growth on the distributed communications processor are also comprehensive, accommodating most line capacities, types and speeds. They include:

- Scanner I—This is the basic scanner, making up to 16 full-duplex lines available. Upon expansion, the scanner can operate with up to 32 full-duplex or 32 half-duplex lines.
- Scanner II—Up to 64 full-duplex or 128 half-duplex lines are available in the Scanner II. One or two Scanner II's may be attached to the processor, thus providing a total of 128 full-duplex or 256 half-duplex lines.

- Line Adapters—A wide variety of line adapters is available with the scanners. These include asynchronous, synchronous, ADCCP, HDLC, UDLC, TWX and wideband (19.2K bps to 56K bps).

This provision of peripherals and communications facilities for growth is illustrated in Figure 5.

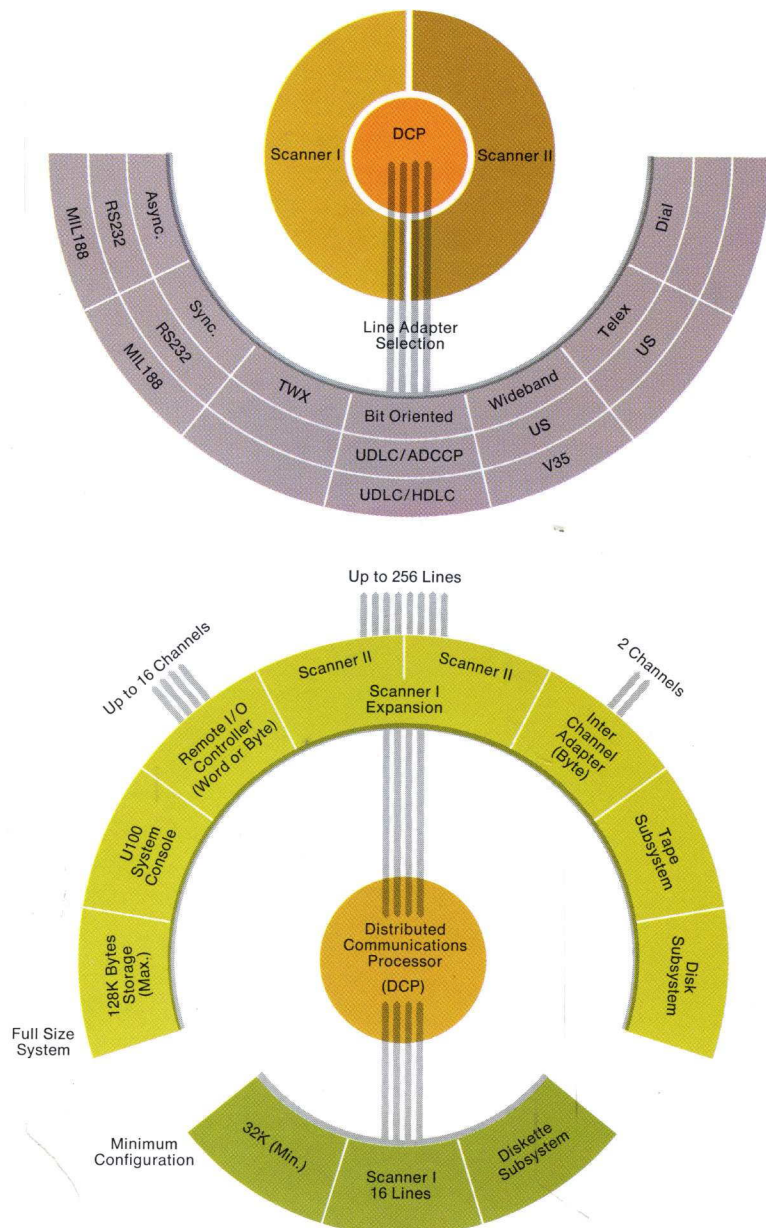


Figure 5: Growth Possibilities in the Distributed Communications Processor and Network.

Versatility and Intelligence

The Distributed Communication Processor with the comprehensive TELCON network software, offers you the intelligent, versatile communications system you need for your continuing success.

With it you get the superstructure, the hardware and the software you need for accommodating your present, and your future.

The total system gives you the advantages of functional independence by off-loading your host computer and distributing the processing work involved in your

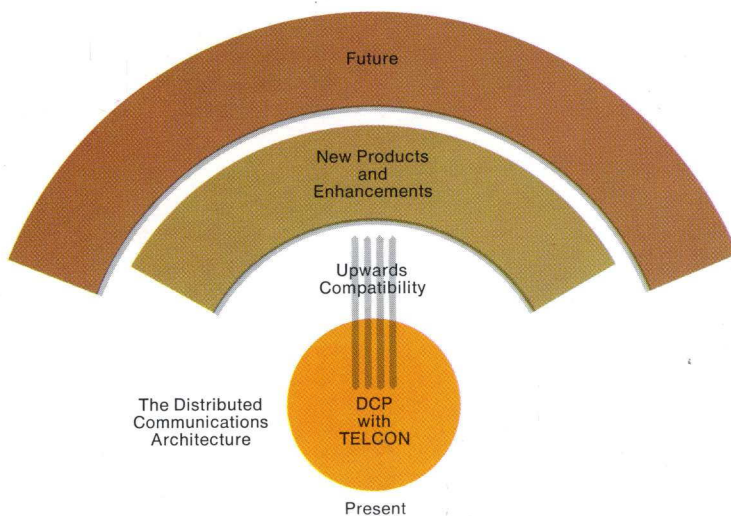
communications functions. Its stand-alone capability, modularity and flexibility of configuration let you plan for future growth with intelligence and confidence.

You get ease of installation, availability, reliability and maintainability benefits—because the product is from Sperry Univac, the company that serves the world. Data security and integrity almost go without saying.

With our total data communications system we offer you the latest advances in technology and research. They come down to architectural concepts, hardware and software designed to give you:

- distributed processing.
- intelligent networks.
- communications system transparency.
- full-range networking.
- provision for multiple hosts.
- provisions for various terminals.

With the SPERRY UNIVAC TELCON System you can plan, rather than react, control rather than compromise. You get what you always wanted—and never before could get—in a data communications system for the present and the future.





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