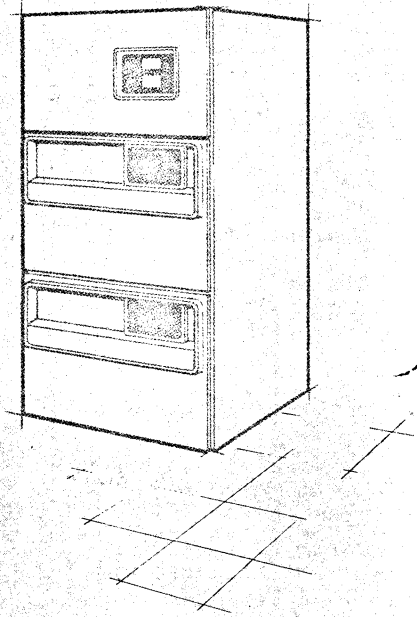
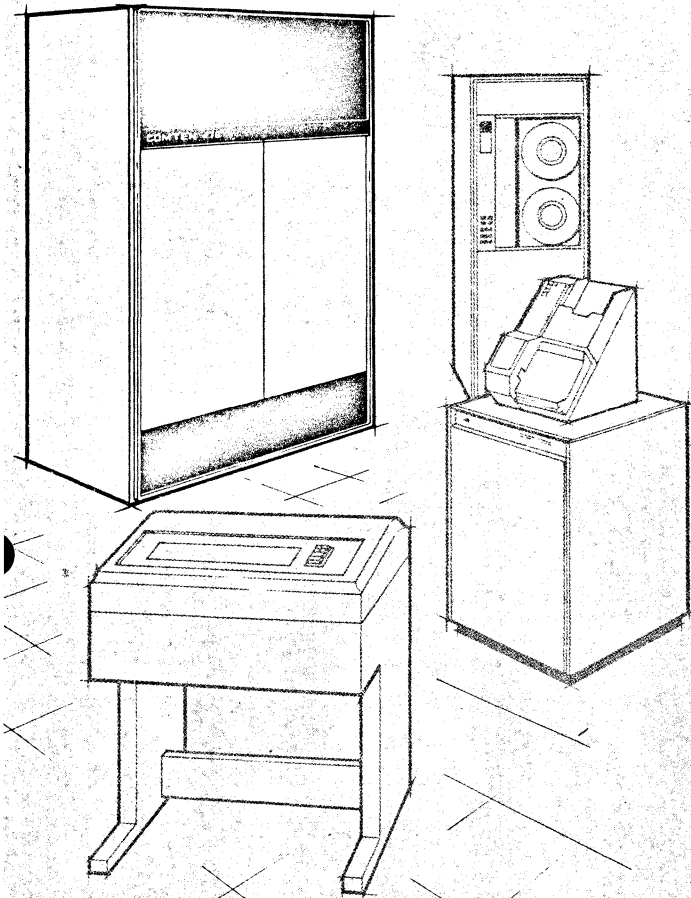


COMTEN 476

COMMUNICATIONS SYSTEMS



FEATURES

- Complete Header Analysis
- Flexibility in Routing Messages
- Date and Time Stamping
- Sequence Numbering
- Core Queue Capability
- Disk Queueing Capability
- Priority Message Selection
- Statistical Analysis
- Recovery
- On-Line Retrieval
- 360/370 Channel Interface
- File Level Interface
- Interfaces 256 Communications Lines
- SDLC Capability
- TDM Support
- IBM Compatible Peripheral Support
- On-Line System Activity Monitor

The COMTEN 476 provides the user with an extremely powerful, cost effective solution to his communication problem.

The COMTEN 476 System can be configured as a message switching system, front-end system or as a combination message switching, front end system. The 476 is capable of interfacing a variety of communications equipment, computer peripherals and general purpose computers.

Control is provided by a Network Control Package which provides file level interface to the host processor. The COMTEN 476 System assures the user of complete message integrity and provides an automatic message level recovery.

Outstanding features of the system include on-line message retrieval, dynamic on-line traffic statistics, full console capabilities, and the ability to queue messages via disk or core storage.

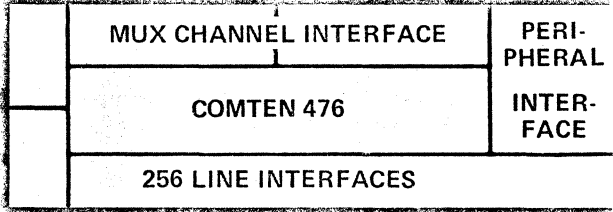
The COMTEN 476 System enhances overall system performance by relieving the host processor of communication overhead and by greatly expanding the number of terminals capable of accessing this system.

IBM
360/370

IBM
360/370

CONSOLE

SAM



DISK
CONTROL

DISK

TAPE
CONTROL

TAPE

TAPE

TAPE

AT & T
8A SERVICES

86B

IBM 2780

IBM 2260

81D

TWX

IBM 360

IBM 1030

CARD READ/
PUNCH

83B

TTY
33/35/37

IBM 1050

IBM 1060

PRINTER

86A

BURROUGHS
TC 500

IBM 2740

IBM 1130

IBM 2741

TDM

IBM 3270

IBM SDLC

Orderly flow of work through the COMTEN communication system is controlled and maintained by the COMTEN Supervisor. This versatile executive system assures maximum system efficiency by overlapping compute and I/O tasks of several programs.

Supervisor functions include:

- Concurrent, multi-sequential task scheduling by priority.
- Program execution on variable time basis via Real Time Clock.
- Peripheral allocation and I/O control.
- Communications I/O initiation and coordination.
- Interrupt tabling.
- Console control.

The COMTEN Telecommunications Access Method (CTAM) provides the communications control functions and interfaces to many different types of lines, services, and terminal devices. CTAM consists of two unique software packages: the Network Control Package (NCP) for the COMTEN Processor and the Computer Interface Package (CIP) for the IBM 360/370. NCP provides stand-alone message switching, and when used in conjunction with CIP, provides front-end capabilities as well as message switching. CTAM provides the means of describing the system configuration, the procedure to be applied to each message and the generation of the system tailored to these descriptions. By having the capability of defining the system by the user's parameters, only the necessary code is generated. This eliminates the unnecessary overhead, time delays, and storage space requirements of a completely generalized system.

The Network Control Package (NCP), the COMTEN resident portion of CTAM, is responsible for controlling the communication lines and terminal devices, validating message header information, line error processing, queueing messages to the proper destination, delivery of messages to their proper destination, and inter-

facing to the Computer Interface Package in the IBM 360/370 when used in a "front-end" environment.

NCP is a set of procedures (PROCS, MACROS) which are called from the COMTEN software libraries at system generation time. The user's own System Configuration Definition (SCD) and Line Procedure Statements (LPS) generate the code necessary to support the Network Control and Front-End requirements. Outstanding features of NCP include:

- Dynamic table entry at start up time.
- System recovery.
- Queueing, both in core and on disk.
- Priority message selection.
- Host processor support.
- Complete header analysis support.
- Wide variety of terminal and communication services support.

The Computer Interface Package (CIP) is the IBM 360/370 resident software which interfaces to NCP when the COMTEN Communications Processor is used in a "front-end" application. CIP provides the user with a file level interface which facilitates access to messages being queued by the NCP. CIP consists of a COMTEN device handler that is appended to the IBM operating system nucleus which follows IBM protocol and interfaces to worker programs by means of a SVC and parameter packet. CIP also provides MACROS which are added to the user's IBM System MACRO library. The MACROS are called by the IBM 360/370 applications programs and provide an interface to the system at the file control level which is independent of individual device characteristics.

In summary, the COMTEN 476 Communications System offers the user a cost effective, flexible, high performance system capable of reducing host processor overhead, reducing line and network costs, and most important, providing more efficient system operation.

SPECIFICATIONS

INSTRUCTION SET

- Instruction Repertoire consists of a 52 instruction subset of standard IBM Instruction Set
- 8 special instructions to facilitate handling of communications data
- RR, RS and RX formats

STORAGE

- 750 ns. cycle time (32 bit plus parity)
- Expandable in 32K byte increments to maximum of 512K bytes
- 4 byte interface between storage and CPU
- Parity checking per byte
- Storage protection provided for 64 memory increments on 8K byte boundaries

PROCESSOR

- 16 general registers (32 bit)
- Initial Load Device
- Operator console with complete console utilities
- Hardware tabling of interrupts

COMMUNICATION I/O

- 256 communication channels
- Full or half duplex protocol
- Asynchronous, synchronous or binary synchronous modes
- Standard Industry Interfaces: RS-232, Mil 188, DC Loop
- Auto Baud Rate Detection
- Auto Answer/Auto Dial
- Any mix of line speeds up to 230.4K bps
- Code levels of 5, 6, 7 or 8 bits

PERIPHERAL SUPPORT

- Disk Storage (I/O Channel Interface)
 - COMTEN 7312/6312 6.25 megabytes, avg. access - 80 ms
 - COMTEN 7214/6214 59 megabytes, avg. access - 35 ms
 - COMTEN 7108/6108 2 megabytes, head/track, avg. access - 8.7 ms.
- Magnetic Tape (I/O Channel Interface)
 - COMTEN 7320/632X 1600 bpi; phase encoded; NRZI compatible option; Maximum of 8 drives, 25 ips/45 ips
- Punch Card (RS 232 BSC Interface)
 - COMTEN 730X
 - 80 or 96 column read/punch capability
 - 300 cards/minute Reader
- Printer (RS 232 BSC Interface)
 - COMTEN 7405/7406
 - 136 character print line
 - 300/600 lines/minutes for 64 character set
 - 96 character set optional

PHYSICAL

Power	Dimensions
208V ±10% 60 Hz	Height - 75 3/4 inches
Weight	Width - 57 3/8 inches
1000 pounds	Depth - 27 1/8 inches
Temperature	
62°-80° Operational	Heat
Humidity	11,600 BTU/Hour
35-60% - Normal	1000 CFM Airflow