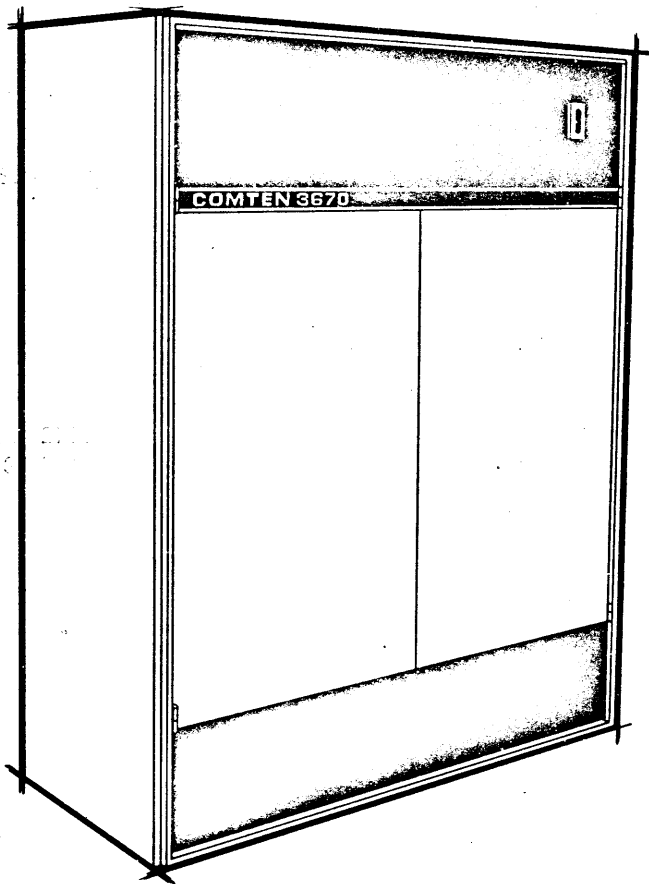


COMTEN 3670

COMMUNICATIONS SYSTEMS



The COMTEN 3670 is a versatile, high-performance communications system. It allows an IBM System 360 or 370 to communicate with remote terminals and computers over a wide range of communications facilities. The 3670 presents to the System 360/370 an IBM compatible interface which emulates all 2701, 2702 and 2703 functions. In addition, the 3670 is compatible with the IBM 3704/3705 in both the emulation and native modes.

The COMTEN 3670, in its most basic form, is a plug-compatible, software transparent, cost effective replacement for IBM 270X equipment. In Native Mode, the 3670 provides a compatible interface to the IBM System 370 with TCAM and/or VTAM. The IBM user further benefits from the growth potential, flexibility and reliability.

A single COMTEN 3670 can simultaneously access as many as four (4) IBM 360 or 370 Systems. A Terminal Initiated Line Switching function (TILS) allows a terminal to access any application program, in any of the IBM systems to which it is connected. The same function can be accomplished at the central computer site through the use of Site Initiated Line Switching (SILS), which is controlled by the 3670 console. Both TILS and SILS functions can be further expanded to allow a terminal which is connected to any COMTEN 3670 to access an IBM System which utilizes a 3670 at another, physically remote location.

FEATURES

- Full or Half Duplex Operation
- Any Mix of Line Speeds from 45 to 230.4K bps
- Up to 384 Lines
- Throughput Up to 84,000 characters per second
- Auto Answer - Auto Dial
- Auto Baud Rate Detection
- RS-232-MIL188-DC Loop Interfaces
- IBM 270X, 370X Compatible
- Native Mode (NCP)
- Partitioned Emulation Processing (PEP)
- Remote Concentration
- Terminal Initiated Line Switching
- Site Initiated Line Switching
- Inter-Site Access Facility
- Full Console Utilities
- Complete Diagnostics

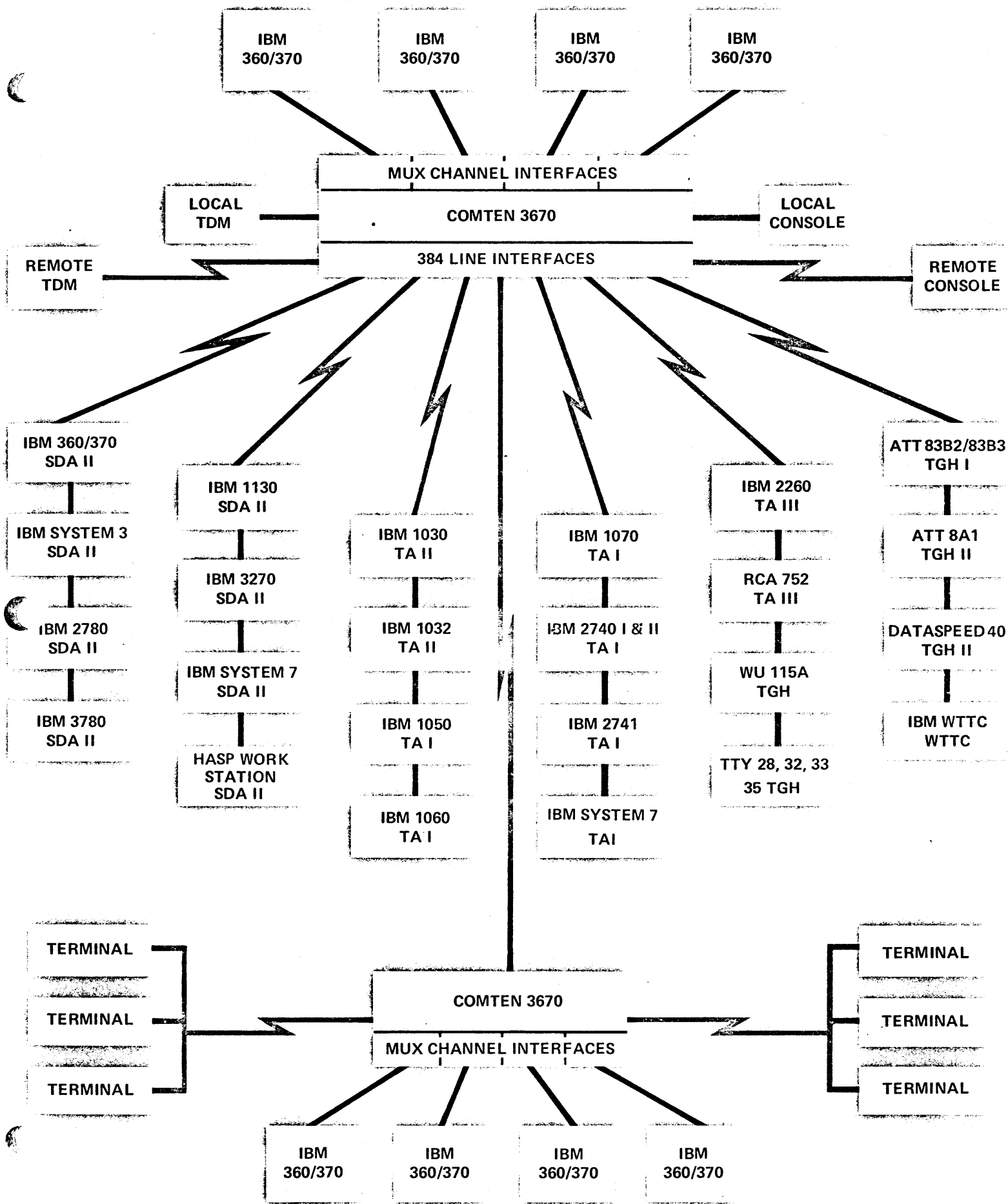
The COMTEN 3670 features a flexible, modular, state-of-the-art design to meet today's and tomorrow's communications requirements.

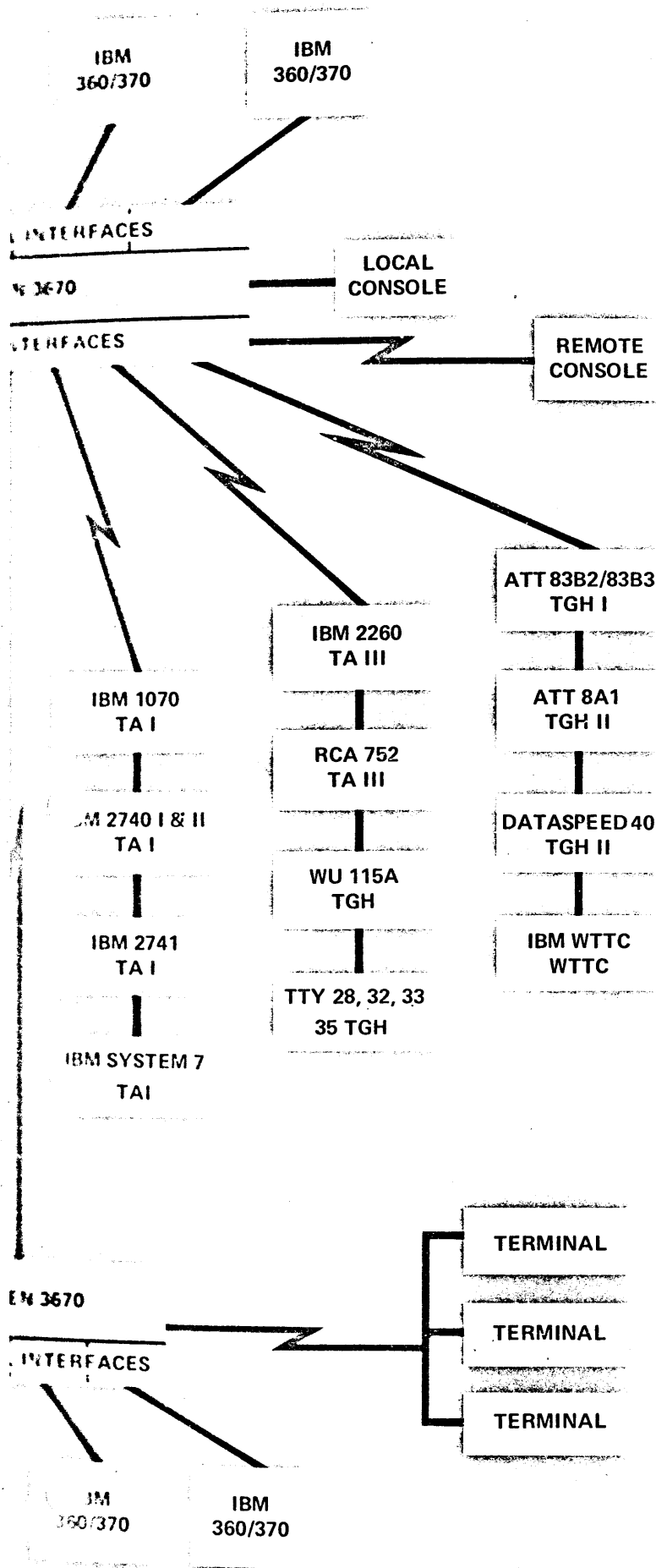
The hardware architecture is extremely modular. Storage is expandable to 512 kilobytes. Multiplexer channel interfaces are expandable to four (4) interfaces.

Each of the multiplexer channel interfaces has the capability of interfacing up to 256 subchannel addresses. Subchannel addresses can be bypassed on an individual basis. This capability allows for replacing several IBM 270Xs or 370Xs not necessarily having contiguous subchannel address assignments; thus, allowing for the greatest amount of subchannel utilization in an emulation system.

The features that allow the superior throughput rates of the COMTEN 3670 are the communications channels and the multiplexer channel interface base. The 3670 communications channels perform all character buffering and, in the case of BSC lines, all BSC protocol and error checking. This method of line handling significantly reduces processor overhead allowing the processor more time for accommodating the many unique functions offered in the COMTEN 3670. The multiplexer channel interface base unit is basically a micro-programmed mini-computer utilizing associative memory techniques.

The base unit handles all multiplexer channel protocol, code detection, command detection and error control. Each multiplexer channel





interface has a sub-channel priority structure allowing higher speed subchannels (e.g., BSC lines) to have access to the channel more frequently than lower speed subchannels (e.g., stop-start lines). The multiplexer channel interface, thus, allows for the highest possible multiplexer channel utilization.

As an emulator, the COMTEN 3670 is a plug-to-plug compatible replacement for the IBM 2701, 2702, and 2703. The COMTEN 3670 outperforms the IBM 3704/5 emulator in terms of type of terminals supported, number of lines supported, number of host 360/370s, throughput and the many additional features offered on the 3670.

In Native Mode, the COMTEN 3670 provides a compatible interface to IBM TCAM and IBM VTAM. The emulation features provided by the COMTEN 3670 are also provided in Partitioned Emulation Processing (PEP) systems which combine both native and emulation mode software. The 3670 again outperforms the IBM 3705/3704 in Native Mode in terms of terminal types supported, number of lines supported, number of host 370s supported and throughput rates accomplished.

The 3670 console is an integral part of both Emulation and Native Mode. The console has a complement of both control and monitoring functions and a number of console utilities. The console provides a unique operational, program maintenance, and hardware maintenance tool.

SPECIFICATIONS

INSTRUCTION SET

- Instruction Repertoire consists of a 54 instruction subset of standard IBM Instruction set
- Eight special instructions to facilitate handling of communications data.
- RR,RS,RX and SI format

STORAGE

- 650 ns. cycle time
- Expandable in 16K byte increments to maximum of 512K bytes
- 18 bit interface between storage and CPU
- Parity checking per byte
- Storage protection against power loss or over temperature

PROCESSOR

- 16-32 bit registers
- Interfaces to 1024 IBM subchannels
- Integral Load Device (tape cassette)
- Operator console with complete console utilities
- Channel interface functions performed by CAM/RAM logic
- Throughput of up to 84K characters/sec
- Hardware tabling of interrupts

I/O

- 384 Communications 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

PHYSICAL

Power
208V \pm 10% 60Hz

Weight
1000 pounds

Temperature
60° - 80° Operational

Dimensions
Height - 75 3/4 inches
Width - 57 3/8 inches
Depth - 27 1/8 inches

Heat
17,200 BTU/Hour
1000 CFM Airflow

Humidity
35% - 60% (Normal Conditions)

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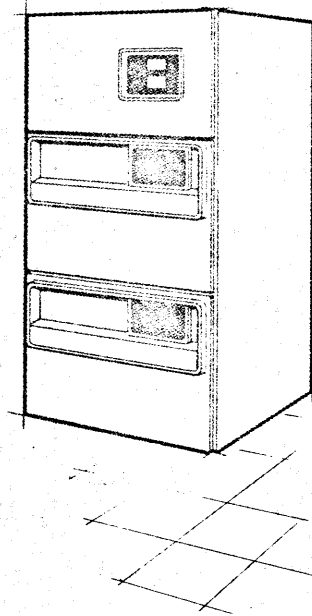
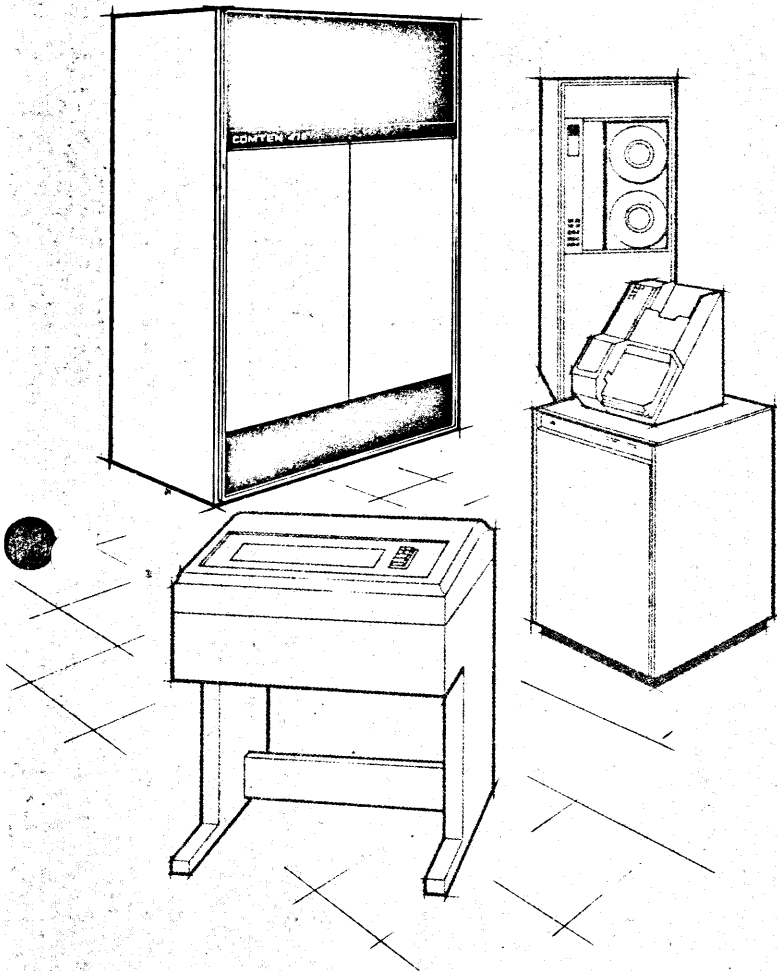
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COMTEN, Inc.

ST. PAUL, MINNESOTA

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.