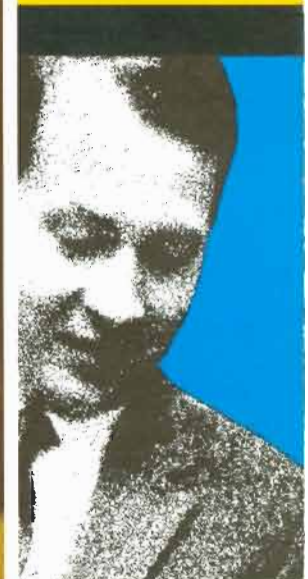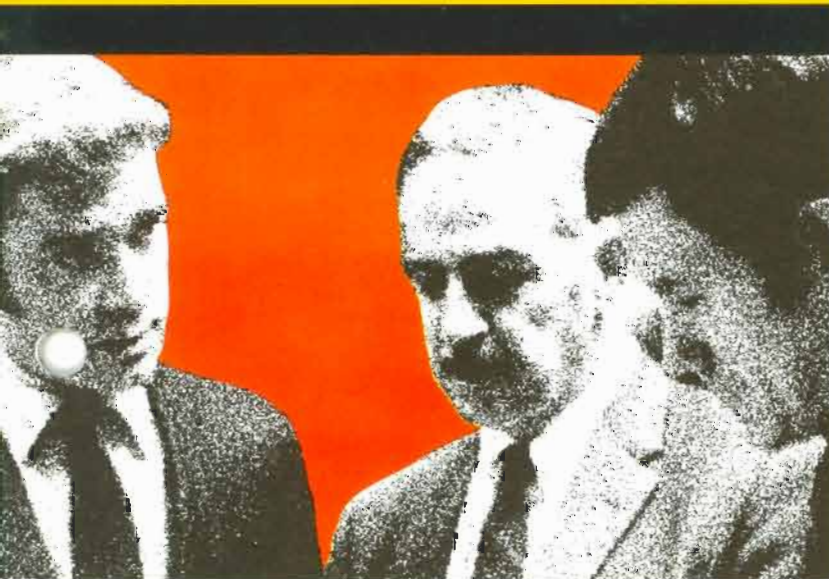# Get more from COM and your computer

HP 2022A magnetic tape reformatting system

Why you need an MTRS with your COM

Computer Output Microfilm is the name. But practically speaking, your computer is not always qualified to send data directly to your microfilm system. Each data processing system has its own physical format, using 7- or 9-track magnetic tapes. And carrying differing numbers of bits-per-inch according to the system's age or maker. There are differences, too, in the machine code used within the format and in the control codes used to give instructions. And your microfilm format, itself, demands that data be provided a specific way.

So your computer may not really be on speaking terms with your COM. The way in which a COM system wants its data may require that existing magnetic tapes be changed to a more compatible format. You can, of course, allocate expensive CPU time to the chore of reformatting. Or you can spend scarce systems analyst resources to reprogram applications software to adapt to COM.

But for efficiency's sake, use the HP 2022A Magnetic Tape Reformatting System (MTRS). It makes the data from a computer system compatible with a particular microfilm format. It eliminates the need for elaborate CPU software programs for running conversion routines. And it provides the only economic way to bring together multiple input data from several computer sources.
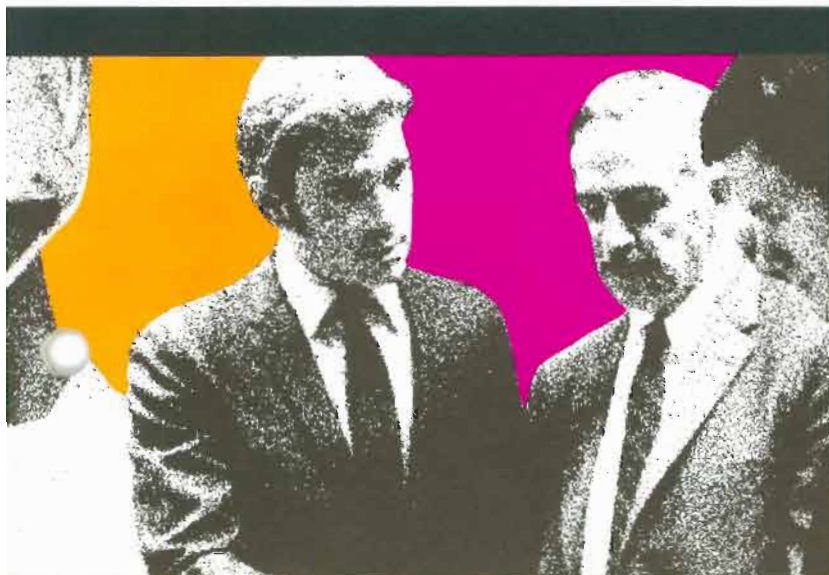
An MTRS frees your CPU for its primary role, and at the same time lets you get the most out of your COM. Your microfilmer can run at its own speed on its own time, and give immediate service on important reports when needed. New COM applications can be tried without changing existing information systems.

Only Hewlett-Packard components, designed and built to Hewlett-Packard standards, go into the compact system. The read-only tape drive will handle 7 and 9-track formats, ranging from 200 to 1600 characters-per-inch, giving you flexibility to handle tape from almost any source. The proper format is easily selected by a simple switch.

The HP minicomputer at the heart of the MTRS has proven ultra-reliable, with over 4000 now at work worldwide. The minicomputer has a 4-thousand 16-bit word memory. It reformats data on command from marked or punched cards fed into the card reader. On the output side, the interface hardware was specially designed by HP to link the MTRS with the microfilmer.
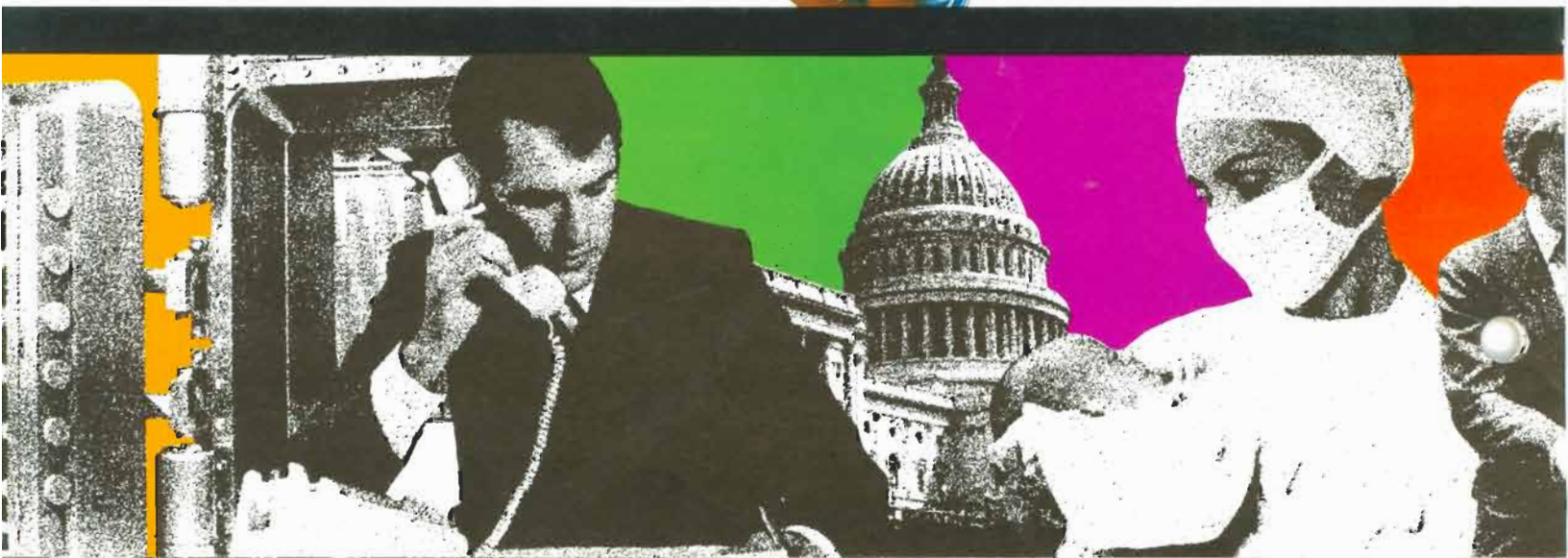

The slim, single-bay cabinet fits wherever you need it. Inside, it provides space to add other computer peripherals. In fact, the MTRS is an expansion plan itself. The addition of a teleprinter, for example, allows increased convenience and ease of operation. It provides you a printout of system messages and a list of jobs entered into the system. Additional types of output can be generated offline by adding a line printer for paper copy or a tape drive for transfer of reformatted information to other equipment.

Our system works in many ways
... in many places

Filing and record-keeping on microfilm is just beginning its boom. From archival storage to up-to-the-minute reports, the COM concept is expanding throughout banking, insurance, medicine, transportation, government. As the uses and tasks of COM grow even within one company, an HP system lets you adapt and expand with COM on an efficient and economical basis.

Our software modularity lets you tailor the MTRS to your specific formatting requirements. The MTRS is compatible with the output of major computer manufacturers. HP can provide software that adapts you to almost any computer output tape. And we can help you program your MTRS to various microfilm formats as well. A comprehensive set of COM application routines is now available. Additional routines are under constant development to meet expanding needs.
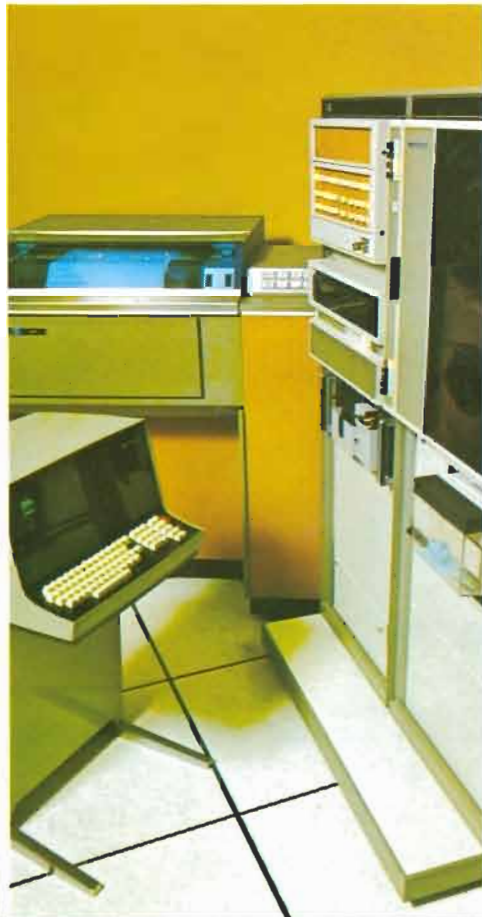
Our software help extends to your specific projects and problems, whether we have just the program you need now, or not. Software questions get answered fast at HP. Our systems analyst or salesman will be able to tell you if we have the specific CPU or COM software you need. Or we can analyze your specific requirement and develop a solution to fit your particular situation.
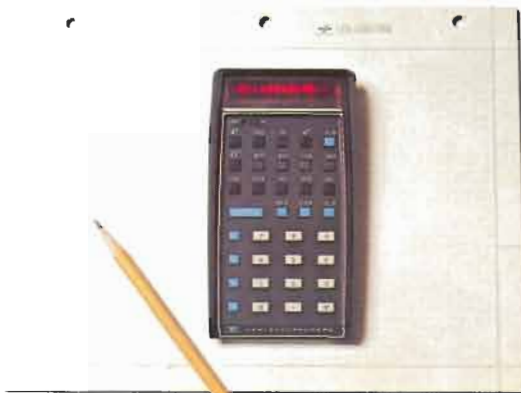
Typical of Hewlett-Packard systems, the 2022A MTRS is designed to work with other HP devices. After all, the MTRS includes a general purpose minicomputer. If a microfilming operation runs only four hours a day, there are 20 additional hours a day in which that mini can work for you. The MTRS software package that directs the processing of data for microfilming can be adapted to operate read/write digital magnetic tape units or line printers.

With a read/write tape unit, you can make tape-to-tape conversions. This is an important requirement at multiunit computer installations that utilize different tape formats. It also serves as a valuable back-up capability in case a microfilmer is out of order. Or it may be helpful to use your MTRS as a part time print station by linking it with an HP line printer. Summary statements can then be easily printed from microfilm reports.

You can also take full advantage of the MTRS mini by adding an HP Moving-Head Disc and a teleprinter. The hardware can then be operated using the HP Disc Operating System (DOS-M) software. The DOS-M has features like program chaining, extended file management, and a job processor that allows the mixing of FORTRAN IV, ALGOL and Assembly Language programs. Individual discs can handle up to 23-million bytes of on-line storage. The HP mini lets the system interface with more than a dozen other peripherals, including card readers, paper tape equipment, CRT terminals, line printers and plotters. With the spare computing time your MTRS offers you, it can do much more than just feed facts to your microfilmer.

You'll find us
an experienced company...
in both problem solving
and customer support

Our growth reflects our way of doing business. Hewlett-Packard's involvement with computers and data systems evolved from its original product base in electronic measurement instrumentation. Increasingly complex measurement tasks required more sophisticated tools of computation. And HP responded with the first general-purpose minicomputer designed from the ground up to provide ease of interface with a broad variety of both computer peripherals and measuring instrumentation.

Since 1966, HP has sold over 4000 minicomputers, over 200 time-share systems and over 100 disc-operating systems. Typically, we build what we sell. Our aim is to make a contribution, and by designing and building our own computers, peripherals and systems, we can provide more complete solutions. In the MTRS, for example, we build all the components.

HP is now 19,000 people strong, and has more than a dozen manufacturing plants world-wide. A company of this size can innovate and contribute in special ways. For one,

our rental and leasing programs for systems are unique for a minicomputer manufacturer. Our rental arrangements enable a customer to take delivery of a system without committing to either a purchase or a long-term lease. Rental contracts can be written for a period as short as 12 months. Leases are available for up to five years. And with an option to buy included.

HP has a practical, working philosophy that is now recognized by customers world-wide: deliver a dependable, quality product and support the user totally. Customer support is now the full time concern of more than 2000 HP people. Our 50 sales and service offices in this country and over 115 offices outside the United States deliver in-depth support for HP products and systems.

Systems Analysts are available in all regions to provide assistance in determining your specialized software requirements or to plan staff training. The Systems Analyst knows problem definition, system configuration and special-purpose software support. He consults with you both before and after delivery of your MTRS to make sure you are on-line as soon as possible.
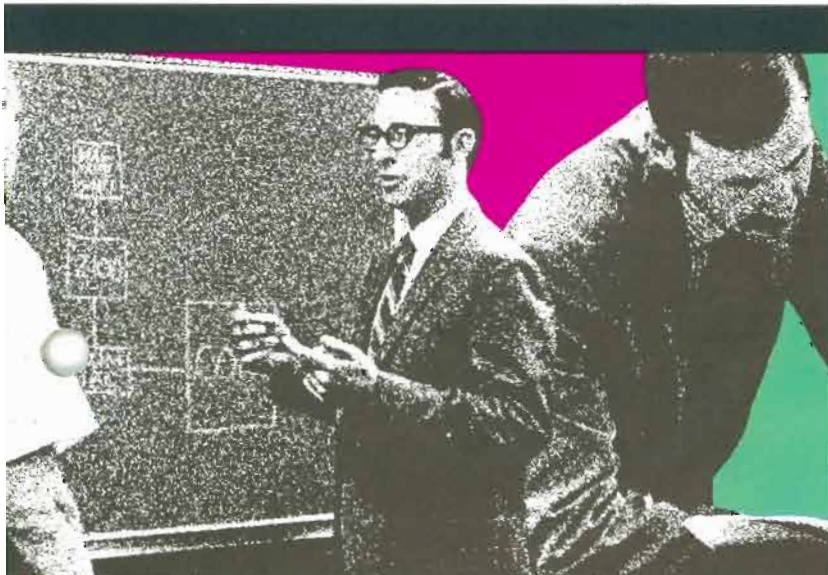
Regional Data Centers provide you with a point of contact for our systems analysts and other HP support services. The Data Centers in the U.S., Canada and Europe are equipped with a full complement of HP computer systems for use in customer training and for software program evaluation. With support

for our computer systems close to you, solutions to problems can be made as efficient and cost-effective as possible.

Service agreements are available which assure you of a complete preventive maintenance program at your facility by a fully-trained service representative. We can even make our maintenance programs as fully comprehensive as 7-day, 24-hour service. If your MTRS is rented, prime shift maintenance is included.

Training, data centers, systems analysts, and service are all part of the HP way. We support what we sell.

HEWLETT **hp** PACKARD