Prime Computer Systems for Interactive Data Processing

PRIME

Why Prime

Because Prime understands your interactive data processing needs. And builds systems to meet them.

Systems that make the transition to on-line operation fast and efficient, because they co-exist with your present environment, not disrupt it. Systems that give you high transaction rates. Systems that assure data integrity, consistency, security, and recovery, with a lot more than conventional parity, error messages, and hardware reliability. Systems that are highly adaptable, so you can respond to changes in your business as fast as your business can change. Systems that provide large-scale functionality, but at 1/10 the price.

With Prime, what you need is what you get

Prime understands:

• You need to get on-line fast, with minimum disruption. Lengthy development ties up programming resources, decreases responsiveness, and wastes money. So with Prime, you get a completely uniform, modular software system that makes it surprisingly easy to develop new applications, or convert old ones. Your system goes up fast, without causing major conflicts with your existing data processing environment, and goes on-line as an integral part of that environment.

• You need standard hardware and software for smooth, easy implementation and growth. Unique hardware and nonstandard languages can seriously disrupt your existing environment when you try to make everything work together. With Prime, you get computers that are upward and downward compatible throughout the product line, and a full range of familiar peripherals to match your applications. You get standard languages like ANSI '74 COBOL, FORTRAN IV, and IBM-compatible RPG II, so you don't have to retrain your programmers before the system can be productive. And you get standard database management facilities that comply with CODASYL Database Task Group recommendations. That means you don't have to deal with the problems and risks of here-today, gone-tomorrow implementations in this very important area.

• You need to be able to support many users concurrently. You also need to give them response as good or better than what they've been used to. So with Prime, you get a combination of performance, simultaneity, and capacity unmatched by any medium-scale computer system. (And

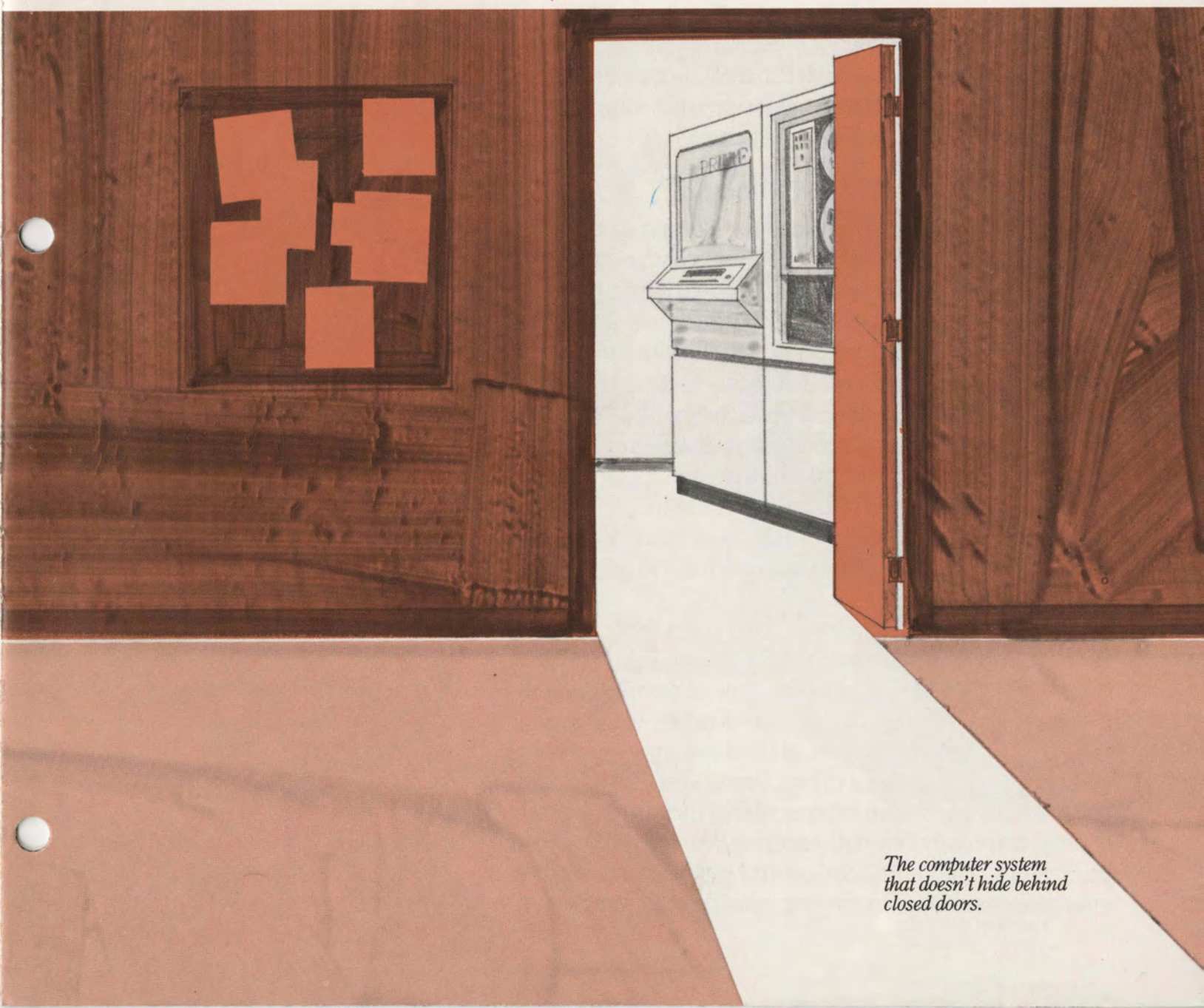
many large-scale systems, too.) You can support up to 63 users simultaneously, provide storage capacities measured in billions of bytes, handle high transaction rates and do it all with full data integrity.

• You need a highly reliable system with comprehensive recovery capabilities that minimize data loss and down time. An on-line failure can bring your business to an abrupt halt, and keep it stopped while you try to recover. Which turns your attention from running a business to the business of running a computer. With Prime, in addition to proven hardware and software, you get a completely integrated system of error detection features and recovery techniques for automatic and immediate on-line transaction recovery, as well as user-controlled off-line recovery.

• You need a highly adaptable system that takes the trauma out of change. If something simple, like changing a form displayed on a remote CRT, causes major repercussions, you can hardly be responsive to changes on a much broader scale. So with Prime, you get what we believe is the most adaptable system you can buy. As your business changes, you make quick, simple modifications to descriptive information outside the operational programs, without sending shock waves through the programs themselves, the programs they depend on, or programs that depend on them. Programs don't have to be rewritten or files restructured just to change the characteristics of a data field or to add a new type of terminal.

And you get it all at a surprisingly reasonable price

You might expect to pay a lot for a system that gives you so much. You can't match its functionality with anything less than a large-scale mainframe. But a Prime interactive data processing system costs 1/10 the price of a large system. And it's competitively priced with other medium-scale systems that can't approach its functionality. So even the price of a Prime system meets an important need — economy.



The computer system that doesn't hide behind closed doors.

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computer and human. Prime systems also minimize the problems of program conversions. Because your new computer may have to run existing applications, Prime provides industry compatible high-level languages, CODASYL-compliant database management, standard magnetic tape handling and data types for information exchange, and standard communications hardware and line protocols.

Prime helps you get there easily, fast, and economically. Which is the only reasonable way to go.

After you get there

Once your system is fully operational, reliability and performance become the measurement of its success.

Prime knows that your system is of little practical use, no matter how advanced its other features, unless database output is timely, consistent, and accurate. So Prime distributes its reliability through system hardware and software and out to the database itself. Prime systems protect your database against unauthorized use, detect inadvertent misuse, and provide recovery facilities if the database is damaged.

And because business operations occur on a random, transaction basis, rather than on a predictable computer schedule, Prime systems help you model actual business operations. They let you capture data when and where it happens and immediately validate and process it. Which, we think you'll agree, is more timely and less error prone than capturing data off-line, processing it off-line, and then entering it into the system.

Prime understands that transaction processing applications must provide good response to user terminals, so system and user programs are treated as reentrant, shareable, pure procedures to minimize intra-system serialization and queuing, and facilitate parallel transactions and multithreading. Getting high transaction rates also requires a high degree of concurrent database sharing, and that only occurs if sharing is freely permitted and convenient. So Prime systems allow up to 63 concurrent users unrestricted access to any data in the database which they are authorized to use, as readers or updaters, in any combination. And because such transaction rates and large numbers of concurrent users represent a high level of dependence on the data contained in the database, Prime systems protect against overlayed updates, resolve usage conflicts, present consistent views of the database, and provide on-line rollback recovery on a transaction basis.

Once you get there with
Prime, you've really
arrived.

And to help you keep your applications operating at peak efficiency, Prime systems provide facilities for system-wide data administration. This promotes consistent, identical meanings and descriptions of data in the database, as well as standardization of procedures for backup and recovery, validation, privacy, and security. All tasks become easier since the work of a few administrators is leveraged throughout your organizations.

Once you get there with Prime, you've really arrived.

Things change

It's inevitable.

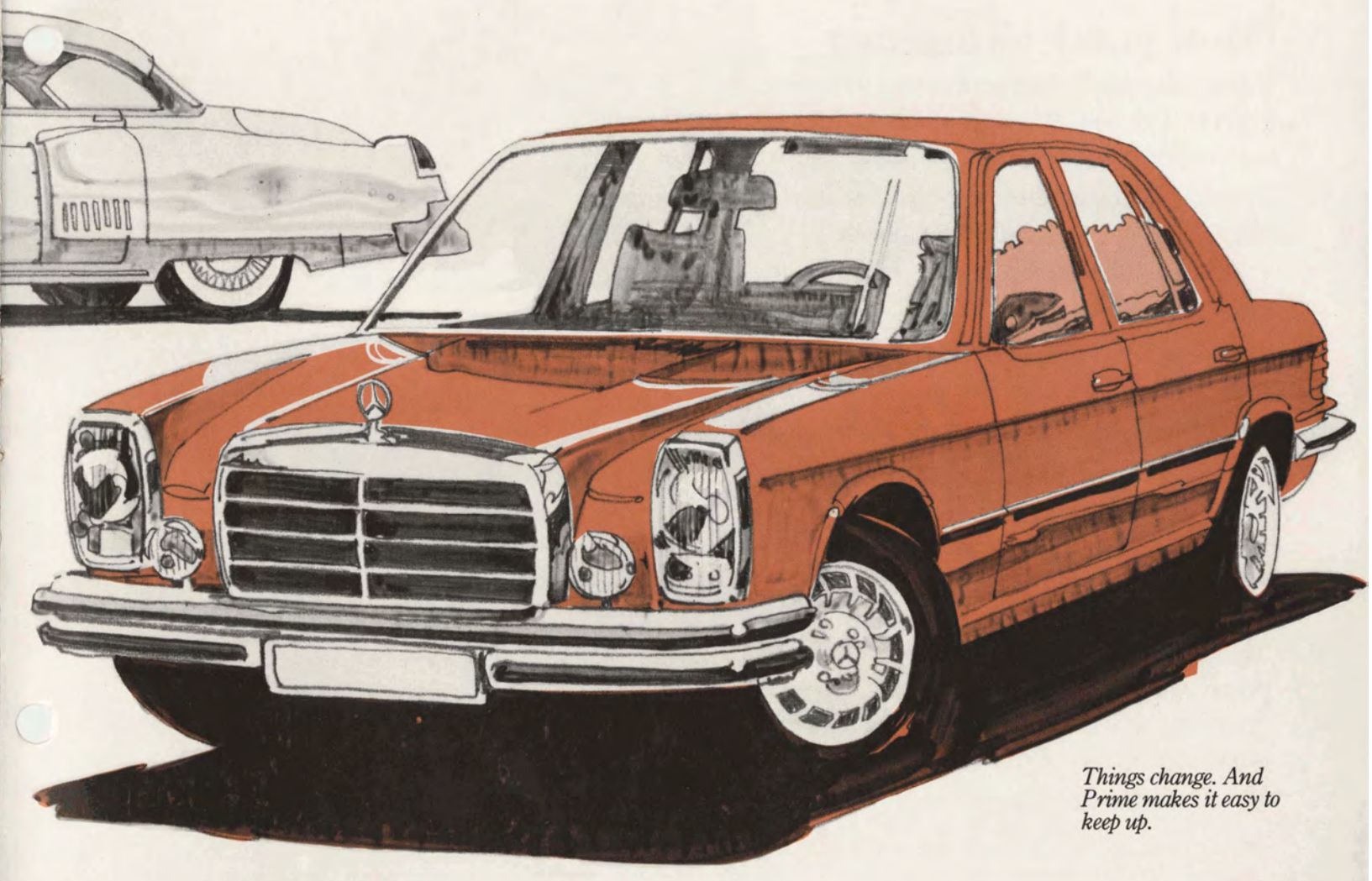
So to remain successful, you must be able to quickly and economically adapt your applications to changes in the way your business works. New customer demands and attitudes. Competitive pressures. Projected growth rates. Technology. To changing world conditions that will unavoidably affect the operation of your business. The energy crisis. Minority employment. New legislation.

To respond to these changes, you will need new report and display screen formats. Current data stored in your database will change. New data and new data relationships will be required. New data and old data will interact. New applications will have to be written.

So Prime systems are designed to be the most adaptable you can buy. Because they allow these changes to occur without disrupting your existing operational application programs. You change the environment surrounding them — not the programs.

This far-reaching adaptability is due to the sophisticated, consistent organization of Prime's uniform software systems: PRIMOS, Prime's operating system; DBMS, Prime's CODASYL-compliant Database Management System; MIDAS, Prime's Multiple Index Data Access System; FMS, Prime's File Management System; FORMS, Prime's Forms Management System; and a full range of industry standard high-level languages. They all work together; they all work apart.

This adapability means you can develop applications that are independent of the physical characteristics of the terminals they use to move data in and out of the system. They're independent of the way forms will be displayed on those terminals. And of the physical characteristics of the system's random access storage devices. They're independent of the characteristics of the data and the physical organization of the data. And they're even independent of the



Things change. And Prime makes it easy to keep up.

programming language (or mix of languages) used. So the original investment you make in interactive application programming is always protected.

Prime systems also adapt easily to changes in volume and speed as your business grows. Add memory up to 8 million bytes and disk storage up to 2.4 billion bytes. And add up to 63 terminals. When a faster central processor is required, it's a simple matter of swapping printed circuit boards without disrupting your applications: all user programs written for the old application will continue to run on the new system without modification. And Prime software continues to work together as your system grows; you can add capabilities as you need them. For example, until you're ready for DBMS, you can use MIDAS files. Then those same files can be used under DBMS to effect an orderly transition at your own pace. And PRIMOS is implemented in distinct but compatible levels to maximize the performance of different processors and minimize system overhead. You can add and mix languages to match application requirements without converting files, because everything works together.

Things change, but so do Prime systems — quickly, easily, economically.

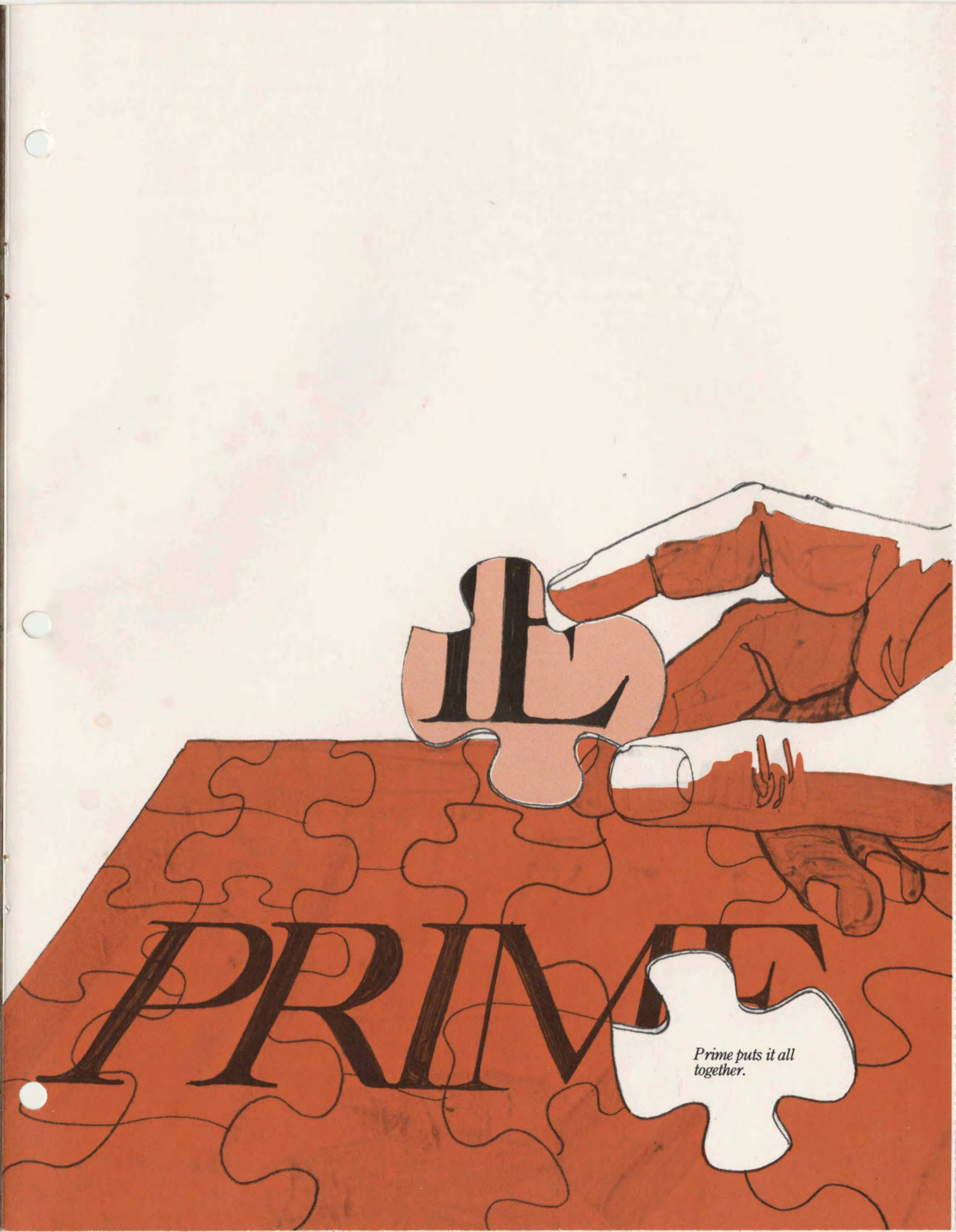
Prime puts it all together

Prime interactive data processing systems:

- get you on-line fast, without disruption, because they fit your current organization and business environment
- provide standard hardware and software for easy implementation, growth, and compatibility
- support up to 63 users concurrently, with high transaction rates and with full data integrity
- provide high reliability that includes comprehensive recovery capabilities
- adapt to changes in your business fast and easily
- cost 1/10 the price of functionally equal large-scale mainframes.

To find out more about how Prime puts it all together, get in touch with us. We've got in-depth information on things like our Database Management System (DBMS), Forms Management System (FORMS), PRIMOS operating system, processors, peripherals... everything it takes to satisfy your interactive data processing needs. Write or call us at our corporate headquarters, or contact your local sales office.

Prime can help.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