Burroughs B1900 Systems

Solutions for the '80s


B1900
B1900

The Conventional Problems

Progress Can Be Costly
In an effort to increase operational productivity, computer users are developing distributed processing networks. With conventional hardware and software systems the cost of this progress can be exceptionally high.

Today, 60 to 70 percent of data processing budgets is spent for software development and maintenance. And, once the network is established, even minor changes can have a costly negative impact on the entire system . . . including hardware, system software and application programs.

This large investment is further compounded by the average 2-year period normally required to design, code, test and implement a new software system.

Decreasing Program Life
Changing requirements of your growing business, plus rapidly changing laws and regulations, drastically reduce the life of your software. The average life span of new application systems is estimated at a mere 36 to 48 months!

Higher Maintenance Costs
Growing networks and increased data, together with expanded transaction requirements, result in continuous and costly modifications to software. Today, maintenance costs typically range from 50 to 250 percent of the original implementation cost. And, industry averages show that from 65 to 80 percent of all programming effort is devoted to maintenance of existing application systems.

Burroughs Solutions

Burroughs B1900 Systems
Burroughs B1900 Systems are powerful small to mid-range computers that facilitate faster, easier and more economical development of distributed processing networks.

The B1900's power and flexibility, integrated with its uniquely powerful system software, enables it to perform effectively in both "stand-alone" and distributed processing environments. It can be used as a host system or can act as a terminal to larger systems. And, due to its extensive multiprogramming capabilities, the B1900 can communicate with a host system while simultaneously processing applications at a remote site.

These new systems provide up to 30 percent more productive power than previous computers of the same class, yet they occupy 50 to 65 percent less floor space. The entry level B1900s operate in any normal office environment thus eliminating the need and cost for special rooms with controlled temperature and humidity.

The B1900s employ extremely fast "cache" memories that speed data in and out of the processing elements. A "Variable Micrologic" design enables the B1900 to dynamically alter its operating logic from one instant to the next to create the ideal processing environment for the particular requirements of each processing task.

The B1900's system software, combined with Burroughs program development aids, enables you to drastically reduce the time and investment normally associated with developing a distributed processing network.

Burroughs B1900 Systems are truly the processing solution for today and the future.

Transaction Control System
Burroughs B1900 computer systems feature the Transaction Control System (TCS) which is fully proven and available today. TCS solves the problems normally associated with conventional data processing systems by providing extensive capabilities for efficiently managing on-line programming, data entry, data base and reporting systems.

Master Control Program
Burroughs unique operating system, the Master Control Program (MCP), is an integral part of the Transaction Control System. The MCP automatically assigns memory, manages input/output functions, communicates with the operator in everyday language, logs system use, dynamically loads programs, maintains a library of all files and supervises numerous other functions.

The MCP automatically manages system resources to meet the needs of the computer's workload. It continually and dynamically assigns resources, initiates jobs and monitors their performance for optimum system efficiency. By assuming the management of system resources, the MCP enables programmers to devote more time to generating business application solutions rather than wasting time on computer "housekeeping" problems. MCP control of the system also means simpler, more efficient use of the computer by the operator.

More Power Per Dollar
Hardware specifications indicate a system's potential power. System software, such as the MCP, determines how much of that power is usable by you. The MCP allows you to utilize the B1900 Systems' power to its fullest potential through such capabilities as:

- VIRTUAL MEMORY – provides efficient memory utilization and maximum system throughput. Programs are automatically segmented into logical variable-size "pages" at the time they are compiled. This segmentation gives your programmers complete freedom to write programs which are independent of memory size restrictions. The program segments are automatically called by the MCP as they are needed during program execution. This feature also allows more jobs to run concurrently, thus increasing system throughput.

- MULTIPROGRAMMING – processing multiple jobs simultaneously so that all portions of the system are productive.

- PRIORITY SCHEDULING – allows you to determine the levels of importance for each job to be executed. With multi-level priorities, each job can be ranked with other jobs being processed simultaneously. Each job is recognized by the system and is given more or less time and computer resources based upon its ranking at the moment. Job priorities can be changed dynamically in the midst of processing to answer more urgent demands and management needs.


B1900

Ready Processing Power at All Locations

The Problem

As hardware and communications costs come down, businesses want the ability to expand their computer power to more people at more locations through remote terminals. Unfortunately, with conventional systems, the time, resources and capital required to generate software to control the terminal network can become astronomical.

The Solution

The Transaction Control System quickly, easily and economically defines and implements a data communications network. It analyzes your input statements and generates a custom code to effectively service the network according to your particular requirements. TCS provides a fast, simple and truly economical means of putting computer power where you need it.

TCS does not impact your application programs . . . they remain totally intact and fully usable. This eliminates reprogramming and maintenance costs while enhancing the life of your programs.

With TCS, you may select from a comprehensive range of terminals, line control procedures and line speeds. Available terminals include Burroughs Modular Terminal Systems, line printers, terminal computers, input and display systems and special purpose terminals.

On-Line Programming and Testing

TCS directly answers programming problems with on-line programming and testing capabilities. Powerful programming aids, normally found with larger, more expensive systems, enable your staff to create, build, edit and reorganize files and compile programs on-line. This work can be performed from either local or remote terminals without impacting the day-to-day job productivity of your system. Programs can also be executed from the terminals.

Security is assured through a user-code/password method. The programmer/terminal operator logs on with a user-code and password and can access only the files authorized by the user-code.

TCS on-line programming aids virtually eliminate coding sheets and costly, dedicated computer test time. They can significantly increase the productivity of your programming staff while reducing program development and maintenance costs and time to a minimum.

Efficient Data Entry

Exceptional Cost-Effectiveness

TCS enables you to effectively streamline data entry procedures, thus saving valuable time and processing costs. With TCS, data entry is done on-line in the originating departments.

How It Works

Easy-to-use input and visual display units are installed in the departments that normally originate data. The operators quickly and easily enter data directly through the terminals. And, because the terminals are visual display units, the operators can check their entries and correct errors before the data is actually entered. A variety of "prompting" messages guide operators through data entry procedures to assure accuracy and efficiency.

TCS provides a cost-effective direct replacement of expensive, inefficient transcription devices, card punches, key-to-tape devices and key-to-disk cluster systems.

Operator and Data Security

With TCS, each terminal operator is identified by an operator number and is provided with both a password and a security level code. Before an operator is able to log into the system, the correct operator number and password must be entered and verified. In addition, your operators may only access information that is allowed by their security levels. They are denied access to data requiring higher security clearances. This precautionary feature assures the protection and integrity of your data.

TCS also contains an automatic recovery facility which enables the system to restart with virtually no delay. This means that costly downtime is dramatically reduced to a minimum.

Application Independence

To enhance the protection of your programming investment, TCS minimizes the impact of program development, change and maintenance by making all entry, processing and procedural functions independently universal to all application programs. This consolidation of functions makes it significantly easier and more economical to develop, implement, maintain and modify application programs. It enables your programming staff to be more productive by concentrating on application solutions rather than spending time on procedural tasks.

Application independence dramatically reduces the number of checks required to edit programs. Usually, only those tests involving extensive use of the application's master files are retained. When introducing new applications, only the source documents are retained while data validation can be eliminated from the new program. This means new applications can be developed, tested and implemented quicker and easier.

TCS enables you to be more responsive to change, have more effective control of costs and more efficiently utilize the power of your B1900 computer system.


B1900

Effective Data Management

The Goal
Data base files are really the center of your B1900 computer. The objective of data processing is to effectively and economically capture, analyze and record the significance of each transaction, thereby updating appropriate files and providing timely information for reporting and decision-making.

Conventional Methods
Typically, application programs have carried the burden of data management. This usually results in a duplication of stored information and a redundancy of procedural functions. The consequences of conventional data management methods are significantly higher costs in terms of main storage, auxiliary storage, program development and program maintenance. Overall, ineffective data management means reduced throughput and productivity, increased processing costs, slower response to change and costly, inefficient use of the computer's power.

Burroughs Data Management
TCS provides effective data management capabilities which completely remove all data base functions for creating, maintaining, retrieving and storing information out of the realm of application programs. This centralization of data management functions virtually eliminates wasteful duplications and provides for easier, more efficient and truly economical utilization of the data base.

TCS data management reduces storage requirements, thus reducing hardware costs. It monitors and maintains the data base to assure data integrity. Programming time and expenses are dramatically reduced because programmers can develop and test new applications without concern for data management methods.

With TCS central control over all applications, programs are easier to implement and use. This means your computer is more productive, more responsive, more economical to operate and provides maximum results for lower investments.

Immediate Information

Timely, accurate information is the key to success in today's business climate. Information is essential in day-to-day operations, decision-making, short and long-term planning. Information enables management to take the initiative instead of merely reacting to business changes.

Burroughs B1900 Systems, with TCS, are designed to deliver timely, accurate information when and where it's needed. Extensive reporting and inquiry capabilities allow you to provide essential data anywhere throughout your organization. And, you may utilize a wide variety of terminals, terminal computers, display devices and printers with your B1900.

TCS makes information reporting fast, easy and economical. It eliminates time-consuming, costly item-report program development, testing and maintenance. It enables you to define the reports and information you require and to generate them quickly and easily. TCS also allows report programs to be initiated and information accessed through remote terminals.

TCS manages the link between your B1900, the terminal network, the data base and the application programs. With TCS, program development and maintenance costs are lower and information is accurate and easy-to-understand. TCS allows you to easily and economically obtain maximum results from your B1900 System.


B1900

Burroughs B1900 Systems

A Choice of Power To Meet Your Needs

Burroughs B1900 Systems are designed to truly meet the data processing needs of today and the future. Through advanced technology and software, the B1900s provide power and productivity, extraordinary flexibility and responsiveness to change, plus new levels of performance . . . all at a low cost.

The B1900s are modular, general purpose information processing systems that offer such advantages as:

- Exclusive use of high-level languages for lower program development and maintenance costs.
- Automatic, dynamic resource allocation for dramatically reduced operator and programming involvement.
- Human-oriented job control and operator interfaces for improved system management, simpler operation and less operator effort.
- Automatic job scheduling and initialization, plus dynamic priority scheduling for better system utilization and enhanced workflow flexibility.
- Virtual storage for multiprogramming allowing transactions to be processed when they occur rather than holding jobs until the system can accommodate them.
- Easy-to-install system software with virtually no conversion between previous and new software. System software allows for economical, step-by-step expansion of the computer to meet your particular needs. System software permits full utilization of the B1900's power.
- Powerful input/output subsystem featuring extensive distributive processing power for maximum throughput in a dynamic multiprogramming environment.
- Powerful, easy-to-use data communications capabilities that enable the B1900 to efficiently operate as a large host system or as a remote processor in a distributed data communications network.

Entry-Level
The small, entry-level B1900 provides first-time users with a powerful yet cost-effective means of processing data. The entry-level system offers advantages usually associated only with larger, more expensive computers. These features include high-level multiprogramming languages, dynamic multiprogramming, reentrancy and virtual memory.

The entry-level B1900 is an ideal solution for larger organizations with distributed processing requirements. It can effectively and economically be linked to larger host systems.

Mid-Range
Mid-range B1900s offer faster internal speeds and increased memory configurability for greater throughput and productivity. Up to 32 data communications lines can be interfaced through multi-line controls and adapters to provide an extremely powerful transaction-oriented processing system.

Because of its modularity, the B1900 can be easily expanded in cost-effective increments without reprogramming and conversion. These mid-range systems are highly productive and reliable as either free-standing computers or as part of a distributed processing system.

Dual-Processor
Burroughs unique dual processor system is the most powerful B1900. It provides up to 150 percent of the processing power of the basic mid-range B1900s. Yet, it is compatible with all B1900s and other Burroughs systems.

The architecture of the dual processor B1900 is that of twin central processing units sharing common memory and input/output subsystems. All resources of the system are dynamically allocated by a single Burroughs operating system, the Master Control Program (MCP).

The first processor performs resource management and executes user code. The second processor executes user code and makes requests upon the first processor to execute system code as required. Throughput increases over single processor systems can be dramatic. The most significant increase is in the execution of jobs that are normally processor-bound on single processor systems. The dual processor design of the B1900 inherently provides constant system availability.

The dual processor B1900 remains fast and easy to operate. Likewise, software is easy to develop, implement and maintain. The primary difference is increased power/performance and productivity.

This largest of the B1900 Systems is exceptionally productive, responsive and efficient and provides dual processing capabilities found only in extremely large, costly conventional systems. Your investment in a dual processor B1900 is exceptionally low especially when compared to the significantly increased performance and redundancy factor of the backup processor.

Optimum Compatibility and Responsiveness
Users of Burroughs systems have long enjoyed the advantages of growing from one generation of systems to another without concern for costly, time-consuming conversion while significantly enhancing the performance level of their computers.

You may start with a small B1900 System and easily and economically expand without reprogramming. To enhance your system, you simply add hardware. The B1900 automatically recognizes its new resources and immediately utilizes them for more efficient throughput and greater productivity. You can also grow from one B1900 to a larger, more powerful B1900 with the same ease and economy.

The extreme compatibility of software between product lines enables you to easily and economically grow from a B1900 to a medium or large-scale system. The applications you used with the smaller system are fully usable on larger computers. The commonality of many Burroughs program products, such as Data Management System (DMS II), Network Definition Language (NDL), GEMCOS, REPORTER, plus the use of high-level languages, allows you to utilize a large-scale system linked to multiple B1900s in an efficient distributed processing network.

Burroughs B1900s provide a problem-free, economical growth path that allows you to be extremely responsive to changing demands and future requirements.


B1900


B1900

Total Solutions from a Single Source

With Burroughs, you'll receive more than just a sophisticated piece of electronic hardware. To assure a successful B1900 installation you'll have the full support of a worldwide company dedicated exclusively to equipment and systems for data processing.

Years of Experience and Proven Successful Operation

Burroughs has demonstrated its ability to justify your confidence and trust through many years of successful operation.

- Worldwide Operations.
- Nearly a Century of Experience.
- Recognition as One of the Industry Leaders.
- Continual and Successful Growth.

Peripheral Capabilities

You may utilize a wide range of peripherals with your B1900 TCS System. Available peripherals include magnetic tape units, fixed disks, mini-disks, disk packs, line printers, system and communications processors, input and display terminals, terminal computers, reader sorters and special purpose terminals. With Burroughs, you can expand the peripheral subsystem without modification to system software and application programs.

System Design

Our marketing respresentatives, in addition to being technically competent in our B1900 product line, are fully trained in systems design. Their ideas and experience can help select the equipment and software system that will assure you of obtaining the best results for the least investment.

Application Program Products

Burroughs Application Program Products are ready-to-use programs that provide complete solutions and produce vital information at a low cost. Their capabilities enable you to make quick contributions to your business's profitability. You can quickly and easily implement the application programs and may also modify them to fit your particular requirements. And, because they are machine-independent, they can be moved from one computer to another without conversion.

Burroughs offers a comprehensive library of B1900 Application Program Products at a fraction of their original development cost. There are application programs for:

- Business
- Commercial Banking
- Thrift Industry
- Wholesale/Distribution
- Manufacturing
- Transportation
- Health Care
- Government
- Education
- Science/Engineering

Standard Forms

Standard forms and journals are available from Burroughs Office Products Group/ Business Forms Division. These standard forms further reduce the time and cost to implement your B1900 System.

Office Products

Burroughs Office Products Group can improve the efficiency of your operation with outstanding office products such as facsimile transmission equipment, word processing systems, document encoders and protection equipment, plus a complete line of office supplies.

Service and Support

Our professional field engineers will keep your B1900 System operating at peak efficiency. They also have a complete line of data processing supplies available.

Education

Our education staff can train your people in every aspect of B1900 System implementation and operation. Burroughs can also train your staff in all phases of system software, program product and application implementation and utilization. Through Burroughs training, your staff will find that using the B1900 Systems is easy and efficient.

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