BL 700 Series

Britton Lee, Inc.

BL700 Series

High-performance relational database solution

Britton Lee's BL700 relational database system is a family of integrated hardware/software database management systems designed to bring high performance to the relational model. Used in conjunction with Britton Lee's end-user and programmer software tools, Britton Lee's relational software provides the intelligence while the dedicated hardware provides the muscle. The entire system is designed, manufactured and supported by Britton Lee.

Integrated database manager

The truly relational IDM/RDBMS code — the Integrated Database Manager — controls and services all database facilities. IDM host software provides the user interface tools and communication from the host computer system attached to a BL700.

Providing relational database solutions since 1981

Britton Lee relational systems have been managing database activities for mainframes, minicomputers and personal computers since 1981. The Britton Lee BL700 Series incorporates the latest hardware and software enhancements into a system packaged for high-performance relational database management.

Multi-host support

The BL700 can be integrated with many of the popular operating systems on the market today, allowing you to expand your computer network without the worry of database transportability and compatibility. Multiple computers of the same or different types share the BL700 as a common data resource. These include: IBM system 370, and PC, DEC VAX, AT&T 3B Series, Alpha Micro, as well as Sun and Apollo workstations. These computers connect to the IDM700 over one or more of the following communication channels or networks: IBM block multiplexor, RS232, IEEE488 and Ethernet.

Familiar software tools

Familiar software tools make the IDM software easy to integrate. Tools like Smartstar on VAX/VMS and Focus on VM/CMS provide powerful 4GL and developer access to the BL700. PC/SQL Link gives PC users the ability to connect most popular PC applications (Lotus 1-2-3, dBase, MultiPlan) directly to the database machine through SQL.

Lessens network traffic

Since the actual database processing is performed on the BL700, only the requested results, not the entire database, are transferred across the network, thus lessening network traffic. Regardless of choice of channel or host, users have access to the same high-performance relational database on the BL700.

High level of security

Unlike relational software running on general-purpose computers, the BL700 is a complete self-contained database. It has its own storage and tape backup systems. The BL700 guarantees a high degree of security. A centralized, yet flexible protection scheme allows the database to be protected against unauthorized access by granting access privileges to each user from each host computer. This scheme establishes the boundaries between separate applications running against the same database.

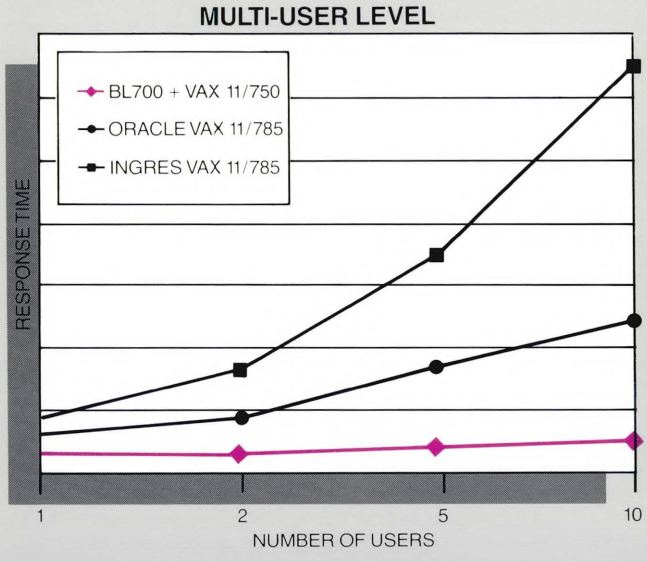
Reliability

Data availability is ensured because disk drives may be mirrored, thus providing highly-effective protection against catastrophic media failures and disk crashes by duplicating critical databases on a redundant set of disk drives. In the event of a single disk failure, users are protected from the loss of data or interruption of operation. A complete set of automatic recovery tools using transaction logging guarantees database integrity.

Performance

Searching relational databases can overload any general-purpose computer running several database applications simultaneously.

The BL700, however, manages data independent of the host computer environment. The application runs on the host — the database runs on the BL700. This division of labor offers performance superior to that which can be achieved with conventional software database packages. Any conventional relational database degrades as the number of concurrent users increases. Beyond some point, this degradation is dramatic on any computer. Not so for the BL700. And we have the independent benchmarks to back up our claim! The offloading of database management chores greatly reduces CPU usage and dramatically increases the productive user capacity of each computer system.



The graph illustrates the results of a recent multi-user benchmark performed on the BL700 and two other leading software DBMS vendors. The performance of the BL700 is consistent and predictable at any multi-user level.

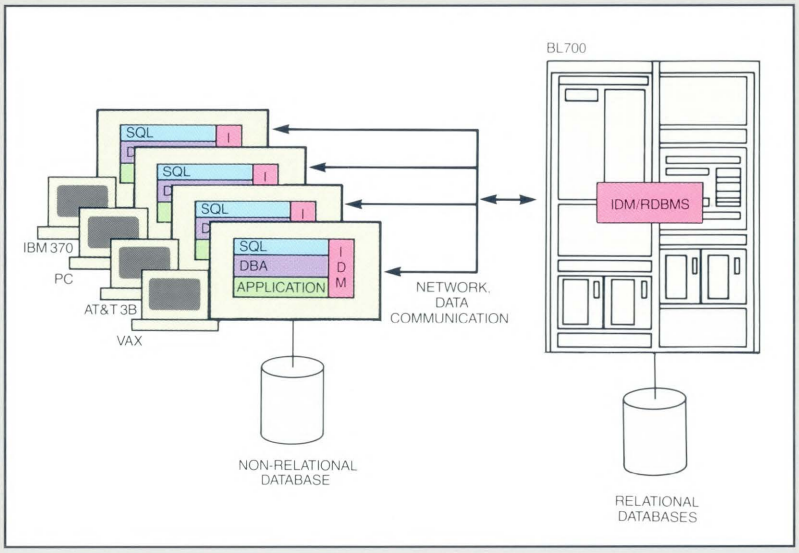
Why are database machines faster?

The IDM/RDBMS code can run faster on a BL700 database machine because the computer environment has been optimized for database work. Each of the special-purpose processors in the BL700 — the disk I/O, communications and database engine — has been specially designed to operate in a database environment. The BL700 need not process user terminals since this function is carried out by the host-computer-resident IDM/SQL software. No user written programs execute on the BL700, thus eliminating much of the operating system overhead necessary in general-purpose computers. Taken together, this makes the BL700 a perfect environment for the Integrated Database Manager RDBMS.

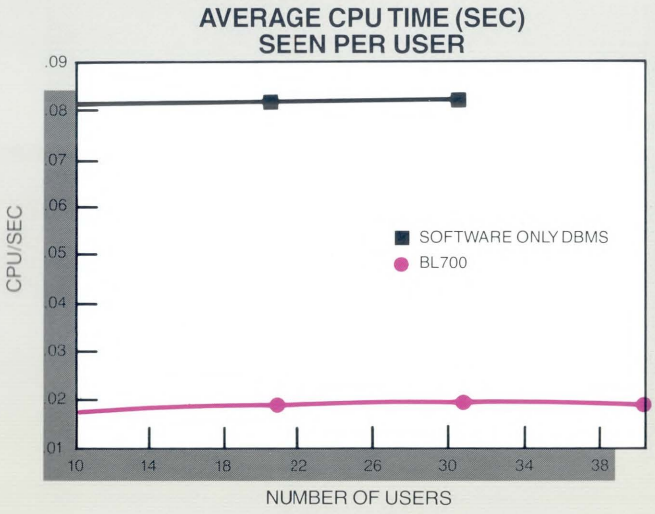
IDM software tools

Britton Lee provides IDM portable software tools that allow the SQL user and programmer to create identical portable applications in more than 20 major operating environments. IDM host software resides on host computers and provides the foundation for user and programmer access. Based on SQL (Structured Query Language), this software package provides complete programmer, interactive user and database administrator facilities.

The BL700 uses significantly less CPU resources than a software-only relational DBMS as the number of users increases.



Britton Lee IDM software divides its function between user/application interfaces residing on user host computers and workstations and Relational Database Management Software (RDBMS) residing on the BL700. Britton Lee network communication software manages the connection between the host-resident and the BL700-resident software.



New and improved

Britton Lee's BL700 Series offers the latest developments in IDM architecture. In its ongoing program of improving the performance and function of the system, Britton Lee is proud to market the BL700, complete with hardware and software enhancements to further improve both system performance and reliability.

All BL700 systems include:

- high-performance database processor
- high-performance tape controller
- SMD/E disk controllers
- mirrored disk feature
- IDM/RDBMS telephone support for the first year
- disk storage that can be expanded
- high-speed streaming tape drive for database backup

The BL700 Series: Powerful, expandable, reliable

The BL700 represents a new performance standard for Britton Lee. With separate paths available for increasing performance and for expanding storage (from 1-10 Gigabytes), the BL700 can flexibly meet a significant range of performance-capacity requirements. And do so without compromising system reliability.

The Britton Lee solution

The relational model. Complete user and programmer tools. High performance. Data sharing. Data security. Any of these features could raise your interest level in a DBMS product. But only Britton Lee offers all of these features in a system second to none. To bring it all together — a solution for today, preparation for tomorrow and a plan for the future — check out the BL700. The relational database performance solution from Britton Lee. For further information on the BL700, contact your Britton Lee sales representative, or call (800) 372-7111. In California call (800) 624-6426.

BL700 Specifications

BL700 Models include:
- IDM 16-slot card cage and power supply, slide mounted
- Database management software
- Timing and control card for data bus
- High performance tape controller card
- Streaming tape drive for data backup and data load
- Winchester disk storage
- Pre-cabled peripherals — FCC standard
- 60-inch RETMA cabinets
- Power distribution and cooling fans
- Console terminal asynchronous connectors (RS232)

Mirrored disks for security and performance
- All models have the ability to mirror identical disk drives. This is recommended for all critical databases.
- Effective MTBF is increased to over 30 million hours
- IDM optimizes reads for mirrored disks to give up to 350% improvement in performance over single drives

Streaming high-speed tapes for fast database backup and data load or transfer
- Standard half-inch 6250-bpi drives with capacity of 140 Megabytes per reel
- Optional 340-Megabyte capacity cartridge tape
- Support for multi-reel files and multi-file tapes

Three Standard Models:
700X
- 1-Gigabyte disk storage (2 half-wide disks)
- 1-SMD/E disk controller

700XL
- 2-Gigabyte disk storage (4 half-wide disks)
- 2-SMD/E disk controller

700XLE
- 2.7-Gigabyte disk storage (4 full-width disks)
- 2-SMD/E disk controllers

Each model can be expanded up to:
- 16 disk drives (to 10 Gigabytes)
- 6 1-Megabyte RAM memory

Two Performance Packages:
700/3
- High performance database processor
- 2-Megabyte RAM memory
- SMD/E disk controller

700/4
- High performance database processor
- 4-Megabyte RAM memory
- Database accelerator RISC processor
- SMD/E disk controllers

General IDM Performance Characteristics
- True relational database (ANSI SQL standard)
- ASCII or EBCDIC databases
- 50 databases per BL700
- Up to 32768 tables per database
- Up to 254 columns per table
- Supports 600 concurrent users (6 MB RAM)
- Permits 250 concurrent queries (6 MB RAM)
- Maximum transaction rate:
  Single row keyed select:
  30-36 transaction/second
  TP/1 banking transaction:
  4-5.5 transactions/second

Communications Options
Each BL700 requires one or more of the following boards:

RS232 Serial Interface Card
- Software configurable (300-19,200 baud)
- Optional modem control for remote access
- 8 Ports and backpanel connectors
- Up to 8 cards (64 connections) per IDM

IEEE488 Parallel Interface Card
- General Purpose Interface Bus (GPIB)
- Up to 8 star or daisy-chain connections
- Up to 8 cards per IDM
- Optional 300-meter bus extender
- Data throughput 80-KBytes/sec max

IEEE802.3 Ethernet Interface Card
- Each card supports up to 100 connections
- Up to 4 networks per IDM
- 200 concurrent query processes per board
- Data throughput 150-KBytes/sec

FIPS60 Block Multiplexor Channel Card
- Supports IBM and Unisys block multiplexor channel (max 4 channel cards)
- Data rates to 200 KBytes/sec

Power Requirements
Each cabinet contains power distribution for BL700 and peripherals.
- Power cord 208/220V, single phase, 3-wire 2-pole (NEMA L6-20R)
- 20 Amps per cabinet

Britton Lee, Inc.
14600 Winchester Boulevard
Los Gatos, CA 95030
(408) 378-7000
Telex: 172-585