Britton Lee Integrated Systems Division

Customer Requirements

Custom Integrated Systems

Applications Software Mainframes, Minis, PCs Communications
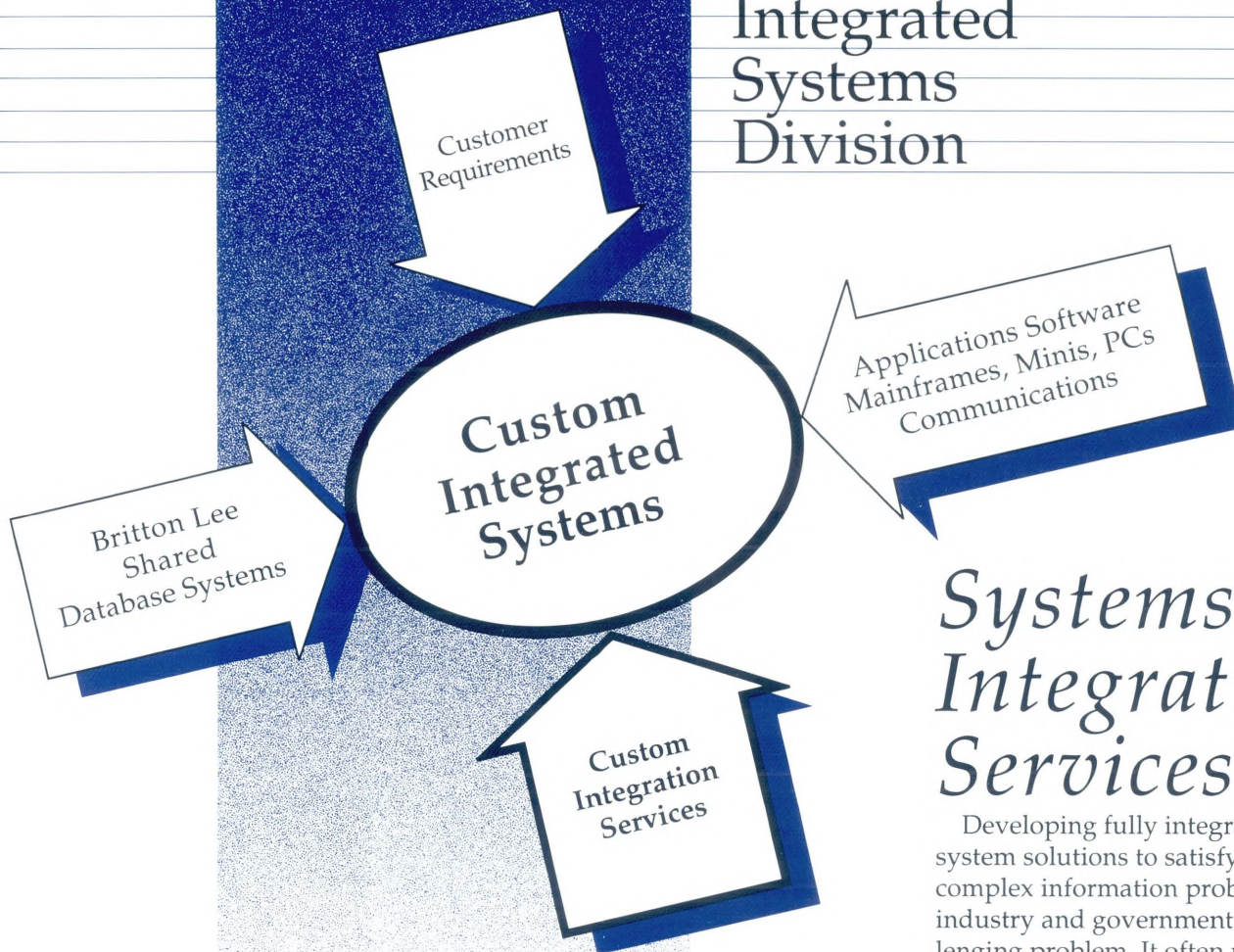
Britton Lee Shared Database Systems

Custom Integration Services

Britton Lee, Inc.

Systems Integration Services

Developing fully integrated custom system solutions to satisfy the complex information problems of industry and government is a challenging problem. It often requires skills not available to, or present in, the customer's organization.

As a proven industry leader in the development, manufacture and support of Shared Database Systems, Britton Lee, through its Integrated Systems Division, specializes in the custom integration of information systems tailored to meet the needs of its customers.

Integration services range from system definition through all phases of system analysis, design, implementation, acceptance and maintenance. Our goal is to thoroughly understand the customer's information system requirements and provide superior integrated systems solutions.

System Integration Services

Britton Lee's custom system integration services can satisfy complex information system requirements.

System Definition

System Requirements and Specifications: The first stage of any information system project is to clearly define the requirements and specifications of the proposed system as driven by the problem to be solved. Without this definition and due consideration for current systems technology, the project often takes off in a random direction which wastes time and money.

Database Requirements: The Integrated Systems Division will participate in generating or objectively reviewing your database requirements and specifications to ensure that subsequent analysis and design efforts are properly directed. We will apply formal methodologies to define data flows, data descriptions and entity relationships to develop a stable, yet flexible, data model for the application and corporate enterprise.

Application Requirements: Application requirements and database requirements must be uniquely addressed, but in a coordinated approach. We will analyze your requirements for application process functionality and their dependencies with database requirements. Data inputs and outputs for the system and users will be evaluated to ensure consistent and clear definition of both application and database requirements.

Analysis & Design

System Configuration: The Integrated Systems Division will assist in the evaluation of your current or planned information system configuration to ensure that your immediate and long-term system requirements are satisfied. We are prepared to evaluate your performance and capacity requirements in terms of hardware, software and data communications. If preferred, we will assume full responsibility for the specification, procurement, integration and installation of your new information system.

Database Analysis and Design: Characteristics of the data model and design of the database are critical issues in the development of an information system. Britton Lee supports the relational data model for its ease of use, flexibility for change, and quick applications development capability — significant advantages to the system developer and the end-user. A properly designed database utilizing normalization and indexing, provides an effective foundation for supporting the applications software which often changes to meet the current functional needs of the enterprise. Structuring a performance-oriented database to remain flexible for long-term growth and efficient maintenance requires the proper expertise. This unique strength, provided by the Integrated Systems Division, is based on Britton Lee's extensive experience with Shared Database Systems.

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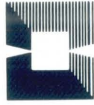
Implementation

Implementation and integration of the database and application designs brings the information system together. The database will be physically constructed and loaded with actual or simulated data. Application processes will be coded, tested and integrated with the database functions. Database queries, updates and transactions will be implemented, tested and optimized. Database administrative procedures will be developed and tested to ensure a stable and well managed database. The intelligent use of 4th generation application languages and 3rd generation programming languages will significantly expedite system prototyping, development and maintenance.

Acceptance

Perhaps the most critical phase of any custom system development effort is acceptance testing, verifying and validating the system implementation. We will define or review acceptance test plans and procedures taking into consideration the database and application requirements, and system configuration. We will perform and document acceptance testing to ensure that the information system meets its defined requirements.

No information system is complete until documentation is written for the system operator, database administrator and end-users. We will generate this documentation, and provide training at appropriate levels to support a successful turnover of the system to the customer.

Maintenance

Offering ongoing support programs for your custom implementation is the Integrated Systems Division's commitment to the continued success of your information system. In addition to Britton Lee's hardware and software maintenance programs for standard products, we will support your custom application and database implementation by providing services tailored to meet your ongoing requirements.

Project Methodology and Management

The Integrated Systems Division emphasizes the principles of structured software and database development methodologies, supported by a flexible and closely coordinated project team approach. We know what questions to ask to fully define your information system requirements. Our project teams, structured to work efficiently and effectively, will utilize the appropriate resources to complete projects thoroughly, on schedule, and within budget.

Throughout the duration of a custom information system project, the Integrated Systems Division's project and corporate management will monitor and control each phase of the system development effort. Each project will be supervised by a senior project manager to ensure that task assignments are clearly identified and performed efficiently. Thorough planning at the start of the project, continuous monitoring and reporting of progress and scheduling, regular reviews with the customer, and identification and resolution of any project problems is the responsibility of project management.

The Shared Database Solution

Britton Lee designs, manufactures, markets and supports very high performance Shared Database Systems. Britton Lee is the market leader in terms of installed dedicated hardware/software relational systems which successfully serve both industry and government.

Britton Lee's shared database solution is based on dedicated database systems which concurrently support multiple general-purpose "host" computers, such as mainframes, minis, workstations and PCs. The system offloads all of the database management functions, leaving only applications processing and end-user interaction to be performed by the hosts. Britton Lee's Shared Database System supports several standard host computers. Custom integration of other host computers and special data communications requirements are part of the services available from the Integrated Systems Division.

Britton Lee's Shared Database System, based on the popular relational database model, implements the widely-used Structured Query Language (SQL), in addition to high level application development tools. Britton Lee's use of the relational database model and SQL language is our commitment to supporting industry standards when meeting the needs of our customers.

Britton Lee offers a family of systems designed to satisfy an extensive range of performance, database capacity and on-line users. Multiple Britton Lee Shared Database Systems, integrated into an information system, provide a virtually unlimited range of database capability.

Applications Processing (Hosts)

- *On-line information systems*
- *Transaction processing systems*
- *Scientific/engineering data systems*

DEC VAX	IBM Mainframe	IBM PC	AT&T 3B	"Other"
Apollo	Sun	Pyramid	DG MV	

Communications

Ethernet   Block Mux   IEEE-488   RS-232C   "Other"

Database Management

- *Query and update processing*
- *Multi-user security and concurrency*
- *Transaction management*
- *Backup and recovery*

Britton Lee Shared Database System
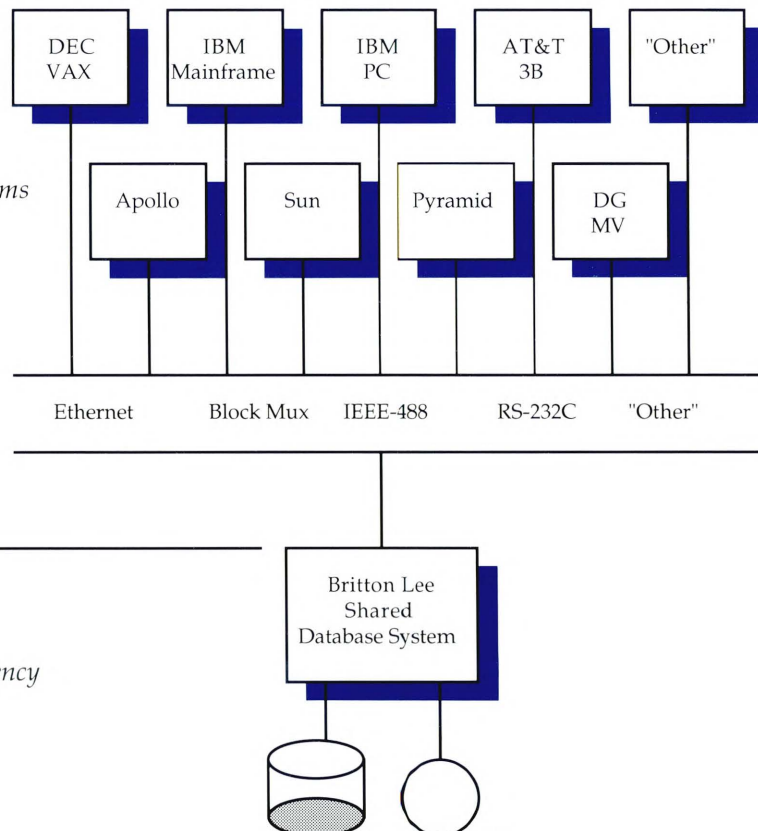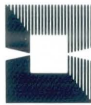
Applications Analysis and Design: Applications using a database system must be analyzed and designed to efficiently utilize the functionality and characteristics of the database. Database retrieval queries, data updates and transaction requirements will be properly formulated to optimize application and database performance. Application processes will be carefully decomp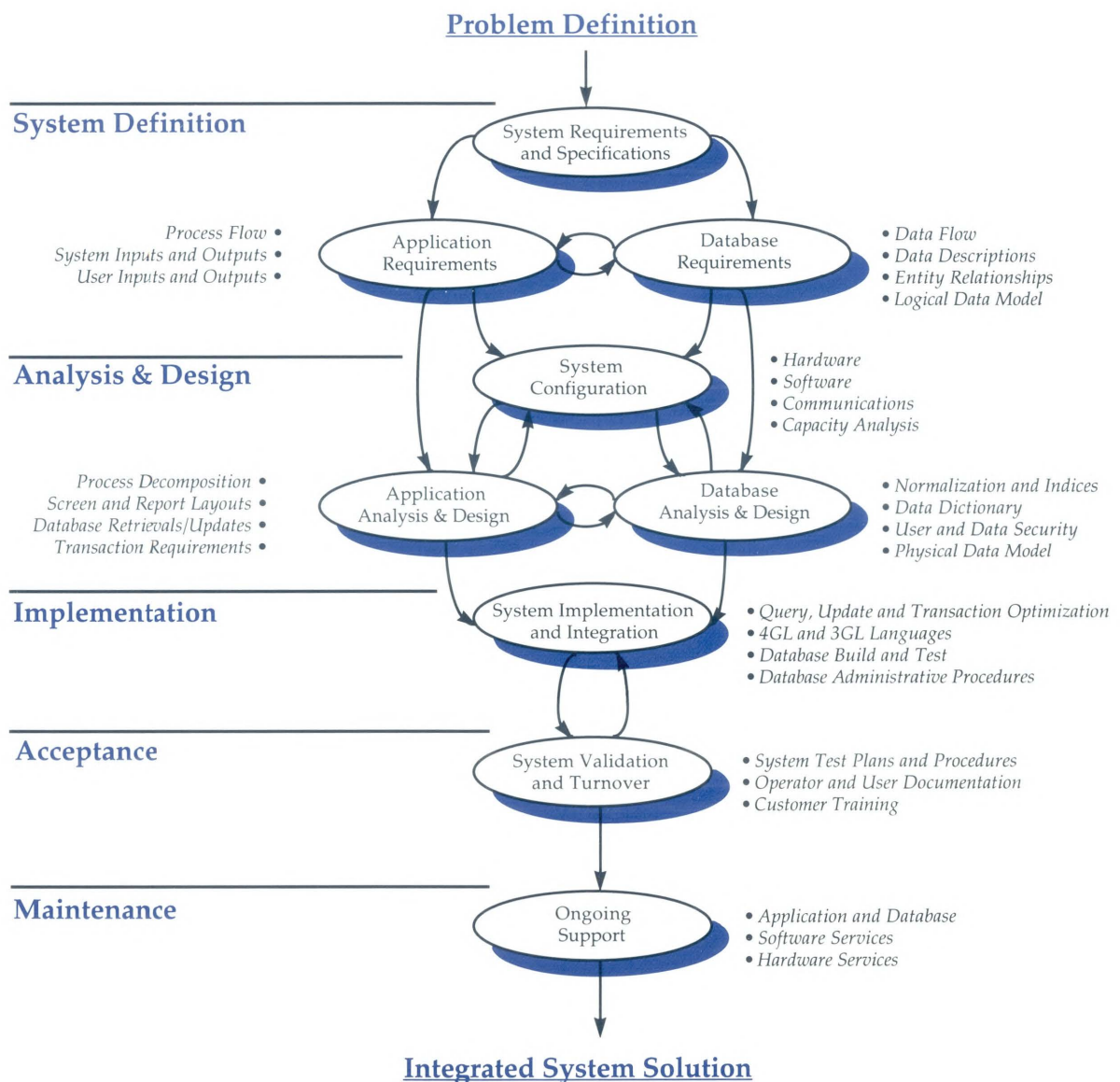osed into easily developed and maintained software modules for database activities, applications processing and user interfaces (i.e. screens and reports).

Problem Definition

System Definition

System Requirements
and Specifications

Process Flow •
System Inputs and Outputs •
User Inputs and Outputs •

Application
Requirements

Database
Requirements

• *Data Flow*
• *Data Descriptions*
• *Entity Relationships*
• *Logical Data Model*

Analysis & Design

System
Configuration

• *Hardware*
• *Software*
• *Communications*
• *Capacity Analysis*

Process Decomposition •
Screen and Report Layouts •
Database Retrievals/Updates •
Transaction Requirements •

Application
Analysis & Design

Database
Analysis & Design

• *Normalization and Indices*
• *Data Dictionary*
• *User and Data Security*
• *Physical Data Model*

Implementation

System Implementation
and Integration

• *Query, Update and Transaction Optimization*
• *4GL and 3GL Languages*
• *Database Build and Test*
• *Database Administrative Procedures*

Acceptance

System Validation
and Turnover

• *System Test Plans and Procedures*
• *Operator and User Documentation*
• *Customer Training*

Maintenance

Ongoing
Support

• *Application and Database*
• *Software Services*
• *Hardware Services*

Integrated System Solution

B enefits to the Customer

Britton Lee's Integrated Systems Division offers a full range of custom integration services for the implementation of the customer's unique information system requirements. Our ability to analyze your information requirements, develop the database, and implement the application is a valuable resource. We will take full responsibility for the development of your information system, or serve as a project partner. Our goal is to see that your integrated information system effectively meets your requirements in the most efficient manner. The success of the customer's information system is the measure of our success. The Integrated Systems Division is committed to providing superior system services with the following benefits to the customer:

- *Carefully specified, planned, and managed information system projects*
- *Databases designed for performance, ease-of-use, growth and stability*
- *Fast and efficient system development*
- *Minimized system development risk*
- *Support before, during and after system development*
- *Commitment of a single vendor for superior products and services*

For more information on the services of Britton Lee's Integrated Systems Division, please contact your Britton Lee sales representative.

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