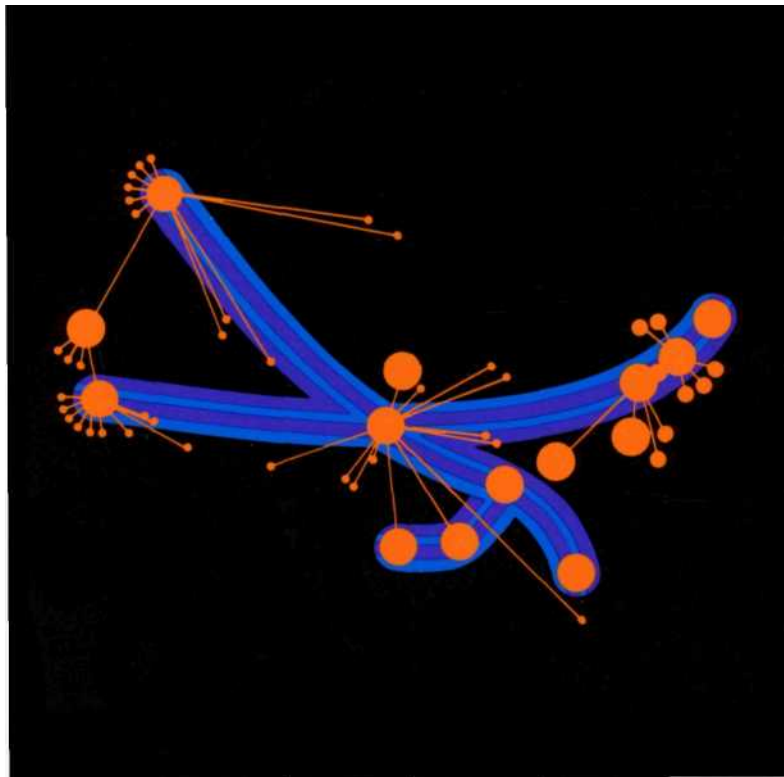# BCS

BOEING COMPUTER SERVICES, INC.

# BCS on the job...
tailored services

These and other services...

BCS is a subsidiary of The Boeing Company, with product lines that include computer time, programming, consulting, training, data base services, facilities management, and a variety of other services. BCS operates throughout the United States, from district offices in Philadelphia, Washington, D.C., Houston, Seattle, and Wichita. Data centers are maintained at Seattle, Philadelphia, Wichita, and Huntsville.

With staff and facilities developed through more than 20 years of broad business experience, BCS offers comprehensive support in many widely used applications. These include general business and financial systems, automated manufacturing techniques, inventory management, scientific and engineering techniques, management systems, and computer operating systems. Today BCS is providing these and other services to industry and to various levels of government throughout the country, and each user receives direct, personal attention from experienced BCS people.
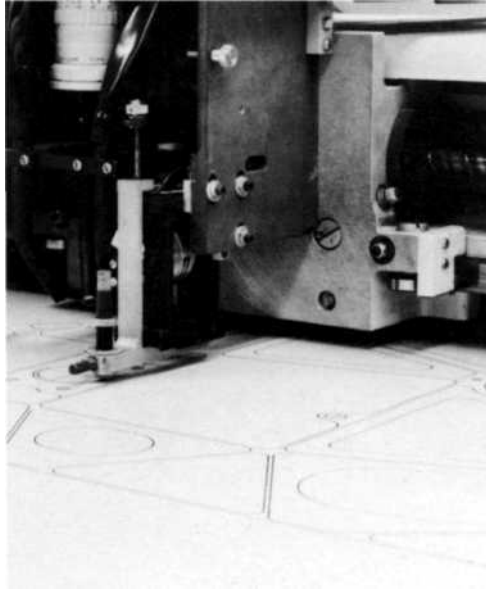
DIMENSIONAL CONTROL is a manufacturing and engineering tool that saves money, shortens flowtime, and turns the impossible end product into a profitable reality. Developed in the demanding environment of aerospace design and production, Dimensional Control is now available to industry at large as a regular service of **BCS**.

With Dimensional Control you can capture the design intent of a project in mathematical form, moving straight into numerically controlled tooling and production without trial-and-error experimentation. At the same time, using drafting machines, you can visualize the design for reference, with the drawings serving as a constant guide and check for all components.

Dimensional Control will help you to compress schedules, save man-hours and materials by eliminating defects, further reduce material costs by designing for numerically controlled machining of complex shapes, and ensure consistent production throughout. Parts and assemblies will be readily interchangeable. Subassemblies will mate without rework or forced fits. Widespread subcontracting can be employed with consistent results ensured by the use of the common mathematical sources provided by Dimensional Control.

The uses of Dimensional Control are broad; airplanes, engines, trucks, automobiles, architectural components, topographic studies, shipbuilding, and other current applications have thoroughly demonstrated the versatility of this new industrial tool.

RAGS: A SOLID-WASTE MANAGEMENT SYSTEM. RAGS (route analysis, generation, and simulation) is BCS's response to a long-recognized need of American urban communities. Both the volume and per capita production of solid waste are rising at accelerating rates. Productivity has failed to keep pace. Costs are increasing rapidly. The result everywhere is a major financial and service crisis.

RAGS is already being used to meet the problem head-on. It is currently in full-scale use in Baton Rouge, Shreveport, and Memphis, where service quality and economics have been substantially improved. Citizen complaints have declined. Employee morale is up. Fewer accidents are being reported. Backtracking on truck routes has been cut to a minimum. Productivity is much higher than before, and costs are down.

RAGS gets results like these by establishing efficient routes and schedules, balancing workloads between routes and crews, selecting suitable transfer stations, disposal points, and garages, and simulating the economic effects of operational decisions.

Easy to implement, RAGS produces visual material that can be used directly by collection crews, with minimal instruction. Supervisory personnel can observe and control operations, making operational adjustments on the spot wherever the need arises. Effects are almost immediate when the RAGS system goes into operation.

ENVIRONMENTAL PROTECTION: DEFINING THE PROBLEM. With its coast-to-coast communication network and large computers, BCS is ideally situated to assist federal agencies dealing with nationwide problems. Data-gathering, storage, and retrieval services are now being provided on a massive scale to the Environmental Protection Agency in its effort to check water pollution. Using BCS for support, the agency operates a system called **STORET**, which defines cause-and-effect relationships in water pollution.

Information on streams throughout the country is gathered at key points, then transmitted to the BCS data center at Philadelphia. Several basic types of data are processed: the uses to which the water is applied, criteria to fit the uses (such as temperature and pH), present condition of the water, past conditions, and point-source data on pollution. An action file is maintained on city or state plans for eliminating harmful discharges or otherwise upgrading water quality.

FOR THE BUSINESSMAN. For the businessman who wants direct control of his operation, **BCS** now has a complete range of action-oriented tools. These are computer programs and techniques that you can use to get at the detailed facts about your business, take prompt action, and get solid economic results. Applying these tools singly or in combination, you can obtain on-the-spot analyses of job expenditures, projections of cash requirements, sales forecasts, labor allocations, and other aids to decisive action. With these tools you can formulate dependable job estimates, foresee possible need to borrow (or defer certain payables), take advantage of discounts, arrange to recruit new personnel, and otherwise stay on top of the action.

The **BCS** tools are designed for immediate response. The program costs are surprisingly low, and initial preparation is minimal. They include programs for accounts payable, payroll, inventory, job costs, accounts receivable, department costs, general ledger, and many others. All have been in regular use for years. No testing is needed. All are applicable, as they are, to most businesses.

FOR THE COMPUTER USER. BCS offers computer time on a variety of large and small equipment. Appropriate computers, systems, and programs are provided to fit the customer's need for batch or terminal services. A nationwide telecommunication network brings the **BCS** data centers within reach of terminal-service users throughout the country.

Batch services are available at all four **BCS** data centers: Wichita, Seattle, Philadelphia, and Huntsville. These can be used to fulfill your entire computing need or to alleviate peak loads or emergencies.

Terminal services at **BCS** are highly diversified. Computers and software are the best and most advanced available. Conversational terminal services and remote job entry are both offered, to augment your present computer capability.

A new and dramatically useful terminal service now provided by **BCS** is interactive computer graphics. This gives you instantaneous visualization of mathematical information, allowing preview study of engineering design data, topographical information, economic data, performance curves, market information, and other decision-making inputs.

Another recent addition to **BCS** terminal services is an extremely effective **COBOL** debug program: **COSYBUG**. This new tool substantially reduces debugging time, providing shorter overall flowtimes and lower costs. **COSYBUG** is easy to learn; a **COBOL** programmer can become proficient in about two hours. Programs can be debugged interactively with **COSYBUG**; core dumps are no longer necessary; and **COSYBUG's** flexibility makes it especially useful in developing new programs.

This and similar analytical assistance are regular services of **BCS**, made possible by its unique combination of physical resources and computer-management expertise.

The services covered in this folder are just a few examples of how **BCS's** regular product lines are applied to specific industrial, business, and governmental needs. Product lines are offered in these categories:

- Computer Time Sales
- Program Services
- Facilities Management
- Consulting
- Training
- Data Base Services

To implement these services **BCS** operates almost $100,000,000 worth of equipment selected to provide maximum flexibility. Included are:

- IBM 360s
- CDC 6600
- IBM 370s
- IBM 7080 and 7094
- Miscellaneous special-purpose computers
- Plotters: Gerber, Orthomat, CalComp, SC 4020
- Computer output microfiche systems (tape to microfilm): Rand COM 500, UCC 300-3, Datagraphix
- Tape-controlled drafting machines
- Optical scanners

For further information write or call one of the BCS offices listed on the back cover of this folder.

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