POINT 4's FORCE:
DEVELOPS NEW SOFTWARE FASTER

POINT 4's FORCE, an automatic programming system, reduces application development time by as much as 80%. The system increases programmer productivity by generating bug-free, documented source code. A leader in the code generation field, FORCE performs essential programming functions automatically, thereby allowing the programmer to concentrate on the initial tasks requiring senior talent.

FORCE FEATURES

- Generates independent, totally transportable IRIS* Business BASIC programs that are:
  — documented
  — uniform
  — fully-commented and labeled
  — error-free
- Contains a data-dictionary that dynamically maintains data and program specifications
- Produces sophisticated reports, data entry and menu programs
- Aids in conversion of software to IRIS Business BASIC
- Provides programmer flexibility with 19 macro commands
- Offers free-form edit masking
- Automatically creates user manual
- Links by name programs, menus and documentation

FORCE is composed of three primary functional models: a data-dictionary that dynamically stores and manages information used in program development; language processors which retrieve specified information from the dictionary and generate source code; and the documentation facility.

INDEPENDENT PROGRAMS

Once an application program is created with FORCE, it performs independently of the source code generation system. FORCE generated programs can be utilized with any of POINT 4's multi-user computer systems and other similar computers which are supported by IRIS.* IRIS (Interactive Real-time Information System) is POINT 4's high-performance, time-sharing operating system, capable of supporting a large number of concurrent users and is utilized in over 19,000 installations worldwide.

DATA-DICTIONARY: A COMMON DATA BASE

Application components are specified to the system through straightforward entry techniques. Each application area in the dictionary is referenced by system name, and specifications may be shared between systems.

Program entry screens and report formats are stored in the dictionary. Data element attributes, file characteristics and program information are defined to the dictionary and referenced during source code generation so that the programs execute as required. Programs can be altered by changing dictionary information and regenerating.
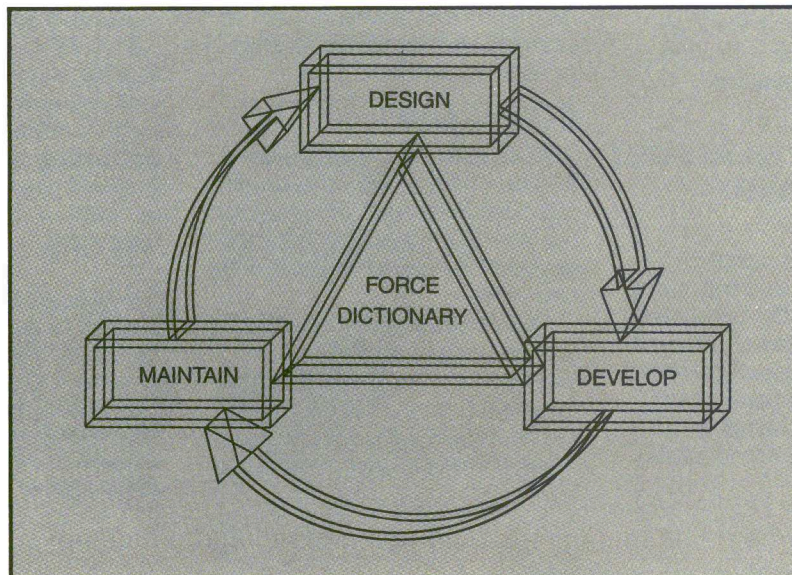
AIDS PROGRAM CONVERSION

A special advantage to users with existing application programs is FORCE's ability to assist in conversion of those programs to IRIS Business BASIC, saving many hours of programming time.

SPECIFICATION TO FINISHED PROGRAM— SWIFTLY

FORCE generated programs are:

Extensively Documented: Programming application information is readily available when the user needs it. Generated source code is documented both internally and externally. In-line comments and labeled source code enhance internal documentation. External documentation on files, programs, data elements and

DESIGN

FORCE DICTIONARY

MAINTAIN

DEVELOP

screens is available through dictionary reporting functions. Uniformly structured programs can be more easily understood and maintained. Enhancement is simplified because the generated code is independent of FORCE. Programs may be modified through FORCE source code, manually or by modifying dictionary definitions.

Fully-Commented and Labeled: Because programs are generated in labeled source code, readability is enhanced. Descriptive labels are easier to remember and more functional when following the logic or line numbers. Programmers don't have to anticipate line number branching or renumber. Since only entry points are labeled, other program statements are not mistakenly referenced and the possibility of duplicate line numbers is eliminated.

Error-Free: Because FORCE generates the source code, errors are virtually eliminated. The chance of errors occurring is greatly decreased because the programming logic is standard and the source code is labeled, even when programs are modified.

Sophisticated Report And Data Entry Programs

FORCE creates complete report, data entry and menu programs automatically. Generated report programs can access multiple files, performing calculations, statistics, record selection and break functions. Data entry programs combine all standard file maintenance functions in one program allowing insertion of keys and indexed file checks for selected inputs.

19 Macro Commands

FORCE provides 19 macro commands which allow the generation of an almost unlimited number of application programs. Functions performed by the macros include screen generation, file accessing and report formatting. Included is a User Macro, with parameter passing, which allows the programmer to specialize programs to suit the application. The User Macro allows the programmer to incorporate the specially defined function within FORCE's code.

Free-Form Edit Masking

Virtually any mask or display layout can be designed with FORCE. The system's masking operations allow decimal point numerics and right/left justification with rounding or truncation, and float and fill characters. Any keyboard character may be included before, within or after printed or displayed data.

Forscript

FORSCRIPT, a subsystem included with FORCE, automatically creates a complete, easy-to-use operator manual specifically designed for nontechnical system operators.

With FORSCRIPT, user documentation is formatted into a word processing file at program generation time. FORSCRIPT documents include a preface, table of contents and operational guidelines. Each generated program has instructions, reference tables and screen reproductions, making it easy to understand and use. Operator manuals are written to correspond in structure with the application. Manual sections are referenced from executing program screens. This means that an operator can find program explanations quickly using the online references.

Documentation

FORCE product documentation is extensive and tutorial. Executing FORCE programs refer to corresponding sections in the FORCE manual, providing an online index to operations.

Point 4: Responsive To Our Customers' Needs

At POINT 4 Data Corporation, our business is multi-user systems with a personal touch. We design and manufacture computer systems, distribute them through a worldwide network of value-added resellers and support those resellers with personal service.

POINT 4 computer systems are flexible, cost-efficient, expandable and upward compatible. And we're working for the future, developing new and better products and planning more and better ways to support our customers.

The materials contained herein are intended for general information. Details and specifications concerning the use and operation of POINT 4 Data Corporation's equipment and software are contained in the applicable technical manuals, available through local sales representatives.

*IRIS is a trademark of POINT 4 Data Corporation.