ProIcon for the Macintosh

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ProIcon is an extended and enhanced implementation of Version 8 of the Icon programming language. It was developed as a commercial product by The ProIcon Group, a joint venture of Catspaw, Inc. and The Bright Forest Company. When it was withdrawn from the market, it was placed in the public domain for distribution by the Icon Project.

Technical Profile

ProIcon is a standard Macintosh application. It runs stand-alone, has a standard Macintosh interface, and does not require MPW.

ProIcon includes a capable program editor and has facilities for compiling and running Icon programs, setting program options, managing windows, and the usual Macintosh printing and clipboard operations. Programs can be entered, tested, and debugged without ever leaving the ProIcon application. Up to twelve windows can be open at one time, allowing development of several programs simultaneously, as well as viewing data and program output. Program execution can be suspended and resumed at will or terminated at any time. On-line help is available for all ProIcon functions, operations, control structures, and keywords.

Settable program options include redirection of input and output, specification of a parameter string for the main procedure, control of tracing, and so forth. Compiler and run-time memory limits also can be set. Windows are automatically connected to files so that program input and output can be performed between windows and files.

Icon programs compiled by ProIcon run as stand-alone applications. They require a run-time support system, which is provided, but its use is transparent.

In addition to the Macintosh interface, the ProIcon language contains many extensions to Version 8 of Icon:

- Function tracing (in addition to procedure tracing)
- An optional termination dump of variables and their values
- Optional use of the Macintosh International Comparison System
- A set of functions for manipulation of windows, their contents, and the clipboard
- Functions for navigating through folders
- Functions for determining and setting file signatures
- Functions for producing dialog boxes
- A function to launch other applications under MultiFinder
- External functions for accessing HyperCard XCMDs and XFCNs
- Memory monitoring and a separate application for visualizing memory utilization

Memory Monitoring

Automatic storage management makes programming in Icon much simpler than in many other programming languages. Although the process is invisible to the Icon programmer, it is fascinating and can give insight into what goes on when Icon programs run.

ProIcon contains a facility for saving information about storage management. A separate application, MemMon, produces animated displays showing storage allocation and garbage collection in full color.

The ProIcon Manual

The 367-page ProIcon manual describes the ProIcon application and provides an overview of Icon, a summary of Version 8 features, a description of ProIcon extensions, and a mini-reference manual for all Icon functions, operators, keywords, and control structures. The manual also has appendices with reference material including complete keyboard encodings for all characters, a description of International String Comparison, information about writing external functions, a description of the MemMon application, and an extensive index. The ProIcon manual does not include basic material on Icon. Instead it serves as a supplement to *Icon Programming Language, Second Edition*. Prentice-Hall, 1990.

System requirements

ProIcon requires System Version 6.0.1 or higher. It needs 400KB of free memory for satisfactory operation; 1MB RAM is recommended. ProIcon and MemMon are 32-bit clean and run under System 7. MemMon requires an 8-bit color or grayscale monitor.

Obtaining ProIcon

The ProIcon program package can be downloaded via FTP and the Web or purchased on disks from the Icon Project.

For FTP, connect to ftp.cs.arizona.edu, cd /icon/binaries/macintosh, and get README to see what to download.

For the Web, connect to http://www.cs.arizona.edu/icon/. From the home page there, under **Implementations** follow the link to FTP Area for Binaries, then to macintosh, and get README to see what to download.

Disks purchased from the Icon Project are $15, which includes shipping by parcel post in the United States, Canada, and Mexico. There is a $5 charge for air mail shipping to other countries.

The ProIcon manual in 8.5×11" format with a 3-ring binder is $20, which includes shipping by parcel post in the United States, Canada, and Mexico. There is a $25 charge for air mail shipping to other countries.

Detailed information on ordering, method of payment, and so forth is available on the Icon Web page; link to Mail-Order Information. Alternatively contact the Icon Project:

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