
The Icon Newsletter

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Icon Newsletter to Cease Publication

The first issue of the *Icon Newsletter* appeared more than 20 years ago. It announced the availability of Icon for the CDC 6000/CYBER and the DECsystem-10.

Subsequent issues of the *Newsletter* covered a variety of topics ranging from implementation to programming to user applications. When the *Icon Analyst* started in 1990, some of the subjects formerly covered by the *Newsletter* moved to the *Analyst*.

In recent years, as the Icon language and its implementation matured, there has been less material for the *Newsletter*.

At the same time, the wide availability of the Web has made it possible to publish news in a timely fashion.

The *Newsletter* has served its purpose and run its course. The next issue, scheduled for June 2000, will be the last.

More Early *Icon Analysts* On-Line

The first five years of the *Icon Analyst* (August 1990 – June 1995) are now available on-line in PDF format. You'll find links to them at

<http://www.cs.arizona.edu/icon/analyst/iaback.htm>

Version 9.3.2 of Icon Released

Version 9.3.2 of Icon for UNIX, and Version 9.3.2 of the Icon program library, are now available from the Icon web site:

<http://www.cs.arizona.edu/icon/v93u.htm>
(Icon for UNIX)

<http://www.cs.arizona.edu/icon/ipl93.htm>
(Icon program library)

Source code is available for Icon and for the library. Binaries of Icon are available for several common UNIX platforms. Precompiled ucode files of the library procedures are also available.

For the Icon source code, this is primarily a maintenance release. The code has been reworked and simplified to increase portability. An ANSIC compiler is now required, and UNIX systems are expected to supply a POSIX (1003.1-1988) library. This new source release is sufficiently portable that it also builds on the Be operating system (see www.be.com), albeit without graphics.

Version 9.3.2 adds one new feature to Icon: The files in a directory can be listed by opening the directory as a file. Subsequent reads return the names of the files contained in the directory. The names are returned in no particular order, and for UNIX, the directories `.` and `..` are included.

The program library update reflects all the changes that have accumulated since the release of Version 9.3.1 in December of 1997, and it includes several new programs, procedures, and packages.

Jcon News

Version 2.1 of Jcon, the Java-based implementation of Icon, is now available. It includes minor feature additions, documentation edits, and bug fixes. Changes include the following:

- A directory can be read by opening it as a file.
- JPEG images can be written under Java 2 implementations.
- Java class files can be bundled with a Jcon program for easier dynamic loading.
- The run-time system can be bundled with a Jcon program to make it completely self-contained.
- Large integers now work with `to-by`, `seq()`, `limitation (e1 \ e2)`, and `exponentiation (e1 ^ e2)`.
- A zero increment value is diagnosed by `seq()`.
- `&host` no longer spawns a shell invocation of the `uname` utility.
- The run-time package name has been changed from `rts` to `jcon`. All programs must be recompiled.

A copy of the new Icon program library, compiled for Jcon 2.1, is also available.

A new technical report describes the Jcon imple-

mentation in detail:

Todd A. Proebsting and Gregg M. Townsend, *A New Implementation of the Icon Language*

The report describes in detail the Jcon compiler and its object-oriented run-time system.

The Jcon package, program library, and technical report can be downloaded from the Jcon web page:

<http://www.cs.arizona.edu/icon/jcon/>

The Icon Newsletter

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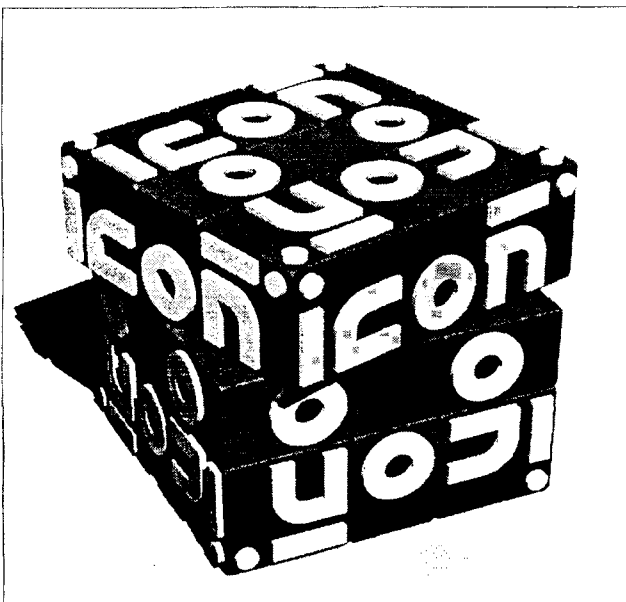
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New DOS Version of Icon

Steve Waldo has updated DOS Icon. It consists of two modules:

- iconcns — a Windows95 console version of icon and iconx
- iconmx — the DOS extended version of icon and iconx

The console version has the advantage of handling Windows 95's long file names, but obviously cannot run under pure DOS — only in a Windows 95 DOS box. The extended DOS version "feels" faster, but this has not been confirmed.

Both versions have the `-A` option of icon, which produces a stand-alone executable (the `.icx` file appended to a copy of `iconx.exe`). The modules are available from

<http://www.cs.arizona.edu/icon/ftp/binaries/msdos32/>

Minicon

Dave Hanson, Ray Pereda and Todd Proebsting recently completed a new implementation of Icon at Microsoft Research. This implementation, "Minicon", implements all of Version 9 Icon except for graphics.

Minicon is implemented in C++, and its object-oriented run-time architecture is inspired by the Icon implementation done at the University of Arizona. This architecture enables the easy addition of data types to the run-time system.

The implementation team is using Minicon for research into adding new data types to Icon.

Currently, there are no plans for making Minicon available outside of Microsoft.