Version 8.8 of Icon for MVS - Installation

Alan Beale
SAS Institute, Inc.

1. INTRODUCTION

Version 8 of Icon for MVS should run on the IBM 30xx and 43xx families
of processors and on other 370- or 390-type processors that use the MVS
(including MVS/XA and MVS/ESA) operating system.

Version 8 of Icon for MVS is distributed on a 1600 BPI standard-la-
belled tape (volume serial ICON88) which includes JCL, object code,
CLISTs, test and example programs, data for the programs and documenta-
tion files. The files on the tape were created with the IBM utilities
IEBGENER and IEBCOPY. Printed documentation is included with tapes dis-
tributed by the Icon Project at the University of Arizona.

2. INSTALLING MVS ICON

The first file of the tape is a JCL file containing a job to copy the
rest of the tape to disk. This JCL will require editing to conform to
local conventions before the job can be run. Use the following JCL
(changing UNIT names as necessary) to copy this file from the tape to
disk:

```
//ICON JOB standard-JOB-card-format
/*SETUP ICON88        possibly needed
// EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSIN DD DUMMY
//SYSUT1 DD DSN=ICON.JCL,VOL=SER=ICON88,UNIT=TAPE,
//          LABEL=(1,SL),DISP=(OLD,PASS)
//SYSUT2 DD DSN=userid.ICON.JCL,UNIT=DISK,
//          SPACE=(TRK,(1,1)),DISP=(NEW,CATLG)
//
```

The installation JCL defines an instream PROC named INSTALL with sym-
bolic parameters for those options you are most likely to need to
change. Three parameters you must specify are the name of the LINKLIST
data set into which the Icon load modules are to be linked, the TSO pre-
fix to be used in naming the Icon auxiliary files, and the name of the
data set containing ISPF interface routines. You can also select
whether the Icon documents are to be printed, the forms and printer to

be used if so, whether the source files are to be copied, and the names of the disk and tape units at your site. Probably, you will also need to modify the JOB card, add a JOBPARM card and/or modify the SETUP card to conform to your site's standards.

The files on the installation tape are as follows:

1. ICON.JCL -- the installation JCL

2. INSTALL.DOC -- a copy of this document (printed 66 lines to the page)

3. ICON.DOC -- a copy of the MVS Icon User's Guide (printed 66 lines to the page)

4. ICONT.OBJ -- the object code for the Icon translator. The object code is linked by the installation JCL into a LINKLIST library.

5. ICONX.OBJ -- the object code for the Icon executor. The object code is linked by the installation JCL into a LINKLIST library.

6. ICON.ISPPLIB -- an IEBCOPY-unloaded PDS containing sample panels for the Icon-ISPF interface.

7. ICON.CLIST -- an IEBCOPY-unloaded PDS of CLISTs including a CLIST used by the ISPF interface.

8. EXAMPLES.ICN -- an IEBCOPY-unloaded PDS of example Icon programs.

9. EXAMPLES.DATA -- an IEBCOPY-unloaded PDS of data for the example Icon programs.

10. ICON.FORM -- an IEBCOPY-unloaded PDS containing an Icon registration form and a trouble report form.

11. ICONLIB.ICN -- an IEBCOPY-unloaded PDS containing source for Icon procedures useful with MVS.

12. PGMLIB.ICN -- an IEBCOPY-unloaded PDS containing source for Icon programs useful with MVS.

3. INSTALLING THE ISPF INTERFACE

The ICONX module references the ISPF interface routines ISPQRY, ISPLINK and ISPEXEC. You must modify the install JCL to specify the name of the library containing these routines. If you do not run ISPF, or do not want to use the interface, specify the name of the ISPF library as NULLFILE. You will have unresolved external references for these names, but Icon will execute successfully as long as the ISPF interface is not used.

To complete installation of the ISPF interface you should copy the ICONSPF CLIST from the ICON.CLIST data set to an ISPF CLIST data set, and copy the ICON panel from ICON.ISPPLIB to an appropriate ISPF panel library. You should also modify an appropriate parent panel, such as a "user applications" panel, to include a selection of the ICONSPF CLIST using the NEWPOOL(ICON) option. An example is shown in the ICN@MSTR panel contained in ICON.ISPPLIB. Do not copy this member to your ISPF panel library; it is intended only as an example.

4. POSSIBLE INSTALLATION PROBLEMS

Unless you have a "dynamic STEPLIB" facility, you are strongly urged to place the Icon load modules in a LINKLIST data set, rather than in a private library. (Do not place them in SYS1.LPALIB, as they are not reentrant.) This is necessary because, although the Icon translator and executor can be invoked using the TSO CALL command, the CALL command will translate any arguments to upper-case, which makes a number of Icon facilities unavailable. If you cannot install into LINKLIST, you are urged to establish a "LOGON procedure" with the appropriate library defined as STEPLIB, so that access to Icon can be gained without use of the CALL command.

If you run ISPF, you may need to define ICONT and ICONX to ISPF as valid TSO command names in the ISPTCM module. Similarly, if you run PCF II, you may need to define ICONT and ICONX as generally available TSO commands rather than CLISTs. If, after installation, you receive "COMMAND ICONT NOT FOUND" messages even though the Icon library is included in STEPLIB or LINKLIST, you should determine whether these changes are necessary at your installation.

If the unit name VIO is not defined at your site, when you attempt to run the Icon translator, it will abort after producing message "LSCX607 Temporary file not created, unit name not defined: VIO". If you receive this message, you must zap the ICONT load module using the AMASPZAP utility to use another direct access unit name, preferably one which is eligible for VIO.

```
NAME ICONT L$C$VIOO
VER 0008 E5C9,D640,4040,4040
REP 0008 ZZZZ,ZZZZ,ZZZZ,ZZZZ       your unit name in hexadecimal
IDRDATA Z4503101
```

Alternately, this problem can be bypassed by allocating SYSTMP01 to a temporary data set before ICONT is called, in which case no attempt is made by ICONT to allocate a work file of its own.

5. TESTING THE INSTALLATION

There are a few Icon programs in the file EXAMPLES.ICN on the distribution tape that can be used for testing the installation and getting a feel for running Icon:

hello.icn
This program prints the Icon version number, identifies the host computer, prints the date and time, and lists the implemented Icon features. Run this test as

```
icont examples(hello)
iconx examples(hello)
```

cross.icn
This program prints all the ways that two words intersect in a common character. The file EXAMPLES.DATA(CROSS) contains typical data. Run this test as

```
icont examples(cross)
iconx examples(cross) <examples.data(cross)
```

meander.icn
This program prints the "meandering strings" that contain all subsequences of a specified length from a given set of characters. The file EXAMPLES.DATA(MEANDER) contains test data. Run this test as

```
icont examples(meander)
iconx examples(meander) <examples.data(meander)
```

roman.icn
This program converts Arabic numerals to Roman numerals. Run this test as

```
icont examples(roman) -x
```

and provide some Arabic numbers from the terminal. Enter the word EOF to stop the program.

If these tests work, the installation is probably correct and it should be a running version of Icon.

6. REPORTING PROBLEMS

Problems with MVS Icon should be noted on a trouble report form (ICON.FORM(TROUBLE) on the distribution tape) and sent to

```
Icon Project
Department of Computer Science
Gould-Simpson Building
The University of Arizona
Tucson, AZ    85721
U.S.A.
(602) 621-8448 (voice)
(602) 621-4246 (fax)
icon-project@cs.arizona.edu      (Internet)
... uunet!arizona!icon-project     (uucp)
```

If a program is involved, a copy of the program will be appreciated. The program may be necessary to provide help.

8. REGISTERING COPIES OF ICON

Those who received a copy of Version 8.8 of Icon for MVS directly from the Icon Project are registered users and will receive the Icon Newsletter without charge. This Newsletter contains information about new implementations, updates, programming techniques, and information of general interest about Icon.

Those who received a copy of Version 8.8 of Icon for MVS from a source other than the Icon Project should fill out a registration form (ICON.FORM(REGIS) on the distribution tape) and send it to the Icon Project at the address listed above. This will entitle them to a free subscription to the Icon Newsletter and assure that they receive information about updates.