Date: August 23, 1982

To: Lisa Software, Lisa Users

From: Ken Friedenbach

Subject: Release 10.2 of the PASCAL Development System

Overview

   This release is intended for Lisa users who want to use the Development
System on O.S. 5.2.3 (or later). There are also a number of bugs that have
been fixed in the 10.0 release. It is strongly recommended that you go to
10.2 on the Monitor at the same time you install 10.2 on O.S. 5.2.x.

   CAUTION: Beginning with this release, INTRINSIC.LIB can no longer be
moved freely from the Monitor to the O.S. This is because the Development
System contains some Intrinsic Units (in *OBJIOLIB.OBJ on the Monitor and in
OBJIOLIB.OBJ on the O.S.).

   CAUTION: The O.S. release contains files of the same name as the Monitor
release, but they are not the same files. (They were linked against different
PasLib files and there are compile time conditional compilation statements.)
This will be remedied in a future release when we plan to have one PasLib and
support for run-time conditionals.

   Major Changes:

   1. Several Compiler/Code Generator bugs were fixed:

       a.   P := pointer (ord (Q) + expr); now generates correct code
            when expr contains P as a subexpression. Thanks to Brad
            Silverberg for an excellent bug report and some diagnostic
            support. Thanks to Rich Page for help with the fix.

       b.   The Code Generator had a limit of 100 different External
            References per procedure which was not being checked. This
            limit has now been extended to 200 and a new Compiler Error
            message is generated when the limit is exceeded:

            309 Too many external references. (note this in your Manual)

            Thanks to Chris Moeller for a good bug report and example.

       c.   The code generator had a bug in the computation of block
            numbers for large Units (greater than 64 blocks). The bug
            resulted in negative block numbers, which apparently worked
            OK on the Monitor. (Unit I/O must mask the sign bit). The
            bug was uncovered when FileIO began doing more I/O checking.
            Thanks to Chris Franklin for the bug report and example.

2.   An error in the 10.0 IUManager caused Lisa to reset whenever a new
     Unit or Segment was added to Intrinsic.lib. This has been fixed.
     Thanks to Lorraine Daniels for the bug report.

3.   PackSeg now supports a single Pack Table for the O.S. PackSeg will
     ask an additional question about reading a table. If the response
     is positive, PackSeg prompts for a filename with the default being
     *PACKTABLE.LIB. If the response is negative, a unique table is
     built (as before).

4.   DumpHex has had a bug fixed related to closing files which were not
     opened.

5.   The Compiler, Code Generator, and IULinker make use of Rick Meyers
     Hardware drivers to report Elapsed Time. The time is measured from
     the beginning of execution to just before exit. Hence, the only
     repeatable times are those generated by execute files.

6.   Bugs in Script have been fixed. Script can be used in "preview"
     mode on Lisa prior to printing on the Apple][.

7.   All programs have been ported to the O.S. except the Assembler
     and Script.

Disks

This release consists of the following diskettes:

     BT10.2:   Monitor boot disk with the 10.1 Monitor System files
                (bootfiles, Filer, SysMgr, Formatter, DiskCopy, etc.)
                and the 10.2 Development System files.

   Barry Haynes is releasing the O.S. version of the Development
   System on a bootable O.S. twiggy which includes TIPPE and the
   Mouse Editor.

BT10.2:
    MON.LOADER   10 13-Jul-82
Boot Files: (Same as 10.0 and 10.1)
    CONFIG.DATA   1 17-Jul-82
    BOOTFILES.DATA   1 2-Jun-82
    LISABUG.OBJ   60 22-Jul-82
    LISABUG2.OBJ   23 19-May-82
    DRIVERS.OBJ   15 21-Jun-82
    MS.OBJ   4 12-Jul-82
    UARTDRVR.OBJ   2 23-Apr-82
    LOADER.OBJ   25 21-May-82
    TWGDRVR4.OBJ   4 13-Jul-82
    MONITOR.OBJ   35 15-Jul-82
    MONITOR.SYMBOLS   11 15-Jul-82
System Files: (Same as 10.0 and 10.1)
    MON.MISCINFO   1 12-Jun-80

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     MON.STARTUP           4  8-Oct-81
     MONSTART1.OBJ         3  4-Jun-81
     SYSMGR.OBJ           35 12-Jul-82
     DISKCOPY.OBJ         14 11-Jul-82
     FORMATTER.OBJ        13 13-Jul-82
     FILER.OBJ           123 22-Jul-82
Development System files: (New for Release 10.2)
     INTRINSIC.LIB         8 23-Aug-82
     IULINKER.OBJ         74  7-Aug-82
     CHANGESEG.OBJ         4  9-Aug-82
     GXREF.OBJ            15  9-Aug-82
     FINDWORD.OBJ          2  9-Aug-82
     IUPASLIB.OBJ         15 14-Feb-82
     OBJIOLIB.OBJ        103  7-Aug-82
     COMPILER.OBJ        217  7-Aug-82
     CODE.OBJ            128 16-Aug-82
     DUMPOBJ.OBJ          47  9-Aug-82
     IUMANAGER.OBJ        30  9-Aug-82
     CODESIZE.OBJ         15  9-Aug-82
     SEGMAP.OBJ            5  9-Aug-82
     CHANGETRAP.OBJ        4  9-Aug-82
     PACKSEG.OBJ          12  9-Aug-82
     DIFF.OBJ             19  9-Aug-82
     FINDID.OBJ            4  9-Aug-82
     BYTEDIFF.OBJ          4  9-Aug-82
     DUMPHEX.OBJ           6  9-Aug-82
     PATCH.OBJ             9  9-Aug-82
     SCRIPT.OBJ          104 18-Jul-82
40/40 files, 367 unused, 367 in largest
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Installation
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1. See the Monitor 10.0 Release Memo for a description of the major differences between the 10.x series and previous PASCAL Development System releases. (CAUTION: read the CAUTIONS on Release 10.0).

2. Boot with your current boot diskette and Filer.

3. If you wish to save your current *Intrinsic.lib, save it under a different name.

4. Transfer the System Files and Development System Files from the Twiggy boot diskette to the root volume on your working device.

5. Re-boot with the new 10.2 boot diskette.

6. If you saved an old *Intrinsic.lib, use the IUManager to install the files *OBJIOLIB.OBJ and *IUPASLIB.OBJ.

7. Follow the directions for Barry's TIPPE release to install and use the O.S. version of Release 10.2.

8. Don't report Development System bugs until they have been replicated

on the Monitor version of 10.2.

        Known Bugs: (O.S. Version)
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    1. For all programs but the Compiler and Code Generator there is an
uninitialized variable in the O.S. Interface Unit which can cause a spurious
error message: "ERROR INITIALIZING HEAP, NonResident = ????", where ???? is
some non-zero value. (Type RETURN to continue execution). The message can be
ignored, and execution will continue successfully. This will be fixed in the
next (minor) release.

(Work-around for Linker EXEC files: add a -P option as the first input to the
Linker. This option has no effect, but the extra line will satisfy the
spurious request for a RETURN.)

    2. Killing of Exec Files is not reliable, except for the Compiler and the
Code Generator. This together with 1. make EXEC files not very useful in
general. This will be fixed in the next (non-reusable) release.

        Known Limitations: (O.S. Version)
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    1. UnitRead from unit 2 is not supported on the O.S. As a result DumpHex,
Patch, and Dumpobj are not available on the O.S. release. Some form of
support will probably be available on the next (non-reusable) release.

    2. PackSeg does not run on the O.S. because there is not enough memory
available for the Heap. Hopefully this will be remedied as the system slims
down by stripping debug information.

    3. ChangeSeg does not work for some unknown reason. (This has not been
tracked down because ChangeSeg is not useful without an Assembler.)

    4. There may still still be a few places in the system where
´*INTRINSIC.LIB´ is assumed to be the name of the IUDirectory file. For this
reason, you may need to maintain both ´INTRINSIC.LIB´ and ´*INTRINSIC.LIB´ on
the O.S. boot volume.