OCTOBER, 1982

PIPELINES

Microware Systems Corporation • 5835 Grand Avenue • Des Moines, Iowa 50312 • 515-279-8844 • TWX 910-520-2535

A LEARNING EXPERIENCE-

MICROWARE SEMINAR '82

Microware hosted it's first User Seminar this year, May 14-16, with 130 OS-9 users, from not only the U.S. but England and Japan, attending the sessions and the after-hours festivities at the Des Moines Marriott.

The Seminar began Friday, May 14th with attendees registering, the Exhibit Room opening and a buffet dinner. Surprisingly enough the food was excellent! The day had been scheduled to allot time for the exchange of ideas and just getting to know one another.

The Exhibit Room was standing room only for the better part of the time it was open. Companies represented in the exhibit room were: Gimix, Smoke Signal Broadcasting. Hazelwood, Positron, GYC, Creative Micro Systems, Stellation Two, CSA, Meta-Lab, Frank Hogg Labs and Specialty Electronics. Booths had been set up to display the newest in hardware and application software available for OS-9. Several OS-9 Level II systems were on display, running terminals for the Application Software vendors. There was hardly a minute when the vendors weren't exchanging stories or explaining their wares.

The heart of the Seminar, the classes which were conducted on Saturday, consisted of eight technical sessions on such topics as "OS-9 Level I & II" to "Picking the Right Language". Each session was closed with an open discussion/question-and-answer period. Cassette tapes were made of all sessions and are available from Microware for $25 per set.

Saturday night was filled with excitment. Hospitality suites were opened at 7 PM by Microware, SSB and Gimix. After liberal amounts of free liquid refreshments had been served, potato chips and credit cards were shuffled, mermaids sought in the bottom of cookie tins, and lots of talk and information exchanged. These "strategy sessions" went on to the wee hours of the morning.

The Sunday morning brunch was highlighted by speechs from Larry Williams, "68 Micro Journal", Terry Ritter, the "father" of the Motorola 6809 and the project manager at Motorola for Basic09 and Ken Kaplan, President of Microware. After brunch, the program was turned over to Brian Capouch and the OS-9 Users Group was formed. For further information on the users group contact:

Brian Capouch
RR 1
Box 270
Monon, Ind. 47959
(219) 253-8181

We have received many calls and letters expressing anthusiasm for making seminars an annual event, so we hope to see everyone (and some new faces) at the 2nd Annual OS-9 User's Seminar on August 12-15, 1983 which will again be held at the Des Moines Marriott. We will pass more information along in further issues of Pipelines.

NEW LICENSING PLAN

FOR SYSTEMS HOUSES

Some years ago the programmers at Microware decided to develop an operating system and suite of languages that could be used to create and use modular, ROMable software. "Software in Silicon" was preceived to be the key to the legendary and elusive "black box" modular software system that could dramatically improve the productivity of system developers.

Once the OS-9 development was completed, the torch was passed to the marketing department. Thanks to our new "Application Vendor Software License" plan, OEM licensing, once affordable only by computer manufacturers, has now become a cost effective efficient option for the producers of turnkey systems.

The Offer

Microware now offers an "Application Vendors License" which will permit the OEM to include copies of the language run-time module as part of their own applications software packages. The per copy royalty per copy is just $10.

These licenses are available for: Basic09 run-time module ("RunB"); Pascal RTS ("PascalN", "PascalS", or "Support"); Cobol RTS ("RunC"); and ROM-based OS-9. The licenses allow you to reproduce up to 250 copies of the program covered by the license, and can be renewed for subsequent 250 copy units at a reduced cost. These licenses do not include source code.

Program Name	Initial License Fee	Renewal License Fee
RunB (Basic09)	$ 2,500	$ 1,250
Pascal	2,500	1,250
RunC (Cobol)	2,500	1,250
ROM-Based OS-9 Lev 1	2,500	1,250
with any above RTS	1,500	750

The License Agreements describe the complete terms and conditions under which these licenses are offered. Contact Microware for sample copies or for further information.

******

HAVE YOU HEARD?

The Los Angeles Times reports the computer has now replaced the power lawnmower as the "third most-cussed machine in existence". Number 1 is the auto, number 2 the television.

PATCHES FOR RUNC

Three bugs have been found in the OS-9 CIS COBOL runtime package. The first one is in the memory management routines. It usually causes problems with COBOL subroutines, expecially in menu type programs that CALL a subroutine, and later CANCEL Users that are getting unexplainable error messages (frequently error 161) should apply the following patch to their copy of Runc: at offset $16ED, change $ED84 to $ED02. The second bug causes problems when segmented programs are run. It does not effect programs not using segmentation.

offset	is	change to
$2015	$10	$AE
$2016	$AE	$01
$2017	$03	$10

The third bug causes a problem when any section or paragraph that happens to have been loaded in memory above $7FFF is PERFORMed. If this occurs, the perform stack becomes confused, and unpredictable results may occur. Normally, it is not possible to encounter this problem in Level I systems, because OS-9 and Runc will consume all of the memory above $7FFF. On Level II systems it can occur anytime Runc is invoked with #32k or more of memory. An updated version of Runc is available to correct the problem. If you are not sure how to make this patch, or are having other problems with COBOL that this doesn't fix, please use the Microware hotline (515)-279-8898 to let us know. Please don't forget to re-Verify your copy of Runc after the patch has been made.

★★★★★

INTERACTIVE DEBUGGER PATCHES FOR LEVEL II

[illegible] of the Interactive Debuuger commands ("E", and breakpoints) won't work correctly on OS-9 Level Two because of the way the "link" function works as compared to Level One. This can be easily be fixed by patching the the Debugger as follows:

1. Type "Debug" to load and start the debugger. It will be used to patch itself.
2. Change address $F684 from $10 to $39.
3. Change addresses $F60D through $F612 to $12.
4. Save the patched debugger to a temporary file by typing:

   $save temp debug

5. Exit the debugger by typing "q".
6. Update the new debugger module's CRC, then delete the temporary file by typing:

   verify <temp >debug.12 u ; del temp

The file "debug.12" will now contain the read-to-run Debugger. We suggest you replace the file "cmds/debug" with this corrected version.

★★★★★

FILE MANIPULATION UTILITY

For the convenience of our readers the editors of this newsletter offer Makeproc, a file manipulation utility written in Basic09. Makeproc, like Dsave. works by creating a procedure file to pe[illegible]m commands repetitively on all files in a di[illegible]ory system. The procedure file contains the command (copy, del, ext.), the file name, and options to redirect I/O and append memory.

A note from our software support staff - on error do not GOTO (515)-279-8898. Makeproc is not supported by Microware.

To use this utility, enter and Pack the following listing.

```
PROCEDURE MakeProc
0000        DIM DirPath,ProcPath,i,j,k:INTEGER
0017        DIM CopyAll,CopyFile:BOOLEAN
0022        DIM ProcName,FileName,ReInput,ReOutput,response:STRING
0039        DIM SrcDir,DestDir,DirLine:STRING[80]
004D        DIM Function,Options:STRING[60]
005D        DIM ProcLine:STRING[160]
0069
006A        ProcName="CopyDir"
0078        Function="Copy"
0083        Options="#32k"
008E        REPEAT
0090          PRINT "Proc name (";ProcName;")";
00A8          INPUT response
00AD          IF response<>"" THEN
00B9            ProcName=TRIM$(response)
00C2          ENDIF
00C4          ON ERROR GOTO 100
00CA          SHELL "del "+ProcName
00D6 100      ON ERROR
00DC          INPUT "Source Directory? ",SrcDir
00F6          SrcDir=TRIM$(SrcDir)
00FF          ON ERROR GOTO 200
0105          SHELL "del procmaker...dir"
011C 200      ON ERROR
0122          SHELL "dir "+SrcDir+" >procmaker...dir"
0142          OPEN #DirPath,"procmaker...dir":READ
015C          CREATE #ProcPath,ProcName:WRITE
0168          PRINT "Function (";Function;")";
017F          INPUT response
0184          IF response<>"" THEN
0190            Function=TRIM$(response)
0199          ENDIF
019B          INPUT "Redirect Input? ",response
01B3          IF response="y" OR response="Y" THEN
01C8            ReInput="<" \ ELSE  \ReInput=""
01DB          ENDIF
01DD          INPUT "Redirect Output? ",response
01F6          IF response="y" OR response="Y" THEN
020B            ReOutput=">" \ ELSE  \ReOutput=""
021E          ENDIF
0220          PRINT "Options (";Options;")";
0236          INPUT response
023B          IF response<>"" THEN
0247            Options=TRIM$(response)
0250          ENDIF
0252          INPUT "Destination Directory? ",DestDir
0271          DestDir=TRIM$(DestDir)
027A          WRITE #ProcPath,"x t p"
0288          WRITE #ProcPath,"TMode .1 -pause"
02A0          READ #DirPath,DirLine
02AA          INPUT "Use all files? ",response
02C1          CopyAll=response="y" OR response="Y"
02D5          WHILE NOT(EOF(#DirPath)) DO
02E0            READ #DirPath,DirLine
02EA            i=LEN(TRIM$(DirLine))
02F4            IF i>0 THEN
0300              j=1
0307              REPEAT
0309                k=j
0311                WHILE j<=i AND MID$(DirLine,j,1)<>" " DO
032C                  j=j+1
0337                ENDWHILE
033B                FileName=MID$(DirLine,k,j-k)
034E                IF NOT(CopyAll) THEN
0358                  PRINT "Use ";FileName;
0365                  INPUT response
036A                  CopyFile=response="y" OR response="Y"
037E                ENDIF
0380                IF CopyAll OR CopyFile THEN
038D                  ProcLine=Function+" "+ReInput+SrcDir+"/"+FileName
03A9                  IF DestDir<>"" THEN
03B5                    ProcLine=ProcLine+" "+ReOutput+DestDir+"/"+FileName
03D1                  ENDIF
03D3                  ProcLine=ProcLine+" "+Options
03E3                  WRITE #ProcPath,ProcLine
03ED                ENDIF
03EF                WHILE j<i AND MID$(DirLine,j,1)=" " DO
040A                  j=j+1
0415                ENDWHILE
0419              UNTIL j>=i
0425            ENDIF
0427          ENDWHILE
042B          WRITE #ProcPath,"TMode .1 pause"
0442          WRITE #ProcPath,"Dir e "+SrcDir
0455          IF DestDir<>"" THEN
0461            WRITE #ProcPath,"Dir e "+DestDir
0474          ENDIF
0476          CLOSE #DirPath
047C          CLOSE #ProcPath
0482          SHELL "del procmaker...dir"
0499          PRINT
049B          INPUT "Another ? ",response
04AD        UNTIL response<>"Y" AND response<>"y"
04C1        IF response<>"N" AND response<>"n" THEN
04D6          BYE
04D8        ENDIF
```