DECUS 12 BIT SPECIAL INTEREST GROUP
NEWSLETTER

November   Number 37   1979

Contributions and correspondence should be sent to:

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(Please include reference to Newsletter number and page when inquiring about material
published.)

NEWSLETTER SUBMISSIONS

The Newsletter is currently published bi-monthly in the odd months. The deadline for
each issue is the last Friday of the preceding even numbered month. Submissions are
accepted at all times and are normally used in the next issue to go to press
regardless of date of receipt. The deadline for ready-to-use material for the next
Newsletter is 28-December-79. Material requiring editing/re-typing should be in
earlier. Ready-to-use material should use an area 7 inches (18 cm) wide by no more
than 9 inches (23 cm) long on each page. It should be single spaced on white bond
paper whenever possible and must be reasonably clean, legible and sufficiently dark
for good photographic reproduction.

Material submitted in machine readable form is particularly desirable because it can
be edited and incorporated into the newsletter format more easily. Higher quality
reproduction is also possible this way. Contact the editor (Bob Hassinger) for
further details on acceptable media and formats if you plan to make a submission in
machine readable form.

COMMERCIAL APPLICATIONS SOFTWARE

I heard from David J. Cantral recently. His company, Pyramid Data, markets a number
of interesting packages and services for 12 bit users. Most of what he offers is for
COS-310, etc. with DIBOL. He has built a list of users of this sort of software and
sends out a newsletter to them from time to time. It appears that he makes use of
audio cassettes for a lot of his instructional material. I belive he can have the
cassettes reproduced at quite reasonable cost so the cost can be kept reasonable.
Seems like a good idea. Jim's address is P.O. Box 10116, Santa Ana, CA 92711. Phone
(714) 639-1527.

SIG COMMITTEES AND WORKING GROUPS

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Micro-8 Working Group and US Symposia Committee Representative

Jonathan Lockwood - see above

RTS-8 Working Group

Lee Nichols - see above

COS-310 Working Group

Lawrence H. Eisenberg - see above

Symposium Software Exchange Committee

Send copies of software you wish to exchange at the next US Symposium to one of the
following committee members for preparation:

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OVERSEAS PROBLEM

Andrew Mc Claren writes from Australia: "The fashion (seen in DSN and now the 12-bit
SIG) of expecting replies to readership audits within one week is unrealistic as
issues are often 2 months old before they are delivered in Australia"

I questioned this very point when I learned that DECUS was going to insert the audit
in the newsletter. I was assured that they understood the problem and that they
intended to allowed ample time for overseas responses. It would appear that in
setting up the audit form, however, there was a failure to indicate that a different

time limit had been established for overseas responses. I think the main point of the one week time limit was to emphasize the need for quick response rather than any sort of absolute cutoff. The DECUS mission is service to the members. Arbitrarily cutting off service is just not in keeping with that mission or the attitude that has always prevailed among the staff. I don't think anyone responding in a timely fashion needs to worry.

SOFTWARE UPDATE INFORMATION

Earl T. Ellis sent some information on updates for DEC 12 bit software. He says: "I think that a lot of users will be interested in both the 'Q' numbers and the dollars of the updates. I've just ordered the 'QF023-CY' for $200 to get a OS/78 license, binaries and documentation to go with my OS/8 V3D as an 'upgrade'. Cheap legal Commercial BASIC (i.e. BASIC V7 - RH). I've also ordered the update of RTS/8 V3 to my RTS8 V1 license, and gotten MACREL/LINK V2 as well for another $200 as 'QF028-NC'. ... It looks like MACREL is the way to go. I believe I mis-named someone ... it's Jeff INGLES, not Jeff English at the University of Rochester."

The following is an extract from the infomation Earl sent:

MACREL/LINKER V2A:

QF019-AC,AY	Binary license, support	$350
QF019-HC,HY	Update, Out-of-Warranty	$200
QF019-WC	Update, In-Warranty	$ 37
QF019-WY	Update, In-Warranty	$ 31

RTS/8 V3.0 combined with MACREL/LINKER V2A:

QF028-XC,XY,XE,XQ	Source License, Support	$900
QF028-YC,YY,YE,YQ	Source License, No Support	$450
QF028-NC,NY	Source Update, Out-of-Warranty	$200
QF028-NE	Source Update, Out-of-Warranty	$350
QF028-NQ	Source Update, Out-of-Warranty	$400
QF028-VC	Source Update, In-Warranty	$ 24
QF028-VY	Source Update, In-Warranty	$ 16
QF028-VE	Source Update, In-Warranty	$100
QF028-VQ	Source Update, In-Warranty	$150

OS/78 V3.0

Supported

QF022-AY,AX,AQ	Binaries, documentation, service	$1400

Unsupported

QF022-CY,CQ,CX	Binaries, documentation and no service	$700
QF022-DZ	License only	$560

Out-of-Warranty

QF022-HY,HX	Binaries, documentation and no service	$165
QF022-HQ	Binaries, documentation	$400

| QF022-HZ | Update license only | $100 |

In-Warranty

QF022-WY	Binaries, documentation, service	$ 20
QF022-WQ	Binaries, documentation, service	$149
QF022-WX	Binaries, documentation, service	$ 20

Upgrade from OS/8 V3D users

| QF023-CY,CQ,CX | Binaries, documentation and no service | $200 |

Source

| QF022-EY,EQ | Source license, no service | $2000 |

Source Update

| QF022-NY | Source license, update, no service | $330 |
| QF022-NQ | Source license, update, no service | $400 |

DECUS PROGRAM LIBRARY NEWS

The following programs have been added to the 12 bit areas of the DECUS Program Library. Contact the Library in Marlboro (overseas you can also contact your local DECUS Chapter Office) for further details.

DECUS 8-655 - CINET-BASIC - This is an update to the popular CINET-BASIC that has been in the library for some time. It was submitted by Geoffrey Chase. It will run in 4k from paper tape. It can also be loaded under OS/8 although the only I/O is low-speed paper tape. It is based on a modification of FOCAL.

DECUS 8-859 - INFPAK - This is Sally Swedine's package for information retrieval on a 12k OS/8 system with RK05 and two DECtapes. She says it can be easily modified for two tapes only. The package is written in OS/8 FORTRAN II and PAL-8.

"Mixed textual and numeric data records are stored in ASCII files on the system device and maintained using EDIT or TECO. The 19 programs provide for the specification of complex subsets of data files which are then either output whole onto new ASCII files or used to select particular variables, lines, or columns for output to DECtape in floating point format. Sets of variables output to DECtape may be paired, unpaired, or paired with a 'missing' data indicator used where an item is unavailable. Once on DECtape, analysis could include processing by a statistical package such as INFSTAT (8-902).

"INFPAK also provides count matrices on numerical or textual 'ranges' (including histograms), itemizes and counts the unique values of an entry or entry set, merges ordered files, and appends new data to existing records in ordered files. It will also provide a formatted line printer listing of any subset."

DECUS 8-907 - T.I. Silent 700 ASR Terminal/Cassette Device Handler - Submitted by I.M. Templeton. "A 2-page device handler for recording and playback on a T.I. Silent 700 ASR terminal equipped with Automatic Device Control. All required control characters are provided and sensed, and several possible end-of-file conditions are recognized.

The terminal may be the console device if necessary. A NULL: handler is also
included."

Codes: D2, G5 (includes F), K25. Listing in writeup.

DECUS 8-908 - TELCOM: Telecommunications/Teleprocessing Program - By Siegfried
Rybczynski. PAL-8 - 12k - written for a DP-12B Asynchrous Modem Interface. Appears OK
to use other interfaces like KL8J, etc. "With TELCOM, your PDP-8 or PDP-12 can
perform computer to computer or computer to remote terminal or other device
communications. Communications codes must be 7- or 8-bit ASCII and may be odd, even,
or mark parity. Default program status has the PDP emulating a remote demand
terminal. The user may exit TELCOM at any time while in this status, perform other
PDP processing then resume TELCOM operations at the point of exit. Additional
features provide for data transfers through the interface to and from file-oriented
devices. File characters are packed and unpacked according to OS/8 (OS/12)
conventions. Files created by TELCOM are readable by other operating system programs
(such as PIP, EDIT, BASIC, etc.). TELCOM utilizes an asynchrous modem interface for
telecomunications at speeds up to 1200 baud. The program has not been tested at
speeds beyond 1200 baud."

Codes: D4, H30, K25, Q145.

DECUS 8-909 - Spearman Rank Correlation Coefficient with Ties - By Lucia Carballo,
submitted by Martin Lipschutz - FORTRAN II - 8k. "A program to compute the Spearman
rank correlation coefficient of two variates and to test its significance. The
Spearman correlation coefficient is a nonparametric measure of dependence of the
variates which is 91% power efficient. The program will accept up to 165 data
points." Listing in writeup.

DECUS 8-910 - VT52-LA36 Device Handler for OS/8 - From Dan Hale. "This program is an
OS/8 standard device handler. It requires a VT52 crt, an LA36 DECwriter II, and the
VTXX-KA interface. The device handler acts as an LPT: driver. It requires that the
LA36 have the top-of-form option. It handles all special characters, implementing
horizontal and vertical tabs, automatic CRLF at end of the line, and automatic
form-feed at the end of the page. Handler is a two-page handler. It operates the
VTXX-KA interface in the printer-controller mode, which means that the output goes to
the printer only, not to screen (unlike DEC's LST: handler)." Listing in writeup.

DECUS 8-911 - TD8E Handler for RTS-8 - By W. van der Mark, Jim van zee, William
Cattey, submitted by Earl Ellis. 2 pages - PAL-8 - uses MQ ("room to recode as TAD's
and DCA's") - tested on 1.2 usec 8e - slower 8A's, etc. untested. "This program is a
modification of DECUS 8-741 (SD8X) into a RTS-8 task to drive TD8E DECtape under
RTS-8. This task will turn off the interrupts for at most 17 msec, and this only
during actual read/writes." Listing in writeup.

DCUS 8-912 - RKREAD/RKDUP: RK8E Utilities - By Kevin Danzig - 12k - OS/8 or
stand-along. "RKREAD: a very simple program that will ID any disk error on an RK8E.
I don't know who wrote the original but I modified it to be self starting. It doesn't
require anything aside from 4k. It is written in PAL-8.

RKDUP: a very quick program requiring 12k. It will copy from any of the four drives
supported by an RK8E to any other in approximately 55 seconds. It will also do a self
copy in 70 seconds. If there is a status error it will report it (unfortunately only
the status error not the address). RKDUP was written in PAL-8 some time ago and the

source is no longer available. Please note that while there are no USR calls in the
program it does need OS/8 to run. Actually only to exit as upon completion it does a
JMP I (7605... Typing ctrl-C at any time will abort and exit to the KBM with one
exception - if the system disk is write-locked.

Codes: H30, K25, Q145

DECUS 8-913 - TECO-8 - Submitted by Stanley Rabinowitz and the TECO Special Interest
Group.

"TECO-8 is a fast, versatile, character-oriented text editor. Advanced features such
as nested iteration loops, conditional execution blocks, and macro commands augment
the many simpler editing commands. TECO-8 will run on any PDP-8 or PDP-12 with at
least 8k of memory and the OS/8 operating system. Additional memory, up to 20k is
employed if available. This version of TECO runs at compatibility level 1 as defined
by the TECO SIG with the exception that Q-Register push and pop and extended match
control is not available. TECO-8 is upward compatible with DEC's OS/8 TECO (V5) but
is written in MACREL and has a large number of additional features including support
for VT-52's and VT-100's, super-TECO mode, read-with-no-wait, CTRL-C trapping,
typeahead, War and Peace Error Messages (i.e. longer explanations - RH) and support
for TECO.IN, and TECO.TE. It also has IF-THEN-ELSE support.

"Also included in this kit is WILD.TE used to support wild cards in compile class
commands, TECO.IN a sample initialization file, VTEDIT.TE version 0 of a popular video
editor written in TECO, and TECKBM.TE an OS/8 keyboard monitor emulator written in
TECO."

Note: the VT-52/100 support is available if you have at least 16k available. If BATCH
is running, you need 20k. Also note: the write-up makes references to the question of
whether your monitor has TECO.TEC support but does not seem to tell you how to
determine this. As I understand it, the support would be in CCL. The versions of CCL
with OS/8 V3D and OS/78 V1 do not have the support but OS/78 V2 and V3 do have it.
The significance is that CCL can chain to TECO and pass it a command line that it was
not able to handle. This is supposed to make extended CCL commands possible by
implementing them in TECO macros. The ability of V7 to exit to the monitor and pass
back command strings completes the facility. The WILD.TE macro demonstrates this by
implementing wild card file specifications for compile class commands (i.e. EXECUTE,
COMPILE, etc) such as .COMPILE TEC???.MA.

DECUS 8-914 - UFCLK: BASIC User Function Package for PDP-8/A Internal Clock - By Dan
Hale. "UFCLK is a BASIC.UF user function overlay to OS/8 Version 3. This version of
the program will require adaptations to work with later versions of BASIC. The
overlay is a set of BASIC-callable functions which enable the user to access the
PDP-8/A internal real-time clock and to manipulate a State Systems Inc. digital relay
interface."

"Uses one page of BASIC's OS/8 device handler space for the resident interrupt code.
This reduces the program's file handling capabilities, but does allow the program to
call other function overlays without impacting the clock timing or interupt service."
Listing in write-up.

BASIC8-108 - Seneca Vally Structured BASIC - By E. C. Emery and T. J. Wood. OS/8
BASIC, 12k. "Seneca Valley structured BASIC allows the following new features in a
BASIC source program: 1) IF condition DO, 2) ELSE, 3) TERMIF, 4) WHILE condition DO,

5) TERMWHILE, 6) ON variable GOTO, 7) condition OR condition,
8) condition AND condition. The logical 'AND' and 'OR' may be used in standard 'IFF'
statements as well as the new constructs that require a condition.

"The pre-processor program translates the new constructs and logical operators into
OS/8 BASIC and outputs the file BASIC.WS which may then be compiled by the BASIC
compiler."

Codes: D2, H30, K25. Listings in the writeup.

BASIC8-109 - TRACE-SEARCH - by James Turner. Educomp BASIC. Requires adaptation for
other versions of BASIC. "TRACE wil locate and print all value assignments (LET) in a
BASIC program. It will examine all lines for a '=' and list the variable being
assigned. There is no routine to handle matrices and they are ignored. There are
some restrictions as to program format.

SEARCH is almost identical to TRACE with the exception that it will print all line
numbers in which a specific variable occurs.

Codes: D2 Listings in writeup.

BASIC8-110 - VTSQR: Fourier Square Wave Display on a VT-52 - By Andrew McClaren. OS/8
V3C, V3D BASIC with patch to PNT function provided. "'VTSQR' demonstrates some of the
capabilities of the VT-55 DECgraphic Scope display unit, in a program which builds up
a square-wave from its fourier harmonics.

"All graphics effects are controlled by a self-contained set of subroutines which may
be used as a basis for developing further graphics programs." Listing in write-up.

FOCAL8-16 - McKeown Statistical Package - By M. J. McKeown, M.D. FOCAL-68 - 4k. "A
three part program used to perform one-sample and two-sample statistics, Welch
Procedure, One-Way Analysis of Variance, and Sheffe's Contrasts between Means, which
allows one to investigate more thoroughly the source of the difference between group
means." Listings in write-up.

DSD FLOPPYS ON PRE-OMNIBUS MACHINES

Jim Van Zee writes: "We have just finished developing an interface card for
pre-Omnibus machines (such as the 8/I, 8/L, and PDP-12) which allows one to hook up a
Data Systems Design floppy disk without purchasing the DW8e bus converter. The user
must be prepared to add some backplane wiring, however, since such machines do not
have slots prewired for such an option. The interface will work with either the Model
210 (RX01 equivalent) or the new Model 440 (RX02 equivalent).

"I have also now had an opportunity to try out my single-density byte-mode handler
using this interface on a PDP-12, and can report that it fails the FUTIL 'scan test'
which I used for comparison in the last issue (#36, p.11), but never-the-less appears
to operate at full speed under ordinary system usage (such as transfering system areas
or moving the Adventure text file from one disk to another). The machine used for
this test had a 1.88 usec cycle time, and, of course, correspondingly long IOTs (about
5 usec on this machine). I had calculated that performance would be marginal under
such conditions, so I am quite pleased that everything (except the 'scan test') works
just as well as it does on an 8/e."

Jim is at Lab Data Systems, 10320 Ravenna Ave. NE, Seattle, WA 98125.

HELP - LQP, FORTRAN IV, ETC

W. E. Musselman writes: "I read with great interest your SIG Newsletter although most of it is over my head. I am an old-fashioned Fortran-IV Programmer, schooled by experience on an IBM 1130.

"My problem with DEC may not be sophisticated enough for your Newsletter but I've entered SPR's, paid $200 to a DEC consultant, even discussed with you on a BASIC operation and still don't have a totally desirable solution.

"The Problem: Write on a LQP printer directly from a program. From my IBM experience, I would write a line of output via a Fortran WRITE statement and the printer would print a line of output. With DEC, apparently each Fortran WRITE places data in buffer and will not print until buffer is full, which in almost all cases was the middle of a line. The next printing would then go back to the beginning of the line and overprint the remainder of the previous line. It should continue where the previous print left off.

"Solutions Proposed: Write on file then print file which works but I'd rather direct print. Secondly, I was advised to use "Basic" so, I learned Basic but no where in the manual can you write directly to printer from Basic. I was advised to designate LQP as a file, open file, write on file. Again, the printer printed a buffer full then repeated the buffer for several times. (Writing Basic output to Diskette file then listing (printing) file means exit Basic to monitor then list file - somewhat cumbersome.)

"Thirdly, almost all of my files in IBM were random access files. However, random access files with just a few words (or values) take up a whole block. There is a lot of wasted space. Somewhere the compiler should pack the records in the block to better utilize the space via the Define File designation.

"I had to write a simple program to pack and unpack random access records into the blocks that I will give to anyone. What help or suggestions can anyone give me on these problems?

"Incidentally, I raise my hand for a 'yea' vote for Word Processing Hints, in fact, any hints at all. Maybe you could devote a page for the unsophisticated programmers like myself for simple problems. You could call it 'Dunces Corner.'"

(Unfortunately, a full explanation of the source of these problems is not simple. They are the result of some involved interactions between a number of aspects of the design of the OS/8, the languages, the device handlers, and the LQP interface. I will try to offer some light here but input from anyone who has ideas or can simplify the problem is welcome.

1) In OS/8 FORTRAN IV you have the option of doing output to a line printer via device 3 (the built in line printer driver) or via the standard OS/8 device driver (LQP) via some unit like 5. As far as I know, DEC does not support a patch to the run time system (FRTS) to change the internal handler to drive an LQP. This would be possible, however, I suspect. The reason for doing this is that the internal handlers are character by character (and the device 3 line printer driver is even ring buffered and interupt driven to allow overlapped calculation and printing). You get the immediate

output desired via the internal handler.

2) Because a version of FRTS with an internal LQP driver is not available, it is
necessary to do the output via a standard OS/8 device handler. Because OS/8 I/O is
designed to be highly device independent, all handlers must be designed to work on 256
word (384 character) buffers. This is the source of the lag between the WRITE and the
printing.

3) In the special case of OS/8 FORTRAN IV and the LQP handler, another, very special
problem causes the overprinting of lines. This goes back to the famous "card reader
bug". Each time FORTRAN is ready to input or output a 256 word buffer to any of the
OS/8 device drivers, it checks to see if that driver is the currently active one (i.e.
the last one to have been used). If it is the active handler, it is used as is. If
it is not, a new, virgin copy of the handler is copied into the active handler area.
With most OS/8 device handlers, this does not present a problem. In the case of the
card reader handler, and now the LQP handler, however, some status such as a partial
line of input or the current status of the printer is saved in the in-core copy of the
handler. Copying in a new, virgin copy of the LQP handler wipes out the status that
was saved (which indicated the printer was in the middle of a line) and the handler
goes through its initialization again which includes returning the printer to the left
margin. Ensuring that the handler does not get copied over should help. To do that,
only do I/O to the one OS/8 device handler LQP: until the output to it is completed.
I think FORTRAN knows enough to leave the handler alone in this case.

One of the reasons to use BASIC is that you can do full upper and lower case output
(if you have the new version - V6 or V7 - that was released with OS/78). It still has
the same lag in the output due to buffering, however. Some years ago, using the older
versions of BASIC, I got around this problem by forcing out 384 nulls when I wanted to
be sure everything up to that point had been forced out to a printer. This was done
with something like:
          FOR I=1 TO 384
          PRINT #n: CHR$(0);
          NEXT I
as I recall. A faster way might involve building a string of, say, 64 nulls so only 6
iterations of the loop would be needed. In some languages a REWIND command has the
effect of forcing out the current partial buffer. I cannot say for sure were this
does and does not work in the OS/8 world.

As to getting help from a DEC consultant - good luck. As far as I know DEC has only a
very small handful of people available for consulting who have anywere near the level
of 12 bit expertise required to deal with this sort of problem effectively. What few
there may be seem to be spread very thinly around world. Your chances of getting one
to help you seem very poor. One of the experts in the user community would be a much
better bet.

On the point about storage allocation for FORTRAN IV Direct Access files - yes, this
is a known shortcoming of the product. When I faced it, I did the same thing - write
a simple set of pack and unpack routines. That turned out to be a good idea anyway
because, in my case, I combined that function with the packing and unpacking of
various data types within the record. In this way you can isolate the storage format
from the rest of the code in the programs that access the files and you have one
standard routine to include in all the programs that access the data base.

I found and reported both the "card reader bug" and the problem with direect access record packing during field testing of the first release of OS/8 FORTRAN IV. The problems were both acknowledged at the time, but the reason for not fixing them has always been the same. The place both things have to be fixed is in the run time system (FRTS). Due to the design of FORTRAN, FRTS must fit in field 0. It took a major effort from one of DEC's best code crunchers to make FRTS what it is. There was simply not enough room to fix the problems, at least within the constraints of the project schedule. Since then the desire, time, talent and funding have not been available to upgrade the product. That is why the users have had to develop enhancements themselves. An example is Bob Phelps' USR routines to open and close files at run time. The developers recognized this as a needed feature but they did not have time/funds to do it.

As to the "Dunces Corner", the thought is valid, we always try to do as much as we can but we need input to do it. Questions, hints, even a regular column from one of you would be nice. How about it? I feel sure that a different name would be more appropriate, though, don't you? - RH)

Mr. Musselman is with Equitable Assurance Society of the United States, City Centre One, 100 Federal East, Youngstown, Ohio 44503. Phone (216) 743-1191.

HELP - VT8E

Robert P. Scobey sent the following request: "I have a VT8E on the system but no editors appear to be available for displaying text on this video machine. The VT8E is a high speed display which works directly out of memory and is relatively easy to program. If you know of any editors available for the VT8E I would appreciate some correspondance on these matters. The buffer for TECO is one possibility for display and I could modify it (probably) if a source listing were available from one of the 12 Bit SIG members. If you know of anyone who might cooperate in this problem, please send the information."

(I think some work in this area has been done but I cannot find the references at the moment - can anyone help? As to TECO - you can order the latest version of TECO (V7) from DECUS. I think they have the whole package including sources. As I recall, this new version is written in MACREL, however, so to do much modifying you will need MACREL and LINK. If anyone has any luck with VT8E software I would like to hear about it. I have always felt the VT8E was a very interesting device whose potential has never been fully realized - RH). Bob Scobey is an Associate Professor in the Section of Neuroscience at the University of California, Davis, California 95616.

VT100 BUG

Theodor P. Giesler sent the following: "We have discovered a problem with new VT100's when used with an acoustical coupler. The new version holds pin 23 of the EIA interface high. When this pin is held high, the carrier tone produced by the coupler changes such that proper communications cannot occur. This was not the case with earlier VT100's. The symptom of problem is that the coupler shows carrier but nothing can be received or transmitted. The solution to this problem is to clip the wire connecting pin 23 on either end of the EIA cable.

"It should be noted that the terminal support group of our local field service office has issued a memo to both the sales and field service people about this problem, but some people are not aware of it."

(I suspect that this problem is dependent upon the particular make and model of
coupler you are using. Also, the kind of cable you use to connect to it may make a
difference. Some of the cables being sold only have the minimum number of wires
(about 6) that are needed for the simple, 300 baud class modems and couplers, so, with
them, pin 23 may not be connected anyway. - RH) Mr. Giesler is with Travenol
Laboratories, Inc. in Deerfield, Illinois 60015.

15.IX.79

Dear Bob,

        Here is a complete list of the changes to EDIT/EDITX to fix
the problem reported by Alistair Windram in Issue #30,p56, and to
allow operation in conjunction with the OS/78 spooler symbiont as
well. The symbiont patch removes the ability to have ODT break-
points when running the program. This is the way DEC did it, but
I'm sure alternative methods are possible (i.e. loc 176 appears
to be free???). The version number (locs 2372-3) is now V13B.

        EDITX is a slightly modified version of EDIT which provides
a number of essential improvments, such as lower case commands,
output control (CTRL/S,Q), and the elimination of all those stu-
pid linefeeds! While EDIT is certainly not a very good editor,
lots of people DO use it, and with these improvements it is actu-
ally possible to manipulate textual material such as this letter
without going insane! The ambitious soul can easily use ODT (or
FUTIL) to convert OS/8 V3D EDIT (or earlier versions) into EDITX.
The next page contains a OCOMP listing of the differences between
versions. Unfortunately I do not know to whom to give credit for
the original work. I got a second-hand copy from the New Orleans
DECUS meeting and can only say: Thanks, Somebody!

        The comparison below was made with OCOMP and then edited on
a VT/78 system (using EDITX) - with the spooler running all the
while in background (foreground?). So it works! Incidentally,
this system was operating with my new byte-mode system handler,
which provides 40% more file space (611 free blocks vs. 438) on
the very same diskettes! I had to patch the spooler program so
that it could access files on either byte-mode or regular disks,
but aside from this (and a patch to FORTRAN-IV), everything else
is exactly the same - the same bootstrap, the same duplication
procedure, etc. Users seeking a solution to the limited size of
regular OS/8 floppies may contact me for more information. (JvZ)

COMPARISON OF CHANGES TO 'EDITX.SV' (22-NOV-78) TO FIX A PROBLEM
WITH THE 'Q' AND 'N' COMMANDS, AS WELL AS TO PERMIT OPERATION IN
CONJUNCTION WITH THE SPOOLER SYMBIONT UNDER OS/78.

| | 22-NOV-78 VERSION | | | | 15-SEP-79 CHANGES | | | |
ADDR	0	1	2	3	0	1	2	3
00000		6100	7700	7701		6232	5001	6100
00004	7000	7000			7700	7701		
00414		1001				1003		
00470			1003				1005	
00554	1003				1005			

ADDR	0	1	2	3	0	1	2	3
01360	5304				5301			
01530				1003				1005
01544	0002				0004			
01550	0002				0004			
01744				4402				4404

ADDR	0	1	2	3	0	1	2	3
02014	1357				2774			
02020	3402				3404			
02310				1001				1003
02370			0262				0263	
02774	xxxx	xxxx	xxxx		3112	5776	1301	

COMPARISON OF OS/8 V3D 'EDIT' AFTER CHANGES FOR 'EDITX'
IMPROVEMENTS: LOWER CASE COMMANDS, CTRL/S,Q SUPPORT, NO
EXTRA LINEFEEDS, 'Q' BUG FIX AND SYMBIONT SUPPORT.

| | EDIT.SV 05-JUL-77 | | | | EDITX.SV 15-SEP-79 | | | |
ADDR	0	1	2	3	0	1	2	3
00000		6100	7700	7701		6232	5001	6100
00004	7000	7000			7700	7701		
00220	1031				7300			
00274	1111	4327			5675	3104		

ADDR	0	1	2	3	0	1	2	3
00414		1001				1003		
00470			1003				1005	
00554	1003				1005			

ADDR	0	1	2	3	0	1	2	3
01250	3071				3074			
01260				1271				4664
01264	7640	5657	2257	6032	3116	7640	5657	2257
01270	5657	7764			6032	5657		
01360	5304				5301			

ADDR	0	1	2	3	0	1	2	3
01530				1003				1005
01544	0002				0004			
01550	0002				0004			
01744				4402				4404

ADDR	0	1	2	3	0	1	2	3
02014	1301				2774			
02020	3402				3404			
02310				1001				1003
02370			0301	0262			0302	0263

ADDR	0	1	2	3	0	1	2	3
02774	4445	2515	2510		3112	5776	1301	

ADDR	0	1	2	3	0	1	2	3
03054				1270				1273
03064			1370	5260			7307	1160
03070	0334	1115	1366	7440	3160	1370	5260	0334
03074	1365	7640	1364	1363	1115	1366	7440	1365
03100	5762	3014	5550	4545	7640	1364	1363	5762
03104	3062	1022	7710	5435	1111	4473	0300	0064
03110	1040	1371	7450	5321	1010	1111	4473	0300
03114	1370	7650	5767	7330	0064	4142	0000	2316
03120	5226	4574	2062	5340	1361	7450	5716	1360
03124	1027	3035	4543	1020	7450	5330	1357	5716
03130	3014	1021	3015	1022	6032	6031	5331	6036
03134	3016	1035	3017	5211	0356	1355	7640	5331
03140	1027	7041			7001	5716		
03154		3665	3647	0034		7757	0177	0004
03160	3262	3242			7774	7764		

Submitted (but not created) by: Jim van Zee

BATCH, BAT and USR in OS/8 FORTRAN IV

The simultaneous operation of BATCH, BAT and USR in machines of any suitable size up to 32K requires some modifications to FRTS. As Lars Palmer pointed out (#16.24) BAT requires the BATCH monitor to remain in high core. Unfortunately, his patch also reacts to a 2-page system handler and can make the last 2600 words of core inaccessible when BATCH is not in use. If USR is used as well as BAT (see #23.37 for an example) we can run into problems if USR writes into the same field.

It is possible to modify FRTS to cope with all the the above. As supplied, the code in 12710-12750 (addresses differ slightly in an older version) examines MXFLD (locn. 10023), the BATCH flag and the 2-page handler flag and decides where up to 3000 words of handlers and buffers (filled from the top down) should be loaded. If there is less than 32K, more than 8K, no BATCH and no 2-page system handler, the load address is M5000. A 2-page handler, BATCH, or only 8K changes this to M4600. A 32K machine (M = 7) is treated specially. If BATCH is present, MXFLD is changed to 6 in case there is a ROM; if it is not, the load address is 4600 if there is a 2-page handler and 4400 (to protect a possible ROM) if not.

Once we decide there is no ROM (or that it is disabled, see #25.12) the code can be simplified and made more efficient. The final result will be that the FRTS load address will be M5000, M4600 or M2000 (as in Lars Palmer's patch) if we have nothing, a 2-page handler or BATCH respectively. USR will load in field M or M-1 depending on the absence or presence of BATCH

The code for FRTS V5A is as follows:

```
12500/1023 1307              TAD UFLD              /mod. to USR Patch

12710/1023 7040              CMA                   /-1
    1/1350 1023              TAD MXFLD
    2/7450 7650              SNA CLA               /skip if not 8K
    3/5326 5317              JMP ONLY8K
    4/1347 1302              TAD TD8EFL            /2-PG sys hand?
    5/7650                   SNA CLA
    6/5322 1345              TAD (200              /no
    7/4746 1344 ONLY8K,      TAD (4600             /yes, or 8K
   20/1302 3030              DCA HDIFF             /set FRTS load start
    1/7650 4746              JMS I (GBFLG          /BATCH?
    2/1345 7650              SNA CLA
    3/1344 5327              JMP NOBCH             /no
    4/3030 1350              TAD (2000             /yes, reset load start
    5/5600 3030              DCA HDIFF
    6/4746 7040              CMA                   /-1
    7/7650 1023 NOBCH,       TAD MXFLD             /set USR field
   30/5334 3747              DCA I (2507           /was NOP in USR patch
    1/1347 5600              JMP I RTINIT

12744/4600                                         /two locns used
    5/0200                                         /in Lars Palmer patch
    6/3613
    7/0006 2507
   50/7771 2000
```

Locns 12732-43 are free for future patches!

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ANNOUNCEMENTS:

Returning from vacation is always the most depressing part of any vacation. Not only do we have all of our office work which has piled up for the better part of three weeks, but we find that our newsletter -- which seems to have been submitted only yesterday -- is now late.

Well gang, we have much news from DEC to pass on, in the form of some very needed and helpful PATCHES to OLDER VERSIONS OF COS (yes, we have DATE PATCHES), and another PATCH for Versions 8.00 and 8.01 (also relating to the date).

Presented for your guidance, also, is our promised routine for screen messages in BATCH programs under DIBOL-8, without the need for that PLEASE and RETURN command.

Presented for your entertainment (my lack of technical writing skill) is the promised WORD PROCESSING list processing routine for elimination of unwanted lines during a list processing routine. The routine is quite interesting and, if you can overcome my lack of clarity, it should be helpful for other problems as well.

Those of you who have forwarded diskettes and written for our WPS>COS routine, please hold on for a few days. We would like to do them all at one time and, in the meantime, we also have a little work to do for the upcoming Fall DECUS U.S. Symposium in San Diego. Oh, yes. The California Supreme Court and Court of Appeal have also asked us to consider applying ourselves to some of the matters which we have pending there.

For those of you who have been kind enough to inquire, our vacation was absolutely great! We visited Germany, Austria, Hungary, Liechtenstein, Luxembourg and France. We managed to make OKTOBERFEST in Munich (and, after more than five liters of their special brew, almost decided to stay) and, believe it or not, we had 15 straight days of sunshine -- nearly an unheard of phenomenon in Europe. My HP-1 (watch calculator) almost earned me a more permanent stay in Hungary, but this is the wrong newsletter for that story!

THE WS-200 -- A GIANT OR A FLOP?

We have heard, time and time again, of the passing of the EIGHT and of the resurrection of the EIGHT. Recent revitalization of R&R, especially toward software applications and some hardware enhancements, for EIGHT-based products were glowingly disclosed at the last Symposium (New Orleans). Promises were made of new dedication and inter-departmental cooperation which would result in considerable renewed interest in the EIGHT, as well as continued product support.

The most notable advancements (at least from the public view) have been with the Word Processing lines and significant enhancements upon the WD-78s and the introduction of the WS-200 series.

The WS-200 is an enhanced PDP-8A, which supports considerably more MOS memory than earlier versions and about eight terminals (VT-100s) and four printers, for its word processing operations. It supports up to four RL01s and two RX01s and comes in a most attractive package. IT LOOKS GREAT! IT COMPLIES FULLY WITH MURPHY'S LAW!

For various reasons, we have become a sort of un-official trouble shooter for many of DEC's problems, especially in connection with Word Processing and COS-310 software difficulties. This status results in a 2-way street, and we get plenty of grapevine and customer information.

The 200 series has been plagued with problems from its introduction; from unfortunate delays occasioned by VT-100 breakdowns, to hardware breakdowns, to unexcusable software breakdowns and deficiencies. The sad truth is that there are many micros available to the public which provide much better Word Processing capabilities than DEC's minis. [Small example: want to correct an error on page 48 of a 100-page document? You can wait forever to find the error -- as there is no way to GO TO PAGE and must search through the document for the error -- and then correct it; then you can wait even longer for the printer to locate the proper page and print it. Lord forbid if you happen to have used another feature which permits RESET of page numbers (for numbering along Chapter lines; e.g. 3-1; 3-2; 4-1; etc.), you might never be able to print the page! Among the most competitive deficiencies are FORMS OVERLAYS such as provided by WANG (it is absolutely impossible to use DEC's wordprocessing with pre-printed forms, and the List Processing is no answer or help), DIRECT PAGE ACCESS such as is available with nearly all serious competitors, FOOTNOTE FOLLOW (also available with most competitors) and a simple SORT/MATH package.

For over a year DEC has been promising remedial software. Because of the deep problems with the 200, however, none of that software has been forthcoming and even VERSION 4.0 for the 200 (the only public version available) is still full of bugs and deficiencies. VERSION 4.0 for the other EIGHT-based systems is now a long way off, and according to earlier projections of Mr. Jack Gilmore, project manager, DEC was supposed to have been ready with VERSION 6.0 by this time.

The real problem, as we see it, is that the users who are really complaining at this time are some giants, on both coasts, and if they should push their complaints any further, we may very well face a depression with the EIGHTS.

In the meantime, and probably a reflection of the problems and responsibilities, we have been unable to receive any response to several letters and telephone calls to project manager Mr. Jack Gilmore, for a period of six months.

COS 3-10 MESSAGE ROUTINES DURING BATCH PROGRAMMING

From time to time it is necessary to place a message upon the screen during a BAtch program. Often the PLEASE command does not provide for sufficient room to set forth a complete message, or requires the operator to press RETURN to complete the message. We have found a way to avoid the problem, and have had success and even some fun with the following routines. Further, we are able to display messages on the screen between programs, without operator intervention, when the running program does not necessarily require any input, and has not been programmed to provide significant information on the screen.

The procedure is so simple that all of the buildup seems unnecessary; yet we have received considerable inquiry on this subject.

PROGRAMMING ROUTINE

All that is necessary is to input any number (we use "Ø") at the beginning of the line and follow it with text. Each line, upon which text is to be typed, must be started with a number. IF YOU USE THE SAME NUMBER FOR EACH LINE THEN YOU CAN ERASE ALL THE INFORMATION WITH A SINGLE COMMAND. [Erasure is necessary, as the BAtch command will insert each numbered line into the buffer. This could affect other programs, especially if you were not expecting it.] If the operator is to perform some function, then the message can be completed with the PLEASE command, which sounds the bell/buzzer and requires a RETURN in order to proceed. THE PLEASE COMMAND MUST NOT BE PRECEDED BY A LINE NUMBER.

The following BATCH ROUTINE is a brief annotated example:

```
R CLEAR                                                  [Clears Screen]
Ø                                                        [Space]
Ø       THE FOLLOWING PROGRAM WILL SORT THE CUSTOMER     [Message Starts]
Ø       LIST FILES AND THE CUSTOMER ACCOUNTS RECEIVABLE
Ø       FILES.  YOUR DISKETTES SHOULD BE ARRANGED IN THE
Ø       FOLLOWING MANNER - PLEASE CHECK THEM AT THIS TIME
Ø
Ø           DRAWER Ø                 DRAWER 1
Ø
Ø       SYSTEM DISKETTE       CUSTOMER FILES DISKETTE
Ø
Ø
Ø           DRAWER 2                 DRAWER 3
Ø
Ø       WORK DISKETTE 1       WORK DISKETTE 2
Ø
Ø
PLEASE CHECK EACH DISKETTE AND PRESS "RETURN" WHEN READY  [PLEASE COMMAND]
ER Ø                                                     [Erases Message from
                                                          Buffer]
RUN CLEAR                                                [Clear Screen]
Ø
Ø       WHILE I AM SORTING THESE FILES, WHY DON'T YOU PUT
Ø       SOME WIDE (15") PERFORATED PAPER IN THE PRINTER
Ø       AND THEN GET A COPY OF COFFEE.  I'LL BE BUSY FOR
Ø       ABOUT TEN MINUTES.
Ø
Ø
ER Ø
RUN SORT,CUSFIL
RUN INDEX
```

While it is true that the messages could be printed by using another program for that purpose, the storage space required is about the same for a screen of information, and editing is far easier, and the procedure is far faster. Generally, if more than a

page of information is required, we would write a program and run it in the BAtch, as storage requirements may outweigh convenience at about that point. But, it's easier to use the single quote "'" this way.

Please note that the ERase Ø command will erase the information in the buffer, but not from the screen. If not used, the buffer will continue to retain the last line of information, and this could interfere with other programs.

DATE PATCHES - MOST VERSIONS OF COS-310

Through your efforts, as conveyed by us to DEC and, most certainly, as conveyed in other means, DEC has now released to us for publication to you DATE PATCHES for each of the following versions: V5.05; V6.05 and V7.00.

Each of these patches will add an eight-year window to your existing systems, through December 31, 1987. PLEASE NOTE: THE PATCHES ARE EFFECTIVE FOR THE DATE PERIOD OF JANUARY 1, 1980 THROUGH DECEMBER 31, 1987. The PATCHED MONITOR will not accept any date prior to January 1, 1980 or later than December 31, 1987. As with the DATE PATCH which we provided in the last issue, each of these PATCHES will cause the DIrectories to show dates eight years later than their actual date. (I.e., an entry of 10/15/78 will be displayed as 10/15/86.)

The PATCHES are appended to the end of this Article.

PATCHES FOR VERSIONS 8.00 AND 8.01

Also attached to the end of this Article are two PATCHES for Versions 8.00 and 8.01 which are concerned with the DATE COMMAND. The problem is described as: "When entering the date into the system, the MONITOR accepts a numeric day of zero or blank as valid. SOLUTION: The attached patch to the MONITOR corrects this problem. It changes the version number of the MONITOR to V8.01B. Please note that COS-310 assumes each month is 31 days long, and therefore will accept such dates as 31-FEB-79."

PLEASE NOTE: Use of the VERSION 8.00 PATCH will change the version number of the MONITOR to V8.00A.

WORD PROCESSING HINTS COLUMN

Provided we continue to receive some encouragement from those of you out there, and that means some letters with ideas, questions, or telling us to get lost, etc., we will try to provide some interesting hints and kinks for the WP-8 series.

There appears to be some active interest in formation of a Word Processing SIG at this time, but we believe that the better approach would be to form a Working Group within the 12-BIT or DEBUG SIGS, or both. There are several reasons, but principal among them, at this time, are: (a) there are not enough users who could participate in an active manner in such a SIG -- most users being in the secretarial base and (b) it is unlikely that users who are primarily interested in Word Processing would have sufficient technical interest to support a SIG.

In the meantime, KUBERNAN, Cloverdale Executive Building, 2110 Cloverdale Avenue, Winston-Salem, North Carolina 27103 (919-725-1915), a DEC OEM, is presently actively

trying to form such a SIG or, at least, a working group. Those interested should send them a note. We, also, are interested and hope to participate with Kuberman.

There is, of course, a significant difference between DEC's Word Processing systems which operate on the EIGHTS and that which operate on the ELEVENS. The principal difference is that the WPS-8 is far superior to WPS-11 (which uses a WS-78 in the communications mode, for its Word Processing, and is anything but efficient). On the other hand, a commercially available system for the ELEVENs, WORD-11, which closely emulates WPS-8 (but has many enhancements) appears to be receiving wider acceptance than DEC's own system, and operates directly under RSTS with VT-100 support. (Present minimum requirements are PDP-11/34 and about 10M disk memory. Rumor has it that a new version may be available soon for smaller ELEVENS, possibly down to the PDT-100 series, and operable under RSX-11.)

CREATING FORMS FOR LIST PROCESSING WITH VARIABLE FIELDS REMOVED FROM FINAL PRINTOUT WITHOUT PRINTING BLANK LINES

PROBLEM: Creating a form (espcially an address block) with list processing, where different lines may or may not require information, but the lines should be "closed". (I.e., no blank lines should be printed.)

USE NOTE: The following set of instructions will appear far more complicated than the process actually is. After you have tried it once or twice, you will see just how simple it actually is. The following illustrations should be of some help.

SOLUTION: Set up the form so that all variables _initially_ appear on the same, or as many lines as needed, although the final output is to be on another line, separated by at least a single space. DO NOT SEPARATE THE FIELDS WITH RETURNS. I.e., use "wraps".

It is now necessary to "wrap" the variable to the line upon which it should be printed, if there is information to print. To do this, create a ruler above the line containing the first "variable" so that the right edge falls within the first "variable" field. (See illustrations below.)

This will cause the fields to "wrap" to the following lines upon a scroll. If other variables are on the same line, continue to set up the rulers causing all variable line field indicators to wrap to the next line.

After wrapping all the variables, so that they appear on the desired line, _IF_ _PRINTED,_ back up to the beginning of each wrapped (i.e., variable) line.

Then reset your rulers for the actual rulers desired (which will probably be the one at the top of the page), _but_ _enter_ _some_ _different_ _character_ _in_ _each_ _ruler_ (e.g., enter an unused tab, or move the H around, etc.), so that a ruler will remain imbedded between each line which may contain a variable.

Go to the beginning of each line containing a variable, which may or not be printed, and which, if not printed, you do not want a blank line, and strike the RUB CHAR OUT key. This will not delete any information (or, if it did, you did something wrong and will have to edit it back in), but will delete the line feed instruction to the computer, unless something is printed. [NOTE: To insert a character at the last point on the line, after the "rubout" operation, it is necessary to position the cursor under the last existing character - type in the new information (including that

last character) and then delete the "last" character. Many of you most likely have
had this problem arise under different circumstances. Now you have that solution,
also.]

Scroll through the form. The variable fields will remain on separate lines, but will
not print, and a blank line will not be transmitted, if there is no information found
for that field.

EXAMPLE: The following typical NAME/ADDRESS List is used:

```
<GENDER>
<FIRST>
<MIDDLE>
<LAST>
<JR/SR>
<TITLE>
<CONAME>
<SUITE>
<STREET>
<CITY>
<STATE>
<ZIP>
<DROP>
<POBOX>
<>
```

The ADDRESS LIST FILE contains many addresses which contain corporate titles (i.e.
<TITLE>) and company names <CONAME>, but some do not. Some addresses have <SUITES>,
and others do not. We want to create a form, for List Processing which will allow us
to make a single pass through the file, with a single selection specification, and
print all the address blocks without any line skipping.

The form ruler initially is set up as follows:

```
L----------------------------------------------------R--------------------
      .   1   .   2   .   3   .   4   .   5   .   6   .   7   .   8
.........0.........0.........0.........0.........0.........0.........0.........0
```

The form is then initially set up in this fashion (NOTE THE SPACES BETWEEN THE
"VARIABLE" FIELDS):

<GENDER> <FIRST> <MIDDLE><LAST><JR/SR> <TITLE> <CONAME> [line wrap]
<SUITE> <POBOX> <STREET> [hard return - optional]
<CITY>, <STATE> <ZIP> <DROP>

The <JR/SR> field will print only if there is a Jr. or Sr. or III, etc., in the field.
IT IS NOT A PROBLEM. (MIDDLE NAMES SHOULD ALWAYS HAVE A TRAILING SPACE IMBEDDED IN
the List File. "Jr./Sr." should always have an imbedded space and comma -- e.g.,
"<JR/SR> ,Jr." upon inputting the list file.)

<TITLE>, such as President, Secretary, etc., <CONAME>, which is the company name, if any, <SUITE> and <POBOX> are all variables which should be printed on their own lines but, if not present, should not cause a line feed.

First, create rulers to force a "wrap" of EACH of the fields:

```
L-----------------------------------------R-------------------------------------------
        .   1   .   2   .   3   .   4   .   5   .   6   .   7   .   8
.........0.........0.........0.........0.........0.........0.........0.........0
```

<GENDER> <FIRST> <MIDDLE><LAST><JR/SR> <TITLE> <CONAME>
<SUITE> <POBOX> <STREET>
<CITY>, <STATE> <ZIP> <DROP>

This ruler will force <TITLE> <CONAME> <SUITE> <POBOX> <STREET> to the following line, as follows:

```
L------------------------------------R
```
<GENDER> <FIRST> <MIDDLE><LAST><JR/SR>
<TITLE> <CONAME> <SUITE> <POBOX> <STREET>
<CITY>, <STATE> <ZIP> <DROP>

Repeat the process, with a new small ruler for each of the variables which have fallen on line 2:

```
L----------R---------------------------------------------------------------
        .   1   .   2   .   3   .   4   .   5   .   6   .   7   .   8
.........0.........0.........0.........0.........0.........0.........0.........0
```

Now your screen will appear as follows:

```
L------------------------------------R
```
<GENDER> <FIRST> <MIDDLE><LAST><JR/SR>
```
L_____R
```
<TITLE>
<CONAME>
<SUITE>
<POBOX>
<STREET>
<CITY>,
<STATE>
<ZIP>
<DROP>

Since we want <CITY> <STATE> <ZIP> and <DROP> to be on the same line, reset your ruler for those as follows:

```
L-------------------------------------------------R--------------
        .   1   .   2   .   3   .   4   .   5   .   6   .   7   .   8
.........0.........0.........0.........0.........0.........0.........0.........0
```

Now your screen will appear as follows:

```
L-------------------------------------------R
<GENDER> <FIRST> <MIDDLE><LAST><JR/SR>
L--------R--------------------------------------------------------------
<TITLE>
<CONAME>
<SUITE>
<POBOX>
<STREET>
L-----------------------------------------------------------R------------
<CITY>, <STATE>  <ZIP>  <DROP>
```

At this time you are ready for the final step. Place a ruler between each of the
lines, which is different in some meaningless detail from each of the prior rulers.
(E.g., move a meaningless tab around; or insert and delete tabs -- just make them
different so that they will remain imbedded.) For example:

```
L---------------------------------------------------------R------------
<GENDER> <FIRST> <MIDDLE><LAST><JR/SR>
L-----------T-------------------------------------------R------------
<TITLE>
L---------------T--------------------------------------R------------
<CONAME>
L--------------------T----------------------------------R------------
<SUITE>
L----------------T--------------------------------------R------------
<POBOX>
L---------------T---------------------------------------R------------
<STREET>
L---------------------------------------------------------R------------
<CITY>, <STATE>  <ZIP>  <DROP>
```

Now, the final step is to back up to the beginning of each line containing a "vari-
able" field, and to then press the RUB CHAR OUT one time for each field. This will
erase the required line feed character, but will keep your variable field on its own
line.

During the printout of your list processing form, if the field is empty, the line will
be skipped and will not be printed. If there is information to be inserted in the
field, it will, in fact, be inserted and printed on its own line.

DON'T FORGET DECUS SYMPOSIUM IN SAN DIEGO

For those of you who can make it, the program for this coming DECUS looks even greater
than what we had last Spring in New Orleans. The EIGHTS really have been given good
time and scheduling.

We look forward to seeing you in San Diego.

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COS-310 V5.05   Seq 5.5 M

Enter the following commands:

```
.R PATCH
FILE NAME: /N
PATCHING MONITOR
BLOCK: 14
LOCATION : 143
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : 372
OLD VALUE: 6200
NEW VALUE: 6000
LOCATION : END
RELATIVE CHECKSUM: 7601
NEW BLOCK PATCHED OK
BLOCK: 15
LOCATION : 110
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 16
LOCATION : 372
OLD VALUE: 7660
NEW VALUE: 7650
LOCATION : END
RELATIVE CHECKSUM: 7770
NEW BLOCK PATCHED OK
BLOCK: 36
LOCATION : 375
OLD VALUE: 0110
NEW VALUE: 0120
LOCATION : END
RELATIVE CHECKSUM: 0010
NEW BLOCK PATCHED OK
BLOCK: END
04 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: COMP
BLOCK: 2
LOCATION : 211
OLD VALUE: 1630
NEW VALUE: 1631
```

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COS-310 V5.05   Seq 5.5 M

LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 14
LOCATION : 164
OLD VALUE: 0132
NEW VALUE: 0126
LOCATION : 172
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: CREF
BLOCK: 4
LOCATION : 376
OLD VALUE: 1630
NEW VALUE: 1631
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 6
LOCATION : 161
OLD VALUE: 0132
NEW VALUE: 0126
LOCATION : 171
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: /X
EXIT

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COS-310 V6.05   Seq 6.5 M

Enter the following commands:

.R PATCH
FILE NAME: /N
PATCHING MONITOR
BLOCK: 14
LOCATION : 143
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : 371
OLD VALUE: 6200
NEW VALUE: 6000
LOCATION : END
RELATIVE CHECKSUM: 7601
NEW BLOCK PATCHED OK
BLOCK: 15
LOCATION : 110
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 16
LOCATION : 372
OLD VALUE: 7660
NEW VALUE: 7650
LOCATION : END
RELATIVE CHECKSUM: 7770
NEW BLOCK PATCHED OK
BLOCK: 36
LOCATION : 375
OLD VALUE: 0110
NEW VALUE: 0120
LOCATION : END
RELAVITE CHECKSUM: 0010
NEW BLOCK PATCHED OK
BLOCK: END
04 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: COMP
BLOCK: 2
LOCATION : 211
OLD VALUE: 1630
NEW VALUE: 1631
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 14
LOCATION : 164
OLD VALUE: 0132

COS-310 V6.05   Seq 6.5 M

NEW VALUE: 0126
LOCATION : 172
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: CREF
BLOCK: 4
LOCATION : 376
OLD VALUE: 1630
NEW VALUE: 1631
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 6
LOCATION : 161
OLD VALUE: 0132
NEW VALUE: 0126
LOCATION : 171
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: DFDIR
BLOCK: 2
LOCATION : 144
OLD VALUE: 0110
NEW VALUE: 0120
LOCATION : END
RELATIVE CHECKSUM: 0010
NEW BLOCK PATCHED OK
BLOCK: END
01 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: /X
EXIT

COS-310 V7.00   Seq 7.0 M

Enter the following commands:

```
.R PATCH
FILE NAME: /N
PATCHING MONITOR
BLOCK: 14
LOCATION : 143
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : 371
OLD VALUE: 6200
NEW VALUE: 6000
LOCATION : END
RELATIVE CHECKSUM: 7601
NEW BLOCK PATCHED OK
BLOCK: 15
LOCATION : 110
OLD VALUE: 5567
NEW VALUE: 5570
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 16
LOCATION : 372
OLD VALUE: 7660
NEW VALUE: 7650
LOCATION : END
RELATIVE CHECKSUM: 7770
NEW BLOCK PATCHED OK
BLOCK: 36
LOCATION : 375
OLD VALUE: 0110
NEW VALUE: 0120
LOCATION : END
RELATIVE CHECKSUM: 0010
NEW BLOCK PATCHED OK
BLOCK: END
04 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: COMP
BLOCK: 2
LOCATION : 211
OLD VALUE: 1630
NEW VALUE: 1631
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
```

COS-310 V7.00   Seq 7.0 M

BLOCK: 14
LOCATION : 164
OLD VALUE: 0132
NEW VALUE: 0126
LOCATION : 172
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: CREF
BLOCK: 4
LOCATION : 373
OLD VALUE: 1630
NEW VALUE: 1631
LOCATION : END
RELATIVE CHECKSUM: 0001
NEW BLOCK PATCHED OK
BLOCK: 6
LOCATION : 161
OLD VALUE: 0132
NEW VALUE: 0126
LOCATION : 171
OLD VALUE: 2301
NEW VALUE: 2101
LOCATION : END
RELATIVE CHECKSUM: 7574
NEW BLOCK PATCHED OK
BLOCK: END
02 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: DFDIR
BLOCK: 2
LOCATION : 144
OLD VALUE: 0110
NEW VALUE: 0120
LOCATION : END
RELATIVE CHECKSUM: 0010
NEW BLOCK PATCHED OK
BLOCK: END
01 BLOCK(S) PATCHED IN THIS FILE
FILE NAME: /X
EXIT

COS-310 V8.01A
(Patch 3)   Seq 3 M

1. Create a PATCH command file (PT03) using the following editor
commands:


```
    .ER
    .LN
    .0100  /N
    .0110  16
    .0120  204
    .0130  7440
    .0140  205
    .0150  1314
    .0160  206
    .0170  7700
    .0180  207
    .0190  5315
    .0200  210
    .0210  4563
    .0220  211
    .0230  5315
    .0240  212
    .0250  4565
    .0260  213
    .0270  0030
    .0280  214
    .0290  3203
    .0300  215
    .0310  2313
    .0320  216
    .0330  2203
    .0340  217
    .0350  1713
    .0360  220
    .0370  2313
    .0380  221
    .0390  7500
    .0400  222
    .0410  5315
    .0420  223
    .0430  1103
    .0440  224
    .0450  7550
    .0460  225
    .0470  1104
    .0480  226
```

COS-310 V8.01A
(Patch 3)   Seq 3 M

```
.0490 1713
.0500 227
.0510 7640
.0520 230
.0530 5215
.0540 231
.0550 1203
.0560 232
.0570 7002
.0580 233
.0590 7110
.0600 251
.0610 0213
.0620 END
.0630 0434
.0640 26
.0650 256
.0660 2243
.0670 END
.0680 0001
.0690 END
.0700 /X
.0710    <ctrl/z>
.WR PT03
```

COS-310 V8.01A
(Patch 3)   Seq 3 M

2.   Check the PT03 command file by running PATCH without the /C
option.   PATCH simulates the patching operation but does not
change the file on the system device.   When run without the /C
option, PATCH displays CHECKSUM CORRECT--USE OPTION C TO UPDATE
rather than NEW BLOCK PATCHED OK.   To check the command file
enter the following:

     .R PATCH,PT03

PATCH will respond by displaying the PATCH dialogue and returning
to the Monitor.   If PATCH does not return to the Monitor, check
the PT03 command file to ensure that it was entered correctly.

3.   Install the patch by entering the following command:

     .R PATCH,PT03/C

PATCH will respond by displaying the PATCH dialogue and returning
to the Monitor.

COS-310 V8.00
(Patch 7)   Seq 8 M

1.   Create a PATCH command file (PT07) using the following editor
commands:

```
.ER
.LN
.0100  /N
.0110  16
.0120  204
.0130  7440
.0140  205
.0150  1314
.0160  206
.0170  7700
.0180  207
.0190  5315
.0200  210
.0210  4563
.0220  211
.0230  5315
.0240  212
.0250  4565
.0260  213
.0270  0030
.0280  214
.0290  3203
.0300  215
.0310  2313
.0320  216
.0330  2203
.0340  217
.0350  1713
.0360  220
.0370  2313
.0380  221
.0390  7500
.0400  222
.0410  5315
.0420  223
.0430  1103
.0440  224
.0450  7650
.0460  225
.0470  1104
.0480  226
```

COS-310 V8.00
(Patch 7)   Seq 8 M


```
.0490  1713
.0500  227
.0510  7640
.0520  230
.0530  5215
.0540  231
.0550  1203
.0560  232
.0570  7002
.0580  233
.0590  7110
.0600  251
.0610  0213
.0620  END
.0630  0434
.0640  26
.0650  266
.0660  2142
.0670  END
.0680  0041
.0690  END
.0700  /X
.0710    <ctrl/z>
.WR PT07
```

COS-310 V8.00
(Patch 7)   Seq 8 M

2. Check the PT07 command file by running PATCH without the /C
option.   PATCH simulates the patching operation but does not
change the file on the system device. When run without the /C
option, PATCH displays CHECKSUM CORRECT--USE OPTION C TO UPDATE
rather than NEW BLOCK PATCHED OK.   To check the command file
enter the following:

     .R PATCH,PT07

PATCH will respond by displaying the PATCH dialogue and returning
to the Monitor. If PATCH does not return to the Monitor, check
the PT07 command file to ensure that it was entered correctly.

3. Install the patch by entering the following command:

     .R PATCH,PT07/C

PATCH will respond by displaying the PATCH dialogue and returning
to the Monitor.

Corrections & Comments
for

OS/8 SYSTEM REFERENCE MANUAL
AA-H607A-TA

The following collection of errors, corrections and coments pertaining to the OS/8 System Reference Manual were compiled and edited by Dick Murphy and Bernard Klatt. They have been submitted to DEC Software Documentation but readers of the 12 BIT SIG newsletter may also find them of interest. Do not assume that this is the complete list of errors. There are probably several more that we didn't catch.

Page No.   Correction or Comment

1-1 DUMP is a **handler**, not a program; it works with LP08, LE8, LS8 or LA8 printers.

1-3 The minimum configuration for running BATCH is 12K of memory.

1-5 Memory resident portion is 256 words if 1 page handler, 384 words if 2 page system handler.

2-2 RKBn: where n is 0,1,2 or 3. Also RXAn where n is 0 or 1.

2-3 .KF - KREF cross-refernece file, .LT - KREF listing file, .MA - MACREL source file.

3-1 BAD CORE IMAGE message results if CUSP is "RUN" under OS/78.

3-2 SAVE ERROR can also occur if there is not enough room for the file.

3-3 The "OS/8 Software Support Manual" has no CCL info. See the listing of CCL for instructions.

3-4 "DOF" should be "EOF", CCL does not provide "ODT", .MAC and .LINK are also valid CCL commands.

3-6 -FT selects FORTRAN IV if present when CCL was last run; otherwise FORT (FORTRAN II).

3-9 "HELP *" lists the topics for which help is available.

3-18 The SRCCOM /R option indicates a RALF input file.

3-19 The COMPILE command can also be used for FORTRAN II, SABR and RALF compiles.

3-23 Rather poor description of /F. /F is used when a set of files may not fit on a single output device. When a device is full, COPY prints "MOUNT NEW DEVICE...". The devices should have valid directories. If possible, ZERO the devices before performing the COPY.

3-26 The current date is used on files copied using PIP. The file creation date is used on files COPYied using FOTP.

3-39 .RB indicates a MACREL program in Relocatable Binary format and causes LOAD to summon LINK.

3-41 a 3 means the location was loaded into 3 or more times.

3-49 last sentence should be ",use the RUN or GET and START commands rather than R."

3-50 /R switch, not /R extension; A file is not renamed if a file with the new name already exists.

3-55 last line "The monitor **executes**" (not runs) "the SAVE command."

3-61 TECO only accepts 1 input file: TECO output:file<input:file1

3-62 TERMINATE is only functional on a VT78, it replaces the BACKSPACE command when running OS/78. "TERMINAL" would be a more accurate name.

3-65 in "unloads TC08" paragraph, ASSIGN example is invalid, a DIRECT command would be valid.

3-67 Be aware that ZERO will zero a device which is co-resident with SYS without query. Eg. ZERO SYS: will query but ZERO RKA0: will not.

4-1 no mention of /B and /D options; see old OS/8 handbook p.1-79

4-18 no mention of FULL error message; see Error Message Manual p. 16

5-2 in DTA2:INPUT "default extension is specified to the Command Decoder by the program."

6-2 in 6.2.2 last sentance should be "If a standard lineprinter (LA8, LE8, LS8, LP08) is not present in the system,...

6-5 The "branch to" in the NOTE should be "start at location 7000...

6-7 The BATCH example is obsolete. PIP /E, /F and /L no longer work.

6-8 In 2nd paragraph "program FOTP" should be "COPY, TYPE or LIST commands"

6-10 #INPUT FAILURE message reference should be to the console, not Teletype (R).

6-13 In 7th line of BATCH demo "DATE" should be "DATA", also the date format is wrong; should be (5-MAR-74),   PIP /E doesn't exist.

6-14 clean up disk area should be *DEMO1.BN,DEMO1.SV,DEMO2.BN</D

6-16 PIP /E doesn't exist anymore. Date format is incorrect.

6-19 section 6.11 does not belong here. Should be in System Generation Notes.

6-21 TD83 should read TD8E. The following patch to BATCH from Oct.'77 DSN is also required.   .GET SYS BATCH
.ODT
0717 / 1367 7200
.^C
.SAVE SYS BATCH

8-1 bottom of page "If you make an error entering the device mnemonic, type RUBOUT to delete the entry and try again. If the BOOT program is invoked with the CCL BOOT command with the device mnemonic followed by a period BOOT halts after the bootstrap is loaded into memory. This allows media to be changed before the boot is executed. To execute the boot, press CONTinue. This function is not available if BOOT is invoked with a R or RUN command.

8-2 RX boots OS/8, COS-310, WPS-8 also.

9-6 Type .SET SYS NO INIT before running BUILD to save BUILD after the BOOTSTRAP command.

9-14 in line 14 "PIP" should read "PTP".

9-25 Section 9.6...Also refer to the 2 page handler restrictions from the Aug-Sep '78 DSN.

10-3 the REWIND command also works for TC01 and TD8E DECtape.

11-2 Example 2 should be *SBRLS/Q not /R.

11-3 in 2nd. part of example 4 LFT should be LPT.

11-5 TEST (bottom of page) should read TEXT.

12-3 second para: "returns to the command decoder for additional input, unless the preceeding command was terminated with escape or altmode. In this case, DIRECT returns to the OS/8 Keyboard Monitor.

13-1 Delete 13.1.1 and first paragraph of 13.1.2 as the program is run by typing .R DTFRMT.

13-2 The "<" in "SAME<" means "return".

13-10 Note that if "return" is the response to "FIRST BLOCK TO COPY" the entire tape is copied.

13-12 (first line) TD83 should be TD8E.

13-15 first line should be "the program uses the following" not "use.."

14-1 (in 2nd. line) Any standard (parallel) lineprinter with Dev. Code 66 (not just LP08)

16-10 /R example should be .DATE 1-JAN-76   .R FOTP
      .RENAME DTA0:*.*/T or *DTA0:*.*/T

18-1 MCPIP can also read/write CAPS-11 compatible files. Also /0 and /1
     options are available to select unit numbers if a device handler is not
     present in the system.

20-1 PIP no longer performs directory operations.

20-2 no /E, /F, /L options with PIP.

20-5 /X should be /Z, delete last paragraph on directory listings to TTY.

20-6 20.1.2 Examples 5 and 6: PIP no longer has /E or /F options.

20-10 The "USE DIRECT" message results if /E, /F or /L PIP option is
      requested.

21-1 TD83 should be TD8E (two places).

23-1 Disregard all refernces to the RK8L as it does not exist.

25-10 .SET LPT LA78 sets the LPSV handler to handle a LA8A (LA180 interfaced
      through the M8316 parallel port). SET LPT LA8A sets the LPSV handler
      to the standard mode (handles LA78, LA8, LE8, LP08, LS8 etc.). NOTE:
      The names of the SET options are implemented backwards.

 A-1 This table should be updated to include lower case characters and
     control characters.

 B-1 Should be titled "Paper Tape Loading Procedure"; in step 2 turn the
     terminal ON.

 B-8 The phrase "(excluding the Disk Monitor)" should read "(excluding OS/8
     and the Disk Monitor)".

 C-3 Line B still has the old date format.

 D-1 MACREL extensions: .MA - source, .KF, .LT for KREF, .RB for LINK binary.

 F-1 last line: obtain TECO version by typing EO=$$ to the * printed by TECO.

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MARLBORO, MASSACHUSETTS 01752

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