FDBK 11-OCT-74 02:57 24191

User Feedback Decisions leading to NLS-8,4

RLL 25-SEP-74 17:19 24058
Show directory command toooooo long.
Message: What good is the show directory command if it take considerably longer to see ones directory using ths NLS command than using the tenex dir command? I have found myself going to Tenex almost always because of the time. P.S. Thanks for 'paging' the directory. That makes the NLS command a bit better for long dirctories (over the tenex comaand.)
*****Note: [ACTION] *****

4a

Things that work impresssively well: show also. (I think this is the ideal structure for esacaping treeism). show <words> makes remarkably intelligent guesses, but it can also send you off into left field. The ^O function is implemented beautifully. the ^Q in the
middle of an editor command getting you help is quite impressive. (Especiaslly when it gets you some help that you want).
The HELPs themselves are rather well written in most places that they are "finished". (RICART)

4b

KIRK 13-MAY-74 17:27 22983
Praise for the Feedback system
Message: I think the way Susan has been handling the NLS feedback is excellent. This is something we should have had long ago and I hope it becomes an established procedure for the future. It is all too easy to take for granted necessities that aren't apparant because they are working as they should. Let's not let this one go by the wayside after the newness of the new NLS wears off.
*****Note: * action * *****

4c

1-APR-74 1828-PDT BECK: Praise to Allah the HELP programmers
Distribution: FEEDBACK
Received at: 1-APR-74 18:28:21

4d

When I am busily constructing networks in the HELP Database (in New NLS) and want to check how my links work, I can immediately do a <control-q>, one show command to get to the branch I was

User Feedback Decisions leading to NLS-8,4

working on and then step through the menues I have just created just as a HELP user would, do a Quit, and PRESTO! I'm back where I was in Editor, editing the file again. Very Nice. 4d1

17-FEB-74 1700-PDT KELLEY: Praize for the way level indenting works in xnls
cc: irby
Received 17-FEB-74 17:00:11 4e

I just used 21 levels with viewspecs 1 and B in <continuum,sri> and they worked fine. When I turned off B, it worked fine also. Things like this which seem primarily database oriented and not document production or software production oriented are rare so I really appreciate one when it comes along. It makes me very happy. Thanks,
-- Kirk 4e1

JMB 17-DEC-73 11:31 20929
new TNLS
Message: I like what Delete File does; ie, prints--
"Deleted Files are:
(beck, dodad,nls;1,) and its partial copy"
Good Work!
4f

KIRK From-To feature in the Move and Copy commands. 4g

KIRK Ability to bug with the Insert command. 4h

KIRK All of the directory commands from NLS. 4i

Rejected Suggestions
> For suggestions rejected prior to these see <24161, rejected>. 5

None (yet) 5a

Future needs & possibilities or need discussion, evaluation. 6

Small NLS changes requested (not bugs) 6a

JOAN 9-OCT-74 13:43 24176
Current alternatives should include control X
Message: It would really be neat for the new users if control X was included in the current alternatives, since it is one.
*****Note: [ACTION] *****
6a1

(J24123) 2-OCT-74 16:49;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /FDBK([ACTION]) JAKE([

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

```
INFO-ONLY ] ) JHB( [ INFO-ONLY ] ) KIRK( [ INFO-ONLY ] ) DVN( [
INFO-ONLY ] ) POOH( [ INFO-ONLY ] ) RWW( [ INFO-ONLY ] ) DCE( [
INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk: RLL;
```

6a2

FDBK 11-OCT-74 02:57 24191
sug: new viewspec to show only statement names.

If NULL NULL or NULL SPACE are to be the default name delimitors, then I think JAKE's old idea of having a viewspec to show only statement names is needed, this would enable a fast way of checking the enforced name delimitors aswell as being very valuable for scanning a file, It would also be of value for creating indexes with copy with filter command and as a training aide. 6a2a

RLL 9-OCT-74 14:39 24177
sug: show current subversion of NLS date,
Message: It would be nice to be able to find out or print at the begginning of a nls session he curren subversion of NLS, THe date and time would be most helpful since I believe there is no numbering scheme, thi wuld help in isolating bugs to a particular subversion an be a back up in notifiying people of new versions, Make the method by which thi is done easy (e.g., show current subversion date,) Rob
*****Note: [ACTION] *****
6a3

6-OCT-74 2337-PDT KELLEY: Reset Tabstops command (Need)
Distribution: FEEDBACK, irby, maynard, watson
Received at: 6-OCT-74 23:37:43 6a4

There should be a Useroptions Reset Tabstops command so when some poor sucker gets screwed up, he can easily unscrew himself. 6a4a

KEV 10-OCT-74 13:13 24181
more things to be done in nls-8
Message: the file manipulation commands in nls-8 (copy, move, delete, undelete) should be changed so that they display to the user the results of a maniplation on a file on a file by file basis, rather building up one large string and displaying the results of the entire command at the end,
*****Note: [INFO-ONLY] *****
6a5

KIRK 28-SEP-74 01:14 24086
PROG Run Tenex (subsystem) command
Message: creates a horrendus automatic syntax since it contains queries all answered with commandwords Yes or No, (Should be represented once as ANSWER or Y/N as in other commands), Could you forward this to the right person?
*****Note: [ACTION] *****
6a6

cml should eventually be rewritten as suggested here. [KEV] 6a6a

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

KIRK 26-FEB-74 16:32 22065
Some comments concerning the new dynamic addressing elements from a database building and document referencing point of view
Location: (HJOURNAL,22065,1:w)
*****Note: (Secondary Distribution Copy from XXX)*****

6a7

The new AE (address expression) is a very powerful tool. I don't think there is a single special character that is not used for some special function. It is important that these functions be specified unambiguously with the minimum number of characters so that the maximum number of functions can be accomodated.

6a7a

In this framework, I feel the following suggestions should be considered.

6a7b

First, I strongly oppose using Ampersand for Jump to Name External. Ampersand is a special character that should be available for use within a name. Conjunction is a valuable and necessary searching concept that is especially important for cutting down on duplicate names in large databases while retaining a mnemonic and easily typed identifier. The alternative to "&" is "-and-" which is so clumsy as to almost preclude it's use.

6a7c

I suggest instead of using &, that s be used for "jump to name external".

6a7d

[As a side issue, I think that the external default is backword. The default should be "jump to name external" with the special character required if you don't want to search the external file(s).]

6a7d1

In the TNLS LINEFEED command, can we have NLS echo something (like <LF>) to show what you've typed before it goes on to print the statement?
It would be useful for the TNLS user to be able to read his TNLS printout later and see what he did to get that result.
(21198,) (JMB)

6a8

3-JUL-74 1357-PDT LEAVITT: buggish
Distribution: FEEDBACK
Received at: 3-JUL-74 13:57:38

6a9

Not really a bug but a pain. I use the substitute text command a lot in this. If you try using it you will see that it feeds a great deal of paper in completing one

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

substitue (a command that has a number of steps, there is no need to have a blank line between every one of those steps, when i do a whole lot of substitues the amount of ti paper i use is horrendous, it insults my basic liberal bullshit ecological concerns, 6a9a

SRL 27-MAR-74 09:23 22504
Output Quickprint Branch
Message: Is there some reason why the message Output Quickprint branch couldn't be displayed when viewspec g is on? 6a10

In Demand Recognition, CONFIRM should work for recognition. This way Altmode or SP might not be required before a CONFIRM even after a complete command-word has been typed, (22175,) (KIRK) 6a11

Instead of the current "Action or Information only" barrier in the Send command, the default should be "Information" with an OPTIONAL Action commandword (recognized by a single <"U>. (22941,) (KIRK) 6a12

Distribution command hard to find.
Send sounds like the choice to use when finished.
Double verification not needed following Done.
Interrogate should be default with options available
Action? Y/N - If no, automatically fyi. (JAKE) 6a12a

Allow "none of the above" when submitting via Sendmail instead of for info or for action (22878,) (JMB). 6a12b

Make Interrogate the default when entering sendmail unless there is an unfinished item. 6a13

RWW 9-MAY-74 13:01 22931
Bugs and Thoughts - New CML
Location: (MJOURNAL, 22931, 1:w)
*****Note: * action * ***** 6a13a

I tend to use Interrogate all the time. Do others? If so why not just automatically enter interrogate when arriving in SENDMAIL. Should other fields be added like Keywords and obsolete, assuming one can pass them easier than at present.(22931,) (RWW) 6a13b

The current situation of automatically initializing whenever entering Sendmail makes Execute Sendmail practically useless. Yet I rarely want to send more than one item... 6a13c

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

KIRK 16-MAY-74 19:05 23024
Interrogate opinion
Message: I think the order should be: (1) Title (2) Type of source (3) Send (4) Show status (5) Done. First impression is I wouldn't want interrogate to be the default but I haven't thought about it.
*****Note: [INFO-ONLY] *****

6a13d

KIRK 17-MAY-74 12:18 23032
Trying out interrogate
Message: After consideration, Interrogate as a default mode when entering SENDMAIL seems to be a good idea only if the user does not already have an unfinished item. This would also make a good signal that would help me avoid a problem I've had where I've quit out of SENDMAIL unfinished, then gone back in and started on a new item only to find sometimes embarrasing parameters attached to the new item that were left over from the old.
*****Note: [INFO-ONLY] *****

6a13e

SLJ 17-MAY-74 17:02 23039
comment on your 23019
Message: i think interrogate should yes yes be default in sendmmail, standard order would be faster for me, bye, and you will will will get bike back back back.
*****Note: [INFO-ONLY] *****

6a13f

The sequence Replace From,,,To,,,By seems to be clearer than Replace At,,,Through,,,By. In general From-To seems clearer than Through (JAKE)

6a13g

(type of source:) should come after (title:) and (send to:) so a message could be written in relation to the title and sendlist. (22761,) (KIRK) (JAKE)

6a13h

Institute Program CONTENT (as) Content/Sort/Seqgenerator OK
Could be:
Institute Content/Sort/Sequence CONTENT OK

6a14

Update File OK / <Old/Compact/Rename OK>
could be:
Update File/Old/Compact/Rename OK

6a15

KIRK 8-JUN-74 22:27 23368
hatred for change in replace link implementation

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

Message: A screen full of carefully thought out, irreproducable thought just vanished with the message: "ILLEGAL LINK" as I was using the Replace Link command. Total bummer.
*****Note: [ACTION] *****

6a16

KIRK 8-JUN-74 22:31 23369
inconsistancy-in replace link command
Message: when I say replace invisible, and type in a visible, my typein doesn't disappear with the message ILLEGAL INVISIBLE.
*****Note: [ACTION] *****

6a16a

Load File BUGWORD VSPEC CA is what I'd still like to see, with extraction of a valid file name from the bugged visible, and with display of the deduced-file name before VSPEC CA (at least before the CA part). (23142,) (DCE, KIRK) 6a17

Jump File BUG VSPEC CA is o.k., where assume you bug a link and it extracts file name -- but if Load File worked right, would rarely really need this option. Also, should show the file it will take you to before you commit yourself with the final CA. (23142,) (DCE) 6a17a

Jump Link B:/A: VSPEC CA I'd also like, where the VSPEC would over-ride those provided in the link. (23142,) (DCE) 6a18

In TNLS, I used to be able to say Print Branch (work, td: gebtzm) CA CA and have the VSPECS applied to the printout. Doesn't seem to work that way now? How come? Generally, I'd like to see the VSPEC of the last link used in an address apply to the viw (Print or Display), unless LIT vspecs added by user (which would over-ride conflicting link-held vspecs). (23142,) (DCE) 6a18a

Break Statement: As it was previously specified (Old NLS, and from OLD DCE) it is supposed to let you enter SPs that are inserted before the broken-off segment as it is made into a statement. Indeed, the '? menu shows that a SP is allowable after the bug; but a SP produces a "?" response, and I can't put leading SPs in front of the new statement. 6a19

KIRK 26-DEC-73 09:32 21187
An ability missed with the break statement command in New NLS
Message: A feature in the old system that is missed in New NLS is the ability to insert text between broken statements. Use of something like the DFSL may return this ability to

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

New NLS.

6a19a

It is hard enough (technically impossible) to Insert Text at the beginning of statements, but when leading invisibles are deleted for you automatically... In XNLS I find I am no longer capable of inserting text at the front of a new statement created by breaking from another statement. Is this a bug or a feature? (22059,) (KIRK)

6a19b

I seem to find from the "Q HELP info that there isn't expected to be this provision, at least by the documenters. I want that provision back; in fact, I feel that one ought to be able to insert any charcters after an initial SP -- i.e. that all characters after the SP (that follows the BUG LEVADJ) and before the final CA should be inserted at the head of the breakoff statement. (23142,) (DCE)

6a19c

-(23116,) (MDK) "TI" shouldn't be an alternative in the "simulate terminal" command if you're already in TI mode; similarly, "tasker" shouldn't be an alternative if you're already in tasker mode. Fixing those would remove an annoying letter conflict.

6a20

In TNLS, feedback a space after a prompt (22907,) (RLL)

6a21

RLL 6-AUG-74 20:06 23740 sug on copy file command
Location: (GJOURNAL, 23740, 1:w)
*****Note: [ACTION] *****

6a22

When copyin file (copy file command) and one gives a new file name the statement zero in the new file is acopy of statement of the old file. Thus, the old file name and directory appears. this , of course , disappears when one does an update. The suggestion: perhaps it wuld be better to replace file name in staement zero with the new file immediately. One is not immediately sure which file you really have up.

6a22a

NDM 17-SEP-74 13:31 31067
Load Remote file command
Message: I don't see any pretense of a Load Remote command in new NLS. Some of us need that. It will be availablE in some form by Oct 1, won't it?????

6a23

DVN 11-JUN-74 16:05 23332

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

Message: If you want to use both the leval adjustment andthe filter in a command such as copy, you have to specify the filter first. The prompt woul be a little nicer if it said [**]/L: rather than what it now says, L:/[**].
*****Note: [ACTION] *****

6a24

JMB 3-JUL-74 17:53 23524
Suggestions for the Questionmark Facility
Location: (GJOURNAL, 23524, 1:w)
*****Note: [ACTION] *****

6a25

Comments: wouldn't this be clearer and easy to change? 6a25a

RLL 13-SEP-74 11:07 23964 use same line for optional info in show directory command"; Author(s): Robert N. Lieberman/RLL; Distribution: /FDBK([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RLL;

6a26

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

Please put size info when using show directory with options on sam line as name o file, otherwise it goes to o fast on the screen, same for more than one copy of same file. 6a26a

Allow an end of statement to end a sendmail form as well as <CR>. And allow <CR>s in Messages in a sendmail form. 6a27

DCE 20-AUG-74 08:51 23825
("V) Before (CR) Doesn't Seem to Work in Comment Field
Location: (GJOURNAL, 23825, 1:w)
*****Note: [ACTION] *****

6a27a

In tnls if one wishes to format a comment with a carriage return it will of course terminate the comment command. One expects that if he wishes a literal carriage return he can preceed the carriage return keystroke with a ("V). I tried this and it doesn't seem to work properly. The carriage return indeed does get added as a literal to the comment but the impact on nls seems to be also as though the carriage return terminates the command and readies you for a new command in the particular mode. 6a27a1

JMB 19-JUN-74 17:22 23463
Sendmail's Process command doesn't work as advertised
Message: I did Insert Sendmail in Editor. As Help advises (under sendmailforms) I deleted the "DONE:" and added "MESSAGE:" in its place. I then used editing commands to type in my message and fill in the other fields. Then I used Sendmail's Process command to send the item. Show Status then revealed that it got everything but the Message; indeed, DONE had "nothing to send!" Rumor is that the message needs a carriage return after it (though DONE: doesn't) for Process to work; that seems wierd and Help doesn't say anything about that. Could the command or the advertising be cleared up?
*****Note: [ACTION] *****

6a27b

RLL suggestion on the show commands: always have a 'show' for a 'set'
12-AUG-74 10:48 (GJOURNAL, 23767, 1:w)
*****Note: [ACTION] *****

6a28

I would strongly urged for consistency and simplicity to have for each 'set' command a corresonding 'show' command. For example: set buffer size/show buffer size, set private/show privacy setlink default/show link default, etc.

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names.

True we hae show status but that does not sail as nicely. Even a show character size would be nice. 6a28a

DVN 23-MAY-74 14:09 23104
Driven Over Alloocation by Mystery Files
Location: (GJOURNAL, 23104, 1:w)
*****Note: [ACTION] *****

6a29

Some of you may recall that last Friday and Monday I tried to send a journal item which was never delivered because of a confusing accumulation in the distribution field following several attemps to distribute. 6a29a

An sther problem seems to have arisen from that evil journal submission. Today the system began to tell me I was out of pages although Show Disc asserted that I had 25 or so pages to spare. Jeff discovered that the culpable pages were in the partial copy of my sendmail file, invisible to me. Presumably they had accumulated during th various submission attemps. 6a29b

This seems only one way in which a user could accumulate pages which the monitor counts against him but which neither show directory nor show disc status will reveal. It's a pretty frustrating feeling. I suggest making those files visisble. 6a29c

KIRK 22-SEP-74 00:34 24026
Default name delemiters NULL NULL?
Message: Default name delimiters were to be changed to NULL NULL. Has this decision been changed unknown to me or was it just overlooked?
*****Note: [INFO-ONLY] *****

6a30

RLL 12-JUL-74 08:21 23610
add an 'OK' to sort command
Message: strongly urge the sort command have a 'OK' confirming <CA>. At present, after address is given the sort takes off and does its thing.
*****Note: [ACTION] *****

6a31

KIRK 22-SEP-74 18:02 24032
Typical oNLine Systems thinking
Message: Why aren't Output Journal and Print Journal named Output Sendmail and Print Sendmail?

FDBK 11-OCT-74 02:57 24191

sug: new viewspec to show only statement names,

*****Note: [ACTION] *****

6a32

KIRK 5-SEP-74 20:40 23922
NP for jump file return
Message: Jump to file return choice message (currently a filelink) should be the complete link containing the statement number and viewspecs,
*****Note: [ACTION] *****

6a33

3-MAY-74 1616-PDT LEE: Sendmail subsystem, Interrogate command
Distribution: FEEDBACK
Received at: 3-MAY-74 16:16:55

6a34

When it says "Send for action to" it seems you should be able to
type ? and get a message telling you to type ^N to send something
for information at least in DNLS,

6a34a

Larger changes requested

6b

NSW shopping list Estimated Resources TOTAL 40
This table summarizes minimum estimates of resources required for implementing the simplest approach to each task,
Figures are in man months, OPTIONAL TASKS:

6b1

COBOL Programmer's Interface

6b1a

Develop a special COBOL interface which enforces structured COBOL code	3		6b1a1
COBOL syntax checker		3	6b1a2
COBOL shorthand facility	3		6b1a3
Online COBOL program library		1	6b1a4
Spelling completion		2	6b1a5
Test data files generator	4		6b1a6
Online debugging facility	3		6b1a7

Interface for Clerical Personnel

6b1b

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sug: new viewspec to show only statement names,

Preparation and output of text	1	6b1b1
Preparation and transmission of mail	1	6b1b2
Calculator Extension	1	6b1b3
Documentation and Publication System		6b1c
Interface to other textual input systems: OCR, MTST, Etc	1	6b1c1
Additional editing functions and entities	3	6b1c2
Special applications packages	-	6b1c3
Modifications to the Output Processor	5	6b1c4
Graphics		6b1d
Simple drawings	5	6b1d1
Graphics input from other tools:	1 assumes above	6b1d2
Flow-chart production	1 assumes above	6b1d3

3-OCT-74 1309-PDT LEE: print journal
Distribution: FEEDBACK, feedback at office-1
Received at: 3-OCT-74 13:09:31 6b2

I think it would be great if there was a way to skip from one item to aonother in the printjournal command - like a control character to hit when you had seen enough of one item and wanted to skip to the next. 6b2a

(J24122) 2-OCT-74 16:17;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /FDBK([ACTION]) JHB([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RLL;

6b3

sug: show return command statement numbers

Thanks for the show return command. Maybe the statement number (or/and SID) would bbe nice to see on the list of return statements. 6b3a

JEW Proposal for a New Family of NLS Editing Commands 23-OCT-73 12:49 (LJOURNAL, 19830, 1:W) %justifying text string lengths% (19869,) (JBN) (17867,) (RLL) 6b4

INTRODUCTON 6b4a

This is a proposal for a new family of NLS editing commands whose need I feel each time I compose an assembly-language source file using NLS. The problems I encounter arise because I worry about the geometry of statements (plexes, etc.), in addition to their content. Although my application is probably unique, I think the problem I face is a general one, with a general solution. Table building (e.g., in the Resource Notebook) is another application where the same problems arise. 6b4a1

MY APPLICATION, BY WAY OF EXAMPLE 6b4b

I attempt to make assembly-language programs readable both on- and off-line. I head each procedure with an asterisk box containing a description of the procedure's function and calling seqence (for the benefit of Output Processor listings); I tuck the boxes away in the file tree structure in such a way that I can suppress them with level clipping (for the benefit of on-line viewing). 6b4b1

An example of such a box is the following: 6b4b2

```
;*************************************************
************
;***
***
;***        -- SEND MAIL TO USER AT DISTANT SYSTEM
--       ***
;***
***
;***    ASSUMES:                RETURNS:
***
;***
***
;***      a -- distant user pntr  +1 -- unsuccessful
***
;***      b -- local fn pntr         m -- err msg str
pntr    ***
```

sug: show return command statement numbers

```
;***                                    +2 -- successful
***
;***
***
;*************************************************************
************
```
6b4b2a

6b4b2b

I build just one of these from scratch and then create each successive one by copying the previous one, and then 'cutting and pasting'. 6b4b3

Consider the task of replacing the string 'local fn pntr' with some other string describing the argument passed in accumulator 'b' for the new procedure whose box is being constructed. 6b4b4

I bug the first and last characters of the string in a Replace Text operation, and supply the new string. Inevitably, the new string differs from the original in length, and the operation leaves the three asterisks at the right out of alignment. I therefore must count (in my head) the number of SPs that must be deleted or supplied following the new string, and then execute the appropriate Insert or Delete Character operation to restore alignment. 6b4b4a

A much more straightforward solution would be possible with a primitive like the following: 6b4b5

R[eplace] M[easured] T[ext] bug1 bug2 LIT CA 6b4b5a

whose meaning were: 6b4b6

Replace the indicated string of length LOLD with the literal of length LNEW. If LNEW > LOLD, delete the (LNEW-LOLD) characters which follow the new string. If LNEW < LOLD, insert (LOLD-LNEW) SPs following the new string. 6b4b6a

SOME EDITING COMMANDS PROPOSED 6b4c

CONVENTION 6b4c1

The entity Text is used for simplicity in the examples below, but note that the entities: 6b4c1a

Word

sug: show return command statement numbers

Visible
Link
Number
Character (this last one isn't very exciting) 6b4c1a1

would also make sense, 6b4c1b

[I don't know what to do with Invisible,] 6b4c1b1

REPLACING MEASURED TEXT STRINGS 6b4c2

R[eplace] M[easured] T[ext] bug1 bug2 LIT CA 6b4c2a

This operation would replace the indicated string of length LOLD with the literal of length LNEW. In addition, if LOLD differed from LNEW: 6b4c2b

If LNEW > LOLD, the (LNEW-LOLD) characters which followed the indicated string would be deleted, or 6b4c2b1

If LNEW < LOLD, (LOLD-LNEW) SPs would be inserted following the new string. 6b4c2b2

TRANSPOSING MEASURED TEXT STRINGS 6b4c3

T[ranspose] M[easured] T[ext] bug1 bug2 bug3 bug4 CA 6b4c3a

This operation would interchange the indicated strings of lengths L1 and L2, respectively. In addition, if L1 differed from L2: 6b4c3b

The |L1-L2| (i.e., the absolute value of L1-L2) characters which followed the longer string in its new location would be deleted, and 6b4c3b1

|L1-L2| SPs would be inserted following the shorter string in its new location. 6b4c3b2

INSERTING MEASURED TEXT STRINGS 6b4c4

I[nsert] M[easured] T[ext] bug1 LIT CA 6b4c4a

This operation would insert a copy of the literal of length L at the indicated destination. But first: 6b4c4b

L characters at the destination would be deleted. 6b4c4b1

The operation would therefore effectively overlay a section of text at the destination with the literal. 6b4c4c

sug: show return command statement numbers

COPYING MEASURED TEXT STRINGS 6b4c5

C[opy] M[easured] T[ext] bug1 bug2 [to] bug3 CA 6b4c5a

This operation would insert a copy the specified text string of length L at the indicated destination, But first: 6b4c5b

L characters at the destination would be deleted, 6b4c5b1

The operation would therefore effectively overlay a section of text at the destination with the specified text string, 6b4c5c

DELETING MEASURED TEXT STRINGS 6b4c6

D[elete] M[easured] T[ext] bug1 bug2 CA 6b4c6a

This operation would (quite intuitively, I think) replace the indicated text string of length L with L blanks, 6b4c6b

The operation would therefore effectively blank a section of text, 6b4c6c

Before dreaming up the notion of measured text, I had envisioned defining a new Xset mode (i.e., X[set] M[ode] B[lanks] CA and then X[set] T[ext] bug1 bug2 CA) to set a string to blanks, I really think now, though, that the Delete Measured Text idea is a better one, 6b4c6c1

MOVING MEASURED TEXT STRINGS 6b4c7

M[ove] M[easured] T[ext] bug1 bug2 [to] bug3 CA 6b4c7a

This operation would be equivalent to: 6b4c7b

C[opy] M[easured] T[ext] bug1 bug2 [to] bug3 CA 6b4c7b1

D[elete] M[easured] T[ext] bug1 bug2 CA 6b4c7b2

A Break Branch command should work differently from the break statement command, It should put the original substructure under the new statement instead of under the original statement, 6b5

Break Group and Break Plex commands should break at every <EOL>

sug: show return command statement numbers

in statements at the current level ignoring substructure and viewspecs. 6b6

JAKE Column manipulation
13-SEP-73 11:29 19059 6b7

RLL re: new text string - remarks %remarks that wouldn't appear when file is printed - alternate to 19557)%
15-NOV-73 08:27 (IJOURNAL, 20258, 1:w)
6b8

re: intra-statement remarks - suggestion 6b8a

i suggest that a special intra-statement text string be implemented, called remarks. this string would be delimited by special characters, default for example being % (percent signs). this delimitor could be changed in a fashion similar to statement name delimitors. 6b8a1

the purpose of 'remarks' is to allow intra-statement text that is completely ignored in the nls print command or the output processor (by means of a switch for nls and a new directive for the output processor). this will enable the user to put comments or remarks or notes at places in the statement where they apply. this suggestion stems from the typical way people read documents. also, this concept can be used in creating papers. the remarks would be used by the various authors, edtiors, or typists to communicate suggestions, alternative text, or missing text. 6b8a2

the command i[nsert] r[emarks] [at a:] addr ca [t:] would insert the specified text after the given address and enclose the text with the , in effect, delimitors. the commands delete remarks, move remarks, copy remarks would have the obvious results. 6b8a3

two options are possible- the remarks text for computation of addresses could be a) ignored or b) not ignored. at the moment i am not sure which would be better. perhaps it should be related to the printing option, that is, if remarks printing is desired then all addresses would take in consideration the remarks text and if no remarks printing is desired then the addresses would be computed as if the remarks text was not there. clearly this might cause some confusion and i can conceive that such an option would be difficult to implement. 6b8a4

sug: show return command statement numbers

this suggestion is an alternative to the margin notes suggestion made early, possibly both might be desirable, 6b8a5

i would like comments on both this suggestion and the margin notes suggestion,(see nic document (kjournal,19557,) for margin notes suggestion) robert lieberman (ril) (nsrdc@sri-arc) 6b8a6

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sug: show return command statement numbers

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RLL margin note addition to nls %non-printing remarks%
8-OCT-73 18:09 (KJOURNAL, 19557, 1:w)
6b9

(tojournal) 6b9a

i suggest a margin note part of a statement, this would act as marginal notes for the specified statement, there would be an option of printing these notes or not printing them, they would be inserted witha specila insert statement or through a specila address reference (e.g, m,ia2 to mean the margin of ,ia2), all editing (change, replace, delete, etc) will not (repeat not) effect any change in the address reerncing of the text body itself (so one does not need to know what is in the margin for referncing), in a very real sense the margin will act as a separate file with identical statement structure, this could be simulated in display nls by splitting your screen in two, but the advantages of having it within the same file as the text body seems to me wooth it, of course typewriter nls would have no ohter choice, 6b9a1

the motivation for this suggestion stems from the desire to have all the advvantages of the hardcopy environemtn incorparated into nls 6b9a2

robert liebermaa nsrdc (rll) 6b9a3

MDK A suggestion on NLS File Structure, with Application to Back-Links and Output Processor Directives
27-NOV-73 10:36 (IJOURNAL, 20574, 1:w)
6b10

MOTIVATION 6b10a

This brief note has been motivated in part by discussions with Charles P. Bourne, Kjell Samuelson, and Pauline Atherton, during their recent visit to ARC. These three members of ASIS were interested in NLS, especially from the standpoint of dialogue and reference support. They were concerned that we had not implemented any solution to the problem we at ARC have referred to as "back-links". 6b10a1

sug: show return command statement numbers

Consequently, I've been thinking about the problem again, and I want to share what I believe to be a useful scheme for organizing and storing back-link and similar information for files. The scheme is intended to make it practicable that 6b10a2

a) the back-link and other similar information be automatically displayed at the time a file is read, but 6b10a2a

b) the original file remains unchanged. 6b10a2b

In addition to being applicable to Journal files, the scheme also should be applicable to an unrelated problem associated with use of the Output Processor. These two applications are described in this note, after a sketch of the general scheme is given. 6b10a3

SCHEME 6b10b

The scheme is an extension of the "partial copy" concept, and has these attributes: 6b10b1

There should be a new file type (or at least a new distinct subset of existing NLS files), which for want of a better name I am suggesting we call a "quasi" partial copy (QPC) --- namely a file which has some but not all the attributes of partial copies. 6b10b2

The QPC of a file F would not normally be visible separately from F; the QPC's contents would normally be seen only when "merged" with those of F at the time a viewer looks at F. (Here of course the QPC shares a very important attribute of ordinary PC's, namely that it is intimately tied to the structure of the parent file F.) 6b10b3

The QPC would have its own PC, in order to allow someone to make modifications to the QPC while others are viewing F + PC + QPC. (Here the QPC has some of the attributes of an ordinary NLS file.) 6b10b4

Three new mutually exclusive viewspecs are recommended: 6b10b5

capital X: show F together with its QPC (this would be the default viewspec) 6b10b5a

capital Y: show F but not F's QPC 6b10b5b

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capital Z: show F's QPC but not F 6b10b5c

When updating F the contents of F's QPC (and of the QPC's PC) would be IGNORED by NLS. (This is the crucial distinction between a PC and a QPC.) 6b10b6

Update File QPC and Output File QPC would be possible only when viewspec Z is on. 6b10b7

Implementation of the QPC concept would have to be compatible with BSYS (especially the Archive System). 6b10b8

JOURNAL SYSTEM APPLICATION 6b10c

For Journal files, the main goal of introducing the QPC concept is to be able to preserve back-links and notes that are made to a Journal file, and to be able to see them at the time that Journal file is read. 6b10c1

These back-links and notes would be stored in the Journal file's QPC, and so would be visible to the user; but they would not alter the contents of the original Journal file. 6b10c2

The QPC of a Journal file F would therefore have four main purposes: 6b10c3

- to hold links back to other Journal files that "obsolete" F. 6b10c3a

  These links would automatically be stored in a separate branch of the QPC when the Journal subcommand "obsolete" was used. 6b10c3a1

- to hold links back to other Journal files that "update" F. 6b10c3b

  These links would automatically be stored in a separate branch of the QPC when the Journal subcommand "update" was used. 6b10c3b1

- to hold links back to other Journal files that "cite" F. 6b10c3c

  These links would automatically be stored in a separate branch of the QPC when the Journal system discovers a link to F in the origin statement of a different Journal file, G. 6b10c3c1

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- to hold notes that are placed there (in a "NOTES" branch of the QPC) by what I propose be a new Journal system subcommand, "submit note". 6b10c3d

"submit note" would be similar to submit message or submit statement, in that only one statement's worth of note would be allowed. But instead of creating a separate Journal item for the note that is submitted, the submit note subcommand would append the note to the "NOTES" branch of the QPC of F. 6b10c3d1

The submit note subcommand could also (if thought desireable) cause a footnote indication to be made in the QPC at the statement the note refers to, so that the reader of F would be aware of the note when reading the relevant statement in F. 6b10c3d1a

If a viewer wanted to see just the original Journal file F, he need only jump to it with viewspec Y on, or turn Y on while viewing F. 6b10c4

If user A was submitting a Journal item which caused modification to F's QPC while viewer B was looking at F, then the modifications caused by viewer A would be stored in the QPC's PC (i.e., the QPC would be locked). The QPC would be updated by a background process (before or during archiving), and viewer B would not be able to see the modifications until after that update had taken place. 6b10c5

OUTPUT PROCESSOR APPLICATION 6b10d

For the Output processor, the main goals are 6b10d1

1) to permanently remove the directives from the text, thereby making it possible to view a file on-line without seeing the directives, and without having to invoke a process that scans for and deletes the directives. 6b10d1a

2) to remove what I perceive as one barrier to certain types of further development of the Output Processor, the barrier being that the O.P. doesn't know at once where all the directives are embedded, and it must always look for them (a time-consuming process). 6b10d1b

To achieve these goals through the QPC scheme, we would

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need a new noun (the word "directive" seems obvious) in the text editing commands. Then the commands insert directive, copy directive, substitute directive, etc., would all do their thing in the QPC, without changing the original file F at all. That is, each directive that is inserted, moved, copied, etc by a user would exist in the QPC (where it would be explicitly or implicity coupled to a DAE) and would be manipulated by NLS in the QPC. 6b10d2

The display generator and output quickprint would be able to ignore directives and not display them, simply by use of viewspec "Y" (show F but not its QPC). But the option to see the directives would be available with viewspec "X" (show F and its QPC). 6b10d3

The Output Processor would (in principle, at least) be able to run much faster. It would read the QPC separately from the parent file F, so that it had a kind of "road-map" to the directives, and could handle statements without having to scan them to find the directives. I think this would open up new possibilities for directives, and especially for human engineering of the whole O.P. concept. 6b10d4

LPD 23-JUN-73 12:34 17430 Message:
I think the following facility might be of considerable value in the increasing applications of NLS to retrieve data from resource files: the possibility of jumping to a name that was not spelled quite right, i.e. allowing a modest number of missing or doubled characters, transpositions, or wrong characters. Warren Teitelman's LISP system has this ability -- in fact, it invokes it automatically if it fails to find an exact match -- and it is an enormous help. 6b11

Programming 6b12

JEW 31-JAN-74 17:01 21704
LOCAL STRING watchamacallit [Idunkno]
Location: (GJOURNAL, 21704, 1:W) 6b12a

Wouldn't it be nice if one could declare a maximum string length with a declared symbol, in addition to with a self-defining term. Then such length dependencies would be explicit, and changeable by simply redefining the symbol and recompiling the affected files. 6b12a1

sug: show return command statement numbers

JEW A SEAS Idea, Offered with No Expectations %new NDDT%
22-JAN-74 12:58 (GJOURNAL, 21560, 1:W)

6b12b

JCN Response to JI Proposed NLS Features: Meta nls and Output Nls (20028,) and (20027,) %supports%
3-NOV-73 09:01 (LJOURNAL, 20031, 1:W)

6b13

Jean: Thanks very much for your recent NLS feature suggestions/proposals (20027,) and (20028,). 6b13a

They are features that have real promise and I'm sure our Development staff (RWW, CHI, NDM,...) will give them serious consideration. The Meta NLS ideas are along the same lines as what we used to call executable text (but go farther than what we built for the XDS 940). We did have the feature where users could string out a series of NLS commands in statements,...with loops, command accept redefinition, etc.... to perform many higher-level NLS operations. 6b13b

With the changeover to the PDP-10 and the availability of L10 to users, we decided not to re-implement executable text features, feeling that the L10 features would provide much more power,...and easier debugging features. BUT we have never got around to making the interface and, say, NLS-based subsystem (?) that really permits users to take advantage of such user-programs. Your thinking is right on,...and I'm sure will prove quite helpful as an encouragement/stimulus and as a set of user-feature initial specs. 6b13c

My first reaction to the specific set of commands/features you suggest is that those are just the set I'd like as a user. 6b13d

I particularly like the way you picked out potentially interested/involved users and developers and NP in your Journal message sending,, a good use of the message-directing capabilities... now what we need is time and energy to do something about these things,...I'll sure support it. 6b13e

I'm quite sure Doug will be heartened by the reappearance of some support for meta NLS stuff. Oh, I also like the idea of getting a file that looks like what the hardcopy does after output processing. I'll be interested in what Dean Meyer thinks about that. As a lower-level idea and not an answer to your suggestion,... I assume you do know about the user-program DELDIR? It strips out directives in a

FDBK 11-OCT-74 02:57 24191

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document...there may be times when it would help to get documents eadable online after hardcopy processing. but surely not the useful idea you propose. 6b13f

Thanks again, Jean I'll be watching along with you to see how this develops. Jim 6b13g

JI G[oto] M[eta] N[ls] %repetitive tasks%
3-NOV-73 03:57 (LJOURNAL, 20028, 1:w)
6b14

(ndm)
6b14a

The purpose of this note is to invite attention to a concept which I believe has much merit relative to augmenting NLS to render it more useful to many network users. The concept is for the development of an NLS subsystem wherein the user could define and label for subsequent re-use, a process consisting of multiple NLS command executions. Specifically, what is proposed is a User Meta NLS Language. A brief background, description, and discussion are provided in the following:
6b14a1

Background: As a network NLS user, I have found that increasing sophistication in the use of NLS requires that I allocate a reasonable amount of time restructuring past work to reflect increased knowledge of NLS. Examples include restructuring files to conserve disk space through the elimination of NLS overhead, restructuring files to make them also easily viewable through NIC Query, etc. Further, in the conduct of day to day activities, there are many repetitive processes that are effected, where the command sequences are the same, but the files on which they are performed may change. And finally, often I find use of assorted user-progs highly desirable; in some instances they exist, in other instances they do not. Often, one exists which if augmented with another, enable me to do what it is that I desire. In dialog with other NLS users, the opinion was formed that these attributes have an underlying commonality with other NLS usage. Thus, the evolution of the following concept. No pretense at concept completeness is made; the purpose of this note is to propose the concept and subject it to your critical review and consideration, and if found meritorious, to serve as a stimulant to on-going dialog directed at its evolution

sug: show return command statement numbers

to a useful NLS augmentation.

6b14a1a

Description: The primitives of G[oto] M[eta] N[ls] are partially characterized by the following:

6b14a1b

D[efine] P[rocess] (name) user-name

6b14a1b1

This command would enable the user to execute any sequence of NLS commands and have the sequence of commands "packaged" into a named process wherein upon re-execution, all references to specific files, etc., would be generalized such that the user would be required to re-specify the files as they were required. Two modes are envisioned: (1) a process could be defined for dynamic execution; in which case the user would be required to submit file names as they are required, and (2) a process could be defined for defered execution; in which case the user would be required to specify all files during specification for process execution - this will be discussed more fully in the following.

6b14a1b1a

E[xecute] D[efered] P[rocess] (name)

6b14a1b2

This command would allow the user to specify required parameters for a predefined process and request its execution on a defered basis; that is, the "job" would be queued for defered execution.

6b14a1b2a

E[xecute] P[rocess] (name)

6b14a1b3

This command would initiate a user defined process.

6b14a1b3a

S[how] U[ser-progs]

6b14a1b4

This command would cause the system to provide

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the user an index to all included user-progs [as distinguished from named-processes previously defined by the user] wherein each index term would include the name of the user-prog, a mini-description of its function, and its authors ident.

6b14a1b4a

D[escribe] U[ser-prog]

6b14a1b5

This command would provide a detailed description of a specified user-prog including an example of its use.

6b14a1b5a

I[nsert] U[ser-prog]

6b14a1b6

This command would allow a user to augment the user prog library with a user program of his construct. The insertion would result in a system initiated dialog with the submitor to ensure that he supplies all required information for his submission. The entire content of his submission would result in its being placed in a queue for subsequent examination by an NLS/L10 expert who would certify it for inclusion. Any problems found with the submission would result in a journal item being submitted to the user; otherwise, if the submission were found to be adequate, it would be included into the user-prog library and the user so notified.

6b14a1b6a

S[how] C[ommands]

6b14a1b7

This command would provide the user a list of his prespecified processes. Note that these prespecified processess constitute a user specific library which should most probably be maintained as a specific branch in the users initial file.

6b14a1b7a

Discussion: The above are only a few of he commands envisioned, but should suffice to give a good idea of the concept. The benefits I envision from such a

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capability include:

6b14a1c

An extensible user-prog data base under NLS management and easily available and useable to users.

6b14a1c1

The ability for users to define, label, and re-execute repretative processes.

6b14a1c2

The user ability to significantlt augment NLS to his specific usage environment.

6b14a1c3

And many others.

6b14a1c4

References: NIC #20009, 20025, and 20027

6b14a1d

I would appreciate your thoughts on this suggestion, and look forward to an on-going dialog.....Jean

6b14a1e

JI O[utput] N[ls] %to get rid of OP directives%
2-NOV-73 23:41 (LJOURNAL, 20027, 1:w)

6b15

(rww)

6b15a

In collaborative work for the ARPANET Newsletter, it is frequently the case that an article submission is made wherein the submitor has taken great care to embed the appropriate output processor directives. This is especially useful when the article is subsequently journalized and distributed seperately. However, this type of submission does create a problem in eliminating the output processor directives and reformatting the article to make it useful for the on-line version of the newsletter which is also viewable through the NIC Query language. Other instances of such a scenario can be frequently cited. The purpose of this note is to invite your attention to the following suggested NLS augmentation.

6b15a1

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Background References: NIC #20009 2 Nov 73 [jj], and NIC #20025 2 Nov 73 [dhc]

6b15a1a

Suggestion: Create a new NLS command, O[utput] N[ls], which would process an NLS file with embedded Output Processor directives and transform it to an NLS file without Output Processor directives BUT, where the directives had taken effect. Several suboptions may be desirable: (1) to assure that all transformed statements are at the same plex [for compatibility with NIC Query], and (2) leave transformed statements at the same levels as their original occurance.

6b15a1b

Discussion: At the present time, the only way I have of effecting this is through the use of a hack wherein I telnet to NIC, Output Processor the subject file, edit the file into a TENEX file through the use of telnet,typescript, re-insert the file through E[Xecute] I[nsert] S[equential], then use the user-program "append" to minimize multi-statement NLS overhead. Clearly, this "HACK" leaves a lot to be desired in terms of efficiency.

6b15a1c

I strongly recommend you give this recommendation your most serious consideration. I believe the ensueing NLS command would have appreciable utility to your user community. Thanks,.....Jean

6b15a2

DHC 21-JUN-73 16:26 17412
Auto-updating as option in Load File or Logout

6b16

JCN NP Item: Typescript File Command in NLS or EXEC
24-SEP-73 08:39 19264 Message:
Here is a request for consideration of a new feature: a command either at the exec level or in nls that makes the system record what the user types and what the system sends back to him in a file for future use by the user. I have found (as have others) tht use of the telnet,typescript file for making scenarios and for capturing other data is very useful. It means going out via telnet and re-entering the ARC system (or some other) to set up the typescript file. This seems wasteful of network facilities and addds unwanted steps in the process. I'm not sre what difficulties adding such a feature would entail, but offer this sggestion here to get some discussion started.

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%WAS THERE ANY%

6b17

Output Processor

6b18

MDK Output Processing: A Suggestion for How to Improve the Speed %output printfile - looks for directives only in origin statement%
9-FEB-73 16:36 (IJOURNAL, 14367, 1:w)

6b18a

JBN Request for OP Directive Preventing Substatement Page Breaks
1-JUL-73 20:07 17590 Message:
CHI -- For the Directory, as well as for production of formatted reports, there is urgent need for an Output Processor directive to produce page breaks at statements of a certain level only. This is not the directive to produce page breaks at specified levels at each occurrence, but one to insure that page breaks are not made at substatements when this is not desired, and the whole branch should be carried to the next page. I have asked for this before, and perhaps there is some reason it cannot be done? -- Jeanne also (14342,) (JBN)

6b18b

RLL output processor suggestion re: time zones
8-NOV-73 11:49 20109 Message:
the time zone would be very nice to append to the commands 'gdt' and 'gt'. one letter would do, namely, e = eastern, c=central, m=mountean, p= pacific, daylight vs standard time should not be a problem. clearly we have another set of commands now possible, 'gdte', 'gdtc', 'gdtm', and 'gdtp', (also for 'gt.') 'gt' and 'gdt' would always append 'p' unless the new commands are included in the system.
robert (20799,) (NDM)

6b18c

DHC 7-MAY-74 13:29 30705
Sweeping Journal Directive %alternative to (16047,)%
Directive will contain any directive to be executed at a given level..

6b18d

DHC Output Processor suggestions
27-AUG-73 11:48 18678 Message:
In order to make processed output better fit the device it is being printed on (or formatted for) I suggest the following:

6b18e

1. Have the Output Processor (during Output device Teletype) use the Terminal specs (line width, page size,

sug: show return command statement numbers

form feed, etc) as limits, which embedded directives CANNOT exceed, 6b18e1

2, Allow run-time specified directives, The author of a file has certain formatting ideas, The printer of the file may want soemthing different, The printer's directives should take precedence, This saves the printer from having to copy the file and change embedded directives, 6b18e2

3, Allow the concatenation of files, at run time, This, too, saves having to do copying, 6b18e3

KIRK ignore Plex directive,
18-NOV-73 11:23 20356 Message:
I need an Ignore Plex (IGP) directive (like IGB, IGS, etc.), 6b18f

RLL for output processor : new command 'GrabS'
5-OCT-73 10:20 19525 Message:
a suggestion for the output processor, the command 'Grab' serves a useful function for lines; why not have a similar command (GrabS') for statements, One often does nto knwo how many lines will be in a statement but a header statement such as a chapter title will be followed by another statement, r, lieberman of nsrdc 6b18g

TTY window OFF allowing 2 more lines of text if desired, (22061,) (KIRK) 6b19

command feedback OFF allowing 4 more lines of text if all you are doing is jumping and reading, (22061,) (KIRK) 6b20

These require CML re-write 6b21

3-JUL-74 1355-PDT LEAVITT: bug
Distribution: FEEDBACK
Received at: 3-JUL-74 13:55:15 6b21a

When I use the output quickprint and output printer commands in tnls, there is echoed, or printed, an extre "OK:", so one would see:
Output C: Quickprint OK/C: OK:
If I give a command accept after the C and ignore the secong OK, the process gets completed fine, But if I pay attention to the second OK and give another CA, the bell rings, I have learned to ognore the second OK but other

sug: show return command statement numbers

particularly new users may be confused by it, so why not get rid of it. 6b21a1

line entiti.
If we eliminated LINK as a command word as proposed in (JJOURNAL, 22236, 1:w) there would be no conflict. 6b22

Filters should obey line clipping viewspecs. 6b22a

DCE Re-implementing DNLS Line entity
9-OCT-73 12:17 (KJOURNAL, 19580, 1:w)
6b22b

DVN For Lines and Arrays
10-OCT-73 09:00 19590 Message:
I second Doug's motion (kjoural,19580,). See also my argument for Matrices (journal,16245,)
6b22b1

Transpose window command. 6b23

Journal 6b24

CHI 20-JAN-73 20:07 14006
Proposed EXEC level capabilities: Journal Submission and Printing
Message: I recommend the addition of two more entry points into NLS, one for Journal submission and one for Print Journal. I recommend that a new EXEC command be created, say JOURNAL, such that there is are two subcommands, one for submitting a message and one for printing your Journal mail. The default for not specifying which submode should be submission, I think. Also, the Print Journal function should be slightly modified so that it marks the statements it has already typed -- so that repeated use of the command will result in only new material being typed. NOTE: If we can fit this into SNDMSG and MESSAGE, all the better. -- Charles
6b24a

DHC Statement Names for Journal Mail
12-JUL-73 16:38 17774 Message:
It just occurred to me that it would be very nice to have online Journal mail have the Journal number as the Statement name. What are the arguments against such an action and how hard would it be to implement??

--Dave
6b24b

sug: show return command statement numbers

JBN Request for Journal Feedback Line to Show Lack of Title
Please consider having the Status block presented to the
Journal sender include the line
3-AUG-73 08:32 18200 Message: Message:
[no title]
to prompt the sender that one has not been supplied and that
it is a normal part of the submission, -- Jeanne N

6b24c

JEW 25-FEB-74 16:09 22048
Secondary Distribution Bug?
Message: Dave-- Apparent bug in Secondary Distribution, The
following message accompanies the delivered citation:
'Secondary Distribution Copy from XXX', Note the incorrent
ident (I assume), Background's? --Jim

6b24d

DCE 7-MAR-74 17:55 22352
At least one Journal item is not indexed
Location: (JJOURNAL, 22352, 1:w)

6b24e

JBN Request for proper RFC journal format,
6-JUL-73 21:12 (KJOURNAL, 17694, 1:w)

6b24f

JBN Resubmitted Reply to WLB re Journal Headers
20-APR-73 08:28 (MJOURNAL,16031,1:w)
*****Note: (Secondary Distribution Copy)*****

6b24g

MCK Journal Complaint
4-JUL-73 06:29 (KJOURNAL, 17631, 1:w)
%default output directives should be by choice or better
advertised% (15469,) (WLB - also speed up ident check)

6b24h

CHI * BACKLINKS in the Journal
15-NOV-72 21:37 (LJOURNAL, 12866, 1:w)

6b24i

MDK * Annotating Journal Files with Footnotes
19-OCT-72 9:33 (LJOURNAL, 12329, 1:w)

6b24j

MDK MINOR SUGGESTIONS re the Journal,
6-MAR-73 9:07 (IJOURNAL, 14915, 1:w)
%citation format, default viewspecs, status command% %allow

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

other viewspecs & statement nos. (19425,) (JMB)% 6b24k

MCK Comment on 'Distribute Document'
4-DEC-73 10:04 (IJOURNAL, 20702, 1:w)
%DD for offline doc = message "Document is not online" or notify NIC person to manually DD% 6b24l

JEW Identifying Exactly WHAT File is Not On-Line
%change message to specify what directory a journal file is in; ability to interrogate journal catalogs%2-OCT-73 12:19 (JJOURNAL, 19414, 1:w) 6b24m

JEW How About 'RFC-524' Instead of '17140'?
25-JUL-73 16:50 (LJOURNAL, 18011, 1:w) 6b24n

DCE On Journal-item Citation Naming; cf. (18011,), (18036,) and (18063,)
31-JUL-73 09:17 (LJOURNAL, 18132, 1:w) %opposes% 6b24n1

MDK On Changing Journal File Naming Convention
27-JUL-73 08:56 18036 %supports% 6b24n2

JEW Some Dialog Support Ideas for the Next Couple Years
20-FEB-74 15:50 (HJOURNAL, 22002, 1:w) 6b24o

Ideas (not fully developed) for Dialog Support development over a couple-year period, 6b24o1

JOURNAL AND IDENT SYSTEM RE-WRITE 6b24o2

Absolutely the most important item on the list!! If this probject doesn't get top priority, we will one day -- sooner or later -- see the world come crashing down upon us! 6b24o2a

Should assume a multi-host environment as we've discussed and partially designed, with well defined modules -- cataloger, archiver, recorder, publisher, registrar, etc. -- distributed and replicated throughout the Net, 6b24o2b

Flexible access controls are to be built in from the start, 6b24o2c

sug: show return command statement numbers

This topic has been labeled 'Multi-Site Journal System', but it's important to realize that the Ident sytem (i.e., its replacment) is intimately involved -- it's probably the most important and complicated of all the modules, in my view of the world. 6b24o2d

BACKGROUND NETWORK JOURNAL SUBMISSION AND NLS FILE RETRIEVAL 6b24o3

It turns out that there's too much overhead associated with submitting a Journal article or formatting, converting, and retrieving an NLS file to require that it happen in-line with the Network request that initiates it. 6b24o3a

I therefore suggest that we create a background process running NLS to respond to such requests, interfaced to the outside world via the mail system. That is, permit a user to submit a journal article or request a copy of a specified NLS file, formatted in a particular way (e.g., via the Output Processor) by sending an apropriate message via Network mail to JOURNAL@NIC. The message would specify a Network return addr to which the background process would make reply, and, for the case of file retrieval, the host and filename (along with login parameters) where the file is to be sent. 6b24o3b

Journal submission by this mechanism would provide full flexibility with regard to specification of comments, preassigned catalog numbers, RFC numbers, etc. 6b24o3b1

JOURNALIZATON OF SEQUENTIAL FILES 6b24o4

We've long been aware that many journalized documents originate as sequential files. We've long been aware of the difficulty of converting sequential files to tree-structured ones in a reasonable way. Alghough I know that much more work can be done in the area of defining and implementing a variety of clever conversion routines, I believe that that's not the real answer to the problem. In general, you don't make a guy, who's spent time and effort formatting his file, happy by massaging it -- by ANY program (programs don't come that clever). 6b24o4a

I suggest that we permit sequential files to be

sug: show return command statement numbers

journalized (and stored as such), just as there are handles for journalizing hardcopy documents. 6b24o4b

PERSONAL MAIL-MANAGMENT SUBSYTEM IN NLS 6b24o5

No work has been done by us in this area. We need an equivalent of READMAIL, but presumably even more powerful. 6b24o5a

DRAFTS, COMMENTS, AND ACKNOWLEDGMENTS 6b24o6

Formalize the notion of drafts, comments, and acknowledgments, so the journal can make decisions (e.g., about routing) on the basis of whether or not a document has been acknowledged by certain individuals, etc. 6b24o6a

GENERALIZED ROUTING FOR JOURNAL DELIVERY 6b24o7

We can, I think, give the user a great deal of flexibility about the routing of a document to the people in its distribution list (I would expect sequential, and, of course, the current parallel delivery to fall out of this). 6b24o7a

A distribution list would, in the general case, be more complicated than it currently is. For example: 6b24o7b

Distribution: (CHI JDH DCW) then (RWW or 25-FEB 5PM) then ack JEW 6b24o7b1

meaning: 6b24o7c

Distribute in parallel to CHI, JDH, and DCW; when and if positively acknowledged by all of them, send to RWW. Then send finally to JEW, either when RWW has acknowledged or by 5 pm, Feb 25, whichever comes sooner. 6b24o7c1

Both the syntax and example are contrived, and more constructs could be defined, but the idea, I think, is clear. 6b24o7d

DELIVERY OF NETWORK MAIL TO INITIAL FILES 6b24o8

MESSAGE.TXT files can be eliminated for those NLS users who desire it. All network mail sent to them would be reformatted and placed in their initial file, like journal mail. 6b24o8a

sug: show return command statement numbers

SNDMSG SUBSTITUTE IN NLS %DONE% 6b24o9

I've 90% completed an NLS command which replaces SNDMSG, in that it does exactly the same thing as SNDMSG (in terms of the mode of mail delivery), but operates on NLS files and allows both 'User@host' and ident forms for addressees. 6b24o9a

GENERALIZED JOURNAL ADDRESSES IN THE IDENTFILE 6b24o10

Instead of the current hardcopy, on-line, and network mailbox address, permit each user to maintain N such mailboxes. Each would be of one of those three types, and each would admit only mail which met certain criteria, e.g.: 6b24o10a

Authored by one of a specified list of users. 6b24o10a1

Meeting certain specified size constraints. 6b24o10a2

Containing specified keywords in the title. 6b24o10a3

Etc. 6b24o10a4

PROMPTING MECHANISMS 6b24o11

Allow the user to be modified (at login, or if already logged in, by NOTIFY) when, e.g.: 6b24o11a

mmail arrived at a particular mailbox. 6b24o11a1

On a pre-specified date and time of day, with a specified message. 6b24o11a2

Etc. 6b24o11a3

VIEWING WHAT'S BEEN CHANGED IN A FILE 6b24o12

Provide the ability for a user to visibly distinguish on his screen between a file and the changes contained in its partial copy (with underlining, italics, or whatever, perhaps under user control). Allow a file to be viewed through any of several PCs. 6b24o12a

This, to my mind, is the way to implement (at least one form of) comments on a journal document. A user could then send a draft to N other users for review, each of whom would create his own partial copy for the file, and return it via the Journal to the originating

sug: show return command statement numbers

user, who could then view the N partial copies against the original file, and produce a final copy. 6b24o12b

AUTOMATIC GARBAGE COLLECTING OF INITIAL FILES 6b24o13

Allow the user, via the identfile or his profile, to specify a garbage collecting algorithm for his initial file, involving parameters like: 6b24o13a

Time it has sat in the file. 6b24o13a1

Who it's authored by (e.g., 'Discard after 30 days anything not authored by RWW or JCN'). 6b24o13a2

Etc. 6b24o13a3

UNRECORDED MAIL %DONE% 6b24o14

No definition required. (17497,) (DHC) 6b24o14a

JI Distribution Groups
4-NOV-73 11:48 20038 The suggestion is for a capability comparable to the "B option in TENEX sndmsg where I would be able to insert a branch for the distribution in the journal mail system.

6b24p

DHC 22-JUN-73 17:54 17426
Author Control of Distribution Media for Journal Mail 6b24q

AT DELIVERY TIME, I SHOULD BE ABLE TO SAY MEDIUM HARD, ONLINE AND IF THE PERSON HAS ONLY ONLINE TURNED ON, BUT HASN'T SAID 'NEVER' FOR HARDCOPY, HE WILL GET A HARDCOPY (THO HE WOULDN'T, NORMALLY). 6b24q1

LPD Don't like current Net Journal distribution
19-AUG-73 00:29 18495 Message:
I disapprove of the current Net Journal Distribution procedure. The TENEX READMAIL facility is a far less convenient form in which to maintain a permanent record of Journal items addressed to me than my Initials file at ARC. The overhead of transferring such notices to a permanent file is also odious. Until and unless the NIC can make a subsystem (such as NLS) available to aid in this process, I would like my Journal items delivered BOTH to my "home" host and to my NIC Initials file. If it is impossible to do both, I would prefer the latter to the former.

6b24r

sug: show return command statement numbers

JEW Smaller Separator in Print Journal
26-APR-73 13:50 16210 Message:
To whoever is messing around with 'Print Journal' these days (is it Chuck?), Dave Crocker suggests in (15477,) that the separator be reduced from three to one line. Makes sense.

6b24s

DCE NP for SNDMSG, User Program INMES, and round-trip conversion between NLS and sequential files
17-OCT-73 17:35 (LJOURNAL, 19746, 1:W)

6b24t

Comments: Time for more dialogue re improved facilities for NLS support of composng, sending, and managing SNDMSG traffic?

6b24t1

KIRK quit command
30-JAN-74 10:09 21677 Message:
In being consistant with the subsystems and novice user naivete, there should be a quit Tenex command in NLS that would take you out to your higher level. Your higher level would be telnet, a superior NLS, or Logout. There should also be a quit Job command which would equal the Logout command.

6b25

DIA 8-APR-74 14:29 22662
Viewspec suggestions for NLS
Location: (LJOURNAL, 22662, 1:W)

6b26

Let viewspec questionmark display the viewspecs when you want to see them. (KIRK)

6b26a

limit display if viewspecs.

6b26b

This would be a user profile parameter that would control the display of viewspecs. The effect would be that viewspecs would not be displayed unless they were DIFFERENT than a specified set of viewspecs. The result would be that the viewspec area would be empty unless there was something unusual -- which the user would like to be aware of.

6b26b1

I find myself paying little attention to the viewspecs anyway, except when I have some 'special' (unusual for me) setting.

6b26b2

Print Journal

6b27

sug: show return command statement numbers

DHC Fewer hard copies of jourrrnal messages
19-JAN-73 12:17 14012 Message:
This suggestion is actually courtesy of Jon Postel:

A journal message receiver should have hard-copy as an optional, rather thanautomatical occurrence. This would lessen the mail situation some.

Probably the easiest thing to do is have the print Journal command have a verbose mode which queried for a) deletion of the message, and b) hard copy of the message. 6b27a

Now that filters delimited by semicolons ;filter; are defined as viewspecs in the definition of a link or an address, ;filter; should be a valid viewspec whenever the V: prompt appears. (22486,) (KIRK) 6b28

Alternative views in help 6b29

24-SEP-74 1818-PDT KEENEY: help
Distribution: KELLEY
Received at: 24-SEP-74 18:18:37 6b29a

how can i get a printout of the whole help system,
i am really behind on nls development and reading the latest help
might help (so to speak...)
marcia 6b29a1

-(23116,) (MDK) the command feedback window and the literal feedback window should be merged, in practically all instances, so that the total expression that a user composes --- command words, command noisewords, literal typeins, etc --- is displayed in the appropriate order for the user to reflect upon. 6b30

The major difficulty in doing this would seem to be how to handle bugs. 6b30a

I think this depends on the situation. 6b30b

If the user is bugging a word or character or filename then that string can just be displayed; if the user is bugging a structure, then the statement number(s) of that structure could be displayed, or perhaps just the symbol "<bug>" could be displayed; other cases would have to be thought out, of course, but the net effect would be an eminently more readable command feedback line. 6b30c

FDBK 11-OCT-74 02:57 24191

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-(23116,) (MDK) I would like to see a modification to the "Output File" command that allows the output to be "filtered" That is, the command should at least optionally obey viewspecs "i" and "k", This would make it MUCH easier to do a content search and save the results without having to split the screen, create a new file, copy filtered, etc, 6b31

SRL 4-JAN-73
The message at the top at times is poetic, but rather strange looking, for example, Transpose text at through and through, Copy Group from through to follow, etc, It seems the words should go away when they are no longer applicable or slashes between or something (CHI: we could echo an @ or BUG for each bug selection -- we will want to do this in final tty-simulated CFL anyway) (JAKE) 6b32

DSM 24-MAY-74 15:07 23117
CML Backspace implementation
Location: (GJOURNAL, 23117, 1:w)
*****Note: [INFO-ONLY] *****
6b33

There is a inconsistancy in the CML interpreter, 6b33a

In expert/expert recognition mode when the user types the sequence <Space><Letter><Backspace> the backspace is executed as a double backspace and the interpreter considers the next letter input as a LEVEL! Command, Example <space>S<backspace>C recognizes copy command 6b33a1

It would seem more consistent to have one backspace leave the interpreter in a state expecting a second level command sequence, and require the user two type two backspaces (or a command delete) to get to the top of the parse tree, 6b33a2

Changes in basic CML io entities DSEL, LSEL, SSEL, 6b34

Indirect Addressing 6b34a

RLL suggestion on indirect addressing,
14-AUG-74 14:14 (GJOURNAL, 23793, 1:w)
*****Note: [ACTION] *****
6b34a1

I believe indirect addressing would be nice to have within editing commands, When thecontrol U business disappears in the new version, one couldusе th control u to be used as an indirection, E.G, if bugged after

sug: show return command statement numbers

connrol u , the name/link bugged wuld be taken as the effective address.This is extremely valuable where an index is kept of links and structural entities are moved/copied to positions relative to this links. The slight inconsistency with TNLS should not be a barrier since such an indirecting scheme has very low value for TNLS uers and <CA> for them means CM where <CA>=<BUG> means the spotcurrently being pointed to. Just don't permit it for TNLS.If there is some other conflict I have issed, then consider a sppcial character or another (ugh) control character to indicate the indirection. (how about slash?) Robert 6b34a1a

KIRK 14-AUG-74 17:04 23797
Addressing in commands by bugging a link
Location: (GJOURNAL, 23797, 1:w)
*****Note: [INFO-ONLY] *****
6b34a2

I support RLL's suggestion (23793,) for allowing <CA> immediately after <^U> mean "I'm bugging a link containing the address". The prompts in DNLS would be 6b34a2a

B/T/[B/A] for CONTENT (LSEL) 6b34a2ai

where the parameter in square brackets for LSEL wants an address (or link, depending on your point of view). 6b34a2a1a

B/A/[B/T] for SOURCE (SSEL) 6b34a2a2

B/A/[B] for DESTINATION (DSEL) 6b34a2a3

I see no inconsistency with TNLS where A: <CA> means "the location of the Current Marker". 6b34a2b

This would also be consonent with the new entity "Default Select" (DEFSEL) for use in the Append, Break, Connect, Distribute, etc. commands. DEFSEL would be T/[B/A]. Just like the new LSEL Robert sugests only without the first B. 6b34a2c

DVN 15-AUG-74 08:21 23798
For Indirect Addressing in Editing (support for 23793)
Location: (GJOURNAL, 23798, 1:w)
*****Note: [ACTION] *****
6b34a3

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Robert's right, I have frequently missed being abtle to bug a link as a source of a copy etc, 6b34a3a

KIRK Use of the equivalent of a DeFault SeLect (DFSL?) (Same as TNLS CONTENT = TYPEIN / [ADDRESS], In DNLS = T:/[B:/A:],) would allow the user to CONFIRM a command without having to type anything for the default, This would save typing the special control characters <^N> and <^U> in order to change the default for the most frequent use in some commands including the following, 6b35

Append Statement (at) SOURCE (to) ADDRESS <NULL> / TYPEIN / BUG / [DAE] CONFIRM 6b35a

This forces the user to type a null character (<^N> or <SP><BS>) whenever appending without inserting any text between the appended statements, 6b35a1

Because bugging text to go between appended statements is more infrequent than not inserting any text between statements (NULL), and in order to make the TNLS Append more closely parallel the DNLS Append, I suggest changing the syntax to be: 6b35a2

Append Statement (at) SOURCE (to) ADDRESS DFSL CONFIRM 6b35a3

Append Statement syntax (5 bugs required) is too lengthly; possibly use optional text, intervening text, or insert added text, instead of to-through 6b35a4

RLL suggestion on a new append statement
23-OCT-73 08:41 19825 Message:
after a execute insert sequential there exist a nls file with no structure, we have found it desirable to structure it by joining (appending) several statements together, however, the append command operates on statements only, we suggestion that aappend be extended to groups, so that one can append to a statement from a group of statements, namely, append to statement ,1 from ,3 to ,13 etc, one could call this ommand group append to distinguish from append, robert lieberman of nsrdc 6b35a5

COnnect (to) Directory USERNAME CA <CONFIRM / <^u> PASSWORD CONFIRM> 6b35b

requires a CA followed by <^u> in order to specify a password (instead of nothing or <SP> as in Tenex), No-password can be the default field and the password can

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be typed in without requireing <^U>. The command would be: 6b35b1

COnnect (to) Directory USERNAME CA (Password) DFSL CONFIRM. 6b35b2

Ken Tells me that this is desirable in other Directory commands as well. 6b35b3

Output <Quickprint/Journal/Printer/COM> [File CONTENT / Copies TYPEIN] CONFIRM 6b35c

This requires <^U> to specify another filename or number of copies other than 1. The following syntax would eliminate the need to type <^u> and could also save accidental printings by following the double command accept convention. 6b35c1

Output <Quickprint/Journal/Printer/COM> DFSL CA (Copies = 1?) DFSL CONFIRM 6b35c2

Set Name delimiters should be considered. 6b35d

DVN 18-JUN-74 08:29 23392
Strings for the Scope of Subsititute
Message: I,e, Substitute character in text, What ever happend to that good idea?
*****Note: [ACTION] *****
6b36

Automatic repeat of commands with Commandwords available along with the first parameter (a la NLS-7) 6b37

CML should be modified so that after typing the noun in addition to the parameter (e.g. B:/[A:]) all of the command verbs in a subsystem can be made available. This is so those people who think this capability from the old system is valuable can write their own subsystem to do this. (22175,) (KIRK) 6b37a

2) Repeat 6b37b

Can't we have a more intelligent implicit way of getting out of repeat mode as in old system by having it recognize that characters being typed are illegal at that point and try to interpret them as commands?(22931,) (RWW) 6b37b1

=(23116,) (MDK) I am personally not satisfied with the

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automatic return to "command reset" mode after every command terminator. 6b37c

The use of "RPT" is not a satisfactory mechanism, especially since it usurps the <control-b> that was previously used for the old center-dot function --- an annoying need to relearn an old habit. 6b37c1

I don't have an obviously winning solution; but my own preference is simply to type "command delete" --- very simple with the mouse, not so simple with a TI --- when I know I want to start a new command. Perhaps this is one place where the old difference between TNLS and DNLS syntaxes should prevail. 6b37c2

19-JUL-74 1558-PDT FEINLER: New NLS
Distribution: FEEDBACK, feinler
Received at: 19-JUL-74 15:58:45 6b37d

To verbalize some of my reticence to use the new NLS : 6b37d1

- There are too many confirms and too much undefinable verbage in the command language. I find a few of the commands almost unintelligible with respect to what I am expected to do, (ex. Sendmail, Append) The number of interruptions from the command language interfer with my concentration on the job I am trying to do. 6b37d2

- The fact that each command is cancelled after it is executed once cust way down on efficiency. For instance, if I am jumping down through a file changing a statement here and some text there. In the old system I could go back and forth between the jump command and the insert command with one bug. Now I must retype the command from scratch. If I have a 'hold' on a command in the new system so that it does not go away after each use, then it is cancelled every time I have to do a jump. Also the double button routine is difficult for me to execute - not infrequently I hit both but only

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the
command delete registers thus canceling my work, 6b37d3

I have mentioned that 'jumps' and text finding seems slower in the
new system than it does in the old, HGL is checking this out, 6b37d4

These are verbalized here not to 'knock' the new system but rather in the hopes that they will be
useful user comments, 6b37d5

Execute Verbose could put him in the most verbose mode for all feedback for the single following command when it's an unfamiliar one such as show drectory (21703,) (21711,) (DVN) 6b38

KIRK 11-AUG-74 00:58 23758
Ampersand should be a valid character in a statement name,
Location: (GJOURNAL, 23758, 1:w)
*****Note: [ACTION] ***** 6b39

Therefore, some other character should be used to specify an external name, It is of utmost importance that this decision be made as soon as possible before ampersand becomes tradition and impossible to remove, 6b39a

DVN 10-JUL-74 21:34 23591
For a Means of Highlighting Strings that Are the Object of Content Searches
Location: (GJOURNAL, 23591, 1:w)
*****Note: [ACTION] ***** 6b40

We are now trying to print via COM some files that came over from another system that included an hyphenation program (as many do) which leaves words with "- " in their midst wherever they now occur in the resulting NLS statment, It happens that many of the statments are very long, more than a screenful in some cases, We cannot merely do a mass substitute because the text includes dashes, 6b40a

What we need in this case is something we often need in eidting, a way of visually highlighting a string which is the object of a subsistute or a content search Then an editor could go rapidly thrugh the text, sight every "- " in a moment, and decide it's fate quicly and easilly, 6b40b

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Since, as I understand it, underline is avialabe both on tasker and on the devices supported by the line processor, underline seems a good way for NLS to highlight strings I have mentioned this problem before, probably not loudly enough. If NLS is ever to compete as a production editing system, (journal,23555,) it needs some such feature. Most word processing systems do. The information that a string occurs somewhere within a statement is just not enough for production editing on displays. 6b40c

Jump to Bottom of window. 6b41

KEy request for a new nls command
5-JAN-73 13:53 13709 Message:
It would be nice if there were a jump to bottom command in NLS that function similarily to the curent jump to item command except that the item selected became the new bottom line of the screen. Viewspecs that matter (such as the e viewspec) could be take relative the the bugged item. This command would be very useful in looking at assembly files for example. 6b41a

RLL 9-AUG-74 10:43 23750
A new jump command suggestion.
Location: (GJOURNAL, 23750, 1;w)
*****Note: [ACTION] ***** 6b41b

I have often found that I wanted a window view showing the last (tail) part of the plex. Jump to tail shows only the tail statement and what follows. I suggest we have another jump (e.g. jump to full tail) that would have the tail statement as the last line of the window. this would give a full screen view of the last part of the plex. Of course it would obey viewspecs. A more general set of jump commands would be a tjump. Where tjump noun does the same as jump noun but positions the bugged (or addressed) statement at the tail(end, bottom) of the window. Rob 6b41b1

(KIRK) 6b42

Allowing edges to be moved anywhere up to the margin and then moved back. 6b43

Jump to previous screen composition, including windows that have been moved away. (MDK) 6b43a

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Allow a user to type "Execute command in TENEX" which would take him to the exec to do one command and then allow him to return (22815,) (KIRK) 6b44

-(23116,) (MDK) you can of course "goto tenex", but you can't "execute command in Tenex" --- so tenex is not a true subsystem ! 6b44a

KIRK Proposed system using two viewspecs to view warps (text specified by a link instead of link syntax).
13-JUL-73 20:46 (LJOURNAL, 17811, 1:w)
6b45

Warps on. When viewspec 1 is on, the text at the addresses specified by links (warps) will be viewed instead of the link syntax unless viewspec 2 is in the viewspec field of the link. 6b45a

Warps off. When viewspec 2 is on, link syntax will be seen instead of warps. 6b45b

If viewspec 2 precedes viewspec 1 or viewspec 2 and not viewspec 1 is in the viewspec field of a link, only the syntax for that link will be seen even if warps are on. When you jump to a link with viewspec 2 in it, warps will be off unless viewspec 1 is also in the viewspec field of the link. 6b45c

If viewspec 2 precedes viewspec 1 in the viewspec field of a link, only the syntax for that link will be seen even if warps are on. However, warps will be turned on when you jump to that link. 6b45d

If only viewspec 1 is in the viewspec field of a link and viewspec 1 is on, the warp will be viewed instead of the link syntax, and the view of the warp will have warps on. That is, the view will be the same as if neither viewspec 1 nor 2 were in the viewspec field. 6b45e

However, if viewspec 1 precedes viewspec 2 in the viewspec field of a link and viewspec 1 is on, the warp will be viewed instead of the link syntax, but the view of the warp will have warps off. 6b45f

Stacking warps is controlled by viewspec 1 followed by some number of viewspec 2's. Each additional viewspec 2 adds the capability of seeing one more stacked warp. 6b45g

I propose that warp views be allowed to include more than

sug: show return command statement numbers

one statement and be governed by the viewspecs in the viewspec field of the link. If viewspec 1 or 2 is in the link, only viewspecs to their left will apply to the warp view. Only viewspecs to their right will apply when jumping to link. A link with an empty address field cannot be a warp. Addressing and editing the text in a warp should be possible when warps are on. 6b45h

Warps should be surrounded by the delimitors of the link. 6b45i

For example, warps off: 6b45j

LOCATOR <nic,locator,0:122sebbmz> 6b45j1

JOURNAL (journal, tjcat, 1:xbr2) 6b45j2

Warps on: 6b45k

LOCATOR <<NIC>LOCATOR,NLS;115, 12-JUL-73 17:17 KIRK ;
1 USING THE LOCATOR ONLINE
(:wn)
1A The Locator organizes selected NIC documents so that you
can reach and read any part of documents online with few
commands.
2 NIC DOCUMENTS
(:ebtm)
2A ARPA NETWORK RESOURCES NOTEBOOK NIC 6740
(:tebbn)
2B GLOSSARY
(This is the NIC GLOSSARY.
To find the definition of a one word term, type:
p[rint] b[ranch] .TERM CR CR
CONTROL o (^o) stops printing.
For an offline formatted version, use
<NIC,GLOSSARYFL,0:w>)
2C INDEXES TO THE NIC CATALOG COLLECTION NIC 5145
(:tebm)
2D NIC USER GUIDE NIC 7590 and ARC USER GUIDES
(userguides,arclocator,2:tebm2)> 6b45k1

JOURNAL (journal, tjcat, 1:xbr2) 6b45k2

HELP Software DEVELOPMENT 6b46

KIRK 28-SEP-74 01:28 24087
Syntax could be better
Message: I think we made a big mistake when we decided to

sug: show return command statement numbers

describe the syntax in terms of how you specify something (CONTENT, SOURCE, DESTINATION) instead of what you need to specify (STATEMENT, CHRACTER, etc.) when we decided we didn't have room to put both. I'm journalizing this for the record in hopes that it can be rectified someday.
*****Note: [INFO-ONLY] *****

6b46a

Free text input

6b46b

RWW 1-MAY-74 16:15 22874
help system needs
Message: Some suggestions fo Help, w need to instrument help to see path etc. It would also be nice to let the user input free form text to express his question or problem and whether or not it got answered or what ever.
*****Note: * action * *****

6b46b1

Brief views specifiable by user

6b46c

RLL 23-APR-74 12:48 22804
help system suggestion
Message: suggestion on help system; the show < command returns one to next higher level; fine. But in TNLS it would be nice to return to this point without printing out all the "help" info again includingg the menu (it was presumedly printed out before and one can look at it). Yes, one could use the control O command to cease printing but this is not 'neat'. If not too hard suggestion a show <n command to supress the printing.

6b46c1

Most frustrating thing is finding two or more objects on the menu you want to examine. You go after one, but it is very difficult to get back to previous menus. The best thing to do, apparently, is type SHOW T:/[A]: " until you get to the place where you can re-select. The large penalty for doing so is that you have to look at that piece of text again. There really ought to be a way to get only the previous menu in the tree. (RICART)

6b46c2

Preliminary Proposal for handling user-programs in NLS-8
see <hjournal, 23986,> <hjournal, 23992,> and <hjournal, 23999,> for background

6c

Suggestions for handling user-programs listed by Applications <hjournal, 23986,>. Codes in parens: Difficulty (a, b, c). Priority (1, 2, 3).

6c1

sug: show return command statement numbers

LETTER (works now, no change) 6c1a

FORMAT, DELDIR, and SHOWDIR (work now, no change) 6c1b

part of FORMAT user-program 6c1b1

JFORM3: (a1) works now, 6c1c

suggest change as the default journal format with some possible minor changes to avoid confusion with level indention, (Harvey?) 6c1c1

DELSP (a1) 6c1d

BASE: Delete Leading (spaces in) STRUCTURE (at) DESTINATION OK: 6c1d1

alternative implementation in PUBLISH user-subsystem 6c1d2

ADDRESS (b1) works now, suggest integration as 6c1e

BASE: Insert Address (to follow) STRING (for ident:) CONTENT OK 6c1e1

possibile additions 6c1e2

BASE: Insert Address (to follow) STRUCTURE LEVELADJUST (for ident:) CONTENT OK:
This command inserts the address as a statement, 6c1e2a

BASE: Insert Address (and phone?) Y/N (to follow) STRING (for ident:) CONTENT OK 6c1e2b

alternative implementations 6c1e3

BASE: Copy Address (to follow) STRING (for ident:) CONTENT OK 6c1e3a

MESSAGE (b1) works now, suggest integration as 6c1f

BASE: Copy/Move Message (file) OK/CONTENT (to follow) DESTINATION LEVELADJUST OK: 6c1f1

alternative implementations 6c1f2

BASE: Copy/Move Sequential (file from) CONTENT (to follow) DESTINATION LEVELADJUST (using) SEQTYPE OK:
SEQTYPE = One (<CR> ends statement)
Two (or more <CR>s ends statement)

sug: show return command statement numbers

[JUSTIFIED (source file)]
Message (file format)
Assembler
Assembeler/Heuristic/Justified/Message] OK 6c1f2a

(note: there is currently no Move Sequential command) 6c1f2a1

INSEQH (being re-implemented by Charles as) 6c1g

"COPY" "SEQUENTIAL" 6c1g1

<"file from"> source _ LSEL(#"OLDFILELINK") 6c1g1a

<" to follow"> dest _ DSEL(#"STATEMENT") 6c1g1b

level _ LEVADJ 6c1g1c

<"using"> 6c1g1d

("ONE" <"<CR> ends statement"> 6c1g1d1

/ "TWO" <"<CR>s ends statement"> ["JUSTIFIED"] 6c1g1d2

/ "ASSEMBLER") 6c1g1d3

SENDMES (b2) 6c1h

SENDMAIL: Unrecorded Y/N/C/OK:
C prompts for: Immediate ((sendmessage) distribution:)
CONTENT OK: 6c1h1

Question: If the Distribution command was used as well, does the mail goes to those people as unrecorded or recorded nls files/messages? 6c1h1a

APPEND (c2) 6c1i

BASE: Append Group/Plex (at) DESTINATION (join with)
CONTENT OK: 6c1i1

note: Append Branch should do the same thing that Append Statement now does (i.e., carry the substructure along,) except it would place the substructure after any substructure under the destination instead of before it. <feedback,fdbk,future> 6c1i2

ADDTEXT (c2) 6c1j

sug: show return command statement numbers

BASE: Insert Front/Back of STRUCTURE (at) DESTINATION CONTENT [FILTER] OK: 6c1j1

alternative or additional implementation 6c1j2

BASE: Substitute Back/Front [FILTER] (in) STRUCTURE (at) DESTINATION <new text> CONTENT OK: 6c1j2a

maybe STRING/STRUCTURE instead of just STRUCTURE ?? 6c1j2a1

TOC(b1), INDEX(c1), MAKEREF(c2), WORDCOUNT(a3): 6c1k

PUBLISH user-subsystem commands 6c1k1

Generate 6c1k1a

Table (of Contents) 6c1k1a1

Index 6c1k1a2

References 6c1k1a3

Count Words 6c1k1b

Could easily be interfaced as BASE commands 6c1k2

SORTNOCASE, sortrev, sortalphabetic: (b2) 6c1l

BASE: Sort STRUCTURE (at) DESTINATION SORT-ALT (finished?) Y/N/OK:
SORT-ALT = OK: | for default or current sort-key
userprogram |
Ignore (case)
Reverse
Skip CONTENT
CONTENT after Skip Wants a content-pattern, 6c1l1

SUBFTPM, (ftpmsys), Load Remote (file) 6c1m

(hopper has a user-subsystem) 6c1m1

should be implemented as the SITE field in ADDRESSES 6c1m2

DELNAME (a3) 6c1n

should remain as user program 6c1n1

SUBLIST (b3) 6c1o

sug: show return command statement numbers

should remain as user program 6c1o1

NOTABS (c3) (doesn't work right in nls-7) 6c1p

should remain as user program 6c1p1

The NIC programs not listed here need more research and can be handled as a seperate issue, 6c2

NLS-8,1 (ARC currently available userprograms 20-SEP-74) 6c3

address 6c3a

calculator 6c3b

identification 6c3c

jform3 6c3d

letter 6c3e

message 6c3f

mouse 6c3g

sortalphabetic 6c3h

sortnocase 6c3i

sortrev 6c3j

inseqh is part of running system 6c3k

letter 6c3l

no change to subsystem 6c3l1

format, deldir, and showdir done as part of FORMAT user-program 6c3m

Currently Append Branch is not implemented. It would be easy to implement by having it do exactly what append statement currently does. Append plex and group is another story. They should work like the Append user program in the running system. (22059,) (KIRK) 6c4

DNLS terminal opinions 6d

9-OCT-74 1008-PDT BAIR: Experience with the Delta Data @

sug: show return command statement numbers

Office-1 (through the Net)
Distribution: FEEDBACK, FEEDBACK AT OFFICE-1, bair, watson
Received at: 9-OCT-74 10:08:49 6d1

I have now logged a number of hours in DNLS through the LP using bothe the Net and Telnet, I would like to go on record with the following:
Speed: No matter what the load at Office-1, e.g., even when it was ,88, the recreate was uncomfortably slow, I did not notice bursts, but did watch the cursor scanning at what was a consistantly slow speed. (48K baud).
Terminal: The Delta Data felt slower than the Hazeltine or the Datamedia. After 2 + years on an Imlac, it was difficult to be objective about the green display. Eye fatique was a problem, whereas I have not had a significant problem with the Tasker or the Datamedia. Human factors wise, green causes more fatiquing things to happen in the retina. The keyboard was difficult to use compard to the TI. More later. 6d1a

DOCUMENTATION DEVELOPMENT
DB: Data Base
> this contains items that have not yet been assigned to a person or are controversial. For assigned tasks, see <nls,mods,done> 6e

Create and maintain a reasonable tree structure with which the user can identify. This depends on an accessing system that allows the user to see Map and Full views. And allows the user to take reference links located in a node. (Reference links are not classified by the node and therefore do not belong in its substructure.) 6e1

The treeishness is very confused by the arbitrary allowed branches. Let's say that you are trying to find out about subject X. You are led down the tree, selecting various branches. At one point, your eyes light up since one choice is "all you wanted to know about X". You think that finally you are going to get the info. In reality, it takes you back to a previous menu and you have to start all over again. 6e1a

DvN I really like the when FILENAME at the same spot spells out its parts in the menued line. 6e1b

RLL 23-APR-74 17:50 22810
annoying loop in help menu system
Message: JUst came across a loop in the help system. I realize that this probably occurs quite often, however it was a bit annoying to kep seeing in menus the same

sug: show return command statement numbers

selection. The particular instance in this case was with ITEM, show item has 1, message and show message has 1, item, guess it would be too hard to prevent this sort of tight loop (a stack of the last menu items called might beinspected before system goes off- if recently displayed then could user option of aborting this selection). 6e1c

10-MAY-74 0545-PDT JERNIGAN: HELP Loop in Programs Section
Distribution: FEEDBACK, jernigan
Received at: 10-MAY-74 05:45:51 6e1d

There is apparently a loop in the HELP Database under the Programs Subsystems section, (1) into the Programs part of Subsystems; (2) Show "loading user program" which is item 3, (3) At this point a section of information comes up entitled "loading user programs" and under it there;are a "show also" selection plus 10 items. In the Show Also are "Programs Load, Filename, extension", (4) Do a Show "Programs Load" and it shows a section of info with two items, first one which is "important loading information", (5) Do a Show "important loading information" (which is Item 1), (6) you get an Item not found; (7) do a show 1 (which is same thing), and you get "important loading information, a CR, and loading user programs: blah blah, which is where you started. I have the TI paper printout from the loop and will deposit it on SUsan's desk. (Point is, it is not important loading information if you just saw it from where you came in.) 6e1d1

The first line of every function statement could be the syntax, Add syntax as first part of each function statement. 6e2

f) In help database, on some commands you get the syntax in the menu, others not. I like getting the syntax as it may not require me to go on. Let's adopt this as the uniform convention. (22931,) (RWW) 6e2a

f. SHOW DELETE MARKER (22871,) (MDK) 6e2b

This works o.k. but illustrates an undesireable feature: 6e2b1

The first line of the response says simply "MARKER". It should say "DELETE MARKER". This comment holds for all SHOW's for which the object is a stacked statement name: the first line that results from execution of the SHOW command should contain the entire stacked statement name. 6e2b2

Change all STRING and STRUCTURE and SUBSYSTEM references in

sug: show return command statement numbers

Function, (syntax and example) to a reference for each command-noun. 6e3

Backlink system 6e4

Whenever the Insert Link command is used, 6e4a

before it inserts the link, it parses the link and 6e4a1

finds the addressed statement and 6e4a2

places a link appended to the end of the addressed statement 6e4a3

preceded by a carriage return, and 6e4a3a

surrounded by pound signs: #<01234># 6e4a3b

It then inserts the SID of the statement addressed by the inserted link 6e4a4

after comment dashes 6e4a4a

after the address inserted by the user. 6e4a4b

If it does not find the addressed statement, 6e4a5

it will insert the link without the "-- SID" 6e4a5a

but only after sending out a message and requesting an extra confirmation, 6e4a5b

The delete statement command 6e4b

checks to see if any links delimited by # are in the statement, and 6e4b1

if one is found, refuses to delete the statement. 6e4b2

If the user still wishes to delete such a statement, he must use the Delete Referenced Statement command. 6e4c

The Renumber SID's command will check for links and either not work, or else only renumber those statements without links. 6e4d

You must use the Renumber Referenced SID's command to renumber referenced statements. 6e4e

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Suggestions outside the realm of NLS code.
> Network Information Center Feedback sent to ident NIC, see Jake feinler to determine status.
Operations and User Development feedback sent to indent FEED, see <OFFICE-1, FEEDBACK, FEED,> or Jim Bair for status. 6f

DVN 20-MAY-74 19:38 23062
response to Response
Location: (MJOURNAL, 23062, 1:w)
*****Note: [ACTION] *****
6f1

I think "Force Case" is much nicer than "set Case mode", (mjournal,23019,ig) How about "show markers",,,,"Show File Marker" is two extra key strokes considering "marker" is a second character name in expert expert mode. 6f1a

OPERATIONS & USER DEVELOPMENT (UD) 6f2

ARC Environment 6f2a

KIRK 1-FEB-74 12:28 21723
NP for an Offquota command
Message: The equivalent of an Offquota command (for the group allocation system) is needed to maintain the first-on, last-off convention and make cooperation among members of each group much less painful. This would allow you to keep your place in the offquota stack when another member of your group is scheduled to be onquota. Currently when you are automatically made onquota, you must log out to allow a scheduled person to log in.
6f2a1

Interface to video-tape cassette machines. 6f2b

Hardware 6f2c

Mouse and Keyset 6f2c1

I want two mouse-sets with five buttons each instead of one mouse and one keyset (KIRK) 6f2c1a

Typewriter terminals 6f2c2

KIRK Features desired in typewriter-like keyboard hardware for optimal user control.
24-JUL-73 20:47 (LJOURNAL, 17999, 1:w)
6f2c2a

sug: show return command statement numbers

Printer 6f2c3

RWW NP for a Printer Escape Mechanism
17-JAN-73 10:05 13857 Message:
A problem has arisen today which has been seen before, namely someone sends a very large file or large number of copies of a file to the printer and then realizes he made a mistake, in the meantime the printer is tied up for 20-30 minutes. Can an escape mechanism be put in the system so the the operator can tell the printer process to stop printing the current file and move on to the next on in the queue?

6f2c3a

TENEX
(secondary distribution to KEV & DCW) 6f2d

The message "use downtime command to see new up-down schedule" would be a valuable thing if it only appeared when there was a new up-down schedule. (22176,) (KIRK)

6f2d1

JI TENEX/NLS File Compatibility : A mini-suggestion
30-OCT-73 07:55 19908 (JOURNAL, JRNL15, J19908: gwy)

6f2d2

DHC Archive lsitings briefer
12-NOV-73 14:41 20174 Message:
I am really glad to see the Archive stuff getting polished, a VERY strong request, tho, is to make the printing of what tapes thefiles are on OPTIONAL (default to DON'T print). If the Archive system works properly, the user doesn't actuallyever need to know the the tape numbers.

And it will greatly speed up the listing process. (Dave.)

6f2d3

JBN Repeated Request for Truncated Print of ARC SNDMSG
3-AUG-73 08:26 18187 Message:
Again, I would like to request that local sndmsg be fixed so that it prints on 8 1/2 paper rather than across the printer paper. As you know, sndmsg from outside stops at the perforation, and it is inconvenient that ARC messages do not. I am sending this only to NP. If that is not the place, would you forward the request. -- Jeanne N

6f2d4

sug: show return command statement numbers

IMLAC 6f2d5

DHC IMLOAD for Imlacs attached to TIPS
23-APR-73 12:54 16048 Message:
The IMLOAD program should be able to reload an imlac attached to a TIP port, just as SENDPRINT can divert output to a TIP port (ostensibly a printer). This way, a crashed imlac could be reloaded , using another trminal, without having to put a standard editor into the imlac.

TIP Divert Output doesn't work. I have tried it many times and apparently too much dirty data get into the loader stream.

6f2d5a

DHC IMNLS changes that should be
25-APR-73 13:17 16163 Message:
These two suggestions are courtesy of Mark Kampe: 6f2d5b

1. Make the functioning of the "direction" buttons an option which is user settable (It would be option 'A', after option '0'). This would allow users to use the buttons, to control the cursor, instead of the bug. Also, please have UCLA's option begin enabled. Also, the option should not exclude use of the bug, while it is enabled. 6f2d5b1

2. Use the 'clear screen' instruction (or clear data area) as a button (page xmit?) on the board, under user control.

6f2d5b2

Scheduler 6f2d6

JEW scheduler gripe * 20-FEB-73 17:18 14551--
Scheduler gripe
It's a Nice Place to Visit, But Why Do I Have to Live There?
Location: (IJOURNAL, 14551, 1:W)

6f2d6a

Archive System 6f2d7

JEW 4-MAY-73 14:08 16282
Adding a DELETE Function to BSYS
Location: (IJOURNAL, 16282, 1:W)

6f2d7a

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

KEV 16-JAN-73 14:04 13827
archive status of nls files
Message: It would be nice if nls propagated archive status when it did an update file
6f2d7b

DHC 13-JAN-73 11:03 13799
QFD
Message: It is very irritating not be able to use the 'qfd' command in tenex,
and therefore to have to print out a rather long directory list.

I can't believe it is computationally expensive to use that commands.
6f2d8

Network 6f2e

JEW NP NLS GLITCH, Underscore Represented as Vertical Bar for Net TTYs %map into UNDERSCORE BACKSPACE%
27-FEB-73 13:49 (IJOURNAL, 14810, 1:w)
6f2e1

NETWORK INFORMATION DEVELOPMENT (NIC) 6f3

Functional Documents 6f3a

MEJ 4-MAY-73 18:14 16284
Desired Catalog changes
Location: (IJOURNAL, 16284, 1:w)
6f3a1

JAKE 5-MAY-73 21:23 16300
Siteidents
Location: (IJOURNAL, 16300, 1:w)
6f3b

Comments: Suggested method for assigning siteidents 6f3b1

RWW * 10-NOV-72 10:33 12718
Three Tasks Requested of JEW for Evolution of NLS Integration into the NET
Location: (LJOURNAL, 12718, 1:w)
6f3c

DHC 12-JAN-73 11:42 13776
Making nls use the Net more Efficiently

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Message: It appears that nls is quite inefficient in composing network 'messages'. 6f3d

Clearly it has no choice when echoing characters, but when sending out relatively large quatities of data (and relative to single-byte echoing, 20 or 30 characters is a large qunantiy) a larger message-size should be attempted. Perhaps a 1000-bit (one packet) buffer, vs. 2-3 seconds between messages should determine transmission. I.e., try to filla packet, but if it takes mor than 2 or 3 (or whatever seems reasonable) seconds of real time, send the message off 'now'. 6f3d1

1k bits desn't seem like an unreasonalbe buffer (unless, of course, TENEX does nasty things to keep you from it.) 6f3d2

Please let me know what you think of my thinking. If I am off base, I would like to undestand how.

thanks. 6f3d3

ANALYSIS 6f4

feedback process 6f4a

28-MAR-74 0920-PDT BAIR: Feedback mechanisms
Distribution: FEEDBACK, islei at ISI, bair
Received at: 28-MAR-74 09:20:06 6f4a1

Jon, It all of a sudden has become very clear that we must coordinate on our separate feedback endeavors. We have a mechanism for subscribers to th Utility that is being refined now after 2 months of operation (see -- bair,feed,1) @ SRI-ARC. I have looked at your groups document and could discuss it with you, particularly from the viewpoint of a Behavioral Scientist. Anyway, we are having our final meeting next week (3 Apr). There seems to be no question that there will be 3 mechanisms, o
at ARC, 1 at Office-1, and the NET. They have very different characteristics and serve different communities. Looking forward tohearing from you, Jim 6f4a1a

JMB - A suggestion she sent in was forwarded to a programmer who in turn contacted her for more information that was specified in the original suggestion. Reinforcement for distributing original text of items. 6f4a2

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sug: show return command statement numbers

JHB - I would like to see an acknowledgment when action is taken, and only then, Otherwise the assumption would be that none was taken, 6f4a3

DVN 30-JAN-74 20:04 21688
Against Feedback for Now
Message: Please don't give me feedback on all the flack I have been sending you!
These days, we are going though a kind of debugging of newnls, Most suggestions are really notices of what the sender thinks are bugs either in the code or in his view of the was the system responds to the user,
As we get more settled, the situation will be different, suggestions will be more constructive and long term, Then it might be useful to give feedback, Perhaps request fo feedback should be some kind of option, 6f4a4

KIRK 31-JAN-74 15:21 21700
Response to Susan's (21685,)
Message: Your message asking whether NEWNLS stuff should be acknowledged is a good idea, It didn't mention the alternative of each user being able to easily find out what happened to his suggestion by going to the NNLS file, so you should judge the responses you get accordingly, I think you know my feelings, but I'll restate them here for the record, I think it would be nice to be able to get a message telling me the status of each of my suggestions each step along it's way to implementation, rejection, or the limbo of contention, However, this expensive service (even if pared down to a minimum single message acknowledging reciept) should only be undertaken if enough of a person's time (10-50% ?) to do it right has been allocated by analysis, operations, development or whoever, Until this time has been made available, I think we should concentrate on making the feedback mechanism as accomodating as possible for someone to find what happened to their suggestion on their own, 6f4a5

JEW Dispatching Users' Questions Efficiently
2-OCT-73 14:39 19420 Message:
Why not create an ident similar to NP and BUGS, called HELP, to which users can address questions (as opposed to suggestions or bug reports) about use of our system (eg., 'How do I do such and such?')? This would not only alleviate the very common problem (in my exerience) of each person at ARC having to serve as dispatcher for

sug: show return command statement numbers

questions that he can't answer, asked of him simply because the asking user knew his name; but it would also (I would guess) serve to generate a data base from which holes in our user guides could be patched. Maybe there is such an ident already and I don't know about it and nobody uses it (?). [Implementation Problem: There's already a branch in the Ident File (although not an ident) called HELP.]

6f4a6

KIRK NP for voting capabilities.
2-JUL-73 19:12 17608 Message:
I would like to vote for Jeannes suggestion (17590,) in the NPS file but I don't know how. Is sending another Journal message the only way? It might be worth while to devise a simple voting system allowing people to associate their ident by someone elses suggestion in the NPS file. Decision makers might like to have an indication of how much user weight is behind a particular improvement. Maybe people would be more inclined to use the NP and BUGS files if they could easily vote for suggestions. I know one user who would feel he had a little more of a role in the bootstrap feedback process. (17611,) (DVN)

6f4a7

other

6f4b

JMB 24-JUN-74 12:31 23439
re <GJOURNAL,23429,3g6> New NLS NPs
Message: I think that #3 Show Return Stack which is under the New Commands Desired section of ADDITIONS should be moved up in priority to the New Commands Desired section of CHANGES, because the lack of such a command, or an alternative solution, is an inconsistency (there is a Show File Return stack command) and a serious frustration in TNLS (there is no way to see where you will find yourself before you go there, changing your stack--Slash in an address now works only after you give the <CA>), and is even more than an NP in my opinion.

*****Note: [ACTION] *****

6f4b1

KIRK 16-APR-74 12:21 22742
My notes of the observations of Sandy trying to learn xnls
Location: (LJOURNAL, 22742, 1:w)

6f4b2

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Assigned tasks: > see < nls, mods, >
this needs to link to mods or something to avoid duplication. It also hasn't been updated in over a month. If you could mark the appropriate status for each item, I'll put it in the appropriate category (done, rejected, Future discussion item, or Assigned to XXX. I guess "on the list in MODS" would also be an appropriate category.) That is the primary difference between the "Assigned" branch in FDBK and MODS. MODS has the assigned person's IDENT by the item where assigned, and FDBK has them in branches. Lets pick one way of doing it and eliminate the duplication of effort across files. 7

people to be done for NLS-8.2 see <NLS,MODS,MODS> 7a

CHI -- FRONTEND, CML, SENDMAIL 7a1

EKM -- GENERAL NLS, COBOL INTERFACE <see -- nls,mods,> 7a2

EKM -- CALCULATOR, OUTPUT-PROCESSOR, 7a3

KEV -- TENEX INTERFACE, PDP-11 7a4

DSM -- USERPROGRAMS, FDBK interface 7a5

KJM -- SECRETARIES INTERFACE 7a6

STAFF -- MYSTERY BUGS 7a7

HGL -- HELP SOFTWARE 7a8

DVN, JMB, KIRK: DOCUMENTATION, HELP INFO CONTENT <see--done> 7a9

DIA -- LINEPROCESSOR, CML compiler
Charles, I'm trying to clean out the feedback file. Could you look these over and note which ones have been fixed, or wont be fixed? DIA says this should be done by you,,, He also said the only one he thought would not be fixed is the LP-to-Tasker bug reported by DVN 7a10

KIRK lineprocessor bug
14-AUG-74 14:52 (GJOURNAL, 23794, 1:w)
*****Note: [ACTION] *****
7a10a

Going into nls when your initial file partial copy is busy at another job freaks out or hangs your lineprocessor job. 7a10a1

RLL 5-JUL-74 07:23 23526
LP bug, When tabs in text and updating done.

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Message: For DNLS and the line processor (with Delta D): When there are tabs in text the LP messes the display up after one does updates, e.g., replace word or character. It appears that the updated line is split into two lines with the first part on the line below (yes below) and the rest of the line as it should be. call me or try it yourself. Robert
*****Note: [ACTION] *****

7a10b

NDM 8-JUL-74 13:08 23547
Line Processor Troubles: Tabs
Message: When I edit a line with tabs in it, the system goes to rewrite the statement, and after the line with tabs is puts in an artificial blank line. Viewspec-f works properly.
*****Note: [INFO-ONLY] *****

7a10c

NDM 8-JUL-74 08:11 23544
Line Processor Troubles: SENDMAIL message
Message: I did a message and it blanked part qof the screen (on Line Processor). That part was never restored.
*****Note: [INFO-ONLY] *****

7a10d

NDM RLL 10-JUL-74 12:27 23569
Line Processor Troubles: Move Boundary
Message: On the Line Processor, in New NLS, viewspec w (all lines all levels), when I Move the Boundary of a horizontally split screen, only one line of each statement is displayed. It is cut after 72 chars, even if that falls in the middle of a word. If we turn off level indentation, more of the statement appears (filling the 72 char line). It seems the only way to recover is a TENEX reset! Haven't tried old NLS or work.
*****Note: [INFO-ONLY] *****

7a10e

NDM 10-JUL-74 12:37 23570
Line Processor Troubles: Backspace in Literal Input
Message: While typing in a literal (like in Insert Statement or now during SENDMAIL Message), I type two lines, then begin the third and see a mistake in the second. So I backspace through all of the third line, then the next backspace erases the char/word from the top line rather than the second line. It actually does the right thing to the literal, but displays it wrongly. Further backspaces are displayed properly.

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

*****Note: [INFO-ONLY] *****
7a10f

NDM 11-JUL-74 09:02 23595
Line Processor Troubles: Update File Compact
Message: Update File Compact, on the Line Processor, tries to refresh the display when it's about done. It takes some lines down, puts some back up, and leaves me with a screen resembling my file but with pieces of it randomly disorganized (in their placement on the screen).
*****Note: [INFO-ONLY] *****
7a10g

18-JUN-74 1807-PDT BAIR at OFFICE-1: Line proc error
Distribution: FEEDBACK AT SRI-ARC, bair
Received at: 18-JUN-74 18:06:57
7a10h

When doing a Jump to item, (got pbug error fndchr,,,. It continued in this mode apparently unable to accept a mouse bug.
7a10h1

18-JUN-74 1814-PDT BAIR at OFFICE-1: lineprocessor
Distribution: IRBY AT SRI-ARC, FEEDBACK AT SRI-ARC, ANDREWS AT SRI-ARC, bair
Received at: 18-JUN-74 18:13:53
7a10i

Perhaps something has changed, but I cannot get this thing to work in DNLS at Office-1. It crashes consistently after the third command in DNLS!!
7a10i1

RLL 19-JUN-74 13:39 23410
refresh bug in LP
Message: Using the line processor (Wash), while in Sendmail, I typed a long message of about 16 lines. Loaded file was deleted line pr line as it should be when inserting text of message, however when done, the message was cleared and the file text was not refreshed, that is I had about 16 or more lines that were blank. Did a refresh via mouse buttons and viewspec f, Got all lines back but when doing the message bit again in sendmail, the lines were not erased before the new text was typed. Since it is happening now I do not know if the line will reappear when i finish this message.
Robert.
*****Note: [ACTION] *****
7a10j

DVN 27-JUN-74 16:41 23486
SCSR JSYS error crstr
Message: For what it matters, when I quit at tasker,

sug: show return command statement numbers

detacched, attached at the line processor, and atempted to continue, that was the error message I recieved, suceeded by a series of "NLS Display Error."
*****Note: [ACTION] *****

7a10K

NDM 27-JUN-74 13:57 23482
Line Processor Troubles: Split Screen
Message: I have a horizontally split screen. In the top window I have viewspec g on (branch only) so part of the window is blank. I deleted one of the statements in the top window. The boundary and bottom window moved up to delete the line, but never moved back down.

7a101

Comments: happened in both old and new NLS 7a1011

RLL 26-JUN-74 07:29 23475
Bugs in viewing (maybe LP problem)
Message: Two bugs: DNLS at the lineprocessor; 1) when having split screen (horizontal), wtih lower half having frozen st on (viewspec o) I did a viewspec K (signatures on) and f (refresh) the frozen statement dotts disappeared (there were no frozen staements at the time). Turned on viewspec o again, tried viewspec L (sign. off) and f(refresh) and again the dots disappeared, turning viewpec o and f on worked. My guess: on split screens with fronzen statements on, refreshing the screen causes the frozen st to be turned off. tried the same with no osiit screen and had no problems. (2) with no split screen tried viewspec K and f, got strnage view, namely it appears that the system thinks i have a very wide terminal. the whole staement appears (if I could see it) on one line. Of corse this cuts the staement off in the middle of what ever is the 72 character. only way out of this is by resetting NLS. again; this is DNLS with Lineprocessor.
*****Note: [ACTION] *****

7a10m

18-JUN-74 1807-PDT BAIR at OFFICE-1: Line proc error
Distribution: FEEDBACK AT SRI-ARC, bair
Received at: 18-JUN-74 18:06:57 7a10n

When doing a Jump to item, (got pbug error fndchr,... It continued in this mode apparently unable to accept a mouse bug. 7a10n1

18-JUN-74 1814-PDT BAIR at OFFICE-1: lineprocessor
Distribution: IRBY AT SRI-ARC, FEEDBACK AT SRI-ARC,

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

ANDREWS AT SRI-ARC, bair
Received at: 18-JUN-74 18:13:53 7a10o

Perhaps something has changed, but I cannot get this thing to work in DNLS at Office-1. It crashes consistently after the third command in DNLS!! 7a10o1

5-JUN-74 1635-PDT MEYER at OFFICE-1: Line Processor and SENDMES User Program
Distribution: FEEDBACK, irby at ARC, andrews at ARC, white at ARC
Received at: 6-JUN-74 04:47:50 7a10p

Line Processor only gets blown out by SENDMES when SENDMES goes to try a network delivery. Jim White, ideas? 7a10p1

NDM 31-MAY-74 07:33 23175
Line Processor Troubles: Empty Screen
Message: Still awaiting new Line Processor and new program, so don't know if this is fixed in new setup. After running a Content Analyzer that returns "Empty", X recreate displayy with viewspec j does NOT take down the "Empty". It just writes over it when overlap. 7a10q

NDM 23-MAY-74 06:06 23086
Line Processor Troubles: Horizontally Split Screen
Message: Screen horizontally split, I delete a statement in top window: boundary and all bottom window jogs up one line as it erases deleted line, then STAYS there. Recreate display in bottom window does right thing but top line of bottom window remains (duplicated as) bottom line of top window. 7a10r

MEH JHB KIRK 16-MAY-74 14:45 23023
lineprocessor feedback
Location: (MJOURNAL, 23023, 1:w)
*****Note: [INFO-ONLY] ***** 7a10s

author:JHB date:15 may 74 time:4:30 7a10s1

all of a sudden received stream of garbage characters, in command mode that i couldn't stop. some of them were executed causing file to be renamed. 7a10s1a

author:JHB date:15 may 74 7a10s2

sug: show return command statement numbers

<^C> and con do not clear screen for tenex, neither does reset. 7a10s2a

author:JHB date:15 may 74 7a10s3

split screen insert statement--dumped part of statement into tenex window and doubled the viewspec fdbk. 7a10s3a

author:JHB date:15 may 74 7a10s4

would randomly not clear fdbk windows. 7a10s4a

author:kirk date:8 may 74 time:15:31 7a10s5

backspace character (BC key) is defined to be <^H> which doesn't wok in tenex and means something different in NLS, it should be defined to be <^A>. 7a10s5a

author:kirk date:9 may 74 time:9:18 7a10s6

i had viewspec B and L and then changed to W but i only got 2 lines no matter what i did after that, i could not get more than 2 lines for a statement. 7a10s6a

author:kirk 7a10s7

i got hung, characters went in but nothing came back, reset LP and <^P> worked. 7a10s7a

author:MEH 7a10s8

same bug as one listed previously, reset tip channel by disconnecting modem, works ok now, for some reson tip gets in a state where it will not listen to <^P>. 7a10s8a

NDM 9-MAY-74 14:34 22933
Line Processor Troubles: Dialog to date
Location: (MJOURNAL, 22933, 1:w)
7a10t

Comments: Summary of Line Processor dialog in which I have been involved. 7a10t1

DVN 4-MAR-74 22:07 22182
Line Processor and XNLS Problems
Location: (HJOURNAL, 22182, 1:w)
7a10u

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

I am working tonight in XNLS through the line proecessor, so I am sending my problems in both directions. 7a10u1

Fragments of my origen statement are all the time floating in my input text; likewise my input text runs into the top lines of my file. The fragments of the origien statement are, I guess, the sourcce of ORG in caps which floats up some times. 7a10u2

Sometimes when I do jump to item the screen removes a middle item or two, moves the jumped-to item up to second place, and waits for a recreate display before making further modifications. 7a10u3

On one occasion Update File Old, pruduced some kind of jumble on the screen. <control-t> followed by <control-C> prodcued a complete jumble including the tenex teletype image, and various fragments of my file. I reset. 7a10u4

Just now it worked fine. 7a10u4a

Finally some one on a TI linked to me. I hit <control-c> to see more lines. That got me the teletype face plus a jumbled NLS screen. I reset. Then she wanted me to try something in new TNLS. I reentered WORK intending to simulated terminal type TI. But I was greated with a new high in garbage. All kinds of shit like I'd not set up the line procesor properly..eg <control-c> echoed with a string of chracters. I went to another terminal. 7a10u5

7a10u6

JEW -- PROTOCOLS
I'm trying to clean out the feedback file. Could you look these over and not which ones have been fixed, or wont be fixed? 7a11

DVN 19-JUN-74 11:57 23407
You Can't Write on Updates from Journal Files.
Message: When you update rename from a journal file to make a copy to work on, the new file inherits the journal file's unwritability. If then update compact to a thrid file, you can write on the compacted file.
*****Note: [ACTION] ***** 7a11a

NDM 23-MAY-74 07:45 23087
Bug in User Program SENDMES
Message: The user program SENDMES cannot send messages to

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Tom O'Sullivan, possibly because of the apostrophy in his name, I can neither type it in nor accept the name offered by the ident system, It blows out the line processor too, 7a11b

Comments: I assume this will also be a bug in the new system's equivalent subsystem, 7a11b1

4-JUN-74 0521-PDT MEYER: SENDMES
To: feedback
Distribution: FEEDBACK, white
Received at: 4-JUN-74 0536:34-PDT 7a11c

I only wrote the interface to Jim White's SENDMES, I haven't the skill nor the time to fix it, I would hope that the code does get fixed before it is made a part of the running system (in new NLS), --Dean 7a11c1

NDM 31-MAY-74 07:31 23174
Journal SUBCOLLECTIONS command
Message: In Old NLS, in the journal subcollection, I can't specify the subcollections SRI-ARC (the dash won't come out) nor NSW (I type N at it puts up NIC), Also, with each character I type, it does (on the line processor) a complete recreate display, Also, it doesn't a6low backspacing, 7a11d

JDH -- FROZEN NLS
I'm trying to clean out the feedback file, Could you look these over and not which ones have been fixed, or wont be fixed? 7a12

3-JUL-74 2304-PDT KELLEY: there is an undeliverable mail file in my directory
Distribution: FERGUSON, FEEDBACK, white
Received at: 3-JUL-74 23:04:30 7a12a

I think it is the result of a bug in the new SNDMSG, 7a12a1

DCE 10-JUN-74 15:44 23317
Bug in sort process for executable text
Message: Sort Plex process didn't use instituted SORTMERGE program (I was using SORTREV) when executed as a command statement via Process Command Statement (i.e it sorted in normal ordering), yet the proper use of SORTEV ocurred if I executed the Sort Plex operation by hand -- no change in the status of the program buffers or program-institution assignments between these trial, Repeatable inconsistency,

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

*****Note: [ACTION] ***** 7a12b

JCP -- TENEX 7a13

to be done by 1 July 75 7b

ESSENTIAL TASKS: Estimated Resources TOTAL 18-20 7b1

New NLS-8 to Office-1 9 7b1a

NLS Frontend Backend Split 3 7b1b

COBOL Programmer's Interface 7b1c

Make current NLS available in the NSW COBOL environment and develop a basic training package 2 7b1c1

Develop a preprocessor and an interface to a remote job entry facility 2 7b1c2

Documentation and Publication 7b1d

Training package 1 7b1d1

Interface Output Processor to special output devices 1-3 per device depending on its characteristics 7b1d2

Modifications to NLS file system expected 0 no changes to be required 7b1e

to wait until after 1 July 75 7c

Done: to be documented, See <nls,mods,done> 8

Documented tasks, fixed bugs, and answered questions
> Bugs listed here are fixed, For items completed prior to these see <24161, documented>, Online documentation is located in <documentation,help,how>. 9

JMB 6-OCT-74 19:18 24170
Trouble documenting a command when I can't find out the story - the Protect command
Location: (JJOURNAL, 24170, 1:w)

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

*****Note: [INFO-ONLY] bug in syntax generator subsystem, & in Help documentation*****

9a

Bad journal files (some saved, some not) sorry. 9b

DCE 9-OCT-74 09:57 24173
To FDBK, name recognition problems in Journal files
Message: The Journal files don't seem to be adjusted for the new name-designation conventions. For instance, the following link was delivered in a Journal citation, and doesn't work because in that file the "(J24123)" doesn't get recognized as a name.(JOURNAL,JRNL22,J24123)
*****Note: [ACTION] *****

9b1

5-OCT-74 1151-PDT LIEBERMAN: undelivered journal mail: list of items sent.
Distribution: FEEDBACK, lieberman
Received at: 5-OCT-74 11:51:33 9b2

The journal system has not delivered by mail. Here is a list of the ites I hve sent. There might be more.
(24121,) re BUG
(24122,) re Suggestion
(24123,) re suggestion
(24157,) re BUG

.
Thanks. 9b2a

JMB 10-OCT-74 14:52 24185
Bug in NLS 's Help database
Message: When you ask for Protect in Help (when in NLS) it prints the syntax for the obsolete Protect command. This should go away; perhaps there should be a link to the Set Tenex command. [There is no function statement for Protect, just the syntax statement; I guess this problem will go away when you delete the syntax branch, but in the meantime it's confusing]
*****Note: [ACTION] *****

9c

9-OCT-74 1445-PDT LIEBERMAN: send-mail file claimed to be not an NLS file (BUG)
Distribution: FEEDBACK, bair, lieberman, hopper
Received at: 9-OCT-74 14:45:10 9d

The bug associated with send mail file has not been fixed. This makes the journal system totally unusable , WHen is it

sug: show return command statement numbers

anticipated that the sendmail subsystem will be available again??? Thanks. 9d1

6-OCT-74 2117-PDT LIEBERMAN: Bug: my sendmail file is bad;cannot send any mail now.
Distribution: FEEDBACK, HOPPER, lieberman
Received at: 6-OCT-74 21:17:34 9e

Even after delting and expunging both the partial coppy and the file itself (send-mail), I am still unable to send maessages or do practicially anything in the sendmail subsystem. Help quickly please, thanks. 9e1

6-OCT-74 2038-PDT LIEBERMAN: BUG: in journal command "forward"
Distribution: HOPPER, FEEDBACK, lieberman
Received at: 6-OCT-74 20:38:14 9f

When I try a forward command in the journal the message '[sendmail],rll file is not a NLS file' appears and the command does not take effect. Affter deleting the sendmail file and its pc, and trying again the messge 'fst entry nonexistent" appears.
Via Kirk, sounds like the fix to check the file extension for the NLS to solve the message,txt file problem has screwed the sendmail file. Boooooooooooooooo. 9f1

6-JUL-74 2245-PDT KELLEY: copy file
Distribution: VICTOR, feedback
Received at: 6-JUL-74 22:45:38 9g

Using the nls command to copy a text file to the printer results in only a random small protion of the file to be printed. When copying the same file in tenex to lpt:, it works fine. Could it have
something to do with the .NLS;3 extention that gets automatically placed
on the file in the nls copy command? 9g1

(2b1) -052- Have an option in Output Quickprint to put NO heading on any pages except for the string "Page #" at top-right on each page. (feedback,fdbk,03263) i.e. implement option and change CML to be O[utput] Q[uickprint] (OK / N[o headers] (OK / REST) / REST); where REST = C[opies] / F[ile] / A[ppend] ; 9h

Freeze statement VIEWSPEC field is for viewspec of frozen statement window and not the viewspec of the window in which it is located (meaning viewspec o does nothing in the frozen window). It seems when margin boundaries of a split window can be moved to an edge and then brought back, frozen statements will be obsolete. 9i

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

Show Return (ring) command 9j

(4b2) -0105- Show Return Stack command (feedback,fdbk,03390), (feedback,fdbk,03159) 9j1

(2b1) [dsm] -036- The error msg
"illegal text entity"
should be changed to
"invalid ... selection"
where "..." should be the appropriate entity such as text, group, statement 9k

Names that need to be added (or fixed to show up in the right places), 91

RLL 11-JUL-74 20:15 23601
help database suggestion:re process command
Message: For the Help system (TNLS) if one seeks info on the process comand in the programs susbystem but enters help via a goto help and does a show process the help subsys thinks it is process sendmail command, think two items can be offerred one for each process command . Rob
*****Note: [ACTION] *****
911

Comments: Just a test 911a

JMB Bug in Useroptions Printoptions command
2-JUL-74 09:29 (GJOURNAL, 23507, 1:w)
*****Note: [ACTION] *****
9m

Indenting in the Useroptions Printoptions command does not currently take effect until the next time you go into NLS, Charles says it's a bug if it does not take immediate effect. 9m1

It is also implied that Printoptions' Tab settings should also take immediate effect, I think it should affect all windows (since you cannot set tabs for individual files & Indenting affects all windows) from now on until you change it again, Could you check into this? 9m2

I'll have the documentation say that all the Printoptions things will take immediate effect for all "windows" and for future sessions until user changes them--this is preferable for consistency, If this is not what will end up implemented, let me know. 9m3

[ ] DVN 19 6-APR-74 15:36 22775 *rejected suggestion?*

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

How To Make A File Of Your Own Yoou Can't Write On
Message: I just attempted to make a working file from a journal file by updating to a new name. It told me I had no write access to the file I had created. This has happened before. 9n

JMB 1-JUN-74 16:45 23186
BUG in Sendmail
Location: (GJOURNAL, 23186, 1:w)
*****Note: [INFO-ONLY] *****
9o

Make sure documentation says the right thing. 9o1

When I try to Process a Sendmail form that includes

PLEX: 1A
or PLEX: <1A>
or PLEX: ,d
or PLEX: (,d)

but doesn't include DONE, I get the errormessage "Bad statement Identifier" and it won't do it. 9o2

SHOULD BE OF THE FORM (note that it ends with a CR): 9o2a

PLEX AT:(,d)
9o2a1

(2) What is the correct syntax for the ADDRESS folloing the source name--do you include link delimiters? 9o3

Check to make sure it works as documented 9p

In TNLS, if I put two character searches (with an apostrophy) in an address expression, it shouldn't go to the beginning of the statement for the second search; it should search from the CM resulting from the DAE so far onward. 9p1

Actually I'm not sure if it always blows it; I was going to the second occurance of a given character, so both searches were for the same character (that shouldn't matter, though). 9p1a

CHI has added a Jump to File Named comand to nls. This is mostly at DCE's request. It is quite similar to the jump to name command and does not require that the file name be a link. If the file name is in a link, the rest of thelink (including the directory) is ignored. This command will accept TENEX file name syntax, as will links. 9q

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

CHI has fixed several lineprocessor bugs such as tabs, statement numbers. 9r

RLL 30-SEP-74 14:29 24100
archve directory pc not online message.
Message: What is the reason for the message 'file not online..." for the archive directory.pc file? I get it every time I do a show directory command. (guess the PC bit indicator is on but the PC file is not around.) Rob
*****Note: [ACTION] *****
9s

turned off pc bit for him. [KEV] 9s1

KIRK 28-SEP-74 01:14 24086
PROG Run Tenex (subsystem) command bug
Message: Always says "Remote File Manipulation not Implemented Yet." Also, creates a horrendus automatic syntax since it contains queries all answered with commandwords Yes or No. (Should be represented once as ANSWER or Y/N as in other commands). Could you forward this to the right person?
*****Note: [ACTION] *****
9t

bug fixed; cml should eventually be rewritten as suggested here. [KEV] 9t1

Shared screen problems 9u

- (23116,) (MDK) you should be able to do a Tenex "link" and "break links" from within NLS, with the text of the conversation appearing in the literal feedback window (with suitable push-down and roll-up). This would remove yet one more visible reminder of Tenex's presence. 9u1

JMB 25-JUL-74 16:50 23682
The Connect to Tty command is a 'ding-a-ling'
Location: (GJOURNAL, 23682, 1:w)
*****Note: [ACTION] *****
9u2

Comments: In writing up the NLS concept of linking, i.e, connecting terminals, and the Connect to Tty command, I find myself describing a feature that's really inscrutable and unusable. 9u2a

Does it have to be this way? A SCENARIO: 9u2b

Kirk, in DNLS, wants to link to JMB. Says "Connect to

sug: show return command statement numbers

Tty". NLS feeds back "(number)". He has to goto Tenex & do a Where to find the job number. 9u2b1

This is a minor inconvenience. 9u2b1a

Next field makes him choose Input & output or Output only. Then an OK. "(ding-a-ling)" appears in the Tty window. He assumes JMB is refusing links. Goes to Tenex, which tells him JMB did not do a "Receive Connect." He walks to the next room where JMB is at her display. 9u2b2

If JMB happens to be at home or across the country, stop here. 9u2b2a

JMB's screen displays "(ding-a-ling)" in the tty-window. She has assumed it's there because of her normally bad typing. 9u2b3

Sandy Johnson says she assumed that "ding-a-ling" was calling her a dummy. It always reminds me of the TIP's critical attitude, "BAD, CAN'T, etc". Anyway, JMB is not likely to interpret this as a link attempt if she knows she has not set Refuse Links in Tenex. 9u2b3a

KIRK tells JMB she needs to do something with "receive". But that word gets a "?" from NLS. 9u2b4

If the actors here happen not to be documenters, stop here. 9u2b4a

KIRK & JMB read in their documentation something about a command called "Accept Connect (from display)". JMB says, "Yes, that obviously goes with the Connect to Display command for shared-screens; you don't need to do anything to accept a regular link". 9u2b5

Well, JMB & the documentation lie. Any sensible person would just forget it and use Tenex's Link command. If the above is the way NLS's linking is to work it seems to me to be pointless to advertise it. 9u2c

Suggestion: You should not have to do anything special to receive a Connect to Tty, only to refuse it (that's the Tenex principle). Maybe you should have to Accept a Connect to Display (shared-screen), but only if you are given some information from the system that you have to so something. 9u2d

OK no longer works for the default "Input and output" as

sug: show return command statement numbers

documented in Help. Determine wat connect is supposed to do and change documentation if necessary. 9u3

14-AUG-74 0909-PDT BAIR: New NLS Bug in Shared screen
Distribution: FEEDBACK, irby, bair
Received at: 14-AUG-74 09:09:31 9u4

It does not work although the commands are there. 9u4a

(2b1) -052- Have an option in Output Quickprint to put NO heading on any pages except for the string "Page #" at top-right on each page. (feedback,fdbk,03263) i.e. implement option and change CML to be O[utput] Q[uickprint] (OK / N[o headers] (OK / REST) / REST); where REST = C[opies] / F[ile] / A[ppend] ; 9v

CHI has fixed several lineprocessor bugs such as tabs, statement numbers. 9w

RLL 30-SEP-74 14:29 24100
archve directory pc not online message.
Message: What is the reason for the message 'file not online..." for the archive directory.pc file? I get it every time I do a show directory command. (guess the PC bit indicator is on but the PC file is not around.) Rob
*****Note: [ACTION] *****
9x

turned off pc bit for him. [KEV] 9x1

JMB Bug in Useroptions Printoptions command
2-JUL-74 09:29 (GJOURNAL, 23507, 1:w)
*****Note: [ACTION] *****
9y

Indenting in the Useroptions Printoptions command does not currently take effect until the next time you go into NLS. Charles says it's a bug if it does not take immediate effect. 9y1

It is also implied that Printoptions' Tab settings should also take immediate effect. I think it should affect all windows (since you cannot set tabs for individual files & Indenting affects all windows) from now on until you change it again. Could you check into this? 9y2

I'll have the documentation say that all the Printoptions things will take immediate effect for all "windows" and for future sessions until user changes them--this is preferable for consistency. If this is not what will end up implemented, let me know. 9y3

FDBK 11-OCT-74 02:57 24191

sug: show return command statement numbers

[ ] DVN 19 6-APR-74 15:36 22775 *rejected suggestion?*
How To Make A File Of Your Own Yoou Can't Write On
Message: I just attempted to make a working file from a journal file by updating to a new name. It told me I had no write access to the file I had created. This has happened before.
9z

JMB 1-JUN-74 16:45 23186
BUG in Sendmail
Location: (GJOURNAL, 23186, 1:w)
*****Note: [INFO-ONLY] *****
9a@

Make sure documentation says the right thing. 9a@1

When I try to Process a Sendmail form that includes
PLEX: 1A
or PLEX: <1A>
or PLEX: ,d
or PLEX: (,d)
but doesn't include DONE, I get the errormessage "Bad statement Identifier" and it won't do it. 9a@2

SHOULD BE OF THE FORM (note that it ends with a CR): 9a@2a

PLEX AT:(,d)
9a@2a1

(2) What is the correct syntax for the ADDRESS folloing the source name--do you include link delimiters? 9a@3

JHB Notes from Laura Gould Visit 24 June 1974 (Visitlog)
1-JUL-74 18:25 (GJOURNAL, 23503, 1:w)
*****Note: [ACTION] *****
9aa

Comments: These notes are colored by my interests, rough but readable, and hopefully contain those suggestions that will be useful in the development of NLS. 9aa1

Notes from Laura Gould Meeting, 24 June 1974 9aa2

Seminar included discussion of three areas concerning the CAI NLS Project , "Mixed Intivie Tutorial Sysytem to Aid Users of the On-Line System". Contracted by The Deputy for Command and Management Systems, ESD, USAF (Dr. Mayer). 9aa2a

Overview of the Primer (...see hardcopy): 9aa2b

sug: show return command statement numbers

3 Units (chapters) or "lessons" which are roughly estimated to take about 1.5 hours each; 9aa2b1

13 demo tasks run by the simulator; 9aa2b2

An Agenda program drives Scholar (not sure why that's significant...); 9aa2b3

It has the question mark facility. 9aa2b4

Student tasks: 9aa2b5

Student performed tasks are evaluated -- task evaluator which references to a preferred command sequence; 9aa2b5a

Has hierarchy of tasks; 9aa2b5b

references to kinds of questions the student asks, noting the knowledge necessary to answer; 9aa2b5c

Question-answering system: 9aa2b6

Natural language -- comfortable subset of English, uses dynamic parsing; 9aa2b6a

Data Base which includes the structured facts encompassing 90% of the Primer (see listing of Data Base); 9aa2b6b

Instantiation -- will do natural language command that is discussed or introduced by the student. In general, the simulator, written in LISP, can perform 90% of the NLS commands. 9aa2b6c

Primer deals with NLS divided into subsystems, eg. file handling. 9aa2b7

Does not provide for different groups of students, no facility for skipping ahead over material that is known a priori. 9aa2b8

Also "secretive", that is about not introducing commands, many of which represent short cuts, until a later session could conceivably cause bad feelings..."why didn't it show that before...." 9aa2b8a

Recognition issue: 9aa2c

sug: show return command statement numbers

LEG advocates DEMAND, not fixed anticipatory as we do, 9aa2c1

because of the nmumonic value of typing up to a certain (comfortable) point, maybe even the whole command word, and the CONTROL of recognition (system doesn't take off and do something until the student is ready.**) 9aa2c2

Recommendations (in addition to the recognition mode): 9aa2d

Explicitly terminate the L: prompt field with CA, whether Null or not; 9aa2d1

Print file command instead of Print only. This would not move the CM but would Print File from origin with basic default viewspecs (all, all, m,,,); 9aa2d2

Print Rest command was cited (CHI) as improvement over the current Print only, which doesn't have a noun field. 9aa2d3

LEG's comment in the context of training and introducing NLS to new users: "Need subset of NLS." 9aa2d4

NO C: prompt for the first 2 fields: "what else can you type after the the herald?" Also, F: for filename rather thn T:. 9aa2d5

"Noise words more helpful than prompts". 9aa2d6

HELP data base not comprehendable, gave example of response to question about address. (Show Address,,,) 9aa2d7

JHB Questions 9aa2e

Suggestions for explaining plex. 9aa2e1

Reference book,,,necessary?? Yes, of course. 9aa2e2

Ideas about test of NLS skill level,,,user assessment. 9aa2e3

Graduated levels of NLS with restricted command set availabilty,,,first cut of this was given to her. Her response was favorable. She recommended the addition of markers and intoducing SIDs a little earlier in the progression. 9aa2e4

DVN 10-OCT-74 21:47 24192

Role of Nucleator

Doug, and I and Nielsen have substantially agreed that I will be a nucleator. There are some budget considerations incompletely resolved but the general plan now is that my time committed to such work will graudally rise from its present 10-15% to about 50% in January and probably more later. We will have to think carefully how we can most effectively use the remainder of my time. Neilsen is anxious that I not do anything that makes me appear to ARC as an outsider. I have not taken any action on replacement until things clarify a bit more. 1

1

REVISED LIAISON LIST 2

Two Network Liaison Lists are now available at OFFICE-1 for network use: 2a

<NETINFO>LIAISON.TXT - containing a listing of names addresses, phone numbers, etc., suitable for producing mailing labels with some modification. 2a1

<NETINFO>LIAISON-SNDMSG.TXT - containing a continuous listing of sndmsg addresses suitable for online group distribution of messages to Liaison. 2a2

For your information, the NIC maintains the 'official' Arpanet Liaison List, and additions or changes should be verified by contacting FEINLER@SRI-ARC. Since any network user may copy these lists, other versions may be in circulation. Consequently, the NIC disclaims any responsibility for lists other than those contained in the files mentioned above. I also urge you to check the NIC list frequently for recent changes. 2b

NOTE: Some of you have been using Alex McKenzie's very useful version tailored toward TENEX users. There have been several changes received at the NIC just recently due to the influx of Resource Notebook information, so you may want to update that version, if you have one, or check with Alex. 2b1

These liaison lists may be FTPed by any network user. I hope you will make this known to other users at your sites. (NOTE: If needed, FTP may be accessed at OFFICE-1 by connecting to OFFICE-1, then typing:

[@]nicguest <SP> arpa <SP> <CR>
[@]ftp <CR> (There is a 'help' feature available at this point.) 2c

THE SRI-ARC NETWORK JOURNAL SYSTEM 3

Many of you have asked whether the SRI-ARC Network Journal System is available for handling RFC and Group-Note online distribution. (SEE NIC 22383, RFC 629 distributed Mar. 27, 1974.) The system is available at present, but its use for distributing Network dialog is still being reviewed. I will forward any decisions or new information to you that I receive on this topic. 3a

THE RESOURCE HANDBOOK 4

The Resorce Handbook is moving along - not quite as fast as I had

hoped, but moving. The response from all of you was great. Thanks a lot. Some servers had particularly long write-ups or extensive changes, and were not able to meet my rather stringent deadlines. I am still aiming for a Fall publication date, and hope that this will not slip too far. Again thanks for the prompt response. 4a

ARPANET DIRECTORY ERRORS 5

Due to a variety of problems with the identfile data several important network individuals were inadvertently omitted - in particular, the whole BBN-NET group, Col. David C. Russell of ARPA NMRO, and Prof. Feigenbaum at Stanford. I regret these omissions and ordinarily would publish an addendum. However, I have not been able to manage this under the current workload. If others have been omitted, please let me know. 5a

HARDCOPY DISTRIBUTION 6

NIC does not officially provide hardcopy distribution of any documents other than the Arpanet Directory and the Resource Handbook. However, we still have the reference set of NIC documents here, and I realize many of you have items missing from the Station Agent and Liaison collections you have received in the past. Therefore, I will attempt to supply single papers that are needed IF copies are availble and IF I can get to it. I want to emphasize that this is unofficial service and therefore very low on my priority stack. Group-notes should be requested through the Group Co-ordinators listed on p.47 of the June 1974 Arpanet Directory and NIC will ONLY honor requests from Co-ordinators for these items - again on an unofficial basis and if available. 6a

PROTOCOLS 7

Protocol Notebooks are no longer available as the supply is exhausted. Currently there is no mechanism for handling distributon of protocols to my knowledge. Some alternative approaches are being considered, but to date no decisions have been made of which I am aware; therefore, maintenance and distribution of Protocol Notebooks are in limbo. Again I will attempt to supply occasional, single protocols on an unofficial, very low-key basis until some other mechanism is evolved. 7a

STATION AGENTS 8

The group 'Station Agent' is no longer being maintained by the NIC. The purpose of the station agent was to maintain the NIC-distributed station agent collection of hardcopy documents for local users and to provide host-generated documents to the NIC,

and this activity is no longer being supported. This means that you as the Network Technical Liaison are the only 'official' host contacts for Network users, and the official liaison to the NIC for host-related information. 8a

NIC VACATION SCHEDULE 9

I will be away from SRI-ARC from Aug. 7th until approximately Sept 15th combining vacation with attendance of the ICCC meeting in Stockholm and the ARPA meeting in Washington, D. C. During that time the NIC will be essentially unattended since I am the only person handling NIC matters currently. Mil Jernigan (JERNIGAN@SRI-ARC) will check my message file but most things will be held until I return. Hope to see some of you along the way. Will contact all of you when I return. Best regards, Jake 9a

P.S. If any of you wish to FTP this rather lengthy memo, you may do so by using pathname <NETINFO>NICNOTES.TXT from OFFICE-1. 10

JAKE 10-OCT-74 23:41 24194

Apology to Geoff Goodfellow

I wish to apologize to Geoff Goodfellow and to verify to those receiving this memo that Geoff was NOT the person(s) who moved my files from directory <NICPROG> while I was gone on vacation. He did use directory <NETPROG> which has some public files in it, and there was some mix-up between us as to which directory I was concerned about since their names are very similar. I can only surmise that either Mil was using the directory for some of her own work, the files were inadvertently removed (although they mysteriously reappeared), or someone else discovered a relatively empty directory and used it. In any event I feel sure after talking to him that Geoff did not do this and I would like to apologize for implicating him in this incident.

JAKE 10-OCT-74 23:51 24195

Trip report - future plans for the Arpanet

At the end of the Arpanet Book Meeting (HJOURNAL, 24066, 1:W), Dr. Licklider made these brief comments about the future of the Arpanet: 1

I. FUTURE MANAGEMENT 1a

ARPA is now considering transferring the management of the network to either RADC (Rome Air Development Center) or DCA (Defense Communications Agency). ARPA has not formally chosen either of these nor ruled out other possibilities, and neither of these agencies has agreed to take over the management task. However, there is a good possibility that one or the other of these agencies will eventually take over management of the Arpanet. 1a1

Arpa will continue to fund research on the network as it has in the past, and the Net will be used for about the same uses as the present. 1a2

II. FISCAL 76 BUDGET 1b

Licklider sees the Fiscal 76 budget being funded at roughly the same amount as Fiscal 75. 1b1

III. PROGRAMS 1c

Current programs will be condensed into seven categories. ARPA feels it can better manage and defend its programs before Congress if there are fewer of them. 1c1

A. Basic Research Programs 1c1a

1. Artificial Intelligence Systems including knowledge-based computer systems and intelligent terminals. 1c1a1

2. Image Understanding Systems including picture processing, graphics, and some AI signal processing (Fournier, LaPlace, etc.) 1c1a2

3. Advanced Memory Technology including high density, low power storage, very large data base systems, and data storage concepts. 1c1a3

B. Exploration or Applied Development 1c1b

1. Computer Speech including speech understanding, speech compression, and speech recognition on the network. 1c1b1

2. Software Science and Technology including automatic programming, the NSW program, distributed computing, NIC development, and TENEX. (The NIC was defined to also encompass a Performance Measurements Lab, and some aspects of database management but no further elaboration was given.) 1c1b2

3. Command Control Communications Systems covering roughly Bob Kahn's ACQT program, including network security, but not programming climate dynamics. This latter work will be transferred to and sponsored by NSF with NOAA also being involved. This transfer is due to the fact that the program will now include world food supply data and will be more appropriately funded by NSF. ARPA will phase out of this program by Fiscal 76 or 77. 1c1b3

4. Distributed Networks Program including Aloha, Arpanet, etc. ARPA is also phasing out of this program. It will fund the use of the network but research will switch to the Air Force Command Control Communications Systems. 1c1b4

NOTE: Dr. Licklider pointed out that this condensation of programs is not finalized yet and is open to comments by any interested or involved party. 1c1c

C. Miscellaneous Questions, Answers, and Comments 1c1d

1. ARPA expects to have much tighter network access control later this year. The network will be fractionated into subnets sharing phone lines, etc. 1c1d1

2. ARPA may or may not fund a project to acquaint opinion leaders in DOD and government intelligence agencies with the Arpanet. Lukasic is in favor of doing this. ARPA would like outside comments. There is a process of belt-tightening in DOD which Dr. Licklider thinks should create a climate for more use of the Arpanet aids by DOD personnel. 1c1d2

3. Sutherland asked if there were plans to charge 'real' money for network use. Fields replied that ARPA's aim is to charge all people for actual use of network facilities. They now have a charging mechanism for all government agencies. Gene Stubbs of ARPA will work out a charging algorithm for non-government network subscribers. 1c1d3

4. Sutherland asked if the charge to a host might

conceivably cost more than the mini-computer that constitutes the host. Answer was yes, that is possible. TIPs and IMPs (i.e. hosts) will be charged a flat fee regardless of usage, so that effectively costs/no. of hosts = host fee. ARPA is open to other suggestions for charging, but they had to define a system by fiscal 75 so that the network would be transferable. 1c1d4

There is a problem as to whether the present setup and use of the network is economical. Last year few new hosts were added due to the fact that nets in general were under fire. Licklider thinks the Arpanet now uses 3-20% of the possible load. The new managers of the net will deal with these problems in more detail. 1c1d4a

5. What is the future of the Arpanet? DOD agencies, ARPA contractors, and national security agencies can have access. Individual users or new hosts outside those categories will be admitted on a case by case basis. High speed lines are not currently being upgraded. Sattelite communication band widths may be upgraded in the future, probably on a limited research basis. Licklider sees the Arpanet continuing until commercial and defense nets comparable to the Arpanet are available for transfer of Arpanet functions. This will be at least 78 or 79 for defense nets and probably longer for commercial ones. 1c1d5

6. Licklider feels that the sociometry of the Arpanet needs to be explored. ARPA needs to know who talks to whom, who uses what, etc. The inference here is that some emphasis might be placed upon this area of research. 1c1d6

1d

KIRK 11-OCT-74 00:38 24196

Line lengths in NLS

I think most everyone agrees that ideally default maximum VISIBLE line lengths should be the same in the available mono-spaced NLS media: DNLS, TNLS, Output Quickprint, and Output Processor. And that furthermore, this maximum VISIBLE line length should correspond to the Business standard of of 72 characters for lines containing words and ENDING in an invisible (unbroken visible line lengths of greater than 72 characters and lines ending a paragraph (statement) are NOT valid examples). 1

Of course this ideal cannot be realized when one of the media (DNLS) requires that every character have a place while another media (Printer) requires that no invisibles appear at the beginning of a line. The ideal can be most closely reached with the only exceptions occuring when multiple invisible characters occur at the end of a line. This is the way it has been until yesterday and everything has worked fairly well except that the VISIBLE line length has been only 71 characters. 2

Recently in an attempt to improve the situation, the problem has been aggravated, as you may have noticed, by the unwanted occurance of random lines indented one character). The best solution to this problem seems trivial if we distinguish between VISIBLE line lengths and INVISIBLE line lengths. A VISIBLE line length is measured by counting the number of characters in a line up to the last visible character. The INVISIBLE line length is measured by counting the number of characters up to the last invisible character. 3

From this point of view, it seems obvious that in order to best approximate the ideal maximum VISIBLE line length of 72 characters, the INVISILE line length must be 73 characters across all media. Delta-Data allows 80 characters / line, the Hazeltine allows at least 75. T-I's allow 80. Whats the problem? 4

Analyzing information to be retrieved online

It seems the writer of information accessed via a simple-minded NLS accessing system should spend (at this stage of the art) at least half the time getting other people's reactions. This sort of feedback would have two basic sources. 1

1) suggestions and complaints and 2) observing user behavior towards making improvements that would help them, from their point of view. 1a

Recieving suggestions and complaints, though valuable, usually occurs out of the context of the actual situation. For this reason, observing user behavior is usually more valuable. Observing behavior should include both experienced as well as beginner users. There are several ways to get guinea pigs. 2

Whenever the writer is asked a question, sit down with the user in person or via connected terminals and voices to determine why the system cannot answer it. 2a

When finished writing or modifying a section, 1) give a printout to someone not associated with it to proof-read, 2) sit down with someone online who doesn't know the information and pose a hypothetical problem or question to see the best way to answer it. 2b

Hire subjects. This may be the most expensive and least productive because of motivation problems. 2c

When several people are working in this way on the same portions of online information, there has to be a mechanism to ensure that capricous changes are not made. The same change must not be made recursively depending on the orientation of the user currently being watched. This mechanism can be to have an all changes go through a single Editor. 3

current alternatives should include control X

It would really be neat for new users if control X was included in the current alternatives, since it is one. 1

RWW 11-OCT-74 09:18 24199

Conventions for Bug Reporting on NLS 8

Now that NLS 8 has been released, bugs should be reported to the normal feedback process or to Dave Hopper. Development will help Dave as needed, but must get on to other work. In paticular, Charles, Ken and Don are no longer directly involved with NLS because they ned to get on to the frontend work so please give them peace. If you have questions or comments see Elizabeth. Thanks Dick 1

POOH 11-OCT-74 14:03 24200

Elephant Meeting

CONTRADICTIONS HAVE NEEN ALLEDGED IN OUR DESCRIPTION OF THE ELEPHANT. 1

the REVIEW MEETING WILL BE AT 3:00 IN THE PROJECT ROOM. 2

A RECURsive REDEFINITION PLAN SHOULD emeRGE 3

KIRK 11-OCT-74 17:06 24201

How I got an illegal memwrite

I had the following programs loaded: <KELLEY>XLEVADJUST,PROC=REP, and MOUSE. I had about 300 pages of files on my file-return ring. I loaded the IDENTFILE and made a change to BGS and BUGS records. (I enabled to get write access). I think the system had 1000 pages at the time. I did an update Old and got the message, "NLS System error". I did a verify file and the illegal memwrite occurred. I have had this happen in the past but only when running user-programs on large files. It is not a problem with the programs. It appears to be a problem with buffer space allocations. 1

KIRK 11-OCT-74 22:43 24202

file numbers do not match in storessring

This occurs immediately after I did an Update compact on xhelp.
Could have something to do with new update compact stuff? 1

ARAP net future plans

(Journal) Journal documents (most recent first) 1

RWW 11-OCT-74 09:18 24199
Conventions for Bug Reporting on NLS 8
Message: Now that NLS 8 has been released, bugs should be reported to the normal feedback process or to Dave Hopper. Development will help Dave as needed, but must get on to other work. In paticular, Charles, Ken and Don are no longer directly involved with NLS because they ned to get on to the frontend work so please give them peace. If you have questions or comments see Elizabeth. Thanks Dick
*****Note: [ACTION] *****
1a

FDBK 11-OCT-74 02:57 24191
User Feedback Decisions leading to NLS-8.4
Location: (JJOURNAL, 24191, 1:W)
*****Note: [INFO-ONLY] *****
1b

Comments: This document contains the status of user feedback decisions for NLS-8.4. It is over 70 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS,>. Those items which remain as Needs & Possibilities are in <FEEDBACK,FDBK,FUTURE>.
1b1

KIRK 11-OCT-74 00:38 24196
Line lengths in NLS
Location: (JJOURNAL, 24196, 1:W)
*****Note: [INFO-ONLY] *****
1c

JAKE 10-OCT-74 23:51 24195
Trip report - future plans for the Arpanet
Location: (JJOURNAL, 24195, 1:W)
*****Note: [INFO-ONLY] *****
1d

Comments: This is the proper text for a journal item you received a few days ago which inadvertently contained ACMs initial file. Sorry for the mix-up. Jake.
1d1

JAKE 10-OCT-74 23:41 24194
Apology to Geoff Goodfellow
Message: I wish to apologize to Geoff Goodfellow and to verify to those receiving this memo that Geoff was NOT the person(s) who

moved my files from directory <NICPROG> while I was gone on vacation. He did use directory <NETPROG> which has some public files in it, and there was some mix-up between us as to which directory I was concerned about since their names are very similar. I can only surmise that either Mil was using the directory for some of her own work, the files were inadvertently removed (although they mysteriously reappeared), or someone else discovered a relatively empty directory and used it. In any event I feel sure after talking to him that Geoff did not do this and I would like to apologize for implicating him in this incident.
*****Note: [INFO-ONLY] *****

1e

RWW 4-OCT-74 18:04 24169
NLS 8 is released
Message: The NLS 8 system that is up now represents its released form. Development must now move on to its other NSW obligations. Its a good system and will evolve. Suggestions for improvements should be sent to feedback or fdbk but can only be looked at in the future. They will not get lost and are sincerely requesed. Those that tie in with NLS directions coming out of the trip EKM HGL and I are taking will get acted on sooner and these directions will be published. Bugs will get fixed and have priority relative to how they affect loal and client activities.
The journey to NLS 8 has been long and opens up whole new system and user feature horizons. I personally want to thank all the software group for the really dedicated hard work during the past few months.
Applications now has a challenging job of packaging and presenting a powrful sophisticated set of capabilities. Within resource limits Development will help as much as possible. The documentation group has also been struggling hard to keep up with a constantly shifting target and have done a good job and maintained cool in some very frustrating times and I also want to thank them for their strong efforts. Thanks also to everyone else for trying things sending suggestions and keeping cool and working with us these past months. Thanks to all Dick
*****Note: [INFO-ONLY] *****

1f

FDBK 30-SEP-74 16:17 24104
User Feedback Decisions leading to NLS-8,2
Location: (JJOURNAL,24104,1:W)
*****Note: [ACTION]
(Secondary Distribution Copy from KIRK)*****

1g

Comments: This document contains the status of user feedback decisions for NLS-8,2. It is over 50 pages long, we advise you

ARAP net future plans

NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS,>. Those items which remain as Needs & Possibilities are in <FEEDBACK,FDBK,FUTURE>.
Secondary Distribution Copy 1g1

FDBK 3-OCT-74 23:47 24161
User Feedback Decisions leading to NLS-8,3
Location: (JJOURNAL, 24161, 1:w)
*****Note: [INFO-ONLY] *****
1h

Comments: This document contains the status of user feedback decisions for NLS-8,3. It is over 50 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS,>. Those items which remain as Needs & Possibilities are in <FEEDBACK,FDBK,FUTURE>. 1h1

RLB2 2-OCT-74 12:02 24120
WHAT IS A SIMPLE DRAWING?
Location: (JJOURNAL, 24120, 1:w)
*****Note: [INFO-ONLY] *****
1i

RLB2 30-SEP-74 12:10 24096
DISPLAYS FOR NLS GRAPHICS CAPABILITY
Location: (JJOURNAL, 24096, 1:w)
*****Note: [INFO-ONLY] *****
1j

JAKE 30-SEP-74 09:52 24093
Trip Report - Future Management and Programs of the Arpanet
Location: (JJOURNAL, 24093, 1:w)
*****Note: [INFO-ONLY] *****
1k

ACM 26-SEP-74 16:39 24068
WHOOPS!
Message: Please disregard for action concerning HJOURNAL 24066.
True author is JAKE, not ACM.
*****Note: [INFO-ONLY] *****
1l

ACM 26-SEP-74 14:07 24066

GSG 12-OCT-74 15:32 24203

ARAP net future plans

Trip Report - Arpanet Book Discussion
Location: (HJOURNAL, 24066, 1:w)
*****Note: [ACTION] *****

1m

DIA 26-SEP-74 09:23 24060
New (Experimental) version of L10 Compiler
Location: (HJOURNAL, 24060, 1:w)
*****Note: [INFO-ONLY] *****

1n

EKM HGL CHI RWW 25-SEP-74 16:57 24056
NLS Task Shopping List for NSW
Location: (HJOURNAL, 24056, 1:w)
*****Note: [INFO-ONLY] *****

1o

JAKE 25-SEP-74 16:16 24055
A Plea and a Proposal
Location: (HJOURNAL, 24055, 1:w)
*****Note: [ACTION] *****

1p

FDBK 25-SEP-74 14:16 24054
User Feedback Decisions leading to NLS-8.1
Message: <HJOURNAL, 24051,> contains the status of user feedback decisions for NLS-8.1. It is over 100 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS>. Those items which remain as Needs & Possibilities are in <feedback,fdbk,future>.
*****Note: [INFO-ONLY] *****

1q

JAKE 25-SEP-74 12:06 24053
ARPA Book Chapter Outline
Location: (HJOURNAL, 24053, 1:w)
*****Note: [INFO-ONLY] *****

1r

FDBK 24-SEP-74 23:37 24051
User Feedback Decisions leading to NLS-8.1
Location: (HJOURNAL, 24051, 1:w)
*****Note: [INFO-ONLY] *****

1s

JAKE 24-SEP-74 20:59 24049
Contact Report: NIC Discussion with Craig Fields, ARPA IPTO

ARAP net future plans

Location: (HJOURNAL, 24049, 1:W)
*****Note: [INFO-ONLY] *****

1t

JML 20-SEP-74 13:23 24016
ARC Personnel Data now Lives in a New Place
Location: (HJOURNAL, 24016, 1:W)
*****Note: [INFO-ONLY] *****

1u

RWW 19-SEP-74 15:17 23999
The User Program Library
Location: (HJOURNAL, 23999, 1:W)
*****Note: [INFO-ONLY] *****

1v

NDM 19-SEP-74 11:12 31076
User Programs, Subsystems
Message: I support Dick's analysis of the user program list. I don't think MESSAGE is part of SENDMAIL, but maybe a generalized READMAIL subsystem would be appropriate. I agree that jform3's product could be the standard journal delivery format. INSEQH should definitely be an option in Copy Sequential; the code is already a part of the system, the user program is just user interaction.

Maybe two identification systems are appropriate, one for everyone, the other for special people to change idents. Show (part of a) record and Inser (parts of a) recodr [address] could fail in the former.

1w

JEW 19-SEP-74 11:45 23996
MAP Visit
Location: (HJOURNAL, 23996, 1:W)
*****Note: [INFO-ONLY] *****

1x

JCP 19-SEP-74 11:17 23994
Journal Indices
Location: (HJOURNAL, 23994, 1:W)
*****Note: [INFO-ONLY] *****

1y

JAKE 19-SEP-74 08:48 23993
Incorporating user-progs into NLS 8

Location: (HJOURNAL, 23993, 1:W)

GSG 12-OCT-74 15:32 24203

ARAP net future plans

*****Note: [INFO-ONLY] *****

1z

RWW 18-SEP-74 18:36 23992
Initial Reaction to User Program List from Applications
Location: (HJOURNAL, 23992, 1:w)
*****Note: [INFO-ONLY] *****

1a@

NDM 17-SEP-74 17:58 23986
User Programs to be maintained in NLS-8
Location: (HJOURNAL, 23986, 1:w)
*****Note: [INFO-ONLY] *****

1aa

JEW 17-SEP-74 16:54 23985
Inflation
Location: (HJOURNAL, 23985, 1:w)
*****Note: [INFO-ONLY] *****

1ab

NDM 17-SEP-74 13:26 31066
SNDMSG from NLS
Message: I would like to see a way of sending SNDMSGs directly from NLS. In the old system, we had a user program which did that. It even allowed a mixture of SNDMSG addresses and idents in the distribution list. Jim White wrote the code which accomplished that, but it was never fully debugged. I propose that the Sendmail subsystem be the frontend to that code. Another candidate home for it might be the Message subsystem. A number of applications have asked about such an ability and would make use of it.

1ac

KIRK 15-SEP-74 01:07 23975
Feedback needs updating
Message: Since no one has touched the user feedback in over a month, since we are in the process of making a "shopping list" of NLS needs and possibilities, and since we are trying to get all of the bugs out of NLS, I have taken the liberty of updating <FEEDBACK,FDBK,>. I will be thinking of ways this can be made a more ongoing system in hopes that the ARC decision process can be more responsive to the feedback from it's environment than it has in the past. A healthy feedback-decision process is an essential part of any living system. Please think of ways to use our "augmented" capabilities to augment the ARC decision process. It needs it. Read <FEEDBACK,FDBK,INTRODUCTION> for a basic plan that needs improvement. Always include FDBK in the distribution of suggestions and reports of bugs. FDBK is already a member of the

ARAP net future plans

following groups: NP (needs and possibilities): RWW CHI FDBK.
BUGS: CHI HGL DSM FDBK.
*****Note: [INFO-ONLY] *****

1ad

JCP 12-SEP-74 10:31 23944
BILL FERGUSON'S NEW ADDRESS IN COLORADO
Location: (HJOURNAL, 23944, 1:w)
*****Note: [INFO-ONLY] *****

1ae

MEJ 6-SEP-74 13:47 23924
Notes on Catalog Production and Database Handling

Location: (HJOURNAL, 23924, 1:w)

1af

HGL 29-AUG-74 22:21 23896
Watch Out for Light Fingered People
Location: (HJOURNAL, 23896, 1:w)
*****Note: [ACTION] *****

1ag

MEJ 26-AUG-74 20:34 23872
Professional Journal Subscriptions
Location: (HJOURNAL, 23872, 1:w)

1ah

DCE 21-AUG-74 07:52 23831
NLS Version Numbers
Location: (GJOURNAL, 23831, 1:w)
*****Note: [INFO-ONLY] *****

1ai

KEV 19-AUG-74 11:07 23820
glass jars
Location: (GJOURNAL, 23820, 1:w)
*****Note: [ACTION] *****

1aj

JML 14-AUG-74 10:56 23791
ARC Personnel Lists
Location: (GJOURNAL, 23791, 1:w)
*****Note: [INFO-ONLY] *****

1ak

Comments: These files are now being maintained for your reference. Read on for further elucidation. 1ak1

GSG 12-OCT-74 15:32 24203

ARAP net future plans

(author) Journal documents authored 2

GSG 28-SEP-74 19:55 24090
test
Message: this is a test of the new nls send mail system to see if this message will arrive to me by netmail.
*****Note: Author Copy***** 2a

SRI-ARC 5-SEP-74 19:56 31039

Location: (HJOURNAL, 31039, 1:w)
*****Note: Author Copy***** 2b

Comments: This is a brief description of the ways in which the new version of NLS differs from the old (NLS-7). It will be discussed at length during the Architect's Seminar. It's being sent to you now in case you might have a chance to look at it before the meeting, for example, on the plane. Have a good trip.... 2b1

GSG 26-AUG-74 21:23 23873
TEST OF JOURNAL SYSTEM FROM NLS
Location: (HJOURNAL, 23873, 1:w)
*****Note: Author Copy***** 2c

GSG 15-AUG-74 15:33 31002

Location: (GJOURNAL, 31002, 1:w)
*****Note: Author Copy***** 2d

GSG 15-AUG-74 15:32 31001

Location: (GJOURNAL, 31001, 1:w)
*****Note: Author Copy***** 2e

GSG 12-AUG-74 05:47 23759
how to getnls to print only the changed journal mail insteed of everything everytime you print your mail
Location: (GJOURNAL, 23759, 1:w)
*****Note: Author Copy***** 2f

GSG 9-AUG-74 23:37 23757
How to initiate my Journal mail file again,,

ARAP net future plans

Location: (GJOURNAL, 23757, 1:w)
*****Note: Author Copy*****

2g

GSG 8-AUG-74 13:46 30991

Location: (GJOURNAL, 30991, 1:w)
*****Note: Author Copy*****

2h

GSG 4-AUG-74 04:29 23730

Location: (GJOURNAL, 23730, 1:w)
*****Note: Author Copy*****

2i

GSG 2-AUG-74 01:54 23720
FTPSRV & FTPDRV
Location: (GJOURNAL, 23720, 1:w)
*****Note: Author Copy*****

2j

GSG 31-JUL-74 19:31 23708
FTPDRV Problem/Patch
Location: (GJOURNAL, 23708, 1:w)
*****Note: Author Copy*****

2k

GSG 30-JUL-74 18:00 23703
Subroutines in FTPDRV
Location: (GJOURNAL, 23703, 1:w)
*****Note: Author Copy*****

2l

GSG 29-JUL-74 18:38 30953

Location: (JOURNAL, JRNL21, J30953:gw)
*****Note: Author Copy*****

2m

2m1

GSG 29-JUL-74 18:33 30952

Location: (GJOURNAL, 30952, 1:w)
*****Note: Author Copy*****

2n

(Info) Journal documents for information only (most recent first) 2o

GSG 12-OCT-74 15:32 24203

ARAP net future plans

JEW 29-JUL-74 19:23 23694
Preview of Inter-Host/Inter-Fork Procedure Call Protocol
Location: (GJOURNAL, 23694, 1:w)

2o1

Comments: For those interested in contributing to the design of the protocol to be used in the NLS split. This document is incomplete and unpolished, but should indicate the direction in which I'm headed. Now is the time to offer suggestions.

2o1a

GSG 29-JUL-74 19:07 23693
Trying the journal system in the new NLS.
Location: (GJOURNAL, 23693, 1:w)
*****Note: Author Copy*****

2p

GSG 29-JUL-74 14:09 30951

Location: (GJOURNAL, 30951, 1:w)
*****Note: Author Copy*****

2q

JAKE 12-OCT-74 16:50 24204

Go to Identification subsystem

The Go to Identification subsystem has not been implemented in NLS-8. Since Dick has indicated that Charles is no longer available to work on NLS-8 bugs and problems, I would like to know: 1) Is the system going to be implemented or do we continue to have several running systems, and if it is going to be implemented, 2) who is going to implement it and in what time frame. This is somewhat critical so I would appreciate knowing what is happening. 1

JAKE 12-OCT-74 17:04 24205

Problems with sendmail

I cannot send a journal when logged into my own directory <feinler>, I get an error message that states: <feinler>[send-mail],jake;1 is not an NLS file. I do not know what this means. Have tried sending mail with both null and () delimiters, so do not think it is related to that problem. Can someone look into this please? Thanks, Jake 1

JHB 12-OCT-74 21:05 24206

Request for the use of the ident FEEDBACK

Jake, This is just to note for the record our discussion the other day. You pointed out that it was necessary to clear it with Jean before we use Feedback as the ident (in addition to FEED) for the Feedback system for Applications. As soon as you hear would you make the change? Thanks, Jim

1

JHB 12-OCT-74 21:42 24207

SRI/ARC BASIC TNLS-8 COURSE

This introductory course is revised from a similar course for TNLS-7, It has a history beginning with the first usage at the NSW course in Wash., May, 74. Careful consideration was given by all contributors to retaining minimal complexity while imparting, during a two day period, a functional capability -- to prepare and send mail. (See --22858, -- 23133, -- 22856,) which show evolution and rationale.)

SRI/ARC BASIC TNLS-8 COURSE

TNLS SYLABUS

THE BASIC TNLS-8 COURSE OUTLINE

INTRODUCTION TO NLS

NLS = oN Line System

TNLS = Typewriter Version

CAPABILITIES OF SYSTEM:

- Composing
- Editing
- Studying
  - Structuring
  - Browsing - viewing
- Printing
- Publishing
- Communicating -

  sending and receiving mail, messages, documents; teleconferencing; etc.
- Storing and retrieving -

  record keeping, library services, data bases, searching, etc.
- Calculating

SOME NOTES

**This is designed for use when terminals are available for all participants to use/view easily. It is intended to be the first course a person receives on NLS. The commands are shown as the would appear with partial prompting.

COURSE ORGANIZATION

The course is organized by concepts of what a user can do with

TNLS at this level. The seven concepts (listed below) are ordered as one would need them to use the system. Under each concept are the exact commands that instruct the computer to perform the function that goes with the concept. There is a command summary at the end of the course outline that lists the same commands alphabetically for easy reference.

The commands which are included in this first course have been selected to let a user write, edit, store, and communicate typewritten information (text). Those commands numbered with a (2) are to be covered on the second day of the course.

GETTING TO NLS

TERMINAL

NETWORK (if used)

TENEX Executive

TNLS CONCEPTS:

1. FILES

2. TYPING IN TEXT

3. TYPING OUT TEXT

4. ADDRESSING

5. EDITING

6. COMMUNICATING

7. TROUBLE SHOOTING AND HELP

DEFINITIONS FOR THE COURSE OUTLINE

CONTROL = hold down the control (ctrl) key while typing the specified character.

Upper case characters in a TNLS command phrase are what you type.

BASE C: = the TNLS Editor ready signal. It means that you can type in an editing command.

SEND C: = the Sendmail subsystem ready signal. It means that you can type in a Sendmail command.

GETTING TO NLS (review)

THE TERMINAL AND USE (if necessary)

Similarities to and differences from a typewriter

NETWORK (if used)

Net login, after establishing a phone connection type:

e (<> equals a space)

@<>d<>c<>e CR (Not necessary for all terminals)

@<>1<>43 CR (Office-1 is host number 43)

TENEX Executive (review)

Login procedure:

log USERNAME PASSWORD ACCOUNT CR

Group allocation quota: gro<esc>UPSTAT

Directory listing:

dir CR

Some executive commands:

delete

logout

Calling NLS:

Type NLS, then (after the asterisk) type: vcmyE CR

To return to the Exec:

control c

To continue where you were in TNLS:

continue CR

BASIC TNLS:

Abort Commands = control x

1. FILES

The origin statement (number 0)

The initials file

New files

BASE C: <>Create C: File T: FILENAME CR
(FILEOWNER, FILENAME,NLS;1,)

2. TYPING IN "TEXT"

Insert statement (ADDRESS = statement number)

BASE C: Insert C: Statement to follow A: 1 T: TYPEIN CR

Continue to insert = control e

backspace character = control a
backspace word = control w

Insert Text at the end of a statement

(2)BASE C: Insert C: Text to follow A: +e T: TYPEIN CR

3. TYPING OUT "TEXT" Stop printing = control o

Printing the file:

BASE C: Print C: File OK: CR

Print Statement:

BASE C: Print C: Statement at A: ADDRESS CR V: CR

Print the rest of the file:

BASE C: Print C: Rest at A: ADDRESS CR V: CR

(2) Easy print = \

4. ADDRESSING

Addressing within files

Statement numbers (NOTE: TNLS automatically renumbers statements when appropriate)

.t ("tail") for the last statement in the file

(2) Content string: "CONTENT"

Jump to new address (to change where your pointer is)

BASE C: Jump (to) C: Address A: "CONTENT" CR

OR wherever you type in an address after the prompt A:

Jump to Link

BASE C: Jump (to) C: Link A: (FILEOWNER,FILENAME,)CR

(2) Link can be: (FILEOWNER,FILENAME,STATEMENT NUMBER) OR (FILENAME,STATEMENT NUMBER)

Addressing across files and directories

load file

BASE C: Load C: File T: FILENAME CR

5. EDITING

To change text that has been typed in:

Delete Statement

```
BASE C: Delete C: Statement at A: ADDRESS OK: CR
```

Substitute Text in Statement:

```
BASE C: Substitute C: Text in C: Statement (at) A:
ADDRESS CR
<New TEXT> T: TYPEIN CR
<Old TEXT> T: TYPEIN CR Finished? Y/N: CR
Substitutions made: 1
```

Update:

```
BASE C: Update C: File OK:/C: CR
( FILEOWNER, FILENAME.NLS;2, )
```

(2) Move Statement:

```
BASE C: Move C: Statement from A: to follow A: ADDRESS CR
L: CR
```

(2) Copy Statement:

```
BASE C: Copy C: Statement from A: ADDRESS to follow A:
ADDRESS CR L: CR
```

(2) formatting technique:

To insert a carriage return, type control v CR

6. COMMUNICATING

(2) SENDMAIL SYSTEM:

(2) Submit message using idents (or ,receivername) and Interrogate (where the system prompts you):

BASE C: Goto subsystem C: Sendmail OK: CR

SEND C: Interrogate OK: CR

distribute for action to: T: CHI FEED SRL CR

distribute for information-only to: T: CHI

title: T: Example CR

type of source: C: Message T: TYPEIN CR

show status? Y/N: CR (the status typed by the system:)

TITLE: Example

AUTHOR(S): JHB

DISTRIBUTE FOR ACTION TO: chi feed srl

DISTRIBUTE FOR INFO-ONLY TO: chi

MESSAGE: (TYpein of message will be repeated,)

Completed

SEND C: Quit OK:/C:

(2) to send a statement use the following instead of Message (See the Command Summary for example)

<>Statement

(2) send a file (See the Command Summary)

File

(2) The mail box is in initials file under a statement called "(Journal)"

(2) Print Journal

BASE C: Print C: Journal (mail) OK: CR

(2) Empty mail box: subsitute (read) for (journal)...

TENEX ways: (review)

SNDMSG

Link (to) [username]; break links

7. TROUBLE SHOOTING AND HELP

(2) FEEDBACK mechanism:

SNDMSG to FEEDBACK or send a Journal item to ident FEED

Immediate:

Type ?

Type H for Help command

call SRI-ARC, (415 326-6200, ext.3630)
or Link to Bair at SRI-ARC or Office-1

(2) Status commands

control t

(2) Remedies

control c, reset, NLS

Update File Compact

PRACTICE

In addition to trying each command, there is a Primer designed to be used for practice.

TNLS COMMAND SUMMARY FOR THIS COURSE: (alphabetical) NLS supplies that which appears between brackets, CR = Carriage Retrun,

BACKSPACE CHARACTER = control a ; BACKSPACE WORD = control w

CARRIAGE RETURN (formatting) = control v CR

CONTINUE TO INSERT = control e instead of CR (control x to stop inserting)

COPY STATEMENT

Copy C: statement from A: ADDRESS to follow A: ADDRESS L: CR

CREATE FILE

<>Create C: File T: FILENAME CR

DELETE STATEMENT:

Delete C: Statement at A: ADDRESS OK: CR

INSERT STATEMENT:,

Insert C: Statement to follow A: T: TYPEIN CR

INSERT TEXT at the end of a statement

Insert C: Text to follow A: +e T: TYPEIN CR

LINK:

(FILEOWNER,FILENAME,STATEMENT NUMBER) or (FILENAME,STATEMENT NUMBER)

LOAD FILE:

Load C: File T: FILENAME CR

MOVE STATEMENT:

Move C: Statement from A: to follow A: ADDRESS L: CR

PRINT STATEMENT:

Print C: Statement at A: ADDRESS CR V: CR

Easy print = \

PRINT REST:

Print C: Rest at A: ADDRESS CR V: CR

Stop printing = control o

PRINT FILE:

Print C: File at A: ADDRESS CR V: CR

SUBSTITUTE TEXT IN STATEMENT:

Substitute C: Text in C: Statement at A: ADDRESS CR
<New TEXT> T: TYPEIN) CR
<Old TEXT> T: TYPEIN CR Finished? Y/N: OK: CR
Substitutions made: 1

TAIL = ,t for ADDRESS

(the last statement in the file -- when single level)

UPDATE A FILE:

Update C: File OK:/C: CR

SENDMAIL SYSTEM:

Submit Message or Statement or File, idents (or ,receivername), and Interrogate:

Goto subsystem C: Sendmail OK: CR

SEND C: Interrogate OK: CR

(distribute for action to:) T: CHI FEED JCN CR

(distribute for information-only to:) T: RWW

(title:)T: Example CR

(type of source:) C: Message T: TYPEIN CR

OR,,type of source:) C: STRUCTURE A: ADDRESS CR

OR,,type of source:) C: File T: FILENAME CR

(show status?) Quit OK:/C: (the status typed by the system:)

TITLE: Example

AUTHOR(S): JHB

SEND FOR ACTION TO: chi feed jcn

SEND FOR INFO-ONLY TO: rww

MESSAGE: Typein of message,

(Send the mail?) C: Y/N: (CR for yes)

Completed

(2) Print Journal

Print C: Journal mail OK: CR

(2) Empty mail box: substitute (read) for (journal)...

TITLE PAGE

JHB 12-OCT-74 21:42 24207

BASIC TNLS-8 COURSE

SRI-ARC

14 OCT 74

Augmentation Research Center

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025

JAKE 12-OCT-74 22:53 24208

Identification is not dead - it is just away

After trying all methods I could think of to load and run the Go to Identification subsystem and getting only error messages, I could only assume that it had not been implemented. However, after further investigation I found that the CML portion of the program had been archived (sob!). At this writing I still have not had a chance to run the program but will assume it is there; therefore, disregard previous message. 1

THIS IS A DEMO MESSAGE TO SEE IF THE NEW NLS IS NET WILL DO THE JOB 1

FOR ME THIS TIME ARONXXX AROUND...,WEIL THIS MAKE IT? 2

13-OCT-74 0005 [GEOFF] 2a

GSG 13-OCT-74 00:15 24210

SUBMISSION OF JOURNAL FROM THE NETWORK

I FOUND THE BUG, WHICH WAS THE THE FILE <NET>NLS.SAV HAS BEEN REMOVED. 1

WHEN I PUT IT BACK IN, IT STILL DIDN7T WORK AS IT SEEMS THAT THE 1a

NEW NLS, I.E. <NETSYS>NLS.SAV DOESN7T HAVE THAT CODE IN IT, OR 2

DOES AND IT DOESN'T WORK. SO I WENT INTO DDY, AND CHANGED NLS, IN 3

<NET> TO RUN <NETSYS>OLDNLS.SAV. 4

5

I ALSO, NOTICED THAT THE NLS IN <NET> OVER ON OFFICE -1 WAS 5a

ARCHIVED TOO, AND PUT IN A REQEST TO BRING IT BACK AGAIN. 6

7

[GEOFF] 8

------- 9

GSG 13-OCT-74 01:56 24211

Location of most recient RATS handbook.

.tab stops 8 16 24 32 40 48 56 64

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.spacing 1

.right margin 62

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RATS Programmer's Handbook

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Introduction

.paragraph

RATS (RISOS ARPA Terminal System) is the operating system used on the

RISOS PDP11/45.

This document assumes familiarity with the PDP11/45 assembly language (*).

.footnote 5

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- -

.nofill

(*) See, for example:

PDP11/45 Processor Handbook

PAL-11 Assembler Programmer's Manual

.fill

Location of most recient RATS handbook.

!

.paragraph

Part one of this document describes the environment that the RATS supervisor provides to user programs. It includes a general overview of the system, and detailed descriptions of all of the supervisor calls.

.paragraph

Part two describes the system from the point of view of a user logging in on a terminal.

.page

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Part One

.paragraph

The fundamental object in the RATS system is a <process>. The notion of a process should be familiar to users of multiprogrammed computer systems.

In RATS, a process consists of:

.left margin 5

.paragraph

Eight general registers, including a stack pointer (R6) and a program counter (R7). (The alternate set of hardware registers R0 through R5 which exists in the PDP11/45 is not available to the user programmer.)

.paragraph

Location of most recient RATS handbook.

A process status word (PS), containing the four condition codes and the "T" bit. (Other parts of the hardware PS are not available to the user programmer.)

.paragraph

An address space, divided into I-space and D-space. (See the PDP11/45 processor handbook for a discussion of I- and D-spaces.) Each of I- and D-spaces is divided into 8 segments of 8192 bytes (20000 octal) each. Each of these segments has its own set of properties, described below.

.paragraph

A <C-list>, which is a directory containing all of the capabilities of the process. A <capability> is a pointer to an <object>. Examples of objects are files and processes.

Capabilities provide the only access to objects.

.paragraph

A number of state variables, discussed in following sections.

.left margin 0

.paragraph

User processes all run in user mode. The following paragraphs describe the user process's environment in detail. Certain instructions (such as HALT) are said to be <illegal>.

Illegal instructions cause the offending process to stop running.

Location of most recient RATS handbook.

and another process (which is "responsible" for the offending process) is
notified of the error. This
mechanism is described in more detail in the section on
processes.

.left margin 8
.paragraph -3
HALT is an illegal instruction.

.paragraph
WAIT should not be used, since it wastes processor time
which could be used by other processes.

.paragraph
RTI may be used wherever convenient. It will not affect
the processor mode, register set, or processor priority of the
PDP11/45. RTT should not be used, since it may upset the operation
of debugging programs.

.paragraph
SPL and RESET do nothing in user mode.
.paragraph
MTPI, MTPD, MFPI, and MFPD should not be used.
.paragraph

Location of most recient RATS handbook.

BPT, or opcode 3, should not be used. It is reserved for use by debugging programs.

.paragraph

IOT is presently illegal. Suggestions for its use will be entertained.

.paragraph

EMT is used for supervisor calls and is described more fully below.

.paragraph

TRAP performs a trap to a user routine. The PS and PC are pushed onto the user's stack and a new PC and condition codes and T-bit are loaded from location 34 of the user's I-space. The process remains in user mode.

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.paragraph 5

All other instructions behave pretty much as advertised in the PDP11/45 processor handbook.

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Capabilities

Location of most recient RATS handbook.

```
.paragraph                                                          108
   First, some general remarks about capabilities.  A <capability>  108a
identifies ("points to") some <object> in the system.  The          109
types of objects are:                                               110
.left margin 10                                                     111
.skip 1                                                             112
file                                                                113
.break                                                              114
semaphore                                                           115
.break                                                              116
process                                                             117
.break                                                              118
directory                                                           119
.break                                                              120
master entry                                                        121
.break                                                              122
slave entry                                                         123
.break                                                              124
entered process                                                     125
.break                                                              126
supervisor                                                          127
                                                                    128
.left margin 0                                                      129
.paragraph                                                          130
   Capabilities exist only in <directories>.  A capability          130a
```

Location of most recient RATS handbook.

is identified by specifying a directory and an <index> within the directory. An index can be any 16-bit number; hence a directory can contain at most 2**16 distinct capabilities.

.paragraph

Every process has a directory associated with it, called its <C-list> (short for capability list). A process can manipulate objects only through capabilities in its C-list. The C-list therefore defines the access privileges of the process.

.paragraph

The EMT instruction (pronounced "emit") is used to perform operations related to objects. When a process executes an EMT, the supervisor examines the word on the top of the process's stack. That word is used as an index specifying a capability in the process's C-list. This capability specifies the object on which some operation is to be performed; it is the capability <invoked> by the EMT. The particular operation to be performed depends on the type of object and the contents of the low byte of the EMT.
EMT codes in this handbook are in octal notation.
These operations are described separately for each type of object.

Location of most recient RATS handbook.

.paragraph

If the top of the stack does not exist or there is no capability at the specified index, the EMT is illegal. (See above for treatment of illegal intructions.)

.paragraph

Parameters relating to the operation may be passed and/or returned on the stack. The word following the EMT, called supplies information relating to these parameters.
In this handbook, parameters control words are given as two octal bytes.
When any EMT is executed, the stack must contain (from the top): (1) the word specifying the index of the capability being invoked; (2) if bit 7 of the parameter control word is on, a word specifying an index in the C-list; (3) other parameters, equal in number to the contents of bits 6-0 of the parameter control word.

.paragraph

These parameters are referred to by their offset (in octal) from the original SP; e.g. the C-list index parameter would be word 2(SP).
There is presently an upper limit of 24 parameters, excluding the C-list index parameter.

Location of most recient RATS handbook.

.paragraph

After the operation is performed, returned parameters, equal in number to the contents of bits 14-8 of the parameter control word, are pushed onto the stack. These parameters are referred to by their offset from the final SP. There is presently a limit of 24 parameters.

.paragraph

When the EMT completes, the process resumes execution at the instruction following the parameter control word. Unless otherwise specified, EMT's complete immediately.

.paragraph

The EMT instruction clears all condition codes unless specified otherwise in the descriptions of individual operations.

.paragraph

Every capability has an eight-bit byte associated with it, called the <attribute> field. Each bit in this field defines a permission for certain operations on the object. If the attribute is present (the bit on), the operation is allowed. Details may be found in the description of each particular operation.

.paragraph

Location of most recient RATS handbook.

Since directories may contain capabilities to other directories, it is apparent that the directory structure is analogous to a directed graph. There can be several capabilities referring to a single object; in that case, access to the object is shared among all of the owners of the capabilities. Furthermore, no single owner can cause the object to be deleted, for then the others would have capabilities for a nonexistent object. It is a general rule that an object will continue to exist as long as it is possible to reference it, or in other words, as long as there are any capabilities referring to it. A process may release its own capability to an object, but the object itself is not deleted until the last capability to it is released. This fact is important to note, because often it is desired to delete an object which is consuming resources (such as disk space or an I/O device), and a capability tucked away in an obscure place can be a hindrance.

,paragraph

Deletion of a directory causes deletion of all the capabilities it contains, which may in turn cause deletion of other objects. A process is treated as having one capability, to its C-list. Deletion of a process therefore causes deletion of its C-list (which is a directory) only if there are no other capabilities to that

Location of most recient RATS handbook.

directory.

.paragraph

The directory structure may have directed cycles; for example, a directory may contain a capability to itself. In such a case, it is possible that capabilities to an object exist even though there is no path from the root of the directory structure to the object. The rule is: an object is deleted if and only if there is no path of capabilities from the root of the directory structure to the object.

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.center

File

.paragraph

Files are the only form of on-line storage. (Off-line storage, such as magnetic tape, paper tape, and punched cards, is discussed elsewhere.) Files reside on disk and/or in core and are the only access to disk and core. (In this context, "core" means all memory which is directly addressable on the PDP11's unibus, whether ferrite core or solid-state.)

.paragraph

In many computer systems, files reside on disk or other

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secondary memory, and are explicitly copied into the user's core or primary memory when needed. In RATS, files are the user's primary memory. In this respect they resemble closely the concept of segments in the Multics system. (The convention has been established that a PDP11 segment is an 8192-byte area of the address space, and we follow that convention here.) A process references a file by referencing a location in its own address space. If the portion which was referenced is on disk, the supervisor will move it into core, moving part of some other file from core to disk if necessary to make room in core. This activity, known as paging, is completely invisible to the user, except as it affects speed of execution. The entire address space thus appears to be in core at all times.

.Paragraph

A file may be from 0 through 2**32 - 1 bytes long. (In practice, available storage places a more severe upper limit on the length of a file.) The address of a byte within a file is therfore two 16-bit words. Since the PDP11 processor generates addresses which are only 16 bits long, a mechanism is needed to map these addresses into file addresses. This mechanism will now be described.

.paragraph

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The PDP11/45 processor's address space of 2**16 bytes is divided into eight segments of 2**13 bytes each.

```
.nofill
.skip 1
   Contains addresses (in octal)
Segment number    from    through
.skip 1
   0              0     17777
   1          20000     37777
   2          40000     57777
   3          60000     77777
   4         100000    117777
   5         120000    137777
   6         140000    157777
   7         160000    177777
.fill
.paragraph
```

Furthermore, addresses are distinguished as to whether they refer to I-space or D-space. A memory reference is a reference to I-space if it is a fetch of an instruction, index word, immediate operand (such as N in TST _#N), or absolute address (such as A in TST @_#A); otherwise it is a reference to D-space. Since any address may be in either I-space or D-space according to the context in which it is used, there are eight I-space segments and eight D-space segments.

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In this handbook, the following convention for numbering segments is used; segments 0-7 are in I-space, and segments 10-17 (octal) are in D-space.

.paragraph

Each of the 16 segments independently refers to some portion of some file. (Or, a segment may refer to no file.) We say that a segment is <attached> to a portion of a file; this means that references to the segment are in fact references to that portion of the file. The length of the portion may range from 1 to 20000 bytes (octal). The portion may be attached at the lower end of the segment, so that the lowest address of the segment corresponds to the lowest address of the portion, in which case we say the segment expands upward; or the portion may be attached at the upper end of the segment, so that the highest address of the segment corresponds to the highest address of the portion, in which case we say the segment expands downward.

.paragraph

A segment may or may not have write access.

.paragraph

The portion may begin at any file address subject to the following restrictions, which are divided into two cases. If the segment expands upward, then the file address of the

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portion is the address of the first location in the portion, and (1) The file address must be a multiple of 100 (octal). (2) If the segment does not have write access, the file address plus the length of the portion must not exceed the length of the file. If the segment has write access, the length of the file will be increased if necessary to satisfy the preceding condition. (3) The portion must not cross a 20000-byte boundary; in other words, the greatest integer in (file address/20000) must equal the greatest integer in ((file address + length of portion - 1)/20000).

.paragraph

If the segment expands downward, then the file address of the portion is one plus the address of the last location in the portion, and (1) The file address must be a multiple of 100 (octal). (2) If the segment does not have write access, the file address must not exceed the length of the file. If the segment has write access, the length of the file will be increased if necessary to satisfy the preceding condition. (3) The portion must not cross a 20000-byte boundary; in other words, the greatest integer in ((file address - length of portion)/20000) must equal the greatest integer in ((file address - 1)/20000).

.paragraph

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For example, suppose a process has locations 400 through 777 of a file attached to D-space segment 3, with upward expansion. Then when the process references location 60254, it will be referencing location 654 of the file.

.paragraph

Attaching and detaching files does not imply any movement of the file between core and disk. Such movement occurs only when the segment which is attached to the file is referenced. Note that when a file is modified, there is no need to explicitly "write out" the modified version, because the modified version is the only version. The supervisor will move the modified portion onto secondary storage in the normal course of its paging operations.

.paragraph

Two or more processes may share a common file if each has a capability for the file.

.paragraph

A file capability has two possible attributes, namely <write> (bit 1 of the attribute field) and <D-space> (bit 0). The <set length> operation, and the <attach> operation specifying write access, are legal only if the invoked

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file capability has the write attribute. The <attach> operation specifying a D-space segment is legal only if the invoked file capability has the D-space attribute. A file capability lacking the write attribute is "read-only", and one lacking the D-space attribute is "execute-only".

.paragraph

The operations on a file will now be described.

.blank 1

.left margin 4

.paragraph -4

EMT 3 <attach>

.indent -4

-.BYTE 4,0

.break

Attaches a portion of the file to a segment of the process executing the attach, unless an error condition occurs, as indicated by condition codes (see below). Any previous attachment to the segment is removed.

Parameters for the attach are:

.blank 1

2(SP):####bits 11-8 are the segment number (D-space is

.left margin 22

allowed only if the invoked capability has the D-space attribute.)

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```
,paragraph -8                                                    364
bit 3 is the expansion direction;                                365
,break                                                           366
0 = upward, 1 = downward                                         367
,paragraph                                                       368
bits 2-0 are the access control field;                           369
,break                                                           370
2 = read-only, 6 = read/write                                    371
(Read/write is allowed only if the invoked capability            372
has the write attribute.)                                        373
,left margin 4                                                   374
4(SP): File address, least significant half.                     375
,break                                                           376
6(SP): File address, most significant half.                      377
,break                                                           378
10(SP): Length of the portion, in bytes.                         379
,blank 1                                                         380
,left margin 6                                                   381
,paragraph -2                                                    382
Condition codes are set to indicate error conditions:            383
,paragraph                                                       384
N and Z are set if the attach requests write access but the
capability invoked                                               385
does not have the write attribute, or the attach                 386
specifies a D-space segment but the capability invoked does      387
```

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not have the D-space attribute, or the attach requests
read-only access for a portion extending beyond the end
of the file.

.paragraph

N and V are set if the attach requests write access for a portion
extending beyond the end of the file, and the supervisor
is not able to increase the length of the file because of
insufficient secondary storage.

.paragraph

N and C are set if the file address, portion length, or access control
field is invalid.

.blank 1

.left margin 4

.paragraph -4

EMT 4 <read length>

.indent -4

_.BYTE 0,2

.break

The length of the file, in bytes, is pushed onto the stack.
2(SP) is the most significant word, and (SP) is the least
significant.

.blank 1

.paragraph -4

EMT 5 <set length>

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```
,indent -4                                                          412
_,BYTE 2,0                                                          413
,break                                                              414
The length of the file, in bytes, is set to the double-word         415
value on the stack.  2(SP) contains the                             416
least significant word, and 4(SP) contains the most significant     417
word.  N and Z are set if the invoked file capability               418
does not have the write attribute,  N and V are                     419
set if the file is being lengthened and the supervisor has          420
insufficient secondary storage.                                     421
,page                                                               422
,center                                                             423
Directory                                                           424
,blank 1                                                            425
,left margin 0                                                      426
,paragraph 5                                                        427
   A directory is a list of capabilities.  A directory capability   427a
has three possible attributes, which specify permissions for        428
each of three operations, namely read (bit 0), append               429
(bit 1), and delete (bit 2).                                        430
,blank 1                                                            431
,left margin 4                                                      432
,paragraph -4                                                       433
EMT 0 <retrieve>                                                    434
,indent -4                                                          435
```

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-.BYTE 201,0

.break

The capability in the directory at the index in 4(SP)
is copied into the invoking process's C-list at the
index in 2(SP), unless any of the following error conditions
occurs. If the destination index
is not free, N and V are set. If the
capability to be copied is an entered process capability,
or if there are already 32767 capabilities referring to the object,
N and C are set,
If the invoked directory capability does not have the read attribute,
N and Z are set,

.blank 1

.paragraph

EMT 1 <grant>

.indent -4

-.BYTE 201,0

.break

The capability in the invoking process's C-list at the index in
2(SP) is copied into the directory
at the index in 4(SP), unless any of the following error
conditions occurs. V and C are set as in <retrieve>, and N is also set
in those cases. If the

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invoked directory capability does not have the append attribute, N and Z are set.

.blank 1

.paragraph

EMT 2 <delete>

.indent -4

-.BYTE 1,0

.break

The capability in the directory at the index in 2(SP), if any, is released. If the invoked directory capability does not have the delete attribute, C and N are set and the operation does not take place.

.blank 1

.paragraph

EMT 3 <attach>

.indent -4

-.BYTE 4,0

.break

Same as <attach> for files, except that write access is not permitted. This operation allows a process to determine the number, types, and indexes of the capabilities in the directory. The format of a capability is described in the listing of the RATS supervisor.

.blank 1

.paragraph

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EMT 4 <read length> 485

.indent -4 486

-.BYTE 0,2 487

.break 488

Same as <read length> for files. 489

.page 490

.center 491

Process 492

.blank 1 493

.left margin 0 494

.paragraph 5 495

The basic facts about a process have been given above. 496

A process has a run indicator, which indicates whether the process 497

is allowed to execute instructions. The run indicator is independent 498

of state information indicating whether the process is in a 499

wait state. Only the event being waited for can remove the 500

process from a wait state. Thus, if the run indicator is on, 501

turning it off and then at some later time on again will 502

never disrupt the state of the process. 503

.paragraph 504

A process has two names associated with it for the purpose 505

of accounting. They are called the user-name and the 506

account-name. In most cases the two names will be the same. 507

(For cases in which they are different, see the section on entries.) 508

When a user is logged in, his process's user-name and account-name 509

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```
are set equal to the name used at login,                                510
Resources used by a process are accounted to its account-name,          511
A process's user-name only changes at login and logout,                 512
,paragraph                                                              513
When an exceptional condition occurs in a process, such as              514
a HALT instruction, a <fault entry> occurs,  See the section            515
on entries for details of the entry mechanism,  A fault number          516
is passed to the process receiving the fault entry,  The                517
fault number indicates the type of fault:                               518
,blank 1                                                                519
#####Fault No,##################Type of fault                          520
,skip 1                                                                 521
,tab stops 7 22                                                         522
,left margin 22                                                         523
,indent -15                                                             524
0       HALT, odd address error                                         525
,indent -15                                                             526
1       Reserved instructions                                           527
,indent -15                                                             528
2       BPT with T-bit off                                              529
,indent -15                                                             530
3       T-bit trap, or BPT with T-bit on                                531
,indent -15                                                             532
4       IOT                                                             533
,indent -15                                                             534
```

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5 Other illegal instructions, such as
invoking a capability with an invalid EMT code,
invoking an
entry with no masters, or invoking a nonexistent capability.
.indent -15
6 + X Incorrect number of parameters passed, X, which is the
high byte of the fault number, indicates the expected number of
parameters. The stack is unchanged.
.indent -15
7 + X Incorrect number of return parameters expected, X, which
is the high byte of the fault number, indicates the number returned.
The stack is unchanged.
.indent -15
8 + X + N*16 Illegal memory reference.
N is the number of the segment referenced.
X indicates the type of violation:
.left margin 15
.indent -3
X##Type of violation
.indent -3
1##Read-only
.indent -3
2##Segment length
.indent -3
3##Both read-only and segment length

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```
.indent -3                                                          560
4##Segment is not attached to anything                              561
.indent -3                                                          562
5##Segment is attached to a portion of a file which has been deleted 563
.blank                                                              564
.left margin 0                                                      565
.paragraph 5                                                        566
   Other fault numbers are possible in conjunction with the         566a
"cause fault" operation on an entered process capability (q.v.).    567
.paragraph                                                          568
   For the proper operation of T-bit traps, it is necessary to      568a
distinguish two states of a process in which the values of all      569
registers (notably, the PC and PS) are the same.  In both           570
states, the PC contains the address of the next instruction.        571
In one state, the process is about to execute that instruction;     572
if the T-bit is on, a T-bit trap will occur at the end of that      573
instruction.  In the other state, if the T-bit is on,               574
the process is about to perform a T-bit trap signaling              575
the end of the previous instruction executed by the process.        576
If the T-bit is off, no T-bit traps occur and the two states        577
are indistinguishable;  however, for consistency the two states     578
are distinguished on the basis of what would                        579
happen if the T-bit were on.                                        580
.paragraph                                                          581
   To distinguish these two states, bit 8 of the PS is              581a
```

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used. Termed the "RTT bit", it is on in the first state above and off in the second. This bit may be read and written along with the rest of the PS.

.paragraph

Due to deficiencies in the PDP11/45 hardware, the RTT bit may be accidentally cleared. Consequently, programs making use of T-bit traps should be prepared to receive spurious extra T-bit traps.

.paragraph

The operations on a process capability are:

.left margin 4

.paragraph -4

EMT 0, 1, 2, 3, and 4

.break

Same as for directory capabilities, substituting "invoked process's C-list" for "directory". The invoked process capability is considered to have full access attributes.

.paragraph

EMT 5 <wait>

.indent -4

-.BYTE 200,1

.break

Waits for a fault entry from the process. Similar to the <wait> operation on a master entry capability (q.v.). The entered process capability which is created will have the fault

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```
entry attribute (bit 0).                                                605
.paragraph                                                              606
EMT 6 <start>                                                           607
.indent -4                                                              608
_.BYTE 0,0                                                              609
.break                                                                  610
Turns on the run indicator.                                             611
.paragraph                                                              612
EMT 7 <stop>                                                            613
.indent -4                                                              614
_.BYTE 0,0                                                              615
.break                                                                  616
Turns off the run indicator.  Does not affect any other processes, not  617
even ones owned by the invoked process.                                 618
.paragraph                                                              619
EMT 10 <copy from>                                                      620
.indent -4                                                              621
_.BYTE 2,0                                                              622
.break                                                                  623
Sets up an attachment in the invoking process at                        624
the segment specified by 2(SP) identical to that in                     625
the invoked process at the segment specified by 4(SP).                  626
The null attachment may be copied.  Any previous attachment at          627
the destination is removed.  If the file or directory                   628
```

capability which was originally invoked to establish the source attachment did not have the D-space attribute, then the destination segment must not be in D-space; if not, C and N are set. If either segment number is > 17 (octal), V and N are set.

.paragraph

EMT 11 <copy to>

.indent -4

-.BYTE 2,0

.break

Similar to <copy from>. The attachment of the segment in 4(SP) in the invoking process is copied to the segment in 2(SP) in the invoked process. The process's run indicator must be off and the process must not be in a wait; if this is not the case, N and Z are set.

.paragraph

EMT 12 <read registers>

.indent -4

-.BYTE 0,11

.break

Pushes the PS and registers 7 through 0 of the process onto the stack. The run indicator must be off; if this is not the case, N and Z are set and garbage is pushed. The PS and PC may indicate that the process is in supervisor mode. This means that the process was stopped while executing a supervisor call (e.g. EMT). There is no easy way to determine the

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location of the instruction which caused the
supervisor call. If the process is restarted without
modifying its registers, the supervisor call will proceed
to completion normally.

.paragraph

EMT 13 <write registers>

.indent -4

-.BYTE 11,0

.break

Pops registers 0 through 7 and the PS off the stack.
Only the 4 condition codes, the T-bit, and the
RTT bit of the PS are significant. The process's run indicator
must be off and the process must not be in a wait; if this
is not the case, N and Z are set. If the process was in supervisor
mode, the supervisor call which was in progress is aborted.

.page

.center

Semaphore

.left margin 0

.paragraph 5

For a discussion of what a semaphore is and how to use it,
see "Cooperating Sequential processes", by Dijkstra.

.left margin 4

.paragraph -4

EMT 0 <p>

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```
.indent -4                                                    678
_.BYTE 0,0                                                    679
.paragraph                                                    680
EMT 1 <v>                                                     681
.indent -4                                                    682
_.BYTE 0,0                                                    683
.paragraph                                                    684
EMT 2 <read value>                                            685
.indent -4                                                    686
_.BYTE 0;1                                                    687
.break                                                        688
Pushes onto the stack the value of the semaphore              689
variable.  If N processes are hung in the semaphore           690
the value will be -N.  Intended for debugging.                691
A faster way to determine the value of the semaphore variable 692
is to maintain an ordinary variable which is decremented      693
every time a <p> is done and incremented on every <v>.        694
.page                                                         695
.center                                                       696
Entry                                                         697
.left margin 0                                                698
.paragraph 5                                                  699
   The entry facility allows the user to create programmed    699a
capabilities.  Such capabilities, when invoked, can perform   700
any desired function.  For example, they can be made to simulate 701
```

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most of the other kinds of capabilities, 702

.paragraph 703

The entry facility comprises three kinds of capabilities: 703a
master entry, slave entry, and entered process. The process 704
being serviced must own a slave entry capability, and the process 705
which is performing the service must own a corresponding 706
master entry capability. 707

.paragraph 708

The <wait> operation on a master entry waits until a corresponding 708a
slave entry capability is also invoked. When this happens, the slave 709
process is put in a wait and the master process is restarted. 710
The master process is given an <entered process> capability 711
(henceforth abbreviated EpC) referring to the slave process 712
at the index specified in 2(SP). 713

.paragraph 714

The account-name of the master process is set equal to 715
the account-name of the slave process. 716
In effect, this licenses the master to use the slave's 717
account on his behalf. When the master returns control 718
to the slave, the master's account-name is set equal to 719
its user-name. 720

.paragraph 721

Upon successful completion of the <wait> operation, 721a
(SP) will contain the <transmitted information>. If the entry 722
was caused by a process invoking a slave entry capability, 723

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the transmitted information has, in the low byte, the low byte 724
of the slave's EMT, and, in the high byte, the attributes 725
field of the invoked slave entry capability. If the entry is 726
a fault entry, the transmitted information is the fault number. 727
.paragraph 728
The operations on a master entry capability are: 728a
.left margin 4 729
.paragraph -4 730
EMT 0 <create slave> 731
.indent -4 732
_.BYTE 200,0 733
.break 734
A slave entry capability corresponding to the invoked master entry 735
capability is placed in the C-list at the index specified 736
in 2(SP). Its attribute field will be all ones. 737
If the requested index is not free, N and V are set. 738
If the slave entry capability cannot be created, N and Z are set. 739
.paragraph 740
EMT 5 <wait> 741
.indent -4 742
_.BYTE 200,1 743
.break 744
Wait for a slave process to enter. See description above. 745
2(SP) has the index for the entered process capability. 746
If successful, the transmitted information is returned on the stack. 747

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The EPC which is created will have the EMT entry attribute (bit 1). 748

If the specified index is not free, N and V are set and garbage is returned 749

on the stack. If all slave capabilities for this entry 750

have been deleted, N and Z are set 751

and garbage is returned on the stack. 752

.left margin 0 753

.paragraph 5 754

The following are the possible operations on an EPC. If the EPC 754a

does not have the EMT entry attribute, only the <restart> and 755

<return> operations are allowed; if other operations are attempted, 756

N and Z will be set. 757

An EPC may not be <grant>ed or <retrieve>d. 758

.left margin 4 759

.paragraph -4 760

EMT 0 <retrieve> 761

.indent -4 762

-.BYTE 200,0 763

.break 764

The capability in the slave process's C-list at the index 765

specified by the C-list index parameter passed by the slave 766

is copied into the master's C-list at the index in 2(SP). 767

If no C-list index parameter was passed, N and Z are set. 768

V and C are set as in the directory operation <retrieve>, 769

and N is also set in those cases. 770

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```
.paragraph                                                          771
EMT 1 <grant>                                                       772
.indent -4                                                          773
_.BYTE 200,0                                                        774
.break                                                              775
The capability in the master's C-list at the index in 2(SP)         776
is copied into the slave process's C-list at the index specified    777
by the C-list index parameter passed by the slave.                  778
Z, V, C, and N are set as for <retrieve> above.                     779
.paragraph                                                          780
EMT 2 <delete>                                                      781
.indent -4                                                          782
_.BYTE 0,0                                                          783
.break                                                              784
The capability in the slave process's C-list at the index           785
specified by the C-list index parameter passed by the slave         786
is released.  N and Z are set as for <retrieve> above.              787
.paragraph                                                          788
EMT 3 <read parameters>                                             789
.indent -4                                                          790
_.BYTE 0, C + X                                                     791
.break                                                              792
In the parameter control word for this operation, 0 <= X <= 177,    793
and C = 0 or 200.  The X parameters passed by the slave,            794
excluding the C-list index parameter, are copied onto the master's  795
```

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stack, They will appear in the same order in the master's stack as they did in the slave's stack, If the number of parameters passed by the slave is not equal to X, or the C-list index parameter bit in the slave's parameter control word does not match C, N and V are set, and, if X > 0, the slave's parameter control word is pushed onto the master's stack, followed by X-1 words of garbage,

,paragraph

EMT 4 <cause fault>

,indent -4

_,BYTE 1,0

,break

The slave process executes a fault entry, 2(SP) specifies the fault number, The slave's stack pointer will have its value at the time of the enter, The EPC is released from the master's C-list, and the master's account-name is set equal to its user-name,

,paragraph

EMT 5 <restart>

,indent -4

_,BYTE 0,0

,break

The slave process is restarted at the instruction which caused the enter, The slave's stack pointer will have its value at the time of the enter, Hence, unless something

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has changed, it will reenter. Things that might have changed include the C-list, the T-bit, or the run indicator. The EPC is released from the master's C-list, and the master's account-name is set equal to its user-name.

.paragraph

EMT 6 <return>

.indent -4

-.BYTE X+1,0

.break

The slave process is restarted after the instruction which caused the enter. If the EPC has the fault entry attribute, the slave's PC is stepped one word. If the EPC has the EMT entry attribute, the slave's PC is stepped two words (to skip over the parameter control word). Hence, the slave's EMT will appear to complete. 2(SP) specifies condition codes that are to be set for the slave. If the EPC has the EMT entry attribute, X parameters are copied from the master's stack to the slave's stack. They will appear in the same order in the slave's stack as in the master's stack. If the number of return parameters requested by the slave is not equal to X, N and V are set, and an appropriate fault is caused for the slave. If the EPC does not have the EMT entry attribute, X must be zero. The EPC is released from the master's C-list,

and the master's account-name is set equal to its user-name.

.indent 5

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The slave process's RTT bit will be cleared, so that if
its T-bit is on, a T-trap will occur. Exception: if the
entry was a fault entry due to a T-bit trap, the RTT bit was
already off; in this case, it is turned on, so that
another T-bit trap will not occur until the next instruction has
been executed. If the entry was a fault entry due to
a HALT or odd address error, <return> should
not be used; <restart> will cause execution to resume at the
address in the PC, but in the case of an odd address error,
that is not necessarily the address of the next instruction.
.page
.center
Supervisor Capability
.left margin 4
.paragraph -4
EMT 0 <release capability>
.indent -4
_.BYTE 200,0
.break
The capability at the index specified
in 2(SP), if any, is removed from the C-list. The general
remarks above about releasing capabilities apply.
.paragraph
EMT 1 <create file>
.indent -4

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```
_,BYTE 200,0                                                    870
,break                                                          871
A new file of length zero is created and                        872
a capability for the file, with write and D-space attributes,   873
is placed in the C-list at the index specified in 2(SP).        874
If the file cannot be created, N and Z are set.                 875
If the requested index is not free, N and V are set.            876
,paragraph                                                      877
EMT 2 <create directory>                                        878
,indent -4                                                      879
_,BYTE 200,0                                                    880
,break                                                          881
A new directory is created and a capability                     882
for it, with full access attributes, is placed                  883
in the C-list at the index specified in 2(SP).  The directory   884
is initially empty.  If the directory cannot be created,        885
N and Z are set.                                                886
If the requested index is not free, N and V are set.            887
,paragraph                                                      888
EMT 3 <create process>                                          889
,indent -4                                                      890
_,BYTE 200,0                                                    891
,break                                                          892
A new process is created and a capability for it is placed      893
in the C-list at the index specified in 2(SP).  That            894
```

Location of most recient RATS handbook.

index must initially contain a capability for a directory, 895

which will be used as the C-list. The eight registers are initially zero, 896

the PS is initially 174400, and the process has no attachments. The run 897

indicator is off. 898

The user-name and account-name of the process are set equal to 899

the account-name of the process executing the <create process>. 900

If the process cannot be created or 2(SP) does not 901

refer to a directory capability with full 902

access attributes, N and Z are set. 903

.paragraph 904

EMT 4 <create semaphore> 905

.indent -4 906

_.BYTE 201,0 907

.break 908

A new semaphore is created and a capability for it 909

is placed in the C-list at the index specified in 2(SP). 910

The initial value of the semaphore 911

variable will be 4(SP), which must be positive or zero. 912

If the semaphore cannot be created or 4(SP) is negative, N and Z are set. 913

If the requested index is not free, N and V are set. 914

.paragraph 915

EMT 5 <create entry> 916

.indent -4 917

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```
_,BYTE 200,0                                                    918
,break                                                          919
A new entry is created, and a master entry capability for it    920
is placed in the C-list at the index specified in 2(SP).        921
If the entry cannot be created, N and Z are set.                922
If the requested index is not free, N and V are set.            923
,paragraph                                                      924
EMT 6 <read segment properties>                                 925
.indent -4                                                      926
_,BYTE 1,2                                                      927
,break                                                          928
Reads properties of the segment whose number is in 2(SP).       929
If 2(SP) > 17 (octal), V and N are set and two words of garbage are
pushed.                                                         930
Otherwise, pushes the length of the segment in                  931
bytes, and the expansion direction and access control field     932
in the same format as the file operation attach.  (If someone   933
thinks the file number and file address are useful, they could  934
be provided also.)  If the segment is not attached to           935
anything, two zero words are pushed.                            936
,paragraph                                                      937
EMT 7 <detach>                                                  938
,indent -4                                                      939
_,BYTE 1,0                                                      940
,break                                                          941
```

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Removes the attachment (if any) to the segment 942
whose number is in 2(SP). If 2(SP) > 17 (octal), V and N are set. 943
,paragraph 944
EMT 10 <remove attributes> 945
,indent -4 946
_,BYTE 201,0 947
,break 948
Removes attributes from the capability whose index is in 2(SP). 949
Each bit in the low byte of 4(SP), if set, clears the corresponding 950
bit in the attribute field of the capability. 951
There is no error indication if an attribute to be removed 952
is already gone. 953
,paragraph 954
EMT 11 <read calendar clock> 955
,indent -4 956
_,BYTE 0,3 957
,break 958
Returns on the stack, in 4(SP), the number of days since 1#January#1901, 959
and a two-word number giving the number of 1/60th's of a second 960
since last midnight. 2(SP) is most significant, and (SP) is 961
least significant. Greenwich Mean Time is used. 962
,paragraph 963
EMT 12 <wait on calendar clock> 964
,indent -4 965

Location of most recient RATS handbook.

```
-,BYTE 3,0                                                          966
,break                                                              967
Waits until the calendar clock time is greater than or equal to     968
the time on the stack.                                              969
The format of the time is the same as for <read calendar clock>.    970
If the given time is invalid, N and C are set.                      971
,page                                                               972
,left margin 0                                                      973
,center                                                             974
Part Two                                                            975
,blank 1                                                            976
,paragraph 5                                                        977
When a user sits down at a terminal which is connected to RATS,     978
he is typing to a program called EXEC.                              979
EXEC is intended to be self-documenting; in most cases, typing "HELP" 980
will give the user all the assistance he needs.                     981
,paragraph                                                          982
EXEC has a facility for allowing users to run their                 983
own programs.                                                       984
This facility is presently described in a separate memo.            985
Certain features of the environment of a user process are described
here.                                                               986
,paragraph                                                          987
The C-list initially contains:                                      988
,nofill                                                             989
```

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```
,skip 1                                                          990
   Index      Capability                                         990a
,skip 1                                                          991
0      Supervisor                                                992
2      C-list directory                                          993
3      Public directory                                          994
4      Terminal Input                                            995
5      Terminal Output                                           996
6      Code file                                                 997
7      Stack file                                                998
,fill                                                            999
,paragraph                                                       1000
The supervisor capability is described in part one,              1001
The C-list directory capability is an ordinary directory capability
which                                                            1002
refers to the C-list.  This is used to copy capabilities         1003
from one C-list index to another,                                1004
,paragraph                                                       1005
The code file is a file containing the program to be executed by 1006
the process,  The process will initially be given an attachment to
this file in segment zero                                        1007
of I-space,  In the case of EXEC, this file is called the system
file,                                                            1008
and contains code for all permanent system programs,             1009
Normally, the code file will be read-only, to allow              1010
for reentrant programs,                                          1011
```

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```
.paragraph                                                              1012
The stack file is a file which can be used                              1013
for the stack, variables, and all other storage which must be private   1014
to each process (or group of processes)                                 1015
executing the program.                                                  1016
.page                                                                   1017
.center                                                                 1018
Terminal Input Capability                                               1019
.paragraph                                                              1020
A terminal input capability has the following operation:                1021
.left margin 4                                                          1022
.paragraph -4                                                           1023
EMT 0 <read>                                                            1024
.indent -4                                                              1025
_.BYTE 203,1                                                            1026
.break                                                                  1027
Parameters are:                                                         1028
.left margin 9                                                          1029
.indent -5                                                              1030
2(SP):  Index of a capability for a file containing                     1031
space for characters to be placed.  Must have write and D-space
attributes.                                                             1032
.indent -5                                                              1033
4(SP):  Low file address of beginning of the space for characters.      1034
.indent -5                                                              1035
```

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6(SP): High file address of beginning of the space. 1036

.indent -5 1037

10(SP): Maximum number of characters to be put into the space. 1038

.left margin 4 1039

.paragraph 0 1040

This operation waits until at least one character which has 1041

not been read by a previous <read> has 1042

been input on the terminal. 1043

Then all input characters which have not been read by a previous <read> 1044

(up to the maximum) are put into the space 1045

provided, one character per byte. 1046

The space must not cross a 20000-byte boundary in the file. 1047

The number of characters read is returned on the stack. 1048

Zero is returned if there is any error in the parameters supplied. 1049

All RATS terminals are full duplex. 1050

.paragraph 5 1051

The format of the characters returned is as follows. 1052

If bit 7 of the byte is zero, then bits 6-0 contain an ASCII character. 1053

If bit 7 of the byte is one, then some error occured on this 1054

character, as given by other bits in the byte, as follows. 1055

Bit 6 is on if one or more characters were lost at this point in the 1056

input, because either the input buffer overflowed or (unlikely) the 1057

interrupt handler didn't respond to an interrupt in time. 1058

Location of most recient RATS handbook.

Bit 5 is on if a break was received (i.e. a character with no stop bit). 1059

Bit 4 is on if a character with bad parity was received. 1060

.page 1061

.skip 2 1062

.center 1063

Terminal Output Capability 1064

.skip 1 1065

.left margin 0 1066

.paragraph 5 1067

A terminal output capability has the following operation: 1068

.left margin 4 1069

.paragraph -4 1070

EMT 0 <write> 1071

.indent -4 1072

_.BYTE 203,0 1073

.break 1074

Parameters are: 1075

.left margin 9 1076

.indent -5 1077

2(SP): Index of a capability for a file containing characters to be 1078

output. Must have D-space attribute. 1079

.indent -5 1080

4(SP): Low file address of beginning of character string 1081

.indent -5 1082

```
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6(SP): High file address of beginning of character string                1083
.indent -5                                                               1084
10(SP): Number of characters in the string                               1085
.left margin 4                                                           1086
.paragraph 0                                                             1087
This operation outputs the character string on the terminal,             1088
The character string must not cross a 20000-byte boundary in the
file,                                                                    1089
Each byte contains an ASCII character; bit 7 is ignored,                 1090
This operation may wait some length of time before returning, if         1091
output buffers are full,                                                 1092
The user need not be concerned with padding carriage returns, or         1093
other timing considerations,                                             1094
After the EMT returns, the character string may be overwritten           1095
without affecting the output,                                            1096
It is recommended that the character string not be longer than           1097
100 characters, since once a string begins being                         1098
output there is no way to stop it,                                       1099
If there is any error in the parameters supplied, N is set,              1100
.page                                                                    1101
.left margin 0                                                           1102
.center                                                                  1103
Public Directory                                                         1104
.paragraph 5                                                             1105
This directory contains capabilities for accessing I/O                   1106
```

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devices and other resources of general utility. It contains: 1107

```
.nofill                                                          1108
.skip 1                                                          1109
   Index       Capability                                        1109a
.skip 1                                                          1110
6       System file (read-only)                                  1111
10      Phone Handler capability                                 1112
11      Line Printer capability                                  1113
12      Card Reader Handler capability (not implemented yet)     1114
13      Paper Tape Reader Handler capability                     1115
14      Network Control Program capability                       1116
20      GETRUN Code File (read-only)                             1117
.fill                                                            1118
.paragraph 5                                                     1119
The system file is a file containing the RATS supervisor,        1120
the I/O handlers, and the EXEC.                                  1121
Starting addresses of each of the programs in the file           1122
can be found in the listing of the RATS supervisor.              1123
.paragraph                                                       1124
The GETRUN Code File contains a program designed to load other
programs.                                                        1125
For more information see J. E. Donnelley.                        1126
.page                                                            1127
.center                                                          1128
Phone Handler Capability                                         1129
```

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```
.paragraph 5                                                    1130
A phone handler capability has the following operation:         1131
.left margin 4                                                  1132
.paragraph -4                                                   1133
EMT 0 <call>                                                    1134
.indent -4                                                      1135
_.BYTE 211,1                                                    1136
.paragraph 5                                                    1137
The <call> operation allocates a phone line, dials the requested
number                                                          1138
(if possible), and sets the line operating at the requested baud
rate.                                                           1139
Available baud rates are 110, 134.5, 150, and 300 (asynchronous)1140
and 2000 (synchronous).  2000 baud transmission is not implemented
yet.                                                            1141
Parameters are:                                                 1142
.left margin 9                                                  1143
.paragraph -5                                                   1144
2(SP): Index of a directory capability with append attribute.   1145
.paragraph                                                      1146
4(SP): Index in that directory to receive a phone input         1147
capability (see below).                                         1148
.paragraph                                                      1149
6(SP): Index in that directory to receive a phone output        1150
capability (see below).                                         1151
.paragraph                                                      1152
```

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10(SP): Baud rate at which phone line is to operate. 1153
For 134.5 baud, 10(SP) should contain 134. 1154
.paragraph 1155
12(SP): through 24(SP): phone number to be called, one 1156
digit per byte. Sucessive digits are in successive 1157
bytes (i.e. increasing addresses). Only the low 4 1158
bits of each byte are significant. The number must 1159
be in standard form for direct distance dialing, that 1160
is: the digit 1; a 3-digit area code; a 3-digit prefix; 1161
a 4-digit extension. 1162
.left margin 4 1163
.paragraph 5 1164
Two capabilities for operating the phone 1165
line, described below, are returned. A parameter is returned to 1166
indicate the outcome of the request: 1167
.left margin 13 1168
.paragraph -4 1169
0###Successful. The number was dialed automatically, and carrier 1170
was established. Phone input and output capabilities are returned. 1171
.paragraph 1172
1###Busy. The number was dialed automatically, but 1173
carrier was not established within a reasonable time. This could 1174
be due to calling a phone which is busy, or which is not 1175
equipped with data communications equipment (e.g. a wrong 1176
number). It may be advisable to try the call again. 1177

Location of most recient RATS handbook.

```
.paragraph                                                              1178
2###No phone line could be allocated.                                   1179
Try again after some other RATS user has deallocated a phone line.      1180
.paragraph                                                              1181
3###Insufficient resources.  The phone handler was unable to create a
process,                                                                1182
entry, or semaphore.  Try again when system resources are less          1183
heavily loaded.                                                         1184
.break                                                                  1185
.paragraph                                                              1186
4###Error.  An error in a passed parameter was detected                 1187
(e.g. invalid baud rate or phone number).                               1188
.paragraph                                                              1189
X#>#100##A return code greater than 100 (decimal) indicates that        1190
a phone line has been allocated but the number could                    1191
not be dialed automatically.  X is the last four digits of              1192
the phone line from which the call must be manually dialed.             1193
Phone input and output capabilities are returned.                       1194
.skip 1                                                                 1195
.left margin 0                                                          1196
.paragraph 5                                                            1197
If the call was dialed automatically, deleting the phone output         1198
capability will hang up the phone.  If the phone was dialed manually    1199
it must be hung up manually.  Deleting both phone input and output      1200
capabilities results in the phone line being deallocated (i.e.         1201
```

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available for other use). 1202

.skip 2 1203

.center 1204

Phone Input Capability 1205

.paragraph 1206

A phone input capability has the following operation: 1207

.blank 1 1208

.left margin 4 1209

.indent -4 1210

EMT 0 <read> 1211

.indent -4 1212

-.BYTE 203,1 1213

.break 1214

Parameters are: 1215

.left margin 9 1216

.paragraph -5 1217

2(SP): Index of a capability for a file containing 1218

space for characters to be placed. Must have write 1219

and D-space attributes. 1220

.paragraph 1221

4(SP): Least significant word of the address in the 1222

file of the beginning of the space for the characters 1223

to be placed. Must be even. 1224

.paragraph 1225

6(SP): Most significant word of the file address. 1226

Location of most recient RATS handbook.

```
.paragraph                                                          1227
10(SP): Size of the reserved space, in bytes.                       1228
Must be even.  The space must not cross a 20000                     1229
byte boundary.                                                      1230
.left margin 4                                                      1231
.paragraph 5                                                        1232
The <read> operation waits until either (1) a character             1233
which has not been read by a previous <read>                        1234
has been received from the phone line; (2) carrier detect           1235
changes; or (3) data set ready is off (indicating the               1236
phone is on-hook).  It then returns, in the space provided,         1237
one or more words containing either a character                     1238
or status information.  It returns on the stack a                   1239
parameter which is the number of bytes of the space which           1240
were actually used (i.e. 2 times the number of words                1241
returned).  This parameter will be zero if there is an              1242
error in the passed parameters.                                     1243
.paragraph                                                          1244
The meaning of the words returned is as follows.                    1245
If bit 15 is off, then bits 7-0 contain a character                 1246
which was received from the phone line, and bit 12 has              1247
the parity of bits 7-0.  If bit 15 is on, the word contains         1248
status information, as follows:                                     1249
.left margin 9                                                      1250
.paragraph -5                                                       1251
```

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Bit 14 is on if one or more characters were lost due 1252
to buffer overflow. 1253
.paragraph 1254
Bit 13 is on if a break was received. (Note: Some 1255
phone line interfaces cannot recognize breaks. On 1256
these lines, a break will be interpreted as a 1257
series of null characters.) 1258
.paragraph 1259
Bit 11 is on if the word contains status: 1260
.left margin 14 1261
.paragraph -5 1262
Bit 10 indicates the status of carrier detect 1263
.paragraph 1264
Bit 9 is on if an outgoing call is in progress. It 1265
is off if the phone line is on-hook or an incoming call is in 1266
progress. 1267
.blank 1 1268
.left margin 0 1269
.center 1270
Phone Output Capability 1271
.paragraph 5 1272
A phone output capability has the following operation: 1273
.left margin 9 1274
.paragraph -9 1275
EMT 0 <write> 1276

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```
,indent =9                                                          1277
_,BYTE 203,0                                                        1278
,break                                                              1279
Parameters are:                                                     1280
,paragraph =5                                                       1281
2(SP): Index of a capability for a file containing characters       1282
to be transmitted.  Must have the D-space attribute.                1283
,paragraph                                                          1284
4(SP): Least significant word of the address in                     1285
the file of the beginning of the string of characters.  Must        1286
be even.                                                            1287
,paragraph                                                          1288
6(SP): Most significant word of the file address.                   1289
,paragraph                                                          1290
10(SP): Size of the string of characters, in bytes.  Must be even.  1291
The string must not cross a 20000-byte boundary.                    1292
,left margin 4                                                      1293
,paragraph 5                                                        1294
The <write> operation transmits the string of characters on the     1295
phone line.  Each character occupies one word.  If                  1296
bit 15 is zero, bits 7-0 contain the character to be transmitted.  If 1297
bit 15 is one, a break is sent for one character time.              1298
,paragraph                                                          1299
Errors are indicated by returned condition codes.                   1300
N and Z are set if no                                               1301
```

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outgoing call is in progress on the line (see above). 1302

(Some characters may have been transmitted successfully.) 1303

N and C are 1304

set if any passed parameter is in error. 1305

.page 1306

.left margin 0 1307

.center 1308

Line Printer Capability 1309

.paragraph 5 1310

The line printer on the RISOS system is a Versatec matrix printer, 1311

with 132 columns and 54 lines per page. 1312

The line printer capability has the following operation: 1313

.left margin 4 1314

.paragraph -4 1315

EMT 0 <print> 1316

.indent -4 1317

-.BYTE 200,0 1318

.indent 5 1319

2(SP) has the index of a file to be printed. 1320

The entire file will be printed, preceded by a page 1321

containing the calling process's account-name. 1322

Each byte of the file is an ASCII character; bit 7 of each byte is ignored. 1323

Output is buffered, so the <print> operation returns immediately, but the file may not be printed for a while. 1324

After the <print> operation returns, 1325

the file may be overwritten without affecting the output. 1326

.paragraph 5 1327

If any parameter is in error, N and C are set. 1328

If the line printer handler's buffer is full 1329

or enough file space cannot be created, N and V are set. 1330

If the line printer is off-line, out of paper, etc.. 1331

Z (but not N) is set, a message is printed on the operator's console, 1332

and the file will be printed when the printer becomes ready. 1333

After the printer is made ready, another <print> operation must be done to 1334

resume output. If the printer becomes not ready 1335

while a file is being printed but after the <print> operation has returned, 1336

a message is printed on the operator's console, but 1337

no error indication can be given to the user who did the <print>. 1338

.page 1339

.center 1340

Card Reader Handler Capability 1341

.paragraph 1342

A card reader handler capability has the following 1343

operation: 1344

.left margin 4 1345

.paragraph -4 1346

EMT 0 <assign card reader> 1347

.indent -4 1348

_.BYTE 200,0 1349

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```
,indent 5                                                              1350
This operation returns a card reader capability                        1351
at the C-list index in 2(SP).                                          1352
The possessor of a card reader capability has exclusive                1353
use of the card reader until he deletes the                            1354
card reader capability.                                                1355
If the card reader is already assigned to someone                      1356
else,  N and Z are set.  If the C-list index passed is not free,       1357
N and C are set.                                                       1358
                                                                       1359
,left margin 0                                                         1360
,skip 2                                                                1361
,center                                                                1362
Card Reader Capability                                                 1363
,paragraph 5                                                           1364
A card reader capability has the following operation:                  1365
,left margin 4                                                         1366
,paragraph -4                                                          1367
EMT 0 <read>                                                           1368
,indent -4                                                             1369
_,BYTE 200,0                                                           1370
,indent 5                                                              1371
This operation reads a deck of cards and returns a data file           1372
in the index in 2(SP).                                                 1373
The file has the following format.                                     1374
```

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For each card read, there is one word of data for each column (usually 80), followed by a word containing 040000 (octal). The column data is in the following format:

```
.nofill
.skip 1
Bit     Card Zone
.skip 1
15-12   unused (zero)
11      12
10      11
9       10
8       1
7       2
6       3
5       4
4       5
3       6
2       7
1       8
0       9
.fill
.paragraph 5
```

After all card data, there is a word containing the status of the reader when reading terminated.

The following bits are significant:

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```
.left margin 15                                                    1400
.paragraph -5                                                      1401
Bit 15 - always on                                                 1402
.indent -5                                                         1403
Bit 13 - input hopper empty (i.e. normal termination)              1404
or output stacker full                                             1405
.indent -5                                                         1406
Bit 12 - card reader check (e.g. card jam)                         1407
.indent -5                                                         1408
Bit 11 - timing error (indicates that data was lost)               1409
.indent -5                                                         1410
Bit 8 - reader was off-line                                        1411
.left margin 4                                                     1412
.paragraph 5                                                       1413
If not enough file space can be created for the deck,              1414
N and V are set and no file is returned.                           1415
If the C-list index passed is not free, N and C are set.           1416
.page                                                              1417
.center                                                            1418
Paper Tape Reader Handler Capability                               1419
.paragraph                                                         1420
A paper tape reader handler capability has the following           1421
operation:                                                         1422
.left margin 4                                                     1423
.paragraph -4                                                      1424
```

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```
EMT 0 <assign paper tape reader>                                    1425
,indent -4                                                          1426
_,BYTE 200,0                                                        1427
,indent 5                                                           1428
This operation returns a paper tape reader capability               1429
at the C-list index in 2(SP).                                       1430
The possessor of a paper tape reader capability has exclusive       1431
use of the paper tape reader until he deletes the                   1432
paper tape reader capability.                                       1433
If the paper tape reader is already assigned to someone             1434
else, N and Z are set.  If the C-list index passed is not free,     1435
N and C are set.                                                    1436
                                                                    1437
,left margin 0                                                      1438
,skip 2                                                             1439
,center                                                             1440
Paper Tape Reader Capability                                        1441
,paragraph 5                                                        1442
A paper tape reader capability has the following operation:         1443
,left margin 4                                                      1444
,paragraph -4                                                       1445
EMT 0 <read>                                                        1446
,indent -4                                                          1447
_,BYTE 200,0                                                        1448
,indent 5                                                           1449
```

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This operation reads a paper tape and returns a data file 1450
in the index in 2(SP). 1451
The file will contain one byte for each line of tape read. 1452
Leaders and trailers are not stripped. 1453
If not enough file space can be created for the tape, 1454
N and V are set and no file is returned. 1455
If the C-list index passed is not free, N and C are set. 1456
.page 1457
.center 1458
Network Control Program Capability 1459
.left margin 0 1460
.paragraph 5 1461
The Network Control Program (NCP) handles all communication 1462
with the IMP. Familiarity with the ARPA network Host-Host Protocol 1463
(described in NIC _#8246 and _#7104) is assumed. 1464
.left margin 4 1465
.paragraph -4 1466
EMT 0 <reserve socket> 1467
.indent -4 1468
_.BYTE 202,0 1469
.indent 5 1470
The socket number specified in 4(SP) (least significant) 1471
and 6(SP) (most significant) is reserved. A socket capability is returned 1472
at the index in 2(SP). If that index is not free, 1473

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N and C are set. If the requested socket is already reserved, 1474
N and Z are set. 1475
If the NCP cannot create an entry or process or enough file space 1476
to handle the socket, N and V are set. 1477
.paragraph -4 1478
EMT 1 <reserve sockets> 1479
.indent -4 1480
_.BYTE 202,2 1481
.indent 5 1482
This operation reserves 6(SP) consecutive socket numbers, 1483
beginning with an even socket number selected arbitrarily by the NCP. 1484
The first socket number reserved is returned in (SP) (least 1485
significant) and 2(SP) (most significant). Socket capabilities 1486
for each socket reserved are returned in the directory 1487
specified by the index in 2(SP), at respectively consecutive 1488
indexes beginning with the index in 4(SP). 1489
.paragraph 5 1490
If no set of 6(SP) consecutive sockets is available, N and Z are set 1491
and garbage is returned. If the NCP cannot create enough 1492
entries, processes, and file space to handle the sockets, 1493
N and V are set and garbage is returned. If 6(SP) is equal 1494
to zero or greater than 256, or if 2(SP) does not refer to a 1495
directory capability with the append attribute, or if not all the specified indexes in the directory are free, N and C 1496
are set and garbage is returned. 1497

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```
.left margin 0                                                          1498
.skip 2                                                                 1499
.center                                                                 1500
Socket Capability                                                       1501
.paragraph 5                                                            1502
A socket capability provides the mechanism for performing certain       1503
operations relating to its associated socket number.                    1504
Briefly, the operations are:                                            1505
.left margin 12                                                         1506
.paragraph -12                                                          1507
<listen>####Attempts to establish a connection by waiting for           1508
a Request-For-Connection (RFC) and then returning a matching RFC.       1509
.paragraph                                                              1510
<init>######Attempts to establish a connection by sending an RFC        1511
and waiting for a matching RFC.                                         1512
.paragraph                                                              1513
<close>#####Used to (1) abort a <listen> or <init>,                     1514
(2) initiate closing of a connection, or                                1515
(3) acknowledge closing of a connection by the foreign host.            1516
.paragraph                                                              1517
<inactivate#connection>## Used to effectively close a connection        1518
even if the foreign host is slow in responding to a CLS.                1519
.paragraph                                                              1520
<read>######Receives data over the connection.                          1521
.paragraph                                                              1522
```

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<write>#####Sends data over the connection. 1523

.paragraph 1524

<send#INR>##Sends the control message INR on this 1525
connection. 1526

.paragraph 1527

<send#INS>##Sends the control message INS on this 1528
connection. 1529

.paragraph 1530

<wait#for#INS>##Waits for the control message INS on this 1531
connection. 1532

.paragraph 1533

<wait#for#INR>##Waits for the control message INR on this 1534
connection. 1535

.left margin 0 1536

.paragraph 5 1537

A local socket is defined to be "active" between the time a 1538
<listen> or <init> is executed and a <close> is executed. 1539
Exactly one <close> must be executed for each <listen> or <init>, 1540
even if a connection is closed at the instigation of the 1541
foreign host. 1542

.paragraph 1543

There are two typical scenarios for establishing and breaking 1544
a connection. 1545

In case 1, a connection is established with <listen> or <init>. 1546
Sometime later the foreign host closes the connection. 1547

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The local process must eventually acknowledge by doing a <close>. 1548
.paragraph 1549
In case 2, a connection is established with <listen> or <init> 1550
as before. Sometime later the local process does a <close> 1551
to close the connection. The foreign host eventually acknowledges 1552
the close by sending a CLS. 1553
.paragraph 1554
In case 2, if the local socket is receiving data, some data 1555
may arrive between the time the local process does a <close> 1556
(which causes a CLS to be sent) and the time the foreign host 1557
acknowledges the close. We wish to allow the local process to 1558
<read> this data if it chooses; at the same time we do 1559
not want to force the local process to wait for the foreign host 1560
to acknowledge the close before establishing a new connection, 1561
since the local socket may be a scarce resource such as the 1562
logger socket. 1563
.paragraph 1564
Accordingly, we make the following definition. 1565
A connection (not to be confused with a local socket) is "active" 1566
between the time an RFC is sent and either a CLS is received or 1567
an <inactivate connection> is executed. 1568
A connection can remain 1569
active after the local socket has become inactive; 1570
this is to allow the foreign host time to process the CLS. 1571
During this time, <read>s may be done. 1572

```
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Only one connection to a given local socket can be active at once.      1573
.paragraph                                                              1574
A socket number is reserved as long as there are any capabilities       1575
referring to the socket.  Deleting a socket capability                  1576
                                                                        1577
                                                                        1578
(i.e. releasing all copies of it): (1) does a <close> if the            1579
socket is active;                                                       1580
(2) does an <inactivate connection>;                                    1581
and (3) un-reserves the socket number.                                  1582
RFC's received by the NCP are queued if the local socket they           1583
refer to is reserved; otherwise they are refused.                       1584
.skip 2                                                                 1585
.center                                                                 1586
Receive (even) Socket Capability Operations                             1587
.left margin 4                                                          1588
.paragraph -4                                                           1589
EMT 0 <listen>                                                          1590
.indent -4                                                              1591
_.BYTE 0,4                                                              1592
.indent 5                                                               1593
The local socket must be inactive and there must be no                  1594
active connection to this socket;                                       1595
if this is not the case, N and C are set                                1596
and garbage is returned.                                                1597
```

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The local socket is made active. 1598

The <listen> operation then waits until either an RFC for this socket 1599

has been received from any host, or a <close> is done. 1600

.paragraph 5 1601

In the former case, an RFC is returned, opening the connection. 1602

The NCP assigns a link automatically. 1603

The connection byte size is returned in (SP). The foreign host number 1604

is returned in 2(SP), and the foreign socket number in 4(SP) 1605

(least significant) and 6(SP) (most significant). 1606

.paragraph 1607

If a <close> is done before any RFC is received, N and Z are set 1608

and garbage is returned. 1609

.paragraph -4 1610

EMT 1 <init> 1611

.indent -4 1612

-.BYTE 3,1 1613

.indent 5 1614

The local socket must be inactive, there must be no 1615

<send INR> in progress, and the foreign socket specified in 4(SP) and 6(SP) 1616

must be odd; if this is not the case, N and C are set and garbage 1617

is returned. 1618

If there is an active connection to this socket, it is made inactive. 1619

The local socket is made active. An RFC is sent to 1620

the host in 2(SP) and socket number in 4(SP) (least significant) 1621

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```
and 6(SP) (most significant).                                          1622
The NCP assigns a link automatically.                                  1623
The <init> operation then waits until one of the following occurs:     1624
.indent 5                                                              1625
(1) A matching RFC is received, opening the connection.                1626
The connection byte size is returned in (Sp).                          1627
.indent 5                                                              1628
(2) The RFC is refused, or the RFC could not be delivered              1629
because either the foreign host is dead or the foreign IMP             1630
cannot be reached.  N and V are set and a code is returned in (SP)     1631
telling which happened:                                                1632
.nofill                                                                1633
   -1:  Refused                                                        1633a
      0:  Foreign IMP cannot be reached                                1633a1
      1:  Foreign host is dead                                         1633a2
.fill                                                                  1634
.indent 5                                                              1635
(3) A <close> is performed.  The RFC is aborted by sending             1636
a CLS.  N and Z are set and garbage is returned.                       1637
This operation is intended to provide the user with a facility for     1638
timing out RFC's; the NCP never aborts an RFC unless a <close> is
done.                                                                  1639
.paragraph -4                                                          1640
EMT 2 <close>                                                          1641
.indent -4                                                             1642
```

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```
_.BYTE 0,0                                                          1643
.indent 5                                                           1644
The local socket should be active.                                  1645
It is made inactive.  If a <listen> or <init> is in progress,       1646
it is aborted (q.v.).  If there is an active connection to this
socket,                                                             1647
a close is initiated.  (The connection will remain active until     1648
the foreign host acknowledges the close or another <listen> or <init> 1649
is executed.)                                                       1650
.paragraph 5                                                        1651
If the local socket is not active, the <close> will apply           1652
to the next <listen> or <init>.  If one such <close> has already    1653
been saved when a second is attempted, N is set.                    1654
.paragraph -4                                                       1655
EMT 3 <inactivate connection>                                       1656
.indent -4                                                          1657
_.BYTE 0,0                                                          1658
.indent 5                                                           1659
The local socket must be inactive and there must be no              1660
<send INT> in progress;  if this is not the case,                   1661
N and C are set.                                                    1662
If there is an active connection to this socket, it is made inactive. 1663
Any messages arriving on the inactive connection will be discarded. 1664
.paragraph -4                                                       1665
EMT 4 <read>                                                        1666
```

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```
,indent -4                                                          1667
_,BYTE 203,1                                                        1668
,indent 5                                                           1669
There must be no <listen>, <init>, or <read> already in progress;   1670
if this is not the case, or there is any error in the               1671
parameters supplied, N and C are set and zero is returned.          1672
The <read> operation waits until either there is some data to be    1673
read or there is no active connection to this socket (e.g.          1674
the foreign host closed the connection).                            1675
If there is data to be read, it is transferred to the file          1676
whose index is in 2(SP).                                            1677
The file capability must have the write and D-space attributes.     1678
The file address of the beginning of the area for the data          1679
is in 4(SP) (least significant) and 6(SP) (most significant).       1680
10(SP) contains the number of 8-bit bytes in the area;              1681
it should be at least 1012 (decimal), in order to insure            1682
that all messages can be received.                                  1683
The area must not cross a 20000-byte boundary.                      1684
The connection byte count for the data (i.e. the number of bits     1685
of data divided by the connection byte size) is returned in (SP).   1686
The connection byte count will be greater than zero.                1687
Regardless of the connection byte size, bits are stored in          1688
successive 8-bit bytes, high order bit first.                       1689
Users are reminded of the principle of the Host-Host protocol that  1690
```

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```
no significance may be inferred from message boundaries by a receiving                1691
process.                                                                              1692
.paragraph 5                                                                          1693
If there is no active connection to this socket and no data to be read,               1694
N and Z are set and zero is returned.                                                 1695
.paragraph -4                                                                         1696
EMT 5 <send INR>                                                                      1697
.indent -4                                                                            1698
_.BYTE 0,1                                                                            1699
.indent 5                                                                             1700
The local socket must be active and there must be no <listen>,                        1701
<init>, or <send INR> already in progress;                                            1702
if this is not the case, N and C are set and garbage is returned.                     1703
If there is no active connection to this socket, N and Z are set                      1704
and garbage is returned.                                                              1705
Otherwise, an INR (INterrupt-by-Receiver) is sent on the                              1706
connection.                                                                           1707
A code is returned in (SP) indicating the outcome of the transmission,               1708
as for <write> (q.v.).                                                                1709
.paragraph -4                                                                         1710
EMT 6 <wait for INS>                                                                  1711
.indent -4                                                                            1712
_.BYTE 0,0                                                                            1713
```

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```
.indent 5                                                    1714
(Not yet implemented.)                                       1715
.skip 2                                                      1716
.left margin 0                                               1717
.center                                                      1718
Send (odd) Socket Capability Operations                      1719
.left margin 4                                               1720
.paragraph -4                                                1721
EMT 0 <listen>                                               1722
.indent -4                                                   1723
_.BYTE 1,4                                                   1724
.indent 5                                                    1725
The local socket must be inactive and there must be no       1726
active connection to this socket;                            1727
if this is not the case, N and C                             1728
are set and garbage is returned.                             1729
The local socket is made active.                             1730
The <listen> operation then waits until either an RFC        1731
for this socket has been received from any host,             1732
or a <close> is done.                                        1733
.paragraph 5                                                 1734
In the former case, an RFC is returned, opening the          1735
connection.                                                  1736
2(SP) specifies the connection byte size to be used.         1737
The connection byte size is returned in (SP).                1738
```

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The foreign host number is returned in 2(SP), and the foreign 1739
socket number in 4(SP) (least significant) and 6(SP) 1740
(most significant), 1741
,paragraph 5 1742
If a <close> is done before any RFC is received, 1743
N and Z are set and garbage is returned, 1744
,paragraph -4 1745
EMT 1 <init> 1746
,indent -4 1747
-,BYTE 4,1 1748
,indent 5 1749
The local socket must be inactive, there must be no <write> 1750
or <send INS> in progress, and the foreign socket specified 1751
in 6(SP) and 10(SP) must be even; if this is not the case, 1752
N and C are set and garbage is returned, 1753
If there is an active connection to this socket, it is made inactive, 1754
The local socket is made active, 1755
An RFC is sent to the host in 4(SP) and socket number in 6(SP) 1756
(least significant) and 10(SP) (most significant), 1757
2(SP) specifies the connection byte size to be used, 1758
The <init> operation then behaves the same as <init> for receive sockets 1759
(q.v.), 1760
,paragraph -4 1761
EMT 2 <close> 1762

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```
,indent -4                                                          1763
_,BYTE 0,0                                                          1764
,indent 5                                                           1765
Same as <close> for receive sockets (q.v.).                         1766
,paragraph -4                                                       1767
EMT 3 <inactivate connection>                                       1768
,indent -4                                                          1769
_,BYTE 0,0                                                          1770
,indent 5                                                           1771
The local socket must be inactive and there must be no <write> or
<send INS>                                                          1772
in progress;                                                        1773
if this is not the case, N and C are set.                           1774
If there is an active connection to this socket, it is made inactive. 1775
,paragraph -4                                                       1776
EMT 4 <write>                                                       1777
,indent -4                                                          1778
_,BYTE 203,1                                                        1779
,indent 5                                                           1780
The local socket must be active and there must be no <listen>,      1781
<init>, or <write> already in progress; if this is not the case,    1782
or if there is any error in the parameters supplied, N and C are set 1783
and garbage is returned.                                            1784
If there is no active connection to this socket, N and Z are set    1785
and garbage is returned.                                            1786
```

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Otherwise, data is sent over the connection. 1787

The data is taken from the file whose index is in 2(SP). 1788

The file capability must have the D-space attribute. 1789

The file address of the beginning of the data is in 4(SP) (least significant) 1790

and 6(SP) (most significant). 1791

10(SP) contains the connection byte count, which may be zero. 1792

There must be fewer than 8096 bits of data. 1793

The data must not cross a 20000-byte boundary. 1794

Regardless of the connection byte size, data bits are taken from 1795

successive 8-bit bytes, high order bit first. 1796

A code is returned in (SP) indicating the outcome 1797

of the transmission: 1798

```
.nofill                                                    1799
-1:  Successful                                            1800
0:  Unsuccessful because foreign IMP cannot be reached     1801
1:  Unsuccessful because foreign host is dead              1802
.fill                                                      1803
.paragraph -4                                              1804
EMT 5 <send INS>                                           1805
.indent -4                                                 1806
_.BYTE 0,1                                                 1807
.indent 5                                                  1808
```

The local socket must be active and there must be no <listen>, 1809

<init>, or <send INS> already in progress; if this is not the case, 1810

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N and C are set and garbage is returned. 1811

If there is no active connection to this socket, 1812

N and Z are set and garbage is returned. 1813

Otherwise, an INS (INterrupt-by-Sender) is sent on the connection. 1814

A code is returned in (SP) indicating the outcome of the transmission. 1815

as for <write> (q.v.). 1816

.paragraph -4 1817

EMT 6 <wait for INR> 1818

.indent -4 1819

_.BYTE 0,0 1820

.indent 5 1821

(Not yet implemented.) 1822

------- 1823

1824