

Line Processor Protocol

< HARDY, LPPROT,NLS;1, >, 24-OCT-74 13:08 MEH ;;;;< HARDY,
LPPORT,NLS;2, >, 24-OCT-74 12:43 MEH

Protocol for TENEX <-> Line Processor interactions

NOTICE:

This document is not yet cast in concrete. We don't expect sweeping changes of any kind but we reserve the right to change our minds about how some things should be done. Send your comments or reactions to this protocol to

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Introduction

This document is a detailed description of the Line Processor protocol. It is intended to serve as a guide to anyone wishing to implement the Line Processor protocol as well piece of documentation for the Line Processor,

It should be pointed out here that the Line Processor contains a very small, slow microcomputer with little read/write memory. For this reason the protocol is terse and error reports and/or recovery non-existent. The Line Processor terminal is treated more as a hardware device than an intelligent terminal,

Conventions

Coordinates designate character positions. For example (1,1) is the second character on the second line up from the bottom.

The origin is at the lower left corner of the screen.

As components of the protocol, coordinates are passed as one byte of X and one of Y and always have 40B added to them to get them in the printing character range. This limits the max coordinate value to 137B which is 95.

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In TTY simulation, scrolling always takes place on a line feed (LF) not a carriage return (CR). Carriage return does the obvious thing and no more.

1a3d

When inside a protocol string, RUBOUT is NOT ignored. When outside, it is ignored.

1a3e

When outside a protocol string, all control characters (0 thru 37B) are ignored by the Line Processor, except:

1a3f

When the cursor is being tracked:

1a3f1

"G which rings a bell if possible

1a3f1a

CR and LF which do the right thing

1a3f1b

Notice that backspace character ("H) is not implemented in TTY simulation (i.e., when the cursor is being tracked). We have no immediate use for this, but it may be implemented later,

1a3f2

When the cursor has been positioned:

1a3f3

"G which rings a bell if possible

1a3f3a

"H which does a backspace cursor

1a3f3b

From Line Processor to TENEX (mouse input etc.)

1a4

Communication in this direction will adhear generally to the IMLAC protocol as outlined in (IJOURNAL, 14345,).

1a4a

In particular:

1a4b

Keyboard characters 40B thru 177B are unescorted.

1a4b1

Keyboard characters 0 thru 37B are sent as:

1a4b2

34B, 43B, char+140B, X+40B, Y+40B

1a4b2a

Mouse button changes are send as:

1a4b3

34B, 43B, buttons+100B, X+40B, Y+40B

1a4b3a

where buttons is the binary immage of button positons

1a4b3b

Keyset strokes 1 thru 32B are send as:

1a4b4

stroke+140B (e.g., 1 -> a)

1a4b4a

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keyset strokes 33B thru 37B are sent as:	1a4b5
33B => 54B (,)	1a4b5a
34B => 56B (.)	1a4b5b
35B => 73B (;)	1a4b5c
36B => 77B (?)	1a4b5d
37B => 40B (space)	1a4b5e

when not in coordinate mode the mouse buttons are ignored
and keyboard control characters (0 thru 37B) are sent in
unescorted fashion,

1a4c

NOTICE: Current implementation of coordinate mode in TENEX
requires the escape character to be 33B, not 34B as
specified above. For now, use 33B! We expect this to be
changed to 34B sometime in the future.

1a4d

From TENEX to the Line Processor

1a5

The following functions are sent by the applications program
and performed by the Line Processor. All codes, except the
escape (34B) should be printing characters. Padding
characters should be RUBOUTs (177B). The baud rate factor
(f) and the delete line time (Del) are obtained by the
applications program from TENEX via the RLPMD JSYS.

1a5a

Note:

1a5a1

The cursor is generally used to track the mouse.
Some commands stop the tracking and allow the cursor
to be used for display manipulation. "Tracking mode"
refers to whether the mouse is being tracked by the
cursor or not.

1a5a1a

position cursor and stop tracking mouse.

1a5a2

Send(34B, 40B, X', Y')

1a5a2a

X' = X coord (0 thru Xmax) + 40B

1a5a2a1

Y' = Y coord (0 thru Ymax) + 40B

1a5a2a2

result:

1a5a2b

Positions cursor to specified location. Tracking

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stops until a "resume tracking" or a reset is received. Any unescorted characters will be written on the screen and the cursor will be advanced once after each character. Writing beyond the end of the line is not advised as the result depends on the terminal manufacturer and model.

1a5a2b1

specify (small) TTY simulation window

1a5a3

Send(34B, 41B, top, bottom)

1a5a3a

top = Y' for top line of window

1a5a3a1

bottom = Y' for bottom line of window

1a5a3a2

result:

1a5a3b

Invokes a small TTY simulation window of specified size and location. This window will be used until a new one is specified or a reset is received. This does not change the tracking mode.

1a5a3b1

reset

1a5a4

Send(34B, 51B)

1a5a4a

result:

1a5a4b

screen cleared

1a5a4b1

TTY simulation window set to full screen

1a5a4b2

bug selection stack reset

1a5a4b3

resume tracking (see)

1a5a4b4

padding:

1a5a4c

Send pads as for clear screen,

1a5a4c1

resume tracking mouse

1a5a5

Send(34B, 42B)

1a5a5a

result:

1a5a5b

The cursor is used to track the mouse. Any unescorted characters will go into the TTY simulation window currently in use.

1a5a5b1

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write string of blanks	1a5a6
Send(34B, 43B, N')	1a5a6a
N' = number of blanks to be written.	1a5a6a1
result:	1a5a6b
The specified number of blanks are written starting at the current cursor position. The cursor is left at the character position following the last blank. Assumes the cursor has been positioned appropriately beforehand.	1a5a6b1
This command is a no-op if N' is not IN [41B, 177B].	1a5a6b2
padding:	1a5a6c
This command must have N/f padding characters following it.	1a5a6c1
push bug selection	1a5a7
Send(34B, 46B, X*, Y*)	1a5a7a
result:	1a5a7b
The coordinates are pushed on a stack and the character at that location is somehow brought to the user's attention, but not obliterated. The stack will hold a maximum of 8 selections. This command includes a resume tracking.	1a5a7b1
padding:	1a5a7c
This command must have 8/f padding characters following it.	1a5a7c1
pop bug selection	1a5a8
Send(34B, 47B)	1a5a8a
result:	1a5a8b
The top entry on the bug selection stack is popped. The corresponding character on the screen is no longer marked in a special way. If the stack is	

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empty, this command is a no-op. This command includes a resume tracking.

1a5a8b1

padding:

1a5a8c

This command must have 8/f padding characters following it.

1a5a8c1

delete selected line

1a5a9

Send(34B, 44B)

1a5a9a

result:

1a5a9b

The cursor position selects a line to be removed from the screen. All following lines are moved up one line. The contents of the last line are undefined. The X coordinate should be zero, otherwise the results are undefined.

1a5a9b1

padding:

1a5a9c

This command requires Del/f padding characters (Del is obtained from TENEX).

1a5a9c1

insert selected line

1a5a10

Send(34B, 45B)

1a5a10a

result:

1a5a10b

The line which the cursor is on, and all following lines, are moved down one line. The cursor is not moved, and hence is on a blank line. Lines above the cursor are not altered. The last line (before the execution of this command) should be considered "lost." The X coordinate should be zero, otherwise the results are undefined.

1a5a10b1

clear screen

1a5a11

Send(34B, 50B)

1a5a11a

result:

1a5a11b

The entire screen is cleared. The cursor position is not generally known. The TTY simulation window location and the bug selection stack are not altered. The tracking mode is not changed.

1a5a11b1

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padding:

1a5a11c

This command requires Del/f pad characters;

1a5a11c1

Interrogate line processor

1a5a12

Send(34B, 55B)

1a5a12a

result:

1a5a12b

A response to the interrogate command is sent as a
protocol string of this form:

1a5a12b1

34B, 46B, Xmax+40B, Ymax+40B, LPtype, Del, Rate

1a5a12b1a

Where

1a5a12b1b

Xmax is the maximum x coordinate

1a5a12b1b1

Ymax is the maximum y coordinate

1a5a12b1b2

LPtype is in [40B=177B] and designates type

1a5a12b1b3

The least significant four bits of LPtype
designate display terminal type (call it
DITyPe)

1a5a12b1b3a

Currently defined are:

1a5a12b1b3a1

(1) Delta Data 5200

1a5a12b1b3a1a

(2) Hazeltine H2000

1a5a12b1b3a1b

The most significant three bits designate
Line Processor type (call it Type)

1a5a12b1b3b

Currently defined are:

1a5a12b1b3b1

(2) Line Processor with Mouse,
Keyset, Printer

1a5a12b1b3b1a

Del is the number of "pad" characters
(RUBOUT) needed to delay while a delete line
takes place,

1a5a12b1b4

Rate indicates the Line Processor receive
baud rate:

1a5a12b1b5

300 baud: 100B, f=32 decimal

1a5a12b1b5a

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600 baud: 60B, f=16	1a5a12b1b5b
1200 baud: 50B, f=8	1a5a12b1b5c
2400 baud: 44B, f=4	1a5a12b1b5d
4800 baud: 42B, f=2	1a5a12b1b5e
9600 baud: 41B, f=1	1a5a12b1b5f
The baud rate factor, f = Rate=40B;	1a5a12b1b5g
Note; LPtype is not generally used by applications programs but should allow discovery of the true nature of the Line Processor terminal. LPtype should be assigned by ARC personnel for best results. See DIA or CHI ESRI=ARC.	
	1a5a12b1b6
The response back to the TEN is not visible to the user. TENEX grabs it, but the info is available to user programs via JSYS RLPMD. The interrogate will be sent by the EXEC when the user sets his terminal type to Line Processor. This command does not change the tracking mode.	1a5a12b2
Turn off coordinate mode	1a5a13
Send(34B, 60B)	1a5a13a
result:	1a5a13b
Turns off the coordinate mode in the Line Processor. This does not change the tracking mode.	
	1a5a13b1
Mouse buttons become inactive, Keyboard control characters sent to main computer without protocol formatting.	
	1a5a13b2
Turn on coordinate mode	1a5a14
Send(34B, 61B)	1a5a14a
result:	1a5a14b
Turns on the coordinate mode in the Line Processor. This does not change the tracking mode.	
	1a5a14b1

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Mouse buttons become active, Keyboard control characters are sent in input protocol format, 1a5a14b2

Begin standout mode 1a5a15

Send(34B, 56B) 1a5a15a

result: 1a5a15b

All following text written on the screen will be altered in some way from "normal" text. This unfortunately includes characters which go into the TTY simulation window also, so don't leave the line processor in this state indefinitely. Does not change the tracking mode, 1a5a15b1

End standout mode 1a5a16

Send(34B, 57B) 1a5a16a

result: 1a5a16b

Subsequent text written on the screen will be in "normal" mode. Does not change the tracking mode, 1a5a16b1

TENEX RESTARTING 1a5a17

The Line Processor will detect a TENEX restart, by looking for the ten 34B's it sends out at startup time. At that time it will place itself in a state as though the hardware reset button had been pushed, 1a5a17a

start coord tracking 1a5a18

not implemented, 1a5a18a

We may implement a "mouse linking" feature in the future using this and the two following commands. A Line Processor could then be asked to send protocol strings that indicate the mouse movement. It will also plot an "extra" mouse tracking spot, given a stream of tracking coordinates. This will enable two users to see each other's tracking spots, 1a5a18b

stop coord tracking 1a5a19

not implemented, 1a5a19a

linked tracking location (X, Y) 1a5a20

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not implemented,	1a5a20a
open printer	1a5a21
Send(34B, 53B)	1a5a21a
Result:	1a5a21b
Opens the printer for output. Protocol to the printer must be observed: (1) open it, (2) wait for protocol string "request" (below), (3) send strings in response to requests, (4) close it,	1a5a21b1
"Request" string, sent back to the main computer:	1a5a21b1a
34B, 47B, Dev, Count	1a5a21b1a1
Dev is a device code, normally 40B for the printer.	1a5a21b1a1a
Count is the number of characters to send, +40B,	1a5a21b1a1b
Note: The count indicates the Line Processor storage allocated for the next printer string. Sending a longer string will result in a "receive error" (error light on panel).	1a5a21b2
close printer	1a5a22
Send(34B, 54B)	1a5a22a
Result:	1a5a22b
Closes the printer. Actual close will not take place until all characters in the output buffer are printed. That is, the close may follow the last string of characters immediately. It is possible (but very unlikely) that a "request" protocol string may be sent to the main computer after the close is sent to the Line Processor.	1a5a22b1
printer string	1a5a23
Send(34B, 52B, Dev, Count+40B, <characters>)	1a5a23a
Result:	1a5a23b

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The Dev is normally 40B and is ignored by Line Processors with one printer. The Count must not be greater than the sum of the counts in all "request" protocol string not already fulfilled. It may be less. The actual character string may contain any characters. They will be send to the printer without translation or special handling.

1a5a23b1

local input string collection and echo

1a5a24

We will soon release and document a set of commands enabling the main computer to request that the Line Processor collect and echo input text from the user, up to any of a set of "break" characters.

1a5a24a

Application notes:

1a5b

Avoid writing text (or "string of blanks") beyond the end of a line; the display may insert an unwanted line or drop the extra characters.

1a5b1

Avoid positioning the cursor to any $x > X_{max}$ or $y > Y_{max}$.

1a5b2

Avoid doing an insert line on the last line; the display may scroll the entire screen.

1a5b3

Delta Data (DItype=1) must be treated as a special case in the following respect:

1a5b4

When writing text at (x,y) on a line which does not already have text on it up to position x (e.g., after a clear screen or insert line), the applications program must send x/f pad characters after the first character written at position (x,y) . The display takes that long to move a CR symbol into the proper display memory location. (Our thanks to Delta Data).

1a5b4a

NOTE:

1a5c

The Line Processor has a reset button on it (which will be used only on rare occasions). After power up or a hardware reset, the following state prevails:

1a5c1

The screen is clear, the mouse tracking in operation.

1a5c1a

The bug selection stack is empty.

1a5c1b

The full screen TTY simulation is in effect.

1a5c1c

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Coordinate mode is NOT in effect. 1a5c1d

Printer is closed 1a5cie

All TTY simulation Windows currently work as follows:
 Text is inserted in the last line and "scrolling" occurs
 on each line feed (i.e., it does not start on the top line
 of the window as you may prefer). A CR moves the cursor
 to left margin, a LF effects a line break. Typing beyond
 the last character of the line causes a line "wrap" =
 i.e., new text replaces the old line, starting from the
 left margin. The only way to clear a small TTY window is
 to send N line feeds into it, where N is the number of
 lines in the window. 1a5c2

The usual sequence from the applications program will be
 to position the cursor and perform some function, or
 write text, or both. It must end such a sequence with a
 "resume tracking" command. Any broadcast messages,
 links, etc., that come down the line between the cursor
 position and the "resume tracking" will go wherever the
 cursor happens to be. 1a5c3

Normally, broadcast messages and the like will go into
 the TTY simulation window. The difference being that
 they are not preceded by a position cursor command. 1a5c3a

We are modifying the TENEX SOUT (string output) JSYS
 so that the entire string will be placed in the output
 buffer in one piece. This will allow the applications
 program to construct strings so that the cursor is
 always being tracked when miscellaneous text (e.g.,
 system wide messages) happen to be sent to the Line
 Processor, and the screen will never be messed up. 1a5c3b

REENTER code in NLS will clear and repaint the entire
 screen 1a5c4

Mouse tracking will be done by the Line Processor under
 the following conditions: 1a5c5

IF the terminal has received a "resume tracking"
 command since the last position cursor command, AND 1a5c5a

IF there is no input from the TEN, AND 1a5c5b

the mouse coords have changed since the last mouse
 tracking operation, or the cursor has been moved since
 the last mouse tracking operation. 1a5c5c

MEH 24-OCT-74 14:01 24313

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Tracking stops under the following conditions:

1a5c6

A position cursor command comes from the TEN.

1a5c6a

MEH 24-OCT-74 14:01 24313

Line Processor Protocol

(J24313) 24-OCT-74 14:01;;;; Title: Author(s): Martin E. Hardy/MEH;
Distribution: /JBP([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
JBP;

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1p1

JBP 24-OCT-74 14:34 24314

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(J24314) 24-OCT-74 14:34;;;; Title: Author(s): Jonathan B,
Postel/JBP; Distribution: /JAKE([ACTION]) JBP([ACTION]) ;
Sub-Collections: SRI-ARC; Clerk: JBP;

journal citations revisited

lets let each user specify the format that she wishes to receive her journal citations in, this can be done fairly simply by letting each user specify 1 (or 6?) templates using a simple meta language for the citation formats.

(Possibly one template for each of the following:

- articles authored by this user
- articles sent to this user for action
- articles sent to this user for info
- messages authored by this user
- messages sent to this user for action
- messages sent to this user for info)

These templates should exist someplace that the user has easy access to, so that the user can change them at will, they could exist in defined named branches in the initial file or their address could exist as user-options (so several users can share ditation formats).

the following is an example of the level that i am talking about with an example of a template and the citation it would produce.

sample:

```
A[L/",SG+",N+",]":S T <CR>
L["1;wy"] SS D[DDD/ SS DD *= MMM+ *= YY SS HH *; NN *=ZZZ+] <CR>
"To: " C <CR>
"cc: " B[I=S]
```

M

would yield:

```
Victor, K.E.: Sample citation
< LJOURNAL, 11234, 1:wy > Thu 24-OCT-74 13:01-PDT
To: SRI-ARC
cc: chi dia
```

this would be the message body

META-LANGUAGE

alternatives are either stacked vertically or separated by slashes

journal citations revisited

TEMPLATE ::= FIELD / TEMPLATE FIELD

6b

FIELD ::=

6c

*A [BQUAL]

6c1

author; BQUAL will be applied to each author; if BQUAL is not specified it defaults to: ["I+S] to yield upper case idents separated by spaces

6c1a

IF this field were:
this would result in:
C,H,

A[L/",SG+",N+",2S]
Victor, K.E. Irby,

6c1b

*B [BQUAL]

6c2

info distribution list; BQUAL will be applied to each person in the distribution list; if BQUAL is not specified it defaults to: ["I+S] to yield upper case idents separated by spaces

6c2a

*C [BQUAL]

6c3

action distribution list; BQUAL will be applied to each person in the distribution list; if BQUAL is not specified it defaults to: ["I+S] to yield upper case idents separated by spaces

6c3a

*D [DQUAL]

6c4

sent time and date

6c4a

*L [LQUAL]

6c5

link; LQUAL can be used to set the internal address and viewspecs of the link; if it is not specified it defaults to [":g"] for messages and to ["i:w"] for files

6c5a

*M [TQUAL]

6c6

message body; if TQUAL is not specified, then the message is presented as typed

6c6a

*N

6c7

journal number

6c7a

*O [TQUAL]

6c8

journal citations revisited

author organization	6c8a
*R [DQUAL]	6c9
received time and date	6c9a
*T [TQUAL]	6c10
message; if TQUAL is not specified, then the title is presented as typed	6c10a
TQUAL ::=	6d
'+' for upper case	6d1
'-' for lower case	6d2
'/' for first letter upper	6d3
BQUAL ::= ' [BQ1] '	6e
BQ1 ::= BQ2 / BQ1 BQ2	6f
BQ2 ::=	6g
'I [TQUAL] for ident	6g1
'L [TQUAL] for last name	6g2
'F [TQUAL] for first name	6g3
'G [TQUAL] for first name initial	6g4
'M [TQUAL] for middle name	6g5
'N [TQUAL] for middle name initial	6g6
LIT	6g7
LIT ::=	6h
" text "	6h1
' char	6h2
n'S for n spaces	6h3
'<CR> for carriage returns	6h4

journal citations revisited

DQUAL ::= "[DQ1]	6i
default DQUAL is: [DD"-MMM+-YYSHH";NN"-ZZZ+] which is e.g., 24-OCT-74 13:01=PDT	6i1
DQ1 ::= DQ2 / DQ1 DQ2	6j
DQ2 ::=	6k
"M [TQUAL] for month name	6k1
"MM" for numeric month	6k2
"MMM" [TQUAL] for 3 char month name	6k3
"D [TQUAL] for day name	6k4
"DD" for numeric day	6k5
"DDD" [TQUAL] for 3 char day name	6k6
"YY" for 2 char year number	6k7
"YYY" for 4 char year number	6k8
"H" for hour on 12-hour clock	6k9
"HH" for hour on 24 hour clock	6k10
"NN" for minutes	6k11
"SS" for seconds	6k12
"A [TQUAL] for AM or PM	6k13
"Z [TQUAL] for zone name	6k14
"ZZZ" [TQUAL] for 3 char zone name	6k15
LIT	6k16
LQUAL ::= "[LIT]	6l

KEY 24-OCT-74 14:38 24315

journal citations revisited

(J24315) 24-OCT-74 14:38;;;; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /SRI-ARC([ACTION]); Sub-Collections:
SRI-ARC; Clerk: KEV; Origin: < VICTOR, CITATION-FORMAT,NLS;2, >,
24-OCT-74 14:35 KEV ;;;;####;

JAKE 24-OCT-74 18:01 24316

New subscriber to RFCs

(J24316) 24-OCT-74 18:01;;;; Title: Author(s): Elizabeth J, (Jake)
Feinler/JAKE; Distribution: /JBP([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: JAKE;

JAKE 24-OCT-74 18:01 24316

New subscriber to RFCs

Please add Margaret Samaniego (MGS@RAND=RCC) to your RFC distribution list. She is the new Liaison for host RAND-ISD (Dec-71). She will be on my Liaison list if you are picking that off intact. Jake

1

DYN 24-OCT-74 20:13 24317

The Salesman from George Lithograph Will be Here Tomorrow

When Walter Bass was still here, ARC spoke to George Lithograph, a local firm with a good reputation in the printing field, about doing our COM work. Recently they acquired a new COM device, a Singer 6000, and remembered us enough to have a salesman call. I have an appointment with him tomorrow at 2:30, and I'm sure he would be glad to talk with anyone who wants to join us. He has asked for and I intend to supply a sample tape of our output(journal,12214,) and our specifications(journal,14093,).
1

DVN 24-OCT-74 20:13 24317

The Salesman from George Lithograph Will be Here Tmorrow

(J24317) 24-OCT-74 20:13;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOAN([ACTION] Please add this to the dirt
notebook) DIRT([INFO=ONLY]) ; Sub-Collections: DIRT SRI=ARC; Clerk:
DVN;

More On Journal Citations

When I scan my journal branch I find I am normally interested only two things, the title and the author's ident. I am happy with things the way they are but if they were changed I would like to see the full title first, then the ident. I am occasionally interested in the time of delivery, which I can learn from statement signatures, and the distribution, which I can learn from the file header.

1

I agree with Ken that giving users their choice would be nice.

2

I would be very interested in a daily list, say in some central file, of the author and title of all journal items sent (presumably excluding private items). That would be a real community function.

3

The amount of time spent on this trivial question gives me pause. If I wanted to take my time I could produce atleast twenty journal citations from atleast two similar past brouhahas. It seems to me the kind of thing that should be settled by a specialist in an hour's thought. If I didn't know better I would think we have nothing real to do.

4

DVN 24-OCT-74 22:17 24318

More On Journal Citations

(J24318) 24-OCT-74 22:17;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /RLL([ACTION]) KEV([INFO-ONLY]) BAH([INFO-ONLY]) JAKE([INFO-ONLY]) CHI([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: DVN; Origin: < VANNOUHUYS,
MYLIN,NLS;93, >, 24-OCT-74 22:15 DVN ;;; 22128####)

Op. Cit.

I think there are two distinct parts to the journal citation issue.
These are:

- How the citation appears in a users initial file (that is, how
one is notified about a given journal item)

- How the citation appears on the top of the actual journal item,
(or how one identifies a journal item after he has executed the
jump to journal link)

In the first instance, I agree with KEV that user options would be
nice. I would like to see the default format be as close to sndmsg
as possible - not because I think sndmsg is that great, but because
many users get confused going from one form to the other and tend to
opt for the easiest (particularly when they are novices).

In the second instance I think we should follow an accepted
standard, so that one of our journal citations stacks up against
other published journal citations, and can easily be included in a
bibliography without having to run a program or do an extensive
rewrite. For this I would recommend the American Standards format
which goes something like:

Engelbart, D. C., and Jones, S. A. Who says people at Arc are
KWACS? NLS Online Journal, Vol. 7, No. 23456, 28-32 (June 1974).

The journal could have volumes corresponding to files or
corresponding to months, or whatever was reasonable. Pages would be
a little harder to establish, but not impossible. No. could refer to
NIC number or could be omitted in the body of the reference (it
usually refers to the issue no. and besides nic numbers are
frequently not consecutive). The NIC number could then be added at
the beginning or end. This citation could be followed at a lower
level by all other non-citation type information such as to whom it
was distributed, etc, as well as the text of the journal item. That
way one could easily look at a journal file (or volume) with one
level showing and see a nice readable bibliography.

There is currently nowhere (even in the formatted catalog listings)
that a truly useful (i.e., meaningful to outside readers) journal
citation exists.

Using the journal header outlined above would make it much easier to
mix xdoc journal items and online journal items together. Persons
wishing to cite journal references according to some given journal or
society standards could have a choice of user programs that would
add the proper embellishments (such as quotes around the title, or
underlining for COM, etc.) By using the American Standards citation

JAKE 24-OCT-74 22:58 24319

Op. Cit.

we would guarantee that the significant data elements would be available for use,

6

JAKE 24-OCT-74 22:58 24319

Op. Cit.

(J24319) 24-OCT-74 22:58;;;; Title: Author(s): Elizabeth J, (Jake)
Feinler/JAKE; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: JAKE; Origin: < FEINLER, JOURNAL,NLS:4, >,
24-OCT-74 22:52 JAKE ;;;,####;

More care about spelling in our written communications

For the augmentation of recorded dialogue to work well, certain elements of the records must be as accurate as possible. I refer particularly to the titles of Journal items.

Dirk, you happen to be the one person whose performance in that regard most frequently comes to my attention. This message is specifically directed to you; please take more care. To make errors in message titling is peculiarly at odds in both spirit and practice with your professional specialty of technical writing -- accurate expression, and control (e.g., subsequent indexing) of the communications are things in which you should in fact set examples for the rest of us. And, in your new role as DDPGS community Nucleator, you will be put even more into the spotlight.

Examples:

J24-1221 DVN: Faileur to properly Journalize the NSW proposal
Sent: 24-OCT-74 08:41 24290

J24-2033 DVN: The Salesman from George Lithograph Will be Here
TMMORROW
Sent: 24-OCT-74 20:13 24317

J23-1429 VANNOUHUY'S: Architechts
Distribution: ENGELBART, watson, norton
Sent: 23-OCT-74 1429-PDT

J21-0849 VANNOUHUY'S: Meeting wi h Nielson on Approach to Helping
Gunter AFB with Documentation
Distribution: ENGELBART, vannouhuys
sent: 21-OCT-74 0849-PDT

[Note: Gunter, not Gunther]

J17-1356 DVN: Proposal Possibility: Output Processor Direct to
XGP [To add this item to DPCS subcollection]
Sent: 17-OCT-74 12:53 24237

So, not only toward a general "cleaning up of your act" as an AKW user, but also as being important specifically to your new role, let me quite directly request you to do whatever it takes in your working life to eliminate titling errors in your communications. Also, I think that reducing the typos in the text of your more important communiquees should be given serious attention.

I think that it is probably inefficient to worry about the neatness and typographical correctness of the quickie messages; ambiguities or content errors are something else, though. But, in

DCE 25-OCT-74 09:05 24320

More care about spelling in our written communications

more important communiqes, and in all titles, I really don't want
to continue seeing careless text from you, Dirk.

2c

Dick and Jim: This is a general sort of problem among AKW users
that I would appreciate your continuing efforts to upgrade.

3

Thank you all, Doug

4

DCE 25-OCT-74 09:05 24320

More care about spelling in our written communications

(J24320) 25-OCT-74 09:05:;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /DVN([ACTION]) RWW([INFO=ONLY])
JCN([INFO=ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DCE;

DCE 25-OCT-74 09:49 24321

To Pete Tasker: his visit, DoD's COTCO, possible AKW experimentation,
and two new questions

For restricted circulation, Jim and Dick to provide answers to 1a4
and 1a5.

DCE 25-OCT-74 09:49 24321

To Pete Tasker: his visit, DoD's COTCO, possible AKW experimentation,
and two new questions

Pete: I received your message (recorded just below). I am asking
Jim Norton to answer your first question, and Dick Watson your
second,

J21-1854 BOSLEY: NLS - From Pete Tasker
Distribution: ENGELBART AT ARC
Sent: 21-OCT-74 1854-PDT

Dear Doug:

Thanks for taking the time out of your flap on Friday to talk
to me. As I mentioned then, I look forward to being able to
work with you.

As I was coming back on the plane (Saturday) a few questions
occurred to me:

1. What amount of computer power is required to support a
"slot". I know this depends on the use of the slot -- so
answer in terms of how many slots a TENEX of "x" configuration
supports with what you consider reasonable response time (two
seconds?),

2. What are the specific elements of ongoing ARC development
(e.g., hardware front-end) and what are the schedules?

I'm sure that other questions will follow as I think more
about how to fit the NLS stuff into our environment.

Thanks again,

Pete

Robert Lieberman and I learned a great deal of useful information
from you, and generally enjoyed your last Friday's visit very much.
It was particularly enlightening to learn about the "two COTCOs"
(differentiated below with my own acronyms and descriptions):

In Your Words, COTCO (probably) stands for "Consolidation Of
Telecommunications on Oahu,"

DCOTCO -- DoD's CoTCO, stemming from a directive of the DoD
telecommunications czar some years ago. Over-all, in DoD, COICO
(DCOTCO) is headed by the Assistant Secretary of Defense for
Telecommunications and Command & Control (DTACCS) -- currently a
Mr. Reed. CINCPAC's J6 Directorate (?), of which Brig. General
Williams recently took command, has a primary stake.

DCE 25-OCT-74 09:49 24321

To Pete Tasker: his visit, DoD's COTCO, possible AKW experimentation, and two new questions

Early in the DCOTCO activity, a team of military guys in CINCPAC's J6 conducted a study. You implied that their data is about the only thorough-study data available.

2b1

Also, I gathered that NAVTELCOM currently has a proposal in the last stage of review by JCS for a DCOTCO plan. You mentioned that the concept of "writer to reader service" seemed heavily involved, and we conjectured on the difficulty of providing basic encryption services if indeed an early step tried to give this w-t-r service.

2b2

ACOTCO -- ARPA's COTCO, a project aimed at coming up with something, useful for DCOTCO, that makes maximum use of ARPA's new technology. In the past, we had only been aware (and at that, peripherally) of ACOTCO, and thought that that was THE COTCO.

2c

ISI's "COTCO Study" (XDOC -- nnnn,) drew heavily from the earlier study by the J6 military staff.

2c1

As we understand it now, your MITRE team (about 6 people), is part of a larger "Project X" on OAHU, also including about 5 military people. Project X has a main task that isn't directly centered upon DCOTCO -- but the Project is operating under J6, and your team does consider it relevant to make recommendations now to J6 about an evolutionary approach toward your project's longer-term topics by adopting some near-term on-site (like within J6 activities) "experimentation" -- and that the experiments would bear upon the J6 DCOTCO activity.

3

I gathered that Project X is generally dealing with questions of Command & Control needs and possibilities over the next 10 to 15 years; also, you seem to have an evolutionary approach to the subject (the latter facet is of critical significance to us, by the way). Chuck Sheehan (MITRE guy, I gathered) is site director of the project. Admiral Gaylor (pronounced "Guyler") is CINCPAC Commander now.

3a

People speak of C4 problem: Command, Control, Communication, and Computers.

3a1

In J6, a Colonel Carter is the contact guy for your project. Apparently, as head of J6's Systems planning, he reports directly to General Williams.

3a2

Your concepts of first-stage experimental steps would involve every-day information-handling tasks rather than aim for Command & Control, crisis-management functions.

3b

To Pete Tasker: his visit, DoD's COTCO, possible AKW experimentation, and two new questions

You mentioned that, whatever modernized information-handling techniques will evolve in the larger environment on Oahu, they would very likely be based on a specially provided TENEX -- perhaps a dual set for high-redundancy.

3b1

You also mentioned that GSA is pushing for standardizing on a line of terminals, which would impact on the evolutionary possibilities. For instance, you mentioned CRT terminals of the \$2K bracket, with some basic local editing capability. I think you said that a Delta Data 5000 looked like what your potential experimentation would have to (get to?) make use of. (Did you mention that there were 50 of them on order?)

3b2

Also apparently embedded in the evolutionary stages on Oahu would be a requirement that any local computer Network be an upward-compatible sub-net of WWMCCS's PWIN (Prototype WWMCCS Intercomputer Network) design. I gathered that the flexibility of this Net would be hard to predict (possibly limited), and that the WWMCCS computers weren't likely to have very flexible or interactive operating systems (all supporting your notions of special TENEX facility underlaying the information-handling experiments). You mentioned that the terminal-handling computers would be Honeywell 716s.

3b3

The purpose of your last-Friday visit to ARC was to explore the feasibility of ARC's AKW tools and techniques, and of our Utility services, for supporting some of the conjectured experimentation. I think that our mutual conclusion was that they were feasible -- e.g., using a slot or two from the Tymeshare-based Utility, serviced over the ARPANET to Oahu, and used within the J6 environment for some of their "open" work (real work),

3c

We also discussed enough of ARC's experiences and philosophy to develop a clear mutual understanding about what we'd recommend in the way of "local workshop architects" among the Utility users. We are very pleased at the way you seemed to accept our position and be willing to consider integrating these usage-evolution and user-evolution approaches into your tentative plans.

3d

ARC would benefit considerably if, as seemed probable from our discussion, your team and some of the J6 people carry on a serious, exploratory application of our AKW tools and techniques there in the COTCO homeland.

4

The early, exploratory service can be provided over the ARPANET from our Tymeshare Utility machine(s); and I'm sure that Jim Norton's guys would be intrigued by the big-water-gap liaison problem (opportunity) in this exploratory stage, and that they

To Pete Tasker: his visit, DoD's COTCO, possible AKW experimentation,
and two new questions

also would be very much interested in the possible business
challenge of later installing and maintaining NLS in a computer
embedded in your local Net -- if the first-stage results warranted
expanded "experimentation,"

4a

Did we understand that expanded experimentation might move into
some of the activities of J3, CINCPAC's Operations Directorate,
within which the Command Center is located?

4b

Also, in the process of your exploration, and especially in any
successive expansion of the "experiment" into your own Net, I'm sure
that Dick Watson's Development Group would be interested in
discussing and helping with some of the needs and problems (e.g., we
talked of Mapping NLS Backend into other operating systems than
TENEX, and of "reaching through" NLS into large data-base systems).

5

If your interest moves toward explicit matters -- such as service
features, costs, new-slot availability timing, etc for our Utility --
it would be more efficient if you contacted Jim Norton directly. He
manages that side of our activities, and is the only one that can
provide horse's-mouth answers and move directly toward commitments.

6

You also mentioned that your MITRE management is backing some
special efforts toward the kind of modernized information systems
about which our day's discussion principally centered. I would like
to extend an invitation via you to them: if there is any quiet help
that we can provide -- I guess mainly by sharing demonstrable
functions and/or experience-based perceptions -- please call on me.

7

It is slow process, to change perceptions and attitudes; it is a
long, slow, road ahead in the best of future worlds, to see the newer
technological capabilities come to be harnessed effectively; a small
fraternity is beginning to see, and we need to help each other.

8

In any event, Your visit was very interesting and worthwhile for us.
I hope that whether or not any near-future business relationship
develops, we will find some way to keep in touch.

9

Very best regards, Doug

10

DCE 25-OCT-74 09:49 24321

To Pete Tasker; his visit, DoD's COTCO, possible AKW experimentation,
and two new questions

(J24321) 25-OCT-74 09:49;;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /JCN([ACTION]) RWW([ACTION]) BC([
INFO=ONLY]) RLL([INFO=ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
DCE;

CHI 25-OCT-74 09:50 24322

seminar on nls-8 training experience?

Jim, are you going to give a seminar on your experiences training new and old user's in nls-8? If so, I think it should be soon so that the experiences will still be fresh in your mind. I think that a seminar will be a much more alive way to transfer your experiences to us but I also think a written record is valueable. Therefore I would suggest that someone take careful notes (maybe even transcribe it from a tape recording) and that you work these notes/transcription into a reasonable written presentation of the experience and put it in the Journal. -- Charles.

CHI 25-OCT-74 09:50 24322

seminar on nls-8 training experience?

(J24322) 25-OCT-74 09:50;;;; Title: Author(s): Charles H. Irby/CHI;
Distribution: /JHB([ACTION]) DCE([INFO-ONLY]) RWW([INFO-ONLY])
JCN([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: CHI;

CHI 25-OCT-74 10:15 24323

some NSW Frontend related documents

The following documents are being set up as working design/issue
documents for the NSW Frontend (They are in rough states now but
should get more refined as time goes on):

(nsw=sources, fe=design,)	Current Design	1a
(nsw=sources, fe=issues,)	Current unresolved issues	1b
(nsw=sources, doc=cml,)	Documentation for the current CML	1c
(nsw=sources, split,)	Current design and issues for NLS split,	1d

CHI 25-OCT-74 10:15 24323

some NSW Frontend related documents

(J24323) 25-OCT-74 10:15;;;; Title: Author(s): Charles H. Irby/CHI;
Distribution: /RWW([INFO-ONLY]) HGL([INFO-ONLY]) DSM([
INFO-ONLY]) KJM([INFO-ONLY]) RLB2([INFO-ONLY]) JEW([
INFO-ONLY]) JBP([INFO-ONLY]) EKM([INFO-ONLY]) KEV([INFO-ONLY
]) DIA([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: CHI;

Journal Citation Recomendations

Robbert, I have the following recommendations re Journal citations delivered to users:

- 1) The recipient should be able to choose among several citation formats for mail delivered to him, or perhaps make up his own ala KEV's suggestion (This desired Citation format could be stored in master ident file)
- 2) The distribution lists should be made available to the recipient
- 3) the [ACTION] and [INFO-ONLY] fields should not be removed from the citation even though they are deposited into action and info branches (because if the user moves them he loses this info) and
- 4) I would like a citation format that had the author and title (as much as would fit) in the first line for t-viewspec.

CHI 25-OCT-74 10:26 24324

Journal Citation Recomendations

(J24324) 25-OCT-74 10:26;;;; Title: Author(s): Charles H. Irby/CHI;
Distribution: /RLL([ACTION]) ; Sub-Collections: SRI=ARC; Clerk:
CHI;

Functional Documents and Journal Numbers

A kind of document exist in the world of technical publications called a functional document. It is a document that retains its identity but changes content. ("Identity" usually means title, subjectmatter, and identifiers like library numbers.) The airforce document that Elizabeth spoke of at a recent meeting that changes 92% of its pages a year is an example.

Functional documents must be maintained rather than merely published, and that is always a problem. There is a particular question in the context of the journal. Stated simply, the question is: Should the journal number belong to the document, to its revisions, or some combination?

Jeanne North Marilyn Auerbach and others struggled with this problem, e. g. (journal, 13683.). The most recent solution for userguides was agreed upon in November of last year (journal, 20542.). (20542) essentially established that the document always have the same number and that the journal item that bears that number is merely a link to the current online version maintained anyway in <Userguides>. Drafts may be journalized separately. When (20542) was written there was general discussion of the matter.

Numbering of the TNLS and DNLS User's guides has been handled in this manner subsequently.

It recently came to Jim Norton's attention that we were about to institute this procedure for userguides that are soon to emerge from the draft stage. He believes that the plan we have been following violates an ARC policy that each draft of a document should have a separate journal number, and urges strongly that instead we journalize separately the complete text of every finished version that contains substantial revisions. We might separately make a journal item with a link to the current file in <Userguides>.

Jim's intercession raises several issues:

Fundamentally his suggestion would mean that ARC does not have functional documents in the strict conventional sense. It's not clear how much this matters. I welcome suggestions and opinions.

Secondly the setup described in (20542,) exists and has been used (although not very much and I suppose few users are aware of it). How lightly do we change existing setups of this kind?

Third, although I don't remember talking with Jim about establishing the plan in (20542), he was on distribution for it; how do we get people to participate in planning in the planning stage?

1

2

3

4

5

6a

6b

6c

DVN 25-OCT-74 13:22 24325

Functional Documents and Journal Numbers

Fourth, if the people involved continue to disagree, where does
the buck stop?

6d

DVN 25-OCT-74 13:22 24325

Functional Documents and Journal Numbers

(J24325) 25-OCT-74 13:22;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOANT [ACTION] please add this to the dirt
notebook) DCE([ACTION] Becausee of your interest in the integrity of
the journal I am particularly interested in your thoughts) RWW([
ACTION]) JCN([ACTION]) DIRT([INFO-ONLY]) ; Sub-Collections:
DIRT SRI-ARC DPCS; Clerk: DVN; Origin: < VANNOUHUY'S,
NUMBERS,NLS;2, >, 25-OCT-74 13:19 DVN ;;;###;

Conversation with Connie McLindon about ARPA and ISI-XGP

Last week Elizabeth Michael was asked to look into the possibilities of joining the Output Processor to the XGP printer at ARPA perhaps through the ISI-XGP System which in turn is an adaptation by John Vittal of ISI of a system originally written at Carnegie-Mellon by Harold von Loeren and George Robertson. Vittal documentation is available as NLS file < DOCUMENTATION, XGPDOC.NLS;1, >. Since Elizabeth is on vacation I called Connie to try to understand what the people at ARPA need.

As I hear what Connie said, they are now using the XGP at their office through Office-1. They like the product but not the process; the process is apparently complicated, unreliable, and expensive in slot time. They have discussed these problems with Vittal and he is working on a short-term fix which consists of making the ISI-XGP system into a regular TENEX subsystem, simplifying commands and maybe improving reliability. He should be done in something like six weeks. She has asked for a long-term plan for more fundamental improvements.

In particular she is interested in printing NLS files with the XGP, a feat which she asserts Susan Lee has accomplished but which is difficult because the NLS files need first to be made into sequential file via a and then modified to fit the specifications of ISI-XGP. Connie brought this matter up with Doug during his recent visit. She was mostly interested in printing NLS files more easily and being sure some one on the Office-1 staff was in touch with the use of ISI-XGP, made sure that the directory <XGP> at Office-1 had up to date release, etc. Doug however suggested we might want to go directly from our Output Processor to the XGP. Conversation between Elizabeth and Vittal suggest we might collaborate with ISI on the long-term proposal.

A considerable range of choice is available to ARPA and to us in this situation, from a patch of the ISI-XGP to improvement that is not related to NLS, to making a system that translates the output of the Output Processor into a form that the XGP could print. It seems appropriate to me to offer a shopping list of features and costs to ARPA. We could prepare jointly with ISI or not.

Clearly some one would have to pay for whatever work emerged. The short-term ISI work and perhaps the long-term is covered by the miscellaneous clause in their office systems support contract. Connie thought it was at best possible that other money could be found at ARPA to support our work.

It's worth noting that the fit between ISI-XGP and the Output Processor is not perfect. For example they justify mono-spaced lines by inserting spaces between words. In the belief that the resulting page is uglier than a page with an uneven edge, we have never done

DVN 25-OCT-74 13:39 24326

Conversation with Connie McLindon about ARPA and ISI-XGP

so, Connie thinks ARPA could get on without that feature. They do not offer variable type size - it seems very likely the XGP could print variable type size. They offer a font called News Gothic and fonts closely resembling Times Roman and Courier.

6

DVN 25-OCT-74 13:39 24326

Conversation with Connie McLindon about ARPA and ISI-XGP

(J24326) 25-OCT-74 13:39;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOAN([ACTION] another for the DPCS
notebook, you can delete your file) JCN([ACTION]) RWW([ACTION])
EKM([ACTION]) DPCS([INFO-ONLY]) SRL([INFO-ONLY]) ;
Sub-Collections: DPCS SRI-ARC; Clerk: DVN;

JBP 25-OCT-74 13:52 24327

Visit by Benoit

Jack Benoit of MITRE is planning to visit here on 15-NOV-74 and would like to discuss nsw protocols and front end implementation, i may be able to handle it alone by that time but may need your help for part of the day,

--jon,

1

JBP 25-OCT-74 13:52 24327

Visit by Benoit

(J24327) 25-OCT-74 13:52;;;; Title: Author(s): Jonathan B,
Postel/JBP; Distribution: /JEW([INFO=ONLY]) CHI([INFO=ONLY])
RWW([INFO=ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JBP;

SRL 26-OCT-74 09:42 24328

XGP Type Fonts - Comment on (24326,)

The XGP does have variable type size and fonts - there are a dozen or more fonts available - if you'd like I can send you samples of all available fonts (there is a book with all these).
1

SRL 26-OCT-74 09:42 24328

XGP Type Fonts - Comment on (24326,)

(J24328) 26-OCT-74 09:42;;;; Title: Author(s): Susan R. Lee/SRL;
Distribution: /JOAN([ACTION]) JCN([ACTION]) RWW([ACTION])
EKM([ACTION]) DVN([ACTION]) DPCS([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DPCS; Clerk: SRL;

Schedule for the Introduction of NLS-8 to Office-1 Users

As most of our Office-1 users already know, the ARC Development staff has been working on a new version of NLS, now known as NLS-8, for many months. It is about ready for release by the ARC Applications Group to all NLS users at Office-1, after extensive trial use and bug-seeking by our staff. Also, an advance version of NLS-8 has been used at Office-1 on a trial basis by the Workshop Architects from each user organization, starting in early September.

On Tuesday, October 29th we will bring up our most current, checked-out version of NLS-8 for all Office-1 users as the start of a one-week invited preview period.

NLS-8 will be accessed as "PREVIEW" until November 5th. At that time it will be accessed as "NLS."

during this preview period, ARC staff will be working at correcting problems that may be encountered in NLS-8. Thus, the preview version running at Office-1 may undergo some slight changes as the period progresses.

Old NLS (NLS-7), now in use, will continue to be accessed as "NLS" until November 5th. At that time, it will be accessed as "OLDNLS" until Tuesday, November 19th, at which time we plan to remove OLDNLS from active use at Office-1.

NLS-8 documentation is expected to be ready and delivered to each site's Architect by about October 29th.

This will include an NLS-8 Cue-card, Primer, Command Summary, and Old-to-New Command Listing. In addition, several teaching aids for NLS-8 are being developed.

NLS-8 questionmark and HELP features will also aid users in adapting to changed and added features.

Training sessions have already been held at some sites to provide changeover assistance. This activity will continue as appropriate.

We will direct the Office-1 users' attention to the NLS-8 introduction schedule by a login message on Tuesday October 29th.

Our aim is to introduce NLS-8 to all users, while providing for the availability of NLS-7 in a way that will permit users who now rely on NLS-7 in their daily work to learn NLS-8 while still being able to function in demanding situations with their knowledge of NLS-7. It is important, however, that we minimize

JCN 27-OCT-74 11:05 24329

Schedule for the Introduction of NLS-8 to Office-1 Users

the period of running both versions, for this situation increases
the load on the system. 5

With the above plan and schedule, we hope to encourage as smooth
a transition as possible for both experienced and new users. 6

JCN 27-OCT-74 11:05 24329

Schedule for the Introduction of NLS-8 to Office-1 Users

(J24329) 27-OCT-74 11:05;;;; Title: Author(s): James C. Norton/JCN;
Distribution: /KWAC([ACTION]) JDH([INFO=ONLY]) RLL([INFO=ONLY]) SRL([INFO=ONLY]) MEH([INFO=ONLY]) JCP([INFO=ONLY]) MLK([INFO=ONLY]) CHI([INFO=ONLY]) ; Sub-Collections: SRI-ARC KWAC;
Clerk: JCN; Origin: < NORTON, PREVIEW,NLS;1, >, 27-OCT-74 11:03
JCN ;;;;
#####;

RLL 27-OCT-74 12:34 24330

RUde office=1 ssout down

26-OCT-74 2104-PDT LIEBERMAN: RUde office=1 ssout down,
Distribution: FEEDBACK AT OFFICE=1, FEEDBACK, NORTON, lieberman
Received at: 26-OCT-74 21:04:39 1

I have the occassioon to be on OFFICE=1 at night. Generally
forgetting he time, without warning the system ssuts down at 9:00
PDT. OK, maybe the TNLS users don't like too many typeout but, I
think one five minute warnin would be nice. ia

RLL 27-OCT-74 12:34 24330

RUde office=1 ssout down

(J24330) 27-OCT-74 12:34;;;; Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /JCP([INFO-ONLY]) ; Sub-Collections:
SRI=ARC; Clerk: KIRK;

MAP2 27-OCT-74 12:56 24331

Set NNLS file private command

18-OCT-74 0829-PDT PLACKO at OFFICE-1: Set NNLS file private command

Distribution: FEEDBACK AT ARC, hopper at arc, placko
Received at: 18-OCT-74 08:30:22

I just tried to set one of my files private this morning (complete with what I believe to be the proper access list "AccessList: MAP2;") and the response i received was "not implemented". Double check please.

-- Mike

1

1a

MAP2 27-OCT-74 12:56 24331

Set NNLS file private command

(J24331) 27-OCT-74 12:56;;;; Title: Author(s): Michael A.
Placko/MAP2; Distribution: /FEED([ACTION]) ; Sub-Collections: NIC;
Clerk: KIRK;

FDBK 27-OCT-74 13:03 24332

Update Compact

Update Compact can sometimes cure a bad file. Other than that, I
don't think it helps anything except disc space.

1

FDBK 27-OCT-74 13:03 24332

Update Compact

(J24332) 27-OCT-74 13:03;;;; Title: Author(s): ARC FDBK
Feedback/FDBK; Distribution: /SRL([INFO-ONLY]) ; Sub-Collections:
SRI=ARC; Clerk: KIRK;

JHB 28-OCT-74 08:05 24333

Documentation Request

Martin, Please have all the pertinent documentation concerning the Lineprocessor and associated displays sent to Mike Wingfield. Include the Workstation Guide, The hardware schematics and design docs, and your recent publications on the matter. Thanks, Jim (Address on link).

JHB 28-OCT-74 08:05 24333

Documentation Request

WINGFIELD (Lt. Mike) NSW Project Engineer 1

RADC-ISIM
Rome Air Development Center
Griffiss AFB, NY 13441 1a

JHB 28-OCT-74 08:05 24333

Documentation request

(J24333) 28-OCT-74 08:05;;;; Title: (Unrecorded) Title: Author(s):
James H. Bair/JHB; Distribution: /MEH([ACTION]) MAW([INFO=ONLY])
; Sub-Collections: SRI=ARC; Clerk: JHB;

DVN 28-OCT-74 09:21 24334

Please Send Sample XGP Fonts

Glad to hear XGP can change type sizes. Please do send samples of
all available fonts.

1

DVN 28-OCT-74 09:21 24334

Please Send Sample XGP Fonts

(J24334) 28-OCT-74 09:21;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOAN([ACTION] for DPCS notebook) SRL([
ACTION]) DPCS([INFO-ONLY]) ; Sub-Collections: SRI=ARC DPCS;
Clerk: DVN;

Lineprocessor: Needs and Recommendations

On Sept. 26, '74 there was a meeting concerning the problems we are having debugging remote Lineprocessors. The discussion centered around problems brought out by Martin's file (hardy,lpsysneeds.). Attendees: RWW, CHI, DIA, MEH, KEV, JDH. The points of action or recommendation that Development will take are discussed here. We will assume that Martin will be the pusher for these things, except as noted.

NLS will set LP in coordinate mode,

It is possible to enter NLS with the Lineprocessor out of coordinate mode - in which case the mouse buttons don't work etc. It is not obvious to the user what is wrong - he must notice that status light three is off. This is a trivial fix, which CHI has taken care of.

Need Documentation (improve Lineguide)

The Lineguide document needs the following:

An initial section should simply tell the user what he needs to know to use a Lineprocessor workstation. It must be very short and simple.

Another section must tell the user what to do to find out why (and if) the workstation is not working properly. This must start from the top down, providing a checklist that will eliminate dumb oversights as well as find serious malfunctions. It must explain to the user exactly what he has to do about any discovered problems.

A third section should be addressed to a savvy person at the workstation site that is more or less in charge of the workstation, such as the site architect. It must tell that person how to change PROMS, how to hook the thing up in different situations, how to find out if the right set of PROMS is in the thing, etc.

The manual should include the following piece of information:

Doing "C and hitting system reset, changing the terminal type or doing other mischievous things will screw up the Lineprocessor operation. The "C is useful for very few operations and GOTO TENEX is recommended for most things.

Need Procedure and Mailing List for new PROMS

persons in charge or site architects for every Lineprocessor workstation in the field must be on a mailing list for

1

1a

1a1

1b

1b1

1b1a

1b1b

1b1c

1b2

1b2a

1c

Lineprocessor: Needs and Recommendations

Lineprocessor updates, and must know how to change PROMS etc.
We must develop a procedure for making changes.

ic1

Development will provide two diagnostic programs

id

We will write a diagnostic program that the user sitting at the Lineprocessor can run to find out superficially if everything is working properly. To be assigned to Development person.

id1

This program will interrogate the Lineprocessor, find out what kind of terminal is there, and check with the user that it is indeed that type, in the right mode, and everything else we can think of.

id1a

The program will check other trivial things such as the terminal type -- and help him set it to Lineprocessor if it is not right.

id1b

As a further step, it will ask the user to push buttons etc., to see that the hardware is working properly.

id1c

The program will be user-oriented, avoid technical terms, provide help, and give the user advice on what to try and what to look out for, etc.

id1d

The other diagnostic program already exists (lp echodriver) and will be modified to be more easily used with LP's on TIP's (by JDH). This program requires that the user go to another terminal, or call someone at ARC to run it.

id2

The Lineprocessor program has been modified so that the echo test function is incorporated in the standard Lineprocessor program and can be invoked by flipping a sense switch. This means one extra PROM in all LP's (total=7).

id2a

Development needs to have one of every device in the "world"

ie

We need to have AVAILABLE for testing purposes, one of every type of display and printing device that is used out there in the field. We also need to duplicate the hookups as closely as possible (we already do this pretty well).

ie1

We must be able to duplicate problems in order to find bugs.

ie2

phase out Delta Data's

if

Development feels (as do some individuals) that Delta Datas are not adequate Lineprocessor Workstations because they are so slow (i.e. delete line time). Also, they are outrageously

Lineprocessor: Needs and Recommendations

expensive compared to others. In addition they have some peculiar properties that require "special case-ing" inside NLS -- a real drag for programmers and a source of bugs. We would like to recommend to all Delta Data users that they get rid of them ASAP and when none are left we will not support them any longer.

1f1

Better error reports

1g

The error reports we have been getting have not contained enough information. Also, some automatic error reporting could be done:

1g1

We need a feedback mechanism for Lineprocessor trouble reports. For each trouble report, it is necessary to know:

1g1a

What site, what type of display, Date, time

1g1a1

Connection via TIP (which one?) modem?

1g1a2

Speed of the connection

1g1a3

which host were they running NLS on?

1g1a4

Which version of NLS

1g1a5

Detailed description of the problem

1g1a6

The Lineprocessor program has been modified so that it would notify NLS when it discovers an error (and give type of error). Such occurrences will be written on a file. Also, NLS will keep track of frequency of errors and suggest to the user that he run such and such test program if they get out of hand.

1g1b

In any event, Applications needs a diagnostic technician to collate the errors reported, both manually and automatically, and to oversee the whole mess. That person should be ready to fly to a site to identify the problem if necessary. He/She should have both hardware and software knowledge about the Lineprocessor, as well as software knowledge about NLS.

1g1c

Lineguide distribution and "debugging"

1h

It is unreasonable that so many Lineprocessors are out in the world without any documentation or instructions about how to run them. Even SRI people in Washington do not have copies of Lineguide.

1h1

DIA's original description of Lineprocessor use, that was to be incorporated into a user-oriented manual, was written in March 74. ... ih2

LineGuide must be fixed up as soon as possible and copies given to selected Lineprocessor users in order to get their comments on its usefulness. ih3

Applications should market LP's differently 11

Applications should make users aware that we are still field testing Lineprocessors and that they must expect a certain degree of trouble and dialogue with us to get things straight. iii

Terminals must be setup so that the user is aware of the Lineprocessor's existence, so that she can see the status lights and see if errors occur. They cannot shove it in a corner and forget it at this stage of development. iiiz

The copy printer connection is just a multiplexing gimmick for users that have a high speed line and would like to get hardcopy without using another line. It is useless to anyone with a TIP onsite (or a free high speed line), since they can just connect a printer directly to the NET and print faster. iiiz

To make LP hardcopy printers more useful, Development will make a version of the LPPRINT program that will run at 1200-2400 baud. However, that program will not allow simultaneous use of the display. To be assigned to development person. iiiz

Automatic restart in LP issue 1j

Development feels that having the LP do a system reset automatically when it discovers an error is a bad idea because: ij1

The user should be aware that there really is a problem. ij1a

It is not at all clear that we can make it work effectively all the time, and there is nothing worse than automatic disaster. ij1b

Such a feature would be of little value if the entire system worked correctly nearly all of the time, which will be the case if we can isolate and fix the problems. ij1c

The user should not have to intervene - not because the system covers up problems, but because it works right. ij2

Making the invisible visible

1k

NLS will recognize a viewspec that will show invisible characters - by writing funny characters in place of invisible characters. The user will have to re-create the screen to see them, and then again to get them to go away. To be assigned to development person,

1k1

Slowness:

11

There has been some criticism of the speed of remote Lineprocessor Workstations. Here are some reasons for apparent slowness:

111

We believe that OFFICE-1 does not give Lineprocessors lots of output buffer space. This is critical. JDH will check into it and fix.

111a

Delta Data's are very slow in deleting lines -- more than an order of magnitude over Hazeltine. It hurts.

111b

There are many more NET hops to OFFICE-1 from the east coast than from SRI. This introduces some delay, but it should be compensated to some extent by TIP output buffer size,

111c

The TIP buffer sizes have been cut in half from our original buffer size requests. Our original requests may have been too small. All buffers are certainly too small now,

111d

Modem-TIP connections

1m

There are problems in modem-TIP connections and evidently each such connection has to be checked out by Rod and Martin.

1m1

Remaining Bugs

1n

Here are some remaining problems we are currently after:
(DIA,MEH&JDH)

1n1

A strange and repeatable string comes out to terminals (only Delta Data?) that are connected to a TIP via a 208 modem. Seems to be associated with the clearline command but not necessarily.

1n1a

DIA 28-OCT-74 15:01 24335

Lineprocessor: Needs and Recommendations

(J24335) 28-OCT-74 15:01;;;; Title: Author(s): Don I. Andrews/DIA;
Distribution: /MEB([ACTION]) JCN([ACTION]) SRI-ARC([INFO-ONLY
]) ; Sub-Collections: SRI-ARC; Clerk: DIA; Origin: < ANDREWS,
LPNEEDS.NLS;5, >, 28-OCT-74 14:56 DIA ;;;###;

NDM 28-OCT-74 15:34 24336

Opinion on Journal Citation Delivery Format

Modifies slightly format listed as NDM's choice in (24284,).

Opinion on Journal Citation Delivery Format

Allowing people to place whatever fields wherever in their personal citation delivery format sounds like a great idea. But to make sort keys, extraction programs etc, work, you will have to uniquely delimit the fields somehow. That can look messy. Another possibility might be to offer a limited number of formats, each recognizable by programs working on citations.

I think the decision process should go as follows:

1) decide what fields we want in every citation.

2) decide which are the two or three most important for a one line view.

3) decide on overall format.

I have ordered the proposed fields according to my priorities, including some comments here and there:

TITLE the title or subject of mail item

In my experience, 35 characters of the title is enough to include or recognize at a glance 95% of the titles.

AIDENT author ident

Very important. Seem to range typically from 3 to 11 characters.

DATE day, month, and year when mail item was sent. (dd-mm-yy)

I sort my dialog by date and time,

1) As a primary access field.

2) To trace the history of a dialog.

3) To integrate journal and sndmsg dialog.

TIME time that the mail item was sent (xx:xx:xx); 24 hour clock or AM/PM

PRO: Dialog moves more quickly than once a day; need to order dialog within a given day. This must accompany the date,

ZONE time zone

PRO: The time is meaningless without this.

DIST distribution list of idents

3f

PRO: In participating in a dialog, I need to know who else is currently involved and might be interested in my response.

3f1

PRO: If an item was sent for ACTION to the world, I want to give it lower priority than an item sent just to me for ACTION.

3f2

I also want to be able to distinguish between primary recipients (To, or ACTION) and secondary recipients (CC or INFO-ONLY), whether by placing them in separate fields or uppercase primary, lowercase secondary.

3f3

TO: distribution list of idents receiving mail as action

3f3a

CC: distribution list of idents receiving mail item as information only

3f3b

The distribution list should be exhaustive (i.e., recipient himself should be included), since the citation could be copied by someone not on list.

3f4

TYPE the word ACTION and INFO, for action or information

3g

Is the journal going to deliver ACTION and INFO items in separate branches? If so, should definitely not be on first line. If not, I would place this higher in priority than the distribution list. But it should be noted that this is used only in first responding to mail. It is less important if you are your citations as more durable handle on the file. When first examining item, the first line view is probably unimportant.

3g1

LINK complete journal reference in form of link

3h

PRO: Should be in first statement of citation in order for jump to link to work when only first line is bugged or referenced.
???JUMP TO LINK WORKS EVEN IF LINK IN HIDDEN LINES.

3h1

I think a link to the actual document should always be delivered, even for messages. This would allow one the generality of always jumping on a (perhaps hidden) link, not knowing whether it is a file or a message (as from a one line view).

3h2

One might then read the message (hopefully delivered as a substatement) then delete it, trusting the link in the citation to always lead you to the text at subsequent readings. One's initial file might be a bit smaller and

Opinion on Journal Citation Delivery Format

overall system efficiency will be greater with less duplication. The generality of always jumping to file return after following the journal link might be helpful for beginners.

3h2a

COMMENT comments

3i

Should be a substatement of the citation if we believe in structured files.

3ii

ORG acronym of author's organization

3j

This should be the org ident, right? If multiple authors, may be lengthy and should not be on first line.

3ji

RDATE: date and time when mail item was received.

3k

PRO: Statement signatures may be meaningless, since user can edit his citation statement.

3ki

PRO: Could point out interesting and serious communications dynamics; delivery is not always immediate and items may be very timely.

3k2

PRIV privacy type (priv or public or blank)

3l

PRO: This would tell you whether or not the author wants his article shared with other than the distribution list.

3li

The following fields I think should NOT be in the citation:

4

NAME last name or full name

4a

CON: With the ident system one needs only to show record for ident. Could be very lengthy for multiple author items.

4ai

DAY day of the week that mail item was sent (MON TUE)

4b

CON: Unneeded and seldom-relevant. Use a calendar.

4b1

JNUM journal number

4c

CON: It's in the link.

4ci

My choice for the new journal citation format, based on JFORM3 and MESSAGE subsystem format.

5

DATE TIME-ZONE AIDENT: TITLE terminated by a CR and 3 spaces
For Your ACTION/INFORMATION, Private

Opinion on Journal Citation Delivery Format

Distribution: ACTION IDENTS ARE UPPER CASE info only ident
are lower case (Recipient included here somewhere)

Author orgs: Ident,..

Received at: 12-OCT-74 04:31
(JJOURNAL,12345,1:w)

5a

Comments: Comments would appear as substatement of citation,

5a1

Text of Message is a substructure statement.

5a2

Citation in file:

6

Jake brought up the question of what information the journal
should put in the origin of each journal item.

6a

We are on the verge of having a subsystem which can take the
standard catalog format and produce any number of extractions
(author citation, titleword, number, or whatever the librarians
tell us to produce). The catalogs themselves are now protected,
but the user should be to use this forthcoming subsystem to
produce a reference in any of these formats for any file delivered
to him.

6b

Given that ease of transformation and that (with a nice new
delivery format) he will seldom have to study the origin
statement. The file itself ought to be a complete repository for
information about that item. I think it is more important to have
a format where the information is accessible in easily defined
fields rather than deciding now what is pretty and/or limiting the
content to what we currently think is standard/important. I think
we ought to use the standard catalog citation format in the origin
statement of journal file.

6c

NDM 28-OCT-74 15:34 24336

Opinion on Journal Citation Delivery Format

(J24336) 28-OCT-74 15:34;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /RLL([ACTION]) SRI-ARC([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: NDM; Origin: < MEYER,
HEADS,NLS;4, >, 28-OCT-74 15:27 NDM ;;;;;###;

KEV 28-OCT-74 17:33 24337

journal citations again

I do have one or two other things to do, but occasionally I need a
relief from them!

journal citations again

The issue that Dean raises (in-- 24336,) (and I think Jake raised it also) about having sort programs, etc, work is I beleive looking at the citation issue in the wrong way. The problem, as I see it, is having citations presented to an INDIVIDUAL user in the format preferred by that INDIVIDUAL user. Then if an individual wishes to sort her citations, it is her responsibility (perhaps with our help) to provide the sort keys, programs, etc, that will sort the citations in the desired manner. Obviously, these programs must be aware of the format of the citations they are to sort. If an individual wishes to make use of pre-existing sorting programs, then she must see to it that her citations conform to the input format required by the program to be used (and of course both available programs and required citation formats should be published). All the catalog production programs that I am aware of, do not go through individual initial files to get their data, but work on other data bases. Thus, if an individual is only interested in seeing who wrote an article, when it was written, and where it lives, (admittedly a perverse example), there is NO need to have the title in the citation that gets delivered to this person.

KEV 28-OCT-74 17:33 24337

journal citations again

(J24337) 28-OCT-74 17:33;,, Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /SRI-ARC([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: KEV;

RT2 28-OCT-74 17:34 24338

test msg

This was my first message,

RT2 28-OCT-74 17:34 24338

test msg

"A,"H,DEL Delete char "W Delete word "X Delete line "R Re-type line 1
"Q Abort command "V,"",,"\
are all escape characters 2

A Append	B Backup	C Change	D Delete	3
E Exit	F Find	G Group	H Help	4
I Insert	J Jam	K Kill	L List	5
M Modeset	N Notemodes	O Divert Output	P Print	6
Q Quit	R Read	S Search	T Type	7
U Undo	V View	W Write	X Xchange	8
Y Yes	Z Close Divert			9

RT2 28-OCT-74 17:34 24338

test msg

(J24338) 28-OCT-74 17:34;;;; Title: Author(s): Ron Tugender/RT2;
Distribution: /CHI([ACTION] screw you) RWW([ACTION]) RT2([
ACTION]) HGL([INFO=ONLY]) ; Sub=Collections: NIC; Clerk: RT2;

something I couldn't find in the Help database

JMB 28-OCT-74 17:35 24339

Well, I finally found restricted distribution when I tried distribution, but my first try was for unexpanded. How about putting unexpanded in Help's lexicon? --since that's what it used to be called. Not very important, but it would be a nice touch.

1

JMB 28-OCT-74 17:35 24339

something I couldn't find in the Help database

(J24339) 28-OCT-74 17:35;;;; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /FDBK([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
JMB;

JMB 28-OCT-74 17:46 24340

Something I couldn't find with Help

I couldn't find out what default subcollections were defined to be, so i didn't know whether I needed to use Subcollections command or not, Could you make this information more accessible in the Help database (maybe I just didn't think of the right place to look)?

1

JMB 28-OCT-74 17:46 24340

something I couldn't find with Help

(J24340) 28-OCT-74 17:46;;;; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /FDBK([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
JMB;

Comment on Functional Documents & Journal Numbers

If successive revisions of a document are journalized (per JCN's proposal), the essential question for the document's users is:

Which number is put on the hardcopy of the document?

To express this in other words, here is a users' situation:

One of her co-workers tells her that his hardcopy of a particular users guide has number 12345 on it, and that she can get her own copy from that number.

However, what neither of them know is that this users guide has been revised. If journal item 12345 is a link to the location of the most recent version, she will go to the right place; and if she phones ARC and asks for a printed copy of 12345, our revised copies will have number 12345 on them. On the other hand, if 12345 is a copy of the users guide itself, and number 67890 is a revised copy, she will not get the recent Version at 12345, and it won't tell her there is a more recent one.

I'm sure I haven't described or thought of all the possibilities here, but this is a potential situation we should hold in mind when considering this problem.

JMB 28-OCT-74 18:39 24341

Comment on Functional Documents & Journal Numbers

(J24341) 28-OCT-74 18:39;,,; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /JCN{ [ACTION] } RWW{ [ACTION] } DCE{ [ACTION] }
DVN{ [ACTION] } DIRT{ [INFO-ONLY] } ; Sub-Collections: SRI-ARC
DIRT; Clerk: JMB;

JHB 28-OCT-74 21:47 24342

Feedback for action /record

Mike, Did this problem get solved to your satisfaction?

JHB 28-OCT-74 21:47 24342

Feedback for action /record

15-OCT-74 1330-PDT PLACKO at OFFICE-1: Wierdness

Distribution: LEE AT SRI-ARC, bair at sri-arc, placko
Received at: 15-OCT-74 13:31:45

1

When I do a show directory in NLS it indicates the existance of
the following file: <placko>(placko)message,pc;1 and
<placko,message,txt;1> but indicates that it is not online. Using
the interrogate command in EXEC there is no indication that such a
file is archived. What am I d"ing wrong??? -- Mike

1a

JHB 28-OCT-74 21:47 24342

Feedback for action /record

(J24342) 28-OCT-74 21:47;;;; Title: Author(s): James H. Bair/JHB;
Distribution: /FEED([ACTION]) MAP2([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: JHB;

The Need for a Way to Create Formatted, Sequential Files Suitable for
Printing at Terminals at Other Sites

It sometimes happens that we want to pass a file through the
formatting steps of the Output Processor for transmission to some one
who will print it out at a terminal as a sequential file, e.g., as
part of a sendmessage. A file created by the command Output Printer
contains some control characters intended for our line printer that
make it unsuitable for printing at a terminal. A procedure exists
for passing this file through Sendprint to scrub out the control
characters, but it is awkward to use and creates a file that may
contain long lines which TENEX then wraps around with a double star.
It appears that if the output teletype command could alternatively
output to a file, that file would be suitable for this use.

DVN 28-OCT-74 21:51 24343

The Need for a Way to Create Formatted, Sequential Files Suitable for
Printing at Terminals at Other Sites

(J24343) 28-OCT-74 21:51;;;; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /FDBK([ACTION]) DCE([INFO-ONLY]) JCNC
[INFO-ONLY]) SRL([INFO-ONLY]) JEW([INFO-ONLY] does this sound
right?) JBP([INFO-ONLY] does this sound right?) NDM([INFO-ONLY]
does this sound right to you?) ; Sub-Collections: SRI-ARC; Clerk: DVN;

CHI 29-OCT-74 08:36 24344

thanks

Thanks for the message (24338,)

1

CHI 29-OCT-74 08:36 24344

thanks

(J24344) 29-OCT-74 08:36;;;; Title: Author(s): Charles H. Irby/CHI;
Distribution: /RT2([INFO-ONLY]) JGR([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Obsoletes Document(s); Clerk: CHI;

Goodvibes And Computer Capacity

Before making the main point of this piece let me say a couple words on the space I'm coming from. For some time I've been wanting to tell you all how really good I feel about what is happening in Development and Documentation, about how good I feel about you individually and as a team. You all know me well enough to know I don't say such things easily or lightly, that I tend to have over expectations which are hard to meet. (I still have them so don't let good words go to your heads). Looking around the ARPA community and in other organizations outside and within SRI, I feel really proud that the quality and quantity of our technical work matches or exceeds that of any other group I'm familiar with. As Charles has so rightly said, we don't just talk about challenging ideas, we do it (and I should add to show my next n months of concern by July 1, on time I hope). This is the strongest technical group I have had the privilege of being associated in the four years I've been at ARC or the years before and it makes coming in every day really worth while for me that that is the case.

For its size ARC is having a very large influence, I believe for good. I have not always felt so good about every individual or the group while I've been at ARC and it's really nice to feel this way. Maybe it was the three day old macarooni and cheese I ate for breakfast. I have been sad to see us lose good men like Paxton, Dornbush and Smokey, but there have been others that I did not feel were contributing fairly whose departures caused no pain. I would feel a real loss if anyone here now were to depart.

Enough gushing, it's out of character and embarrassing me.

Now to the point. I have been having some good and at times, heavy discussions with Jim and Doug about the philosophy, cost, quantity, quality of computer service to be provided Development and Documentation. We can talk more on details Thursday. Each time the point usually gets made that many of our people don't seem to be around before 9:00 or even 9:30 or after 5:00 or 5:30.

The main point of this remark is that there is a useful expensive resource not being fully used at times when it is not unreasonable to expect people to be here using it.

As Doug and Jim all know I expect as a minimum all of us to put in a productive, intensive, concentrated 40 hours on average and from my model of everybody's working and what they are doing I could quickly assure them of this fact and the good feelings I have described above.

However, the fact still remains that there are usually useful resources in the morning and late afternoons (and evenings and weekends, although I think that outside of special cases and personal

RWW 29-OCT-74 12:26 24345

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choice I feel a personal obligation within funding available to provide as much computer capacity as possible during normal type hours and not to require other shifts).⁷

Since all are not feeling good about the capacity they are getting I request you to examine your work patterns and see what advantage coming in a earlier or staying a little later might do for the situation. Within funding available we are getting the best we can get. If we want to consider how to reallocate within our 8 NSW slots we can discuss proposals at any time.⁸

Thanks, Dick

7

8

9

RWW 29-OCT-74 12:26 24345

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(J24345) 29-OCT-74 12:26;;;; Title: Author(s): Richard W.
Watson/RWW; Distribution: /NPG([INFO=ONLY]) JBP([INFO=ONLY])
DVN([INFO=ONLY]) POOH([INFO=ONLY]) KIRK([INFO=ONLY]) ;
Sub-Collections: SRI-ARC NPG; Clerk: RWW; Origin: < WATSON,
GOODVIBES,NLS;1, >, 29-OCT-74 12:04 RWW ;;;;#####;

RLL 29-OCT-74 13:46 24346

SUG: unnecessary control U in FOrce command

Could this not be an easy fix via the CML????

RLL 29-OCT-74 13:46 24346

SUG: unnecessary control U in FOrce command

Why is it necessary to have the last part of the force command
accessed by control u? the options should be OK/C; instead of
OK/[**]; This will make the use of this command simpler. Example:
force word <BUG> lower <BUG>, Far better than Force Word <BUG> <"U>
Lower <BUG>, 1

RLL 29-OCT-74 13:46 24346

SUG: unnecessary control U in FOrce command

(J24346) 29-OCT-74 13:46;;;; Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /FDBK([ACTION]) JHB([INFO=ONLY])
KIRK([INFO=ONLY]) NDM([INFO=ONLY]) ; Keywords: Suggestion;
Sub-Collections: SRI-ARC; Clerk: RLL;

TRANSITION FROM NLS-7 TO NLS-8 COURSE OUTLINE"

JHB 29-OCT-74 19:09 24357

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This 10 page paper is based on DVN's document, New and Changed Features in NLS-8 (31039,). It is revised, updated, reordered and reworded to serve as a transition course outline. It has been used at RADC. Although designed for use during a face-to-face tutorial, it should be readable without assistance.

OUTLINE OF DIFFERENCES:
New TNLS (TNLS-8) -- Old TNLS (TNLS-7).

1

QUESTIONMARK (?)

2

TNLS-8 has useful questionmark facilities. Typing a ? at any point except when you are typing in text will print out the choices (command words) available.

2a

Note ? changes its output with each new step in a command, and its result depends on the recognition scheme you are using.

2ai

<> = type a space

2b

In Terse recognition mode (discussed below), "<>" before a command means that you have to type a space to begin that command and then as many letters as necessary to uniquely identify it.

2b1

<Control-o> stops printing after a ?, (after the buffers empty...) 2c

When the possible command words have printed out, you are still just where you were in the command.

2d

HELP

3

Type h for the HELP command which retrieves the HELP data base; or you can follow the Help command by any term in NLS for an explanation. OR type a CTRL Q at any point and You Will get help corresponding to what you were doing in TNLS. Once you have begun the Help Command, you can continue asking for topics by name or menu number until you hit a Command Delete.

3a

SUBSYSTEMS:

4

All the commands in NLS have been grouped into subsystems. The commands we use most are in the Base subsystem which includes editing, file handling, and terminal handling commands. Others are available through: Calculator, Sendmail, Programs, Tenex, and Useroptions.

4a

You "Goto" another subsystem.

4b

Type G for goto and then first letter of the subsystem's name. Quit returns You to the previous subsystem.

4c

By default the herald is printed in TNLS. It is the first four

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letters of the subsystem (e.g. SEND:), "<" prints out your subsystem ring.	4d
Subsystems which you have to load: (Load Program: in the Programs subsystem)	4e
Message (the old INMES; use Move Message to bring your messages into NLS)	4e1
...many programs "attach", that is become subsystems which you then can "Goto".	4e2
Subsystems you can Attach to (no loading necessary):	4f
Calculator	4f1
Execute allows you execute one command in a subsystem with automatic return to the previous subsystem.	4g
RECOGNITION OF COMMANDS:	5
TNLS-8 has four recognition schemes. The default is TERSE recognition. You may select one of the other schemes for yourself through the Useroptions subsystem. Ask for "recognition" through the Help command to learn about them.	5a
In terse mode, certain command words are available at any point following each prompt C:. From that list, NLS will recognize and echo the most commonly used command by its first character. To use a command word that is not among the most frequently used, you have to type a space and then type characters until NLS can distinguish. E.g. from the Base Subsystem herald, "S" will evoke "substitute", but to get "Set" you must type "<>se" (where "<>" represents a space) and to get Stop "<>st".	5b
In terse mode, if you type a letter impossible in that spot, TNLS will ring the terminal's bell and wait for you to type in a possible letter. I.e., O D P Will succeed although the command is now Output Printer. The extra D will only make the bell ring harmlessly.	5c
UNIVERSAL COMMANDS (available no matter what subsystem you are in)	6
The following commands are available in all subsystems:	6a
Goto (subsystem)	6a1
Execute (command in subsystem)	6a2

Quit (subsystem)	6a3
< (Show Subsystems stack)	6a4
> (Show Subsystems status)	6a5
? (list commands available)	6a6
<CTRL Q> (begin Help Command at point where you are in typing in a command))	6a7
Help (command)	6a8
Jump (to) ...	6a9
; (permits you to comment without command recognition)	6a10

CHANGED COMMANDS:

7

Old Commands:

7a

Some important commands where the first command word has changed are as follows, with the old command first. They are in Base Subsystem unless noted: Words in parentheses are "noise words" presented by the system, not typed by you.

7a1

Execute Assimilate = No longer a command. The filter option in the commands that copy, move, or delete statements takes over its function.

7a1a

Execute Content Analyzer =<>Set Content To

7a1b

Execute Device Type = <>Simulate Terminal Type in the Terminal subsystem

7a1c

Execute File Verify = Verify File

7a1d

Execute Insert Sequential = Copy Sequential

7a1e

Execute Logout = <>Logout

7a1f

Execute Status = <>SHOW + various alternatives

7a1g

Execute Unlock = Delete Modifications

7a1h

Execute Viewchange = <>SET Viewspecs

7a1i

Execute Journal = Goto Sendmail

7a1j

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Link (in TENEX) = <>Connect to Terminal (in NLS) 7a1k

Null File = <>Create File 7a1l

Output Device Printer = Output (to) Printer 7a1m

Output File = Update File Compact 7a1n

Space (move the CM) = Jump (to) 7a1o

Update = Update File + various alternatives 7a1p

New Commands: 7b

Directory Commands: Now in NLS 7b1

Now you can deal with your directory in NLS as well as in
TENEX, Delete File, Undelete File, and <>Expunge Directory
are NLS Commands. 7b1a

Copy Directory: copies your directory into a file as a plex, 7b2

Options in Copy Directory allow you to see the information
TENEX has about your files sorted in various ways, e.g.,
Size or Protection. All filenames are now in LINK format so
that when you copy your directory you have links to all your
files. 7b2a

Show Directory: prints/displays the same information without
putting it in an NLS file. 7b3

Set Content (pattern) To: 7b4

The most frequently used content analyzer patterns can be
typed in without going to programs. You can type in any
pattern (or point to it), e.g., ["word"], 7b4a

Privacy: 7b5

There are now two systems in NLS for controlling access to
files. One is the Set Tenex (Protection for file named)
command which calls the TENEX protection provisions, based
on usernames and groups. The second is the Set Nls
(Protection for file) command which limits read access to a
list of idents. You have to separately edit the list of
idents into the origin statement of the file in the
following exact format:

AccessList: IDENT IDENT IDENT; 7b5a

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You may have any number of idents and they must be in upper case.

7b5b

REPETITION of commands:

8

The system now returns to the herald after every command, BUT, if you end any command with a Repeat Character (e.g. control b) the system will carry out the command, return to the herald, and go forward in the same command until it meets a field that is not a command word. The Repeat Character is <CTRL-b> by default.

8a

The system will continue to repeat the command in that way until you hit Command Delete.

8a1

If you hit a Repeat Character at command reset, it will repeat your last command out to the first field that is not a command word. You may then step back through the command word-by-word with <Backspace Character>, or <"A>.

8b

ADDRESSING (very different in TNLS!)

9

The prompt for addresses is A:. Following A: you can put ANY ADDRESS in NLS, but viewspecs in a link will be ignored. After the filename position you may use the new within-file address forms in any order as you could in TNLS-7.

9a

Links

9b

Links now differ from addresses only in allowing viewspecs and comments. Links require delimiters ,e.g., <>, when they are in text.

9b1

The prompt T: expects a link in certain situations, for example when it expects a file name,

9b1a

You do not need delimiters when you TYPE IN a link.

9b1b

No Periods in Front of Statement Numbers, Names, or SIDs

9c

Do NOT put periods in front of statement names or numbers or SID's; instead put them in front of structural relationships (i.e., .u (up) ,a ,b ,a or ,p (predecessor) or ,s etc.),

9c1

Content Addresses (search for word)

9d

[content] is "content"

9d1

Quotation Marks have replaced square brackets and angle brackets to mark off content searches used in addresses.

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For example, an address that moves Your CM to statement 5, then to its successor, then to the first occurrence of the string "xxx", Would have been ==,5 s [xxx] == and now is == 5 ,s "xxx" == in TNLS-8.

9dia

,CONTENT; is "CONTENT"=s (limit search to a single statement)

9dib

e,g. to limit the search above to the successor of 5 you would use == 5 ,s "xxx"=s ,

9d1b1

<WORD> is "WORD"=w (look for word only)

9dic

"&" is ".fr" for File Return (you don't type quotes)

9e

"@" is ".r" for Return

9f

PROMPTING

10

You can set prompting in one of three modes: Full, Partial, or Off, The default is Partial, Partial does not show options and some alternatives, The complete list of prompts is:

10a

C: calls for a Command Word

10a1

A: calls for an Address,

10a2

T: calls for you to type something in, e,g. free text, or an ident,

10a3

OK: calls for confirmation of the command or a field within a command, usually CA or REPEAT (<control-b>),

10a4

CA: calls for a command accept. <Control-d> functions as command accept and in TNLS carriage return does so as well,

10a5

Y/N: calls for "y" for "yes" or "n" for "no"

10a6

[**] Square brackets indicate that you have to hit the option character <control-u> to use the option(s).

10a7

OPT shows that you may use <control-u> to gain access to a list of options,

10a8

V: calls for viewspecs,

10a9

L: calls for level adjustment,

10a10

SP: calls for a space as a quasi CA,

10a11

RPT: calls for a <control=b> to repeat the use of some buffer
as in content searches. (In DNLS, the 2 right mouse buttons...)

SPACE now JUMP: (space is no longer a command)

Where in TNLS-7 you hit space at the herald before to move your
CM, in TNLS-8 type J A for Jump to Address. The whole list of
Jump commands that allow you to express address elements as
command words (Jump to Return, Jump to Name, Jump to Link, etc.,)
is also available in TNLS-8. Space retains its meaning within
addresses.

FROM/TO (no longer to an address from an address)

In TNLS-8 you Move and Copy things FROM someplace TO someplace
else instead of vice versa.

HERALD: (no longer *)

BY default the herald is the first four letters of your subsystem.
In the Useroptions subsystem you can CHANGE IT BACK TO * (called
terse herald) or reset the length of the herald for all
subsystems.

THE JOURNAL: (now: Goto (subsystem) Sendmail)

Execute Journal has become the sendmail subsystem. The term
"Journal" continues to refer to the body of information and dialog
built up of submissions.

Execute Journal had two command levels (& and &&), Sendmail has
all commands on the same level.

INTERROGATE works as it did before, the system will ask you for
the things you need to send routine mail.

Changed Commands:

For Submit Statement, Branch, Plex, Group or File you now type
<>Statement, Message, Branch, <>Group, <>Plex, or File. (e.g.
type "space s" to submit a statement.)

Distribute = <>Distribute (for) Action (to):
<>Distribute (for) Information (to):

Go = Send (the mail)

Status = <>Show Status

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Submit Hardcopy = <>Offline	14d4a
Execute Catalog Preassigned numbers = Reserve	14d4b
Place Link = <>Insert Link	14d4c
Execute Secondary Distribution = <>Forward	14d4d
New Functions	14e
Initialize	14e1
TO completely restart a Sendmail session, use the <>Initialize command to wipe the slate clean. When you have sent an item, or when you quit and return via Goto Sendmail, the system initializes for you.	14e1a
Insert Status	14e2
Show Status lists what Sendmail knows at that moment about the item you are sending.	14e2a
<>Insert Status Writes that same information at an address you supply. It writes it in the correct format for the Process Sendmail Form Command. It is often useful to insert your status in a scratch file, edit it at leisure, and then use the edited statement to send the item via the Process Sendmail Form Command.	14e2b
Insert <>Sendmail (form) will put an empty status form where you tell it that you can fill out and then process.	14e2c
Unrecorded	14e3
The Unrecorded command will keep your item from being cataloged and indexed.	14e3a
Private	14e4
The <>Private command keeps people who were not an author or on the distribution list from reading the journalized item.	14e4a
Public	14e5
The <>Public command reverses the private command; it returns the journal item to general access.	14e5a
OPTIONS AND ALTERNATIVES: [**] OR OPT When Prompting is FULL	15

The default prompting is Partial for new users; to see the prompts for options use Full in the Useroptions subsystem.

15a

When several command terms may follow a given command term (such as Delete Branch A: OK/[**]) we speak of Options. Typing the option character, <control-u> allows you to put in command terms otherwise inaccessible. Options include, for example, the filter step in the Copy commands that replaces Execute Assimilate, and the commands that select various kinds of information in Show Directory.

15b

USER PROGRAMS:

16

In general, user programs written for TNLS-7 WILL NOT run or compile in TNLS-8. Most of them have been revised but some have not. If you discover a user program that does not run as it did in the past, report it via the feedback system (sendmail to ident FEED or TENEX sendmessage to feedback@office-1).

16a

QUERY also will not run in NLS-8. The query language is available through the NIC command in TENEX at Office -1.

16b

THE PROGRAMS SUBSYSTEM

17

It replaces and augments the old "Go to program" commands.

17a

Important old Commands with New Names:

17b

Get = Load

17b1

Status = Show

17b2

Buffer = Set Buffer

17b3

THE USEROPTIONS SUBSYSTEM

18

The Useroptions Subsystem controls feedback in the form of heralds, prompts, noise words, etc.; it controls recognition and default viewspecs; it redefines control characters (like the old NLSControlCharacters branch); and it formats pages in the TNLS print command. Execution of commands in the Useroption subsystem rewrites a file (the profile) that determines how these parameters are set when you log in from then on.

18a

DOCUMENTATION

19

In addition to the on line questionmark and Help facilities, there is hardcopy documentation available. Although much of this can be printed from online files, we recommend that requests be made of

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the Office-1 staff for copies. This and any other requests or questions or comments will be responded to within 1 day of receipt at FEEDBACK through sendmessage to FEEDBACK or Sendmail to FEED. 19a

DOCUMENTATION: 19b

Old NLS == NLS-8 Command Equivalents	19b1
TNLS-8 Primer (a self teaching introduction to TNLS-8)	19b2
Mouse And Keyset Codes Card	19b3
TNLS-8 Reference Card (a quick reference to aid the trained user)	19b4
Users' Glossary [In preparation as of 12-OCT-74]	19b5
NLS-8 Command Summary (Syntax listing of all the commands in NLS)	19b6
DNLS-8 Course Outlines	19b7
TNLS Course Outlines	19b8
Workstation Guide [pre-publication as of 12-OCT-74]	19b9
Lineprocessor Guide [pre-publication as of 12-OCT-74]	19b10

TRANSITION FROM NLS-7 TO NLS-8 COURSE OUTLINE"

JHB 29-OCT-74 19:09 24357
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TRANSITION FROM NLS-7 TO NLS-8 COURSE OUTLINE

SRI-ARC

30 OCT 74

Augmentation Research Center

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025

19c

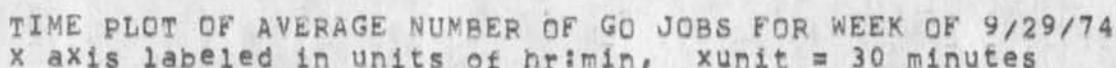
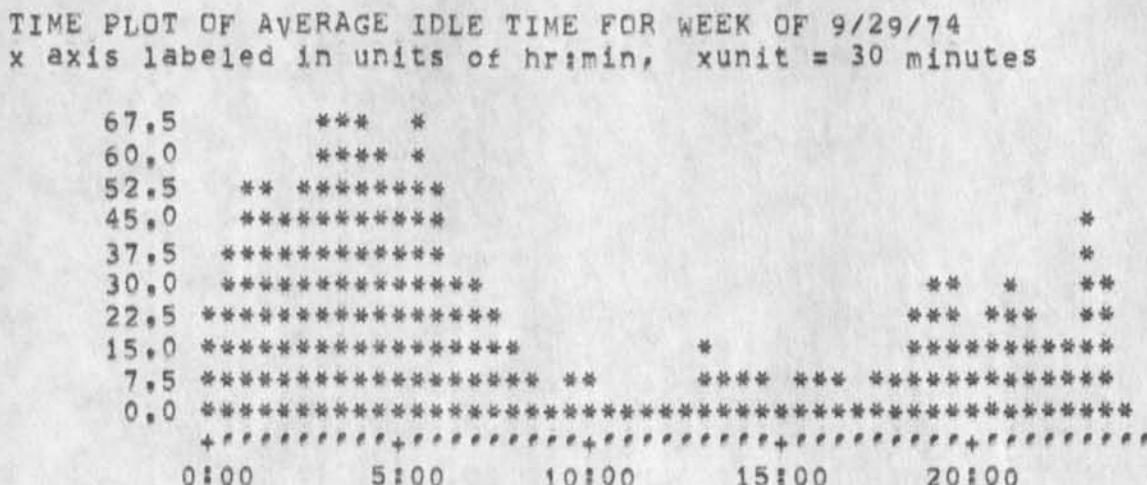
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30 OCT 74

TRANSITION FROM NLS-7 TO NLS-8 COURSE OUTLINE"

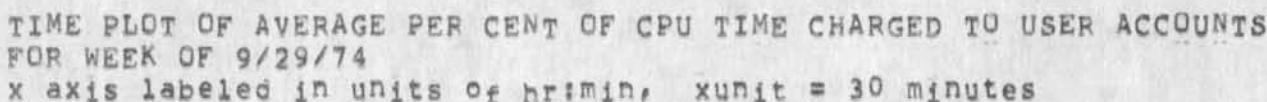
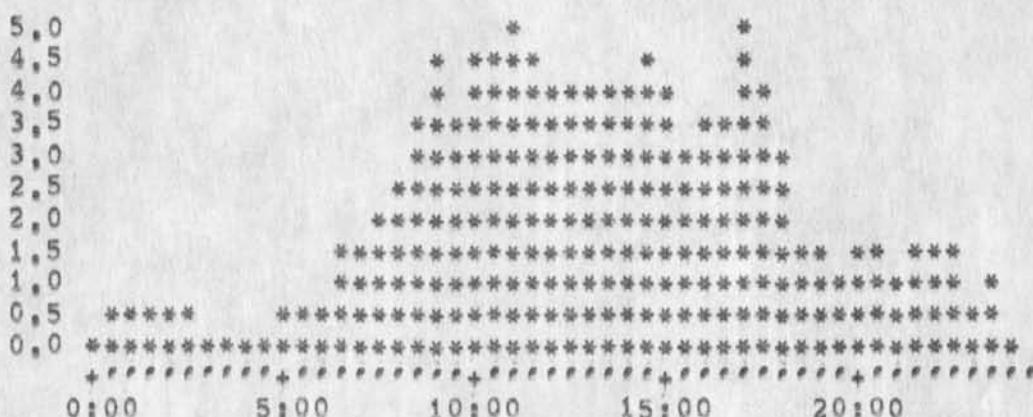
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SRL 30-OCT-74 05:41 24358

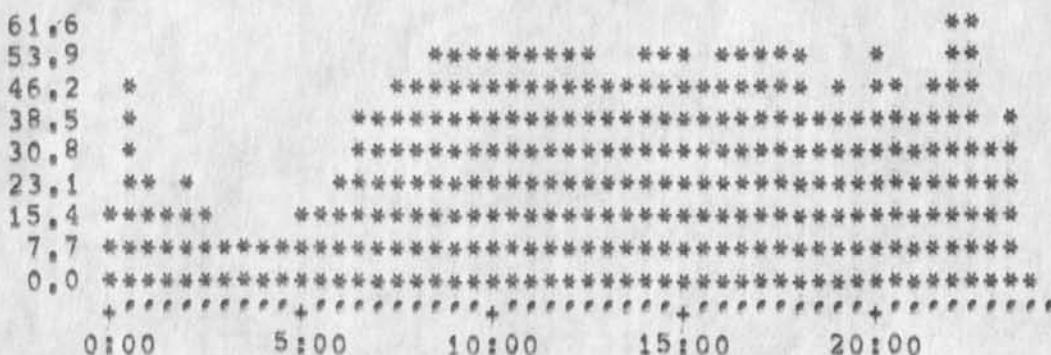
Superwatch Average Graphs for Week of 9/29/74



2



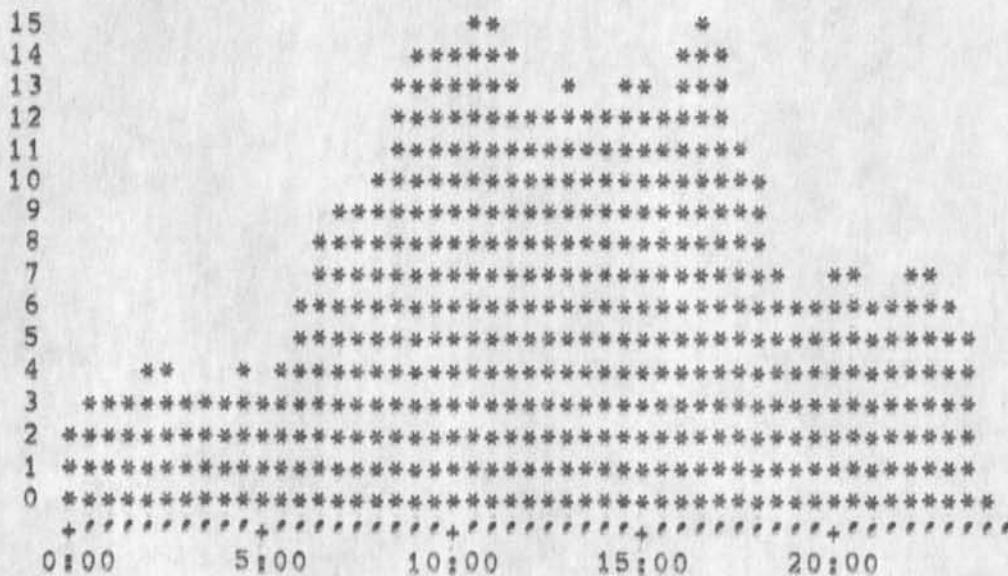
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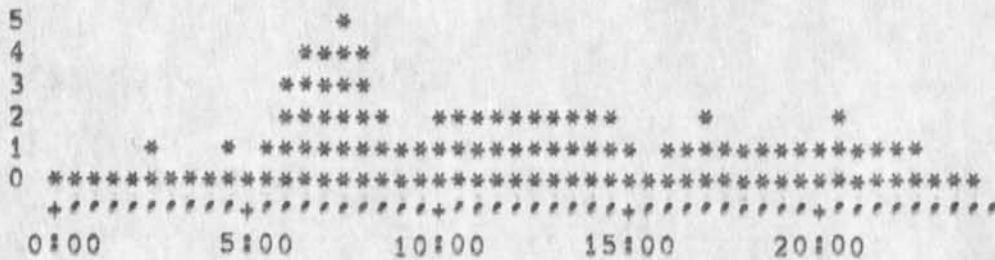
Superwatch Average Graphs for Week of 9/29/74

TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 9/29/74
x axis labeled in units of hr:min, xunit = 30 minutes



4

TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 9/29/74
x axis labeled in units of hr:min, xunit = 30 minutes



5

5a

SRL 30-OCT-74 05:41 24358

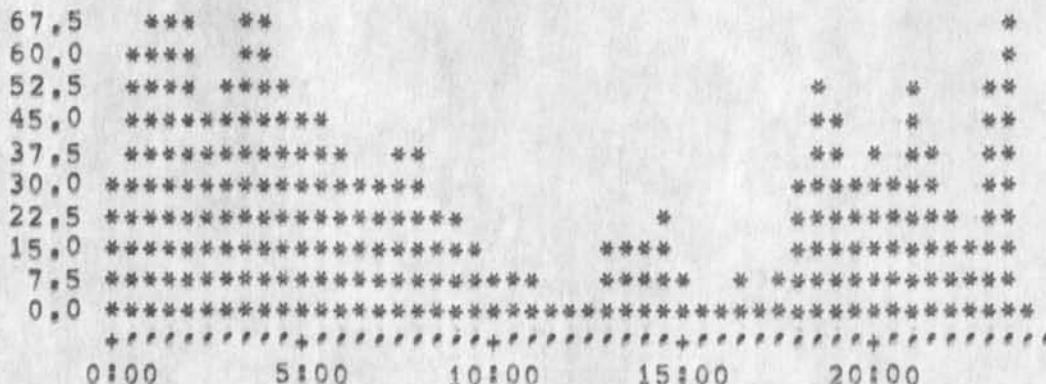
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SRL 30-OCT-74 05:50 24359

Superwatch Average Graphs for Week of 10/6/74

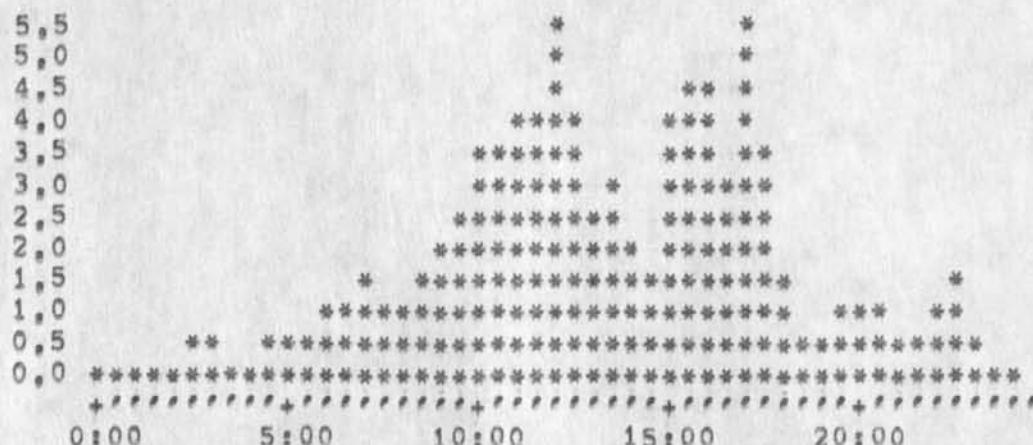
TIME PLOT OF AVERAGE IDLE TIME FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, xunit = 30 minutes



1

TIME PLOT OF AVERAGE NUMBER OF GO JOBS FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, Xunit = 30 minutes

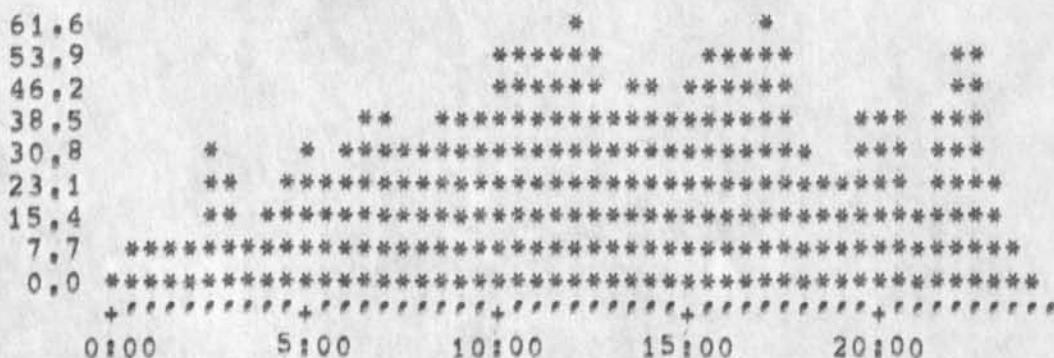
2



2a

TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS
FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, xunit = 30 minutes

3

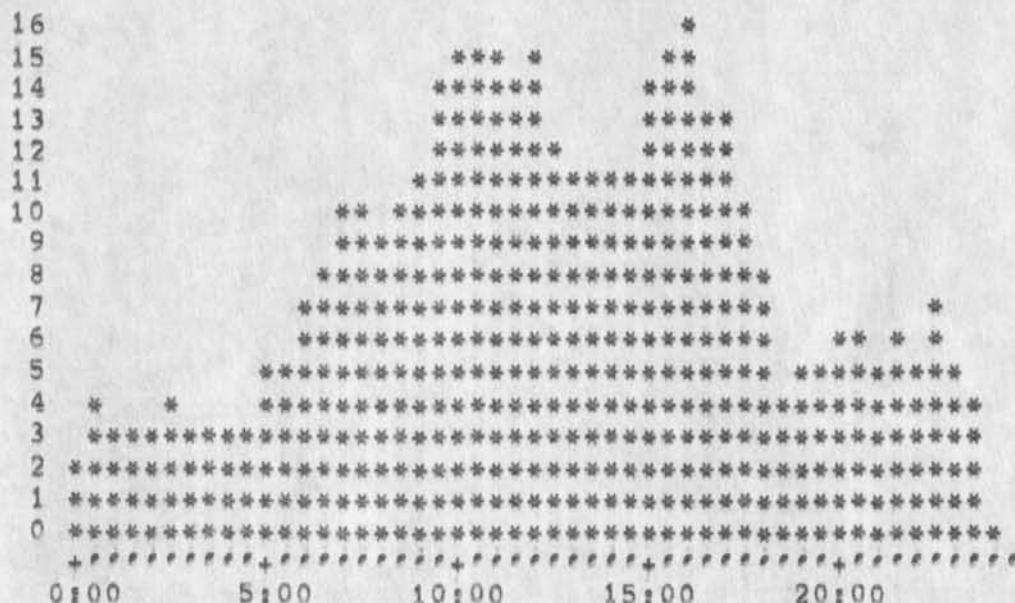


3a

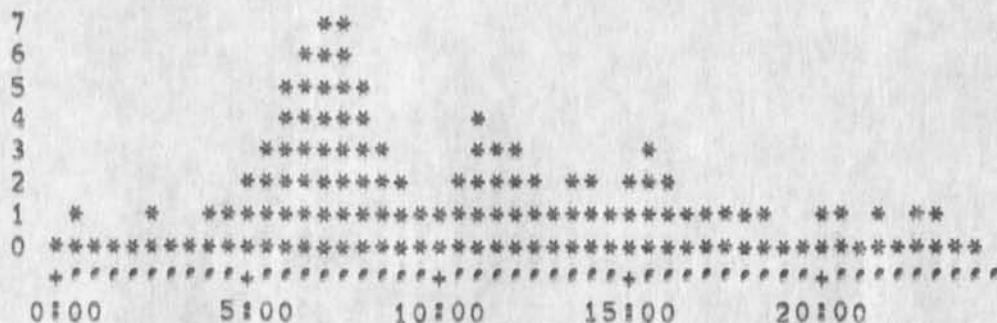
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Superwatch Average Graphs for Week of 10/6/74

TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, xunit = 30 minutes



TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, xunit = 30 minutes



TIME PLOT OF AVERAGE PER CENT OF SYSTEM USED IN OLDDNLS (?) FOR WEEK OF 10/6/74
x axis labeled in units of hr:min, xunit = 30 minutes



4

4a

5

5a

6

6a

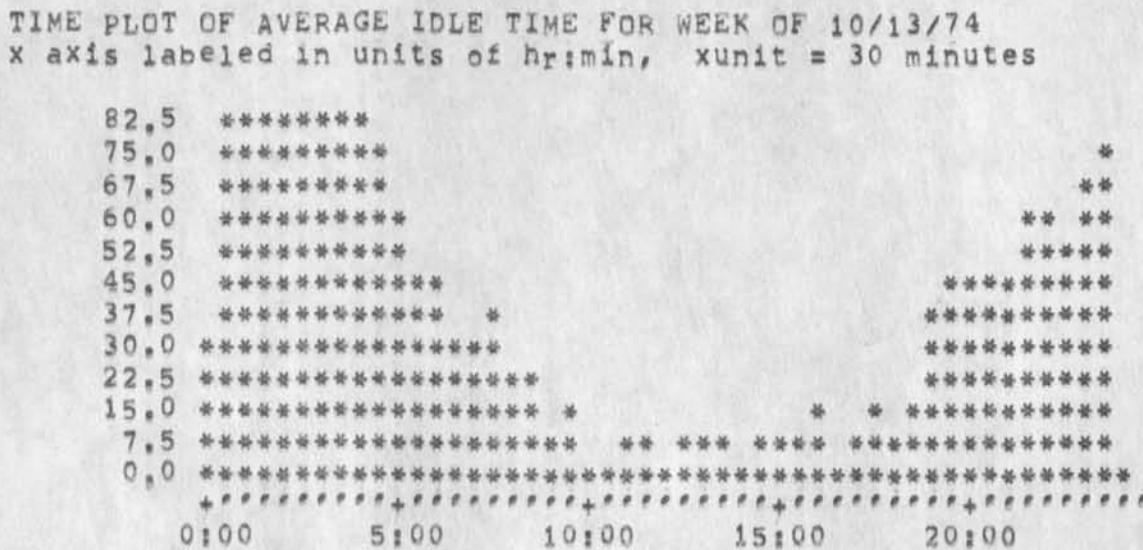
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Superwatch Average Graphs for Week of 10/6/74

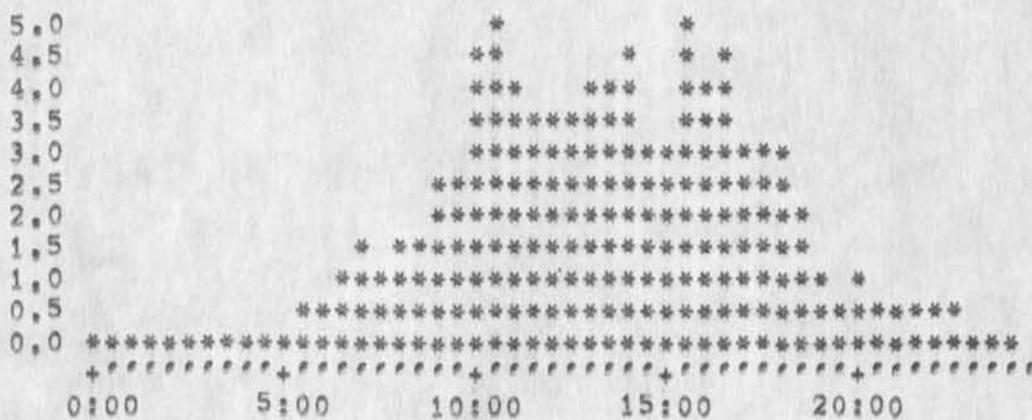
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SRL 30-OCT-74 05:59 24360

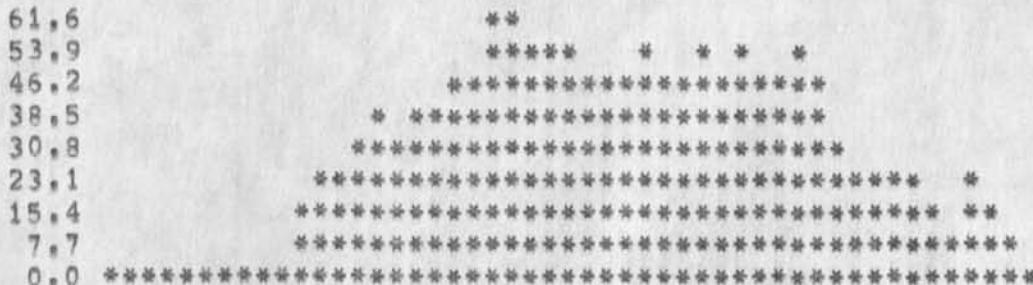
SuperWatch Average Graphs for Week of 10/13/74



TIME PLOT OF AVERAGE NUMBER OF GO JOBS FOR WEEK OF 10/13/74
x axis labeled in units of hours:min, xunit = 30 minutes



TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS
FOR WEEK OF 10/13/74
x axis labeled in units of hr:min, xunit = 30 minutes



Superwatch Average Graphs for Week of 10/13/74

SRL 30-OCT-74 05:59 24360

+-----+-----+-----+-----+-----+
0:00 5:00 10:00 15:00 20:00

3a

TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 10/13/74
x axis labeled in units of hr:min, xunit = 30 minutes

4

15 *
14 ** *
13 ***** * ***
12 *****
11 *****
10 *****
9 *****
8 *****
7 *****
6 ***** *
5 *****
4 *****
3 * *****
2 ** *****
1 *****
0 ***** +-----+-----+-----+-----+-----+
0:00 5:00 10:00 15:00 20:00

4a

TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 10/13/74
x axis labeled in units of hr:min, xunit = 30 minutes

5

4 *
3 ***
2 *** * * *
1 * ***** * * * *
0 ***** +-----+-----+-----+-----+-----+
0:00 5:00 10:00 15:00 20:00

5a

TIME PLOT OF AVERAGE PER CENT OF SYSTEM USED IN OLDDNLS (?) FOR WEEK
OF 10/13/74
x axis labeled in units of hr:min, xunit = 30 minutes

6

10,0 * *
8,0 * * *
6,0 *** * ****
4,0 ***** * * *** **
2,0 * ***** * * *** **
0,0 ***** +-----+-----+-----+-----+-----+
0:00 5:00 10:00 15:00 20:00

6a

SRL 30-OCT-74 05:59 24360

Superwatch Average Graphs for Week of 10/13/74

(J24360) 30-OCT-74 05:59;;;; Title: Author(s): Susan R, Lee/SRL;
Distribution: /JCN([INFO-ONLY]) RWW([INFO-ONLY]) DCE([
INFO-ONLY]) JCP([INFO-ONLY]) DVN([INFO-ONLY]) JAKE([
INFO-ONLY]) DLS([INFO-ONLY]) DSM([INFO-ONLY]) CSM([INFO-ONLY
]) RLL([INFO-ONLY]); Sub-Collections: SRI=ARC; Clerk: SRL;
Origin: < LEE, WEEK10/13GRAPHS,NLS;1, >, 30-OCT-74 05:56 SRL
;;;;<LEE>WEEK10/13GRAPHS,NLS;1, 29-OCT-74 17:26 SRL ;#####

DVN 30-OCT-74 08:54 24361

Watching

How nice to know you are still watching us from afar....I have deleted my citation to your message that gave the DCA publication scheudle and the online journal catalogs are a shambles, could you send it to me again?..,There is some chance I will be in Washington next week for the Demo, but I think the odds are against it.

1

DVN 30-OCT-74 08:54 24361

Watching

(J24361) 30-OCT-74 08:54;;;; Title: (Expedite) (Unrecorded)
Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /SRLC [ACTION
] ; Sub-Collections: SRI-ARC; Clerk: DVN;