NDM 25-FEB-74 08:16 22040

My Involvement with the <USERGUIDES> Directory

I work on the Output Processor Users' Guide (7 files) and on the L10 Users' Guide.. I have in the past written the ARC TENEX Guide, the Network Journal Submission Guide, SENDPRINT Guide, and miscellaneous work on others.

1

NDM 25-FEB-74 08:16 22040

My Involvement with the <USERGUIDES> Directory

(J22040) 25-FEB-74 08:16; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JMB; Sub-Collections: SRI-ARC; Clerk: NDM;

JAKE 25-FEB-74 08:28 22041

Paisley meeting

Doug, I would like to join the luncheon and discussion on Mar. 1 with Wm. Paisley, etc. if there is room. Thanks for including me. 1

Paisley meeting

(J22041) 25-FEB-74 08:28; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /DCE; Sub-Collections: SRI-ARC; Clerk: JAKE;

NDM 25-FEB-74 08:36 22043

JOVIAL Documentation on COM

Duane: The JOVIAL documentation does sound like an interesting and appropriate application of COM. For the moment, I am pretty busy with the DEIS stuff, but I would like to work with you on developing a format when I have time. Columns necessitate a bit of extra hand formatting, but that may be OK. It would be very difficult to have an insert interrupting a columnated page, but it would not be harc if the text progressed from upper left to upper right, then the insert then lower left and lower right, if you know what I mean. Once you and Norton work out the business arrangements, I think the steps would be 1) talk about what you'd like to see, 2) send off a few sample formats (they would be printed on microfilm, then Xerox CopyFlo to get a proof), 3)refine the formats, 4)choose one and order the photo-ready masters (photographic prints of the microfilm for photo-offset), 5) paste up the graphics and special characters, and 6) send to a photo-offset firm (we use in-house SRI printers). We can get together on all this when you are ready to go. --Dean 1

JOVIAL Documentation on COM

(J22043) 25-FEB-74 08:36; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /DLS JCN DVN JHB; Sub-Collections: SRI-ARC; Clerk: NDM;

DVN 25-FEB-74 09:00 22044

I Ain't Gettin' No Mail

No journal itmes have reached my intial file since the 19th or 20th although atleast one has been addressed to me, and reached other adressess, and there have been a couple of all-arc itmes. 1

I Ain't Gettin' No Mail

(J22044) 25-FEB-74 09:00; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JDH JEW JCP; Sub-Collections: SRI-ARC; Clerk: DVN;

JDH 25-FEB-74 09:32 22045

Using pre-assigned RFC numbers.

One of the limitations of our dual-site Journal is that pre-assigned numbers must be used on the system on which they were taken. We may soon allow RFC numbers to be assigned at OFFICE-1 if we can work out a couple of problems. In the meantime, submit it at SRI-ARC or contact Marcia Keeney (MLK) to do it for you. 1

Using pre-assigned RFC numbers.

(J22045) 25-FEB-74 09:32; Title: Author(s): J. D. Hopper/JDH; Distribution: /DHC CHI JEW MLK MDK JHB; Sub-Collections: SRI-ARC; Clerk: JDH;

JDH 25-FEB-74 10:10 22046

Re 30136, more about RFC numbers.

If you were using the ARC machine when you tried to use 21531, there are a couple of other possible causes for your trouble. Perhaps the background system was in the process of running, keeping you from getting access to the number file. This is unusual, but sometimes happens during periods of high load average. If you did get access to the number file, you would probably have to give the ident "MLK" to access that number since she took it out. As far as I can tell, there is nothing wrong with the number files but I will check further.

1

JDH 25-FEB-74 10:10 22046

Re 30136, more about RFC numbers.

(J22046) 25-FEB-74 10:10; Title: Author(s): J. D. Hopper/JDH;
Distribution: /DHC CHI; Sub-Collections: SRI-ARC; Clerk: JDH;

Thought for the Day

Happiness would be
Having the world's BEST editor to correct
Errors made on the world's WORST keyboards
If we didn't have the world's SLOWEST system.

1

JEW 25-FEB-74 14:03 22047

Thought for the Day

(J22047) 25-FEB-74 14:03; Title: Author(s): James E. (Jim) White/JEW; Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JEW;

JEW 25-FEB-74 16:09 22048

Secondary Distribution Bug?

Dave-- Apparent bug in Secondary Distribution. The following message accompanies the delivered citation: 'Secondary Distribution Copy from XXX'. Note the incorrent ident (I assume). Background's?
--Jim

1

Secondary Distribution Bug?

(J22048) 25-FEB-74 16:09; Title: Author(s): James E. (Jim) White/JEW; Distribution: /JDH BUGS; Sub-Collections: SRI-ARC BUGS; Clerk: JEW;

If all else fails, try vacation

Happiness for me was having JEW's program that transfers NLS files to Office-1 intact! Now if I could only transfer a WHOLE directory - nls and txt, even new files - I could conquer the world!!! (The system maybe?) AnyWay, the day may have been a loser for you but you made a little old lady happy so it wasn't a total loss. Non Illegitimus Carborundum! 1

If all else fails, try vacation

(J22049) 25-FEB-74 17:26; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /JEW; Sub-Collections: SRI-ARC; Clerk: JAKE;

KEV 25-FEB-74 18:18 22050

xnls, link parsing, and a new file

i have created a new file: <nls>adrmnp (address manipulator). this file contains the routines lparse, caddexp, and related support routines. currently this file is loaded in the high seg, since it would not fit in the low seg where it belongs. does anyone know why the help subsystem has duplicate copies of lparse and lnkspec, etc.?? in addition, there is a new lparse routine. it is theoretically possible to use altmodes and control-f in file names in links now, but without the proper echoing. inofrm me of bugs, glitches etc. 1

KEV 25-FEB-74 18:18 22050

xnls, link parsing, and a new file

(J22050) 25-FEB-74 18:18; Title: Author(s): Kenneth E. (Ken) Victor/KEV; Distribution: /NPG; Sub-Collections: SRI-ARC NPG; Clerk: KEV;

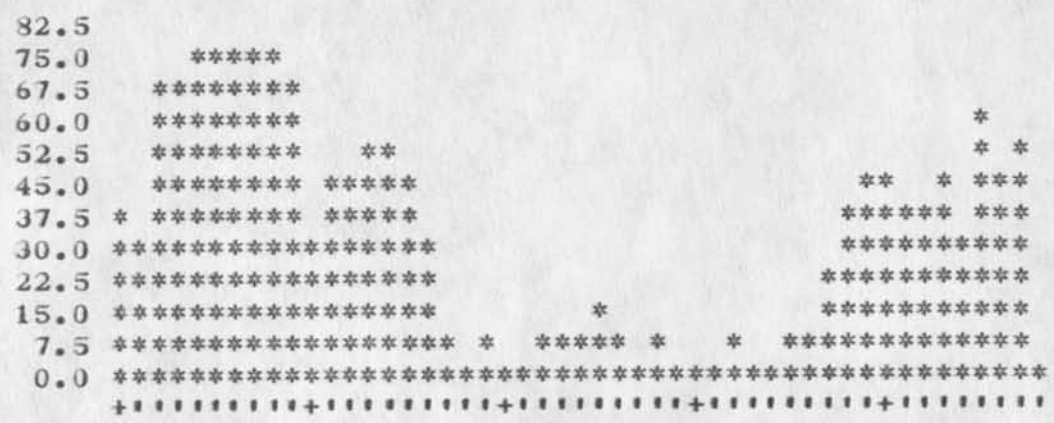
SRL 26-FEB-74 10:10 22051

Superwatch Average Graphs for Week of 2/17/74

For those of you who wonder about the remaining network users, they are FTPSRV (a system job), Bob Martinez and UKICS.

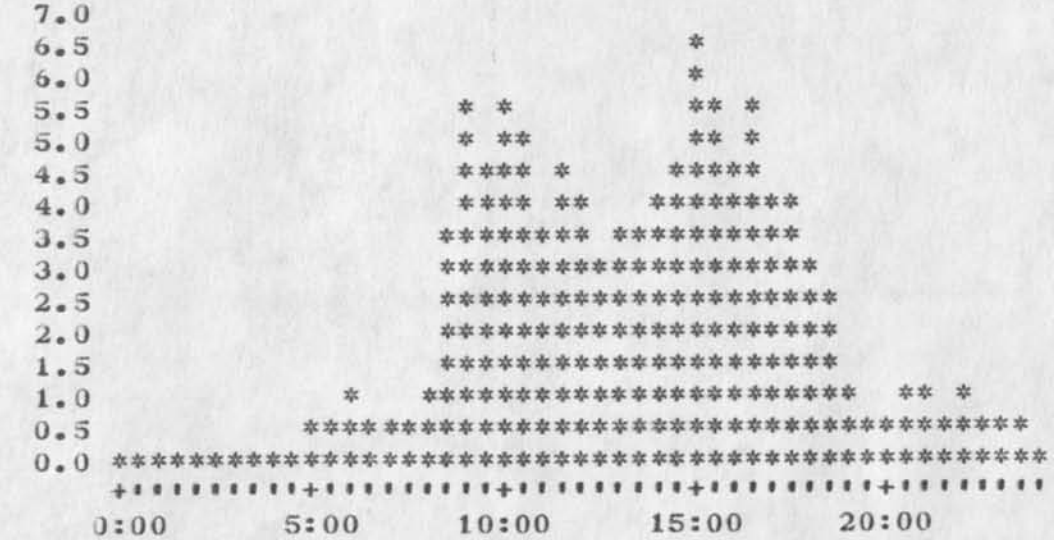
Superwatch Average Graphs for Week of 2/17/74

TIME PLOT OF AVERAGE IDLE TIME FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 1



1a

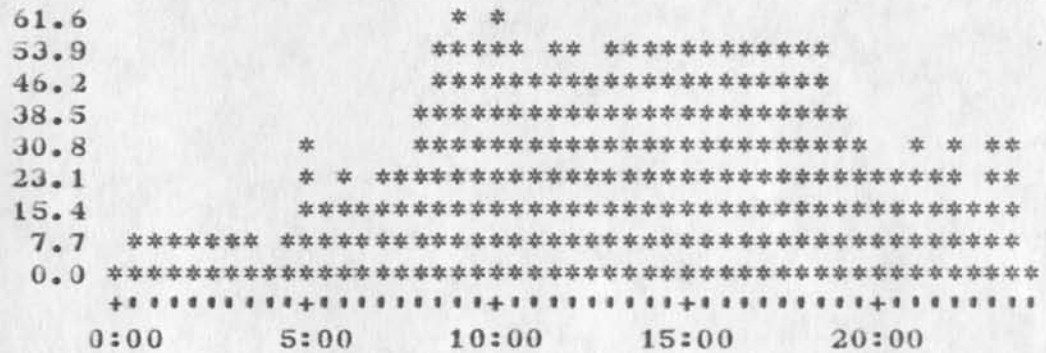
TIME PLOT OF AVERAGE NUMBER OF GO JOBS FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 2



2a

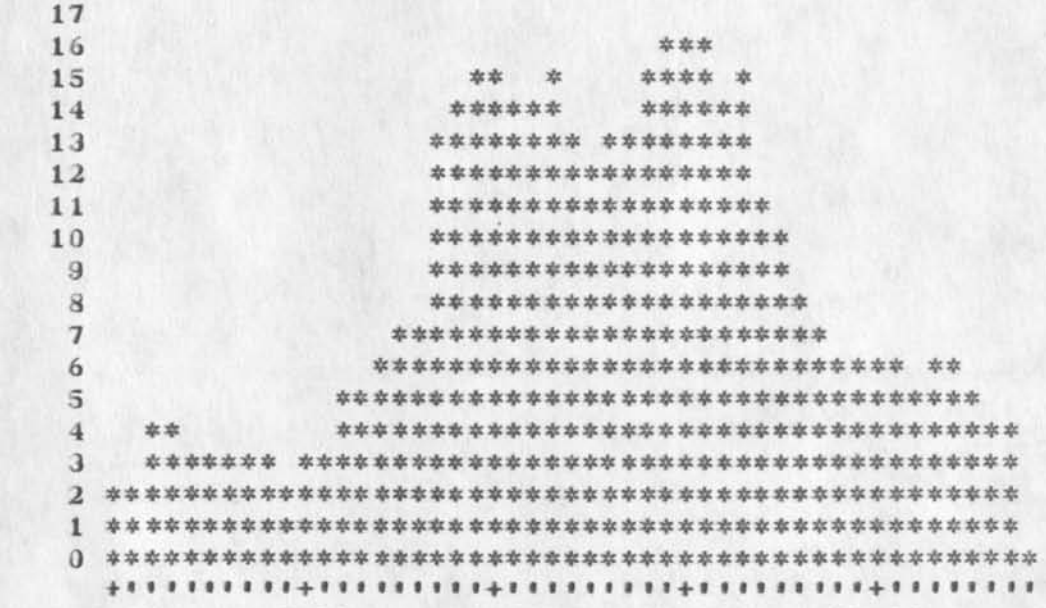
Superwatch Average Graphs for Week of 2/17/74

TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS
FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 3



3a

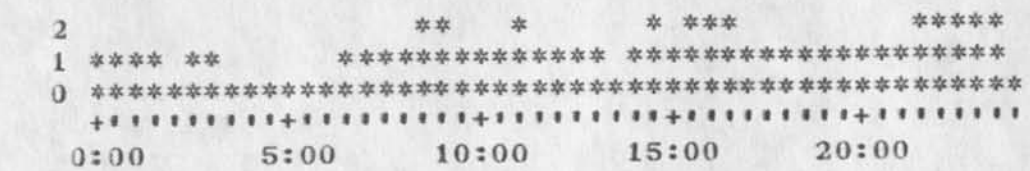
TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 4



4a

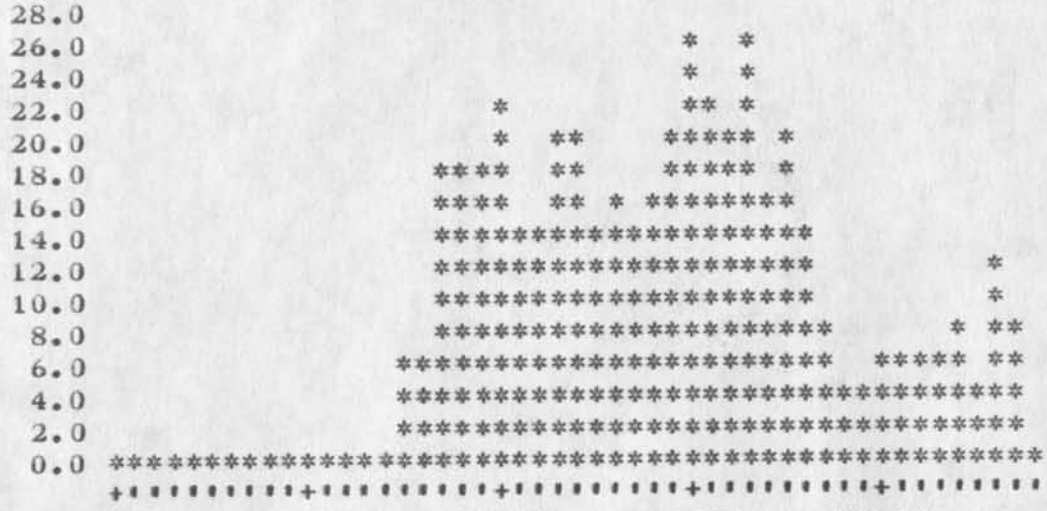
Superwatch Average Graphs for Week of 2/17/74

TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 5



5a

TIME PLOT OF AVERAGE PER CENT OF SYSTEM USED IN DNLS FOR WEEK OF 2/17/74
x axis labeled in units of hr:min, xunit = 30 minutes 6



6a

SRL 26-FEB-74 10:10 22051

Superwatch Average Graphs for Week of 2/17/74

(J22051) 26-FEB-74 10:10; Title: Author(s): Susan R. Lee/SRL;
Distribution: /JCN RWW DCE PR JCP DVN JAKE DLS BAH; Sub-Collections:
SRI-ARC; Clerk: SRL;
Origin: <LEE>WEEK2/17GRAPHS.NLS;2, 26-FEB-74 10:05 SRL ;

How to reach Dean Meyer in Washington:

Office: SRI Washington
1611 North Kent St.
Arlington, Va. 22209
(703) 524-2050 [good any time if anyone's here]

Home (so to speak):
Dean Meyer
Washington 1010
1011 Arlington Blvd.
Arlington, Va. 22209
(703) 525-7270

NDM 26-FEB-74 13:22 22053

How to reach Dean Meyer in Washington:

(J22053) 26-FEB-74 13:22; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /SRI-ARC DEIS; Sub-Collections: SRI-ARC DEIS; Clerk: NDM;

NWG/RFC# 624 MCK AWH JEW 28-FEB-74 17:33 22054

Comments on the File Transfer Protocol

Obsoletes RFC #607

NIC #22054
RFC #624
references: RFC #542
obsoletes: RFC #607

Mark Krilanovich
George Gregg
UCSB
Wayne Hathaway
AMES-67
Jim White
SRI-ARC
Feb 28, 1974

Comments on the File Transfer Protocol

This document replaces RFC 607, which was inadvertently released while still in rough draft form. It would be appreciated if RFC 607 were disregarded, and this document considered the accurate statement of the authors' opinions.

There are several aspects of the File Transfer Protocol of RFC 542 that constitute serious drawbacks. Some of these are quite basic in nature, and imply substantial design changes; these will be discussed in a later RFC. Others could be remedied with very litle effort, and this should be done as soon as possible.

Following is a list of those problems that can be easily solved, together with their proposed solutions:

1. Once a server has been set to the state where he is "passive" with regard to establishment of data connections, there is no convenient way for the user to make him "active" again. The "REIN" command accomplishes this, but affects more than just the desired active/passive state. SOLUTION: define a new command, with a command verb of "ACTV", to mean that the server is to issue a CONNECT rather than a LISTEN on the data socket. If the server is already "active", the command is a no op. "ACTV" is to have the same reply codes as "PASV".

2. Design of an FTP server or user would be simpler if all command verbs were the same length. While it is certainly possible to handle varying length verbs, fixed length string manipulation is in general easier to write and faster to run than varying length string manipulation, and it would seem that nothing is to be gained in this application by allowing varying length strings. SOLUTION: replace the only three-letter verb, "BYE", with a four-letter one, such as "QUIT", and constrain future command verbs to be four letters long.

3. The order of the handshaking elements following a file transfer command is left unspecified. After sending a STOR command, for example, a user process has no way of knowing which to wait for first, the "250 FILE TRANSFER STARTED" reply, or establishment of the data connection. SOLUTION: specify that the server is to send a "250" reply before attempting to establish the data connection. If it is desired to check if the user is logged in, if the file exists, or if the user is to be allowed access to the file, these checks must be made before any reply is sent. The text of the "250" reply would perhaps be more appropriate as "250 OPENING DATA CONNECTION", since it comes before actual data transfer begins. If the server wishes to send an error reply in the event that the data connection cannot be opened, it is to be sent in lieu of the "252 TRANSFER COMPLETE" reply.

4. Some hosts currently send an error reply on receipt of a command that is unimplemented because it is not needed (e.g., "ACCT" or "ALLO"). Even though the text of the reply indicates that the command has been ignored, it is obviously impossible for a user process to know that there is no real "error". SOLUTION: require that any server that does not support a particular command because it is not needed in that system must return the success reply for that command.

5. There is no specified maximum length of a TELNET command line, TELNET reply line, user name, password, account, or pathname. It is true that every system implementing an FTP server likely has different maxima for its own parameters, but it is inconvenient, at least in some systems, for the writer of an FTP user (which must converse with many FTP servers) to construct an indefinite length buffer. Similar difficulties confront the writer of a server FTP. SOLUTION: specify a maximum length for TELNET command lines, TELNET replies, user names, passwords, account numbers, and pathnames. This is to be done after conducting a poll of serving sites concerning their individual maxima. If Network mail is to be included in FTP, the mail text, if sent over the TELNET connection, is to be subject to the same line length maximum.

6. The notion of allowing continuation lines to start with arbitrary text solves a minor problem for a few server FTP implementors at the expense of creating a major problem for all user FTP implementors. The logic needed to decode a multi-line reply is unneccessarily complex, and made an order of magnitude more so by the fact that multi-line replies are allowed to be nested. SOLUTION: assign a unique (numeric) reply code, such as "009", to be used on all lines of a multi-line reply after the first. The reply code used for this purpose must begin with "0" (it cannot be three blanks, for example), so that it will appear

as extraneous to a user process by virtue of the already existing rules concerning reply code groupings.

7. If it is the case that the above solution to (6) is not accepted, the fact that the maximum allowed level of nesting is left unspecified creates a hardship for implementors of user FTPs. This hardship is somewhat easily solved on a machine that has hardware stacks, but not so for other machines. SOLUTION: either disallow nested replies (preferred), or specify a maximum level of nesting of multi-line replies.

8. The prose descriptions of the meanings of the various reply codes are in several cases unclear or ambiguous. For example, the code "020" is explained only as "announcing FTP". It is given as a reply that can be issued when a server cannot accept input immediately after an ICP, but its exact meaning is not obvious. Also, the code "331" is said to mean "ENTER ACCOUNT (if required as part of login sequence)", but is listed as a possible success reply for most of the commands. The explanation indicates that it is only valid in the login sequence, but the command-reply correspondence table implies that it also means, "I can't do that without an account". SOLUTION: an expanded effort should be made by those who originated the reply codes to define them more completely.

A major complaint about the protocol concerns the fact that the writer of an FTP user process must handle a considerable number of special cases merely to determine whether or not the last command sent was successful. It is admitted that the protocol is well-defined in all the following areas, but it is important to realize that the characteristic "well-defined" is necessary, but not sufficient; for many reasons, it is very desirable to employ the simplest mechanism that satisfies all the needs. Following is a list of those drawbacks that unduly complicate the flow chart of an FTP user process:

9. Different commands have different success reply codes. A successful "USER" command, for example, returns a "230", whereas a successful "BYTE" command returns a "200". The stated concept that the first digit would carry this information does not apply, as "100" means success for "STAT", and "200" means success for "SOCK". SOLUTION: specify that any command must return a reply code beginning with some unique digit, such as "2", if successful, and anything other than that digit if not successful. For example, this includes changing the success reply for STAT, perhaps to "200".

10. Some commands have multiple possible success reply codes, e.g., "USER" and "REIN". It is undesirable for an FTP user to be

required to keep a list of reply codes for each command, all of which mean "command accepted, continue". Again, the stated concept concerning the first digit fails, as "230" and "330" are in truth both acknowledgements to a successful "USER" command. SOLUTION: same as for (9) above. The desire to communicate more specific information than simply "yes" or "no", such as the difficulty that some servers do not need all the login parameters, may be solved by having, for example, "230" mean "PASSWORD ACCEPTED, YOU ARE NOW LOGGED IN", and "237" mean "PASSWORD ACCEPTED, ACCOUNT NOW NEEDED". Given the solution to (4) above, a user process becomes much less interested in the difference between "YOU ARE NOW LOGGED IN" and "ACCOUNT NOW NEEDED". The important point is that the idea of "command accepted" is conveyed by the initial "2", and that finer gradations of meaning can be deduced by the user process, if desired.

11. The meanings of the various connection greeting reply codes are somewhat inconsistant. "300 connection greeting, awating input", if intended as a positive acknowledgement to the ICP, should be a 200-series reply, or if intended to be purely informative, a 000-series reply. If the former, then clearly "020 expected delay" is the corresponding negative acknowledgement, and should be a 400-series reply. It is however unlikely that notification of an expected delay would be of importance to a user process without knowledge of the length of the delay. SOLUTION: change "300 connection greeting" to a 000-series reply, perhaps "011" (preferred), or change "300 connection greeting" to a 200-series reply, perhaps "211", and "020 expected delay" to a 400-series reply, perhaps "411".

In addition to the above mentioned weaknesses in the protocol, the following is believed to be a typographical error:

12. Reply code "332 LOGIN PLEASE" is not listed anywhere in the command-reply correspondence table. It would seem that this would be a more-information-needed (success) reply for all those commands which require the user to be logged in. It should also be stressed that the "332" code is to be used for this purpose, as many servers currently use other codes, such as "451" and "504", to mean "LOGIN PLEASE".

NWG/RFC# 624 MCK AWH JEW 28-FEB-74 17:33 22054
Comments on the File Transfer Protocol

(J22054) 28-FEB-74 17:33; Title: Author(s): Mark C. Krilanovich, A. Wayne Hathaway, James E. (Jim) White/MCK AWH JEW; Distribution: /RFC; Sub-Collections: NWG NIC RFC; RFC# 624; Obsoletes Document(s): 21255; Clerk: MCK;
Origin: <UCSB>FTPCOMM2.NLS;7, 26-FEB-74 13:17 MCK ;

DVN 26-FEB-74 14:59 22055

Current Status of EPAC, Group Formed, Making Catalogs, Terminette Formfeeds, ARC-TENEX Guide, Shipping the Delta Data.

DVN 26-FEB-74 14:59 22055

Current Status of EPAC, Group Formed, Making Catalogs, Terminette Formfeeds, ARC-TENEX Guide, Shipping the Delta Data.

I was really sucked in to getting out the R & D Plan last week, let many other things slip. Here are a few odds and ends I am now taking care of: 1

I have asked Marcia to create a group, EPAC: NDM, DVN(coordinator) RAS ECW PGK OWW AGC JCN Kerns, Jordan, Miller, Dave brown, Rodrigues, Rodden, Black Feel free to make addtions. 2

With Pam I am going to start tomorrow going through the old mail and journalizing what deserves preservation. 3

Mil has assigned numbers to a several of EPAC West documents, but has not fully entered them because she has not been able to get ahold of them from Whitby and Kerns. 4

If Dean has opened the left hand side of the terminet he has discovered a little paper wheel. This wheel determins the length of paperthat rolls out in respone to a form feed <control-k>. You punch a hole in it to depart from the default setting and a photocell reads the punch. Martin and I are playing around with indrocuting <control-k> into the text of an output device teletype. 5

I have been remis in dealing with Deans request for the ARC-TENEX user guide. I will get it in in the mail tomorrow and print another copy to replenish Marcia's supply. 6

Following this mornings conference call, I plan to ask Martin to ship the Delta Data East Thursday. Don Andrews will be here working on the line procesor tomorrow; maybe he will solve everything. 7

DVN 26-FEB-74 14:59 22055

Current Status of EPAC, Group Formed, Making Catalogs, Terminette Formfeeds, ARC-TENEX Guide, Shipping the Delta Data.

(J22055) 26-FEB-74 14:59; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /NDM JCN(fyi) MEH(sfyi) MLK(fyi); Sub-Collections: SRI-ARC; Clerk: DVN;

KIRK 26-FEB-74 15:33 22056

Request to ok a request for a survey

Last week I requested Analysis to do a survey to see how many people would be willing to take a cut in their allocation if they could be assured of a correspondingly greater share of the CPU for the time they were logged in. Paul said he was afraid to do this because of what you might think or something (I couldn't understand why he was afraid). Anyway, if you ok my request to him, he said Analysis would do it. As far as I can tell the group allocation is unchanged from when people were using us over the network. Sudden jumps at 2:00, etc. -- KIRK 1

KIRK 26-FEB-74 15:33 22056

Request to ok a request for a survey

(J22056) 26-FEB-74 15:33; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /JCN; Sub-Collections: SRI-ARC; Clerk: KIRK;

KIRK 26-FEB-74 15:35 22057

<HELP> ARC or NIC? MDK says to talk to you.

Jim --
We would like to put the HELP database in directory HELP as that would seem to be the place people would look for HELP to be. However, Jean Iseli seems to be using the directory for something else. I thought network people were supposed to be using office-1. Can we use <HELP> for HELP? 1

KIRK 26-FEB-74 15:35 22057

<HELP> ARC or NIC? MDK says to talk to you.

(J22057) 26-FEB-74 15:35; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /JCN; Sub-Collections: SRI-ARC; Clerk: KIRK;

KIRK 26-FEB-74 15:53 22058

Some errormessages discovered while using HELP

The Backdoor message "a description of the NLS command you were using follows" should not print out when Going to help via the front door (Goto Help, Execute Help). 1

I think the "n is an invalid menu number" error message should instead read: "no menu n available, try show < n". 2

When specifying an address via <↑U> for the show command, it asks for a group and then says: "Invalid List Chracters" "Item not found" unless you type a name in which case it just responds with "?". I think an address in HELP should allow DAE specification of a node in the database to be shown. This would be a valuable capability. Otherwise, it should not be prompted or available. At the least a message could be generated that says: "Not implemented". 3

KIRK 26-FEB-74 15:53 22058

Some errormessages discovered while using HELP

(J22058) 26-FEB-74 15:53; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /HGL EKM; Sub-Collections: SRI-ARC; Clerk: KIRK;

XNLS Bugs or Features?

Currently Append Branch is not implemented. It would be easy to implement by having it do exactly what append statement currently does. Append plex and group is another story. They should work like the Append user program in the running system. 1

Jump File Return puts me into an old version I just got really messed up that way. 2

When I tried to load my ident file after the partial copy had been deleted (it was bad), XNLS created a new version with nothing in it instead of loading the locked version and letting me unlock it. 3

I don't think I should get the message "illegal number" every time I bug a number that happens to be in parentheses. For example, try the Move Number command on (12345,) or (775252). 4

"FILENAME.EXT;123 cannot be opened" is the wrong message for me to get when I try to load a file someone else has protected by marking it 770000. 770000 means the file should not appear to the outside world via the DIRECTORY or any other command. Someone who's access has been restricted in this way should get the FILE NOT ONLINE message. 5

Setting name delimiters does not change the Statement Signature. 6

It is hard enough (technically impossible) to Insert Text at the beginning of statements, but when leading invisibles are deleted for you automatically... In XNLS I find I am no longer capable of inserting text at the front of a new statement created by breaking from another statement. Is this a bug or a feature? 7

Also is my incapability to insert viewspecs with the Load File command a bug or a feature? 8

KIRK 26-FEB-74 16:12 22059

XNLS Bugs or Features?

(J22059) 26-FEB-74 16:12; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NEWNLS; Sub-Collections: SRI-ARC NEWNLS; Clerk: KIRK;

XNLS things to consider

Vertical Splits which are hard enough to do anyway "<SP>spwv", have the bad habit of vanishing irretrievably if you try to move the boundary within 21 characters of the edge. WHY??? There should be an error message or some way to know the limits if they must be set. 1

CONFIRM in the Goto and in the Execute commands should be conistent (none necessary). 2

It seems inconsistent that you should have to have delimiters around file links you bug but not around filelinks you type in. I think file links should be visibles. 3

One should be capable of specifying viewspecs with the Load File command as in the Running system. There is no way of doing this in XNLS. 4

Output quick-print does not look the same as DNLS as far as names on the right is concerned. I prefer the way it shows on the screen. 5

Jump (to) File Return should be changed to Jump (to) File (Return). 6

KIRK 26-FEB-74 16:14 22060

XNLS things to consider

(J22060) 26-FEB-74 16:14; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NEWNLS; Sub-Collections: SRI-ARC NEWNLS; Clerk: KIRK;

User options I would like to have

Command Feedback OFF allowing 4 more lines of text if all you are doing is jumping and reading.

TTY window OFF allowing 2 more lines of text if desired.

Setting expert second level recognition key from space to period.

Changing option character from <↑U> to space. 1

KIRK 26-FEB-74 16:16 22061

User options I would like to have

(J22061) 26-FEB-74 16:16; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NEWNLS; Sub-Collections: SRI-ARC NEWNLS; Clerk: KIRK;

A simple system to eliminate the cludgy left justify indenting system of plex only (l) and branch only (g) viewspecs with indenting off (B) without adding another viewspec.

If the current left justification resulting from branch only and plex only viewspecs with indenting off was instead the way l and g worked for indenting on as the default, then when indenting was off, it would be OFF (independant of plex only or branch only viewspecs). 1

The disadvantange to this implementation is outweighed by the advantages in that if you were bothered by the resulting change in line length, you could split the screen or set your line length. However, under the current implementation, there is no way at all for the user to show plex only or group only with indenting really off. This capability is valuable to me. However, the way branch only and plex only currently work with indenting on is next to useless. 2

Also, I assume that output quickprint could then show the same as view as the Teletype or Display. 3

The alternative to this is to introduce a new viewspec: Left Justify. 4

Something should be done before a whole lot more links get cluttered with capital B's, l's, and g's. 5

KIRK 26-FEB-74 16:17 22062

A simple system to eliminate the cludgy left justify indenting system of plex only (l) and branch only (g) viewspecs with indenting off (B) without adding another viewspec.

(J22062) 26-FEB-74 16:17; Title: Author(s): Kirk E. Kelley/KIRK; Distribution: /NEWNLS; Sub-Collections: SRI-ARC NEWNLS; Clerk: KIRK;

MDK 26-FEB-74 16:17 22063

Original Announcement to NIC Users of Transition to OFFICE-1

The Network Information Center is planning to shift its computer user services to a new PDP-10 Tenex facility at TYMSHARE, Inc., in Cupertino California. 1

The changeover has been scheduled to occur sometime around the end of 1973, or the beginning of 1974. (The date depends on successful checkout of the TYMSHARE facility.) 2

The computer the NIC will be using will be connected to the ARPANET through a TIP at TYMSHARE. 3

% 4

The HOST NAME of the new facility is "OFFICE-1". 5

The HOST ADDRESS is 43 decimal (53 octal).
[TIP users of course use the decimal address, TELNET users the octal address.] 6

AT THE TIME OF THE CHANGEOVER ALL PRESENT NIC USER DIRECTORIES, FILES, AND IDENTS, TOGETHER WITH ALL ONLINE NIC COMPUTER SERVICES, WILL BE MOVED TO THE NEW FACILITY, AND WILL NO LONGER BE ACCESSIBLE AT SRI-ARC. 7

The new facility will be operational Mondays through Saturdays, 5:00 AM to 9:00 PM Pacific Time. 8

% 9

The computer software available at the new facility will initially be the same as that at the present SRI-ARC facility. 10

The "group allocation scheme" developed at SRI-ARC will be used to guarantee access to an estimated minimum of four (4) NIC users at all times during the new facility's operational periods. 11

MDK 26-FEB-74 16:17 22063

Original Announcement to NIC Users of Transition to OFFICE-1

(J22063) 26-FEB-74 16:17; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>OLDNEWS.NLS;6, 19-FEB-74 17:20 MDK ;

MDK 26-FEB-74 16:18 22064

Second Announcement to NIC Users of Transition to OFFICE-1

Beginning Monday 11-Feb-74 after 5:00 AM Eastern time, NIC users were getting their on-line NIC computer service from OFFICE-1. 1

Your Network Mail Address will automatically be changed in the NIC's IDENT system (and subsequently in the Arpanet Directory) to be YOURUSERNAME@OFFICE-1, if it was previously YOURUSERNAME@SRI-ARC. 2

% 3

You are responsible of course for informing your correspondents of any change in your Network Mail address, at the time the transition to OFFICE-1 is made. 4

For a short time you may continue to receive Network Mail at SRI-ARC from others who are not aware of the change, because your directory name (username) will be retained at SRI-ARC (Host #2) for several days after the transition to OFFICE-1. 5

BUT, YOU WILL NOT BE ABLE TO USE THE SRI-ARC SYSTEM AFTER YOUR FILES ARE TRANSFERRED TO OFFICE-1, EXCEPT TO READ YOUR NETWORK MAIL. NO NIC USER FILES WILL EXIST THERE, AND NONE MAY BE CREATED. 6

You should continue to send mail to NIC and SRI-ARC personnel via THEIRUSERNAME@SRI-ARC, because their files will not be transferred to OFFICE-1. 7

% 8

If you currently get on-line Journal Mail delivery via NLS, it will automatically be routed to you (as a NIC user) at OFFICE-1. 9

The Journal will be run in duplicate at SRI-ARC and OFFICE-1. Items generated at or sent to SRI-ARC will appear in the Journal files at OFFICE-1, and vice versa. 10

The indexes prepared at the NIC for Journal items will reflect all items sent via both SRI-ARC and OFFICE-1. 11

% 12

You will no longer be able to modify your own (or others') address and other data contained in the NIC's ident system. [The master identfile will be maintained at SRI-ARC; a copy will be sent to OFFICE-1 daily.] You will, however, be able to look at these data via the "status" command in the NLS identification subsystem at OFFICE-1. 13

To make corrections, updates, etc, please send your changes via

a) Network Mail to NIC@SRI-ARC, or
b) Journal mail to NIC

%

There no doubt will be some bugs and problems involved in the transition, so please bear with us. Thank you for your patience.

If you have any comments or questions, please contact us via:
a) Network Mail to NIC@SRI-ARC, or
b) Journal Mail to NIC. This mail will be reviewed daily, and your messages answered.

%

If you want to see the earlier announcement describing the purpose and scope of this transition to OFFICE-1, type the keyword OLDNEWS

MDK 26-FEB-74 16:18 22064

Second Announcement to NIC Users of Transition to OFFICE-1

(J22064) 26-FEB-74 16:18; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>NEWS.NLS;9, 19-FEB-74 17:25 MDK ;

KIRK 26-FEB-74 16:32 22065

Some comments concerning the new dynamic addressing elements from a database building and document referencing point of view

The new AE (address expression) is a very powerful tool. I don't think there is a single special character that is not used for some special function. It is important that these functions be specified unambiguously with the minimum number of characters so that the maximum number of functions can be accomodated. 1

In this framework, I feel the following suggestions should be considered. 2

First, I strongly oppose using Ampersand for Jump to Name External. Ampersand is a special character that should be available for use within a name. Conjunction is a valuable and necessary searching concept that is especially important for cutting down on duplicate names in large databases while retaining a mnemonic and easily typed identifier. The alternative to "&" is "-and-" which is so clumsy as to almost preclude it's use. 3

I suggest instead of using &, that be used for "jump to name external". 4

[As a side issue, I think that the external default is backword. The default should be "jump to name external" with the special character required if you don't want to search the external file(s).] 4a

I think that <SP> in front of a statement name should specify searching for "name in branch". No space specifies "jump to name any" [which would also search any external files]. 5

I don't think this will add any confusion in explaining the DAE to users for the following reasons: 6

A space preceeding a name as the first element in a DAE will work the same as no space except when specifying a second Group address parameter where the distinction will become important. 6a

Currently if anyone uses a naked name (no preceeding special character) following other addressing elements, all of the preceeding elements are evaluated and then ignored, wasted. 6b

The most important reason I'm requesting the above DAE changes is that in my work and I'm predicting, in the work of other database builders and document referencers; "name in group" and "jump to name external" will be more valuable than the current defaults. 7

Already, typing in front of all of the second names in the help database is an ugly pain. 8

KIRK 26-FEB-74 16:32 22065

Some comments concerning the new dynamic addressing elements from a database building and document referencing point of view

(J22065) 26-FEB-74 16:32; Title: Author(s): Kirk E. Kelley/KIRK; Distribution: /DIRT; Sub-Collections: SRI-ARC DIRT; Clerk: KIRK;

missing artwork

i took the partly red face.
...thanks and good dreams

DVN 26-FEB-74 17:27 22066

missing artwork

(J22066) 26-FEB-74 17:27; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /MAB2; Sub-Collections: SRI-ARC; Clerk: DVN;

JAKE 27-FEB-74 07:57 22067

NSWRDC station agent change

Marcia, Did you get the message to change station agent at NSRDC to FGB (Brignoli). RLL will leave as of Mar. 1, 74. 1

NSWRDC station agent change

(J22067) 27-FEB-74 07:57; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /MLK; Sub-Collections: SRI-ARC; Clerk: JAKE;

Hostname Suggestions

Thanks for your interest in the Hostname List problem. I will discuss your suggestions with Mike Kudlick et al and get back to you with our thoughts later.

1

Hostname Suggestions

(J22068) 27-FEB-74 08:02; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /MDK (fyi) MCK; Sub-Collections: NIC; Clerk: JAKE;

CHI 27-FEB-74 08:22 22069

Next Network Graphics Group Meeting and current NGP interests

Jim, could you tell me the date and location of the next NGG meeting? I (or someone from our group) would like to have specs for a slightly different positioned text protocol (different than Sproull's) ready to present there. We have ordered a PDP-11 to act as a front end to NLS (will do all command specification locally) and want to use NGP. Rob Hoffman from ISI is interested in a display front end also (they are having Systems Concepts build them a XEROX-PARC like display system). Hoffman wants to use NGP. We are planning to build on each other's work. Ed Taft at Parc would like to work on an implementation of transformed and structured display files and is interested in the connection problems and protocols. Sproull wants to act as a consultant to all this. We would like to at least get a positioned text protocol going within the next six months and cannot wait much longer for the NGG to get its head(s) together. I would like to see something firm (and approved) come out of the next NGG meeting or have a clear charter to move ahead with a trial implementation that will grow into the official protocol.

What is happening on the East coast with respect to NGP?

We are in need of a couple of good programmers. Know anyone who is available? If so, point them toward me or Watson.

Bye for now. -- Charles.

1

Next Network Graphics Group Meeting and current NGP interests

(J22069) 27-FEB-74 08:22; Title: Author(s): Charles H. Irby/CHI; Distribution: /JCM; Sub-Collections: SRI-ARC; Clerk: CHI;

DCE 27-FEB-74 10:50 22070

Phone Log: 26 Feb 74, Len Troncale

Phone Log: 26 Feb 74, Len Troncale

Len Troncale called again today (cf last week's call -- 22018,). He'll probably call me again in a few weeks -- shift back to Norton after current cycle. I'm to get him some info from Irby & co. 1

I hadn't been able to think of any evident way that we could help him get NLS on the PDP-10 that he is getting access to at Claremont College. He is intensely interested in launching into exploration of augmentation, has a crew of seven people set to go. Even though his people seem to feel that they can start from scratch and produce hatever they'd need, Len would rather begin with NLS and collaborativey track with us and the rest of our 'Community'. 2

I explained that without a TENEX operating system, NLS wouldn't be directly transferrable to a PDP-10, and that the amount and difficulty of the alteration was unknown to me. He askd if the NLS software was publicly owned: yes, he could have that. The hitches come in three ways: 3

we are under too much pressure right now to be able to spend much time helping make the changes; 3a

I was pretty sure that the DEC operating system wouldn't provide the same flexibility and shared-code capability, thus it would run much less effectively; and 3b

every difference in the foundation system would produce a wedging effect in subsequent evolution, tendng to move their group farther from ours. 3c

He wondered if the Cal Tech 10 was a TENEX, since his group will also be getting some access to that in April. I asked him to find out who the key system software people were at each the Claremont and Cal Tech PDP-10 facility. If we talked directly to them, we might be able to learn more about the environments. 4

I agreed to ask our software people about transferring NLS to a DEC (1050?) TSS -- the effort and problms involved, the limitations that would be enforced on NLS and what NLS fetures wuld be lost or degraded, and the operating efficiency. Also, I urged him to press harder toward finding support tht would enable him to buy Utility service. 5

DCE 27-FEB-74 10:50 22070

Phone Log: 26 Feb 74, Len Troncale

(J22070) 27-FEB-74 10:50; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /jcn chi (Charles: Note Item 5; please respond via Journal) ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Interest in AKW Utility by Sorensen of NASA Ames

I have had several contacts over the past month, showing increasing interest in our AKW Utility, from: 1

Carl Sorensen
N213-2 Ames Research Ceter
Moffett Field, Calif 94035 1a

He called again on 14 Feb, prompting this note. Carl works in the area of Construction and Facilities; he is an Electrical Engineer, and has worked there for many years (we worked together there in 48 to 51). 2

There are increasing pressures both to coordinate activities more, within NASA, and to cope with more complex facilities. Carl has one specific need in mind that seems potentially useful for exploring the application of our AKW stuff: helping coordinate the external communications that Ames conducts, coordinating it first within Ames, then potentially extending such technique into the larger NASA arena. 3

He will read the literature we send, and get in touch later. No rush; but he is persistent in his interest. The price of Utility service doesn't seem to raise an issue; immediate needs are for him to assess for himself the potential, and then to sell the idea at Ames. 4

He mentioned that NASA has a centralized, computer-based system for keeping all of their master specifications data; Ames for instance fills out appropriate forms and sends them in, then later receives the product of this mail and batch process in the form of stacks of some photo-reproduced sections of specifications that must be used as the core of the design and construction specs they use. He can't speak for possibilities of upgrading that service, since it is a centrally done NASA thing (termed "Intact Specifications" because it keeps intact at one central place the master set of specs), but it certainly seems a natural for a future online systems, such as NLS (probably with line graphics). 5

Literature being sent to him: 6

D. C. Engelbart and W. K. English. "A Research Center for Augmenting Human Intellect", AFIPS Proceedings, Fall Joint Computer Conference, 1968, Washington, D.C. (XDOC -- 3954.) 6a

D. C. Engelbart, COORDINATED INFORMATION SERVICES for a DISCIPLINE- OR MISSION-ORIENTED COMMUNITY, paper presented at the Second Annual Computer Communications Conference, San Jose, California, 24 January 1973. (Journal, dated 12 Dec 72 -- 12445.) 6b

D. C. Engelbart, R. W. Watson, J. C. Norton, THE AUGMENTED

Interest in AKW Utility by Sorensen of NASA Ames

KNOWLEDGE WORKSHOP, paper presented at the National Computer Conference, New York City, June 1973. (Journal -- 14724.) 6c

J. C. Norton, R. W. Watson, WORKSHOP UTILITY SERVICE FOR THE USE OF KNOWLEDGE WORKSHOP TECHNOLOGY, Technical Proposal to Bell Canada, SRI No. ISC 73-147, October 8, 1973 (Journal -- 19250,) 6d

DCE 27-FEB-74 11:17 22071

Interest in AKW Utility by Sorensen of NASA Ames

(J22071) 27-FEB-74 11:17; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /JCN JML (Jeanne: Please send the indicated literature) ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Phone Log: 10 Dec 73, Joe Hootman, re I4 NP for Utility buy.

Note: Submitting this much later than the event; I think that we should keep in touch with Stefferud and Hootman . 1

Joe is an associate of Einar Stefferud. They both have visited ARC earlier this year. Now consulting with ILLIAC IV. 2

TOPIC 1: 3

Asked about our interest in trying to find an application within the I4 activities -- Utility buy etc.. He feels that there are some natural application needs there. 3a

Related our history a bit, the various contacts and tentative plans. Explained that neither we nor the I4 had seemed ready before. 3b

He says that operaton seemed to have stabalized over there since our earlier contacts. People at I4 now that would be involved in any decision: 3c

Tom Craycraft: Runs the "wholesale Operation," and reports directly to Mel Pirtle. It is under him that the documentation people work, and where Joe guesses that the most relevant early application would be. 3c1

Ron SchWartz: Assistant director for administration of the I4 Project; reports directly to Mel Pirtle. He's a lawyer; handles all of the contracts and the money, and also seems to check out many of the "deals" that come up. 3c2

He has currently opened up discussion with COSMIC, the group at the University of Georgia that runs NASA's publication center. The I4 people are going to try using COSMIC to be the distributor for a test document. Chose for this purpose the GLYPNIR user's manual. Could lead to having COSMIC be the clearing house for I4 documents. 3c2a

(I told Joe that what we would offer would be complementary to the COSMIC service -- i.e. the development, production, and control. Each client group would be expected to seek its own clearing-house organization, as appropriate for its kind of business.) 3c2b

Suppose that ARPA could allocate at lest one slot to the I4 people for learning -- maybe this would be a way in. He will suggest that to the I4 people. I should bring it up with John Perry -- but Joe asked that I wait until he sees what the reaction of Tom Craycraft is. 3d

Phone Log: 10 Dec 73, Joe Hootman, re I4 NP for Utility buy.

How about his bringing Tom Craycraft over? He will see if he can get Tom in the mood. We'll wait until we hear frm Joe. 3e

TOPIC 2: Also, Joe asks how much of the I4 documentation is in NIC. Says there are only about eight documents, published manuals, that would be relevant for being in NIC's listings. Cost to buy them? He says, "Tnat's an excellent question, and he doesn't know how to answer it. That is part of what I think they are trying to work out with COSMIC." 4

Bob Black in touch with someone at NIC now, he thinks. (Probably wih respect to Resource Data records, in Resource Notebook). 4a

Time to reconsider NIC's stand on handing I4 documents pretty soon. But not really under the new NIC -- really belongs as a secial ARPA-Net Community under ACIS, the developers and users of the ILLIAC IV repesent an important community. 4b

TOPIC 3: A proposal from them to us: He and Stefferud are considering the kinds of support that could be given to people participating in computer network kinds of things. 5

And, in considering the sort of things that ARC is doing, and that we seem to be tied up in a funny position with respect to promise and problems -- he and Stefferud want to propose to ARC a "marketing" service that they can perform. Will offer us a written thinkpiece within a month or so. 5a

They would like to do a particular kind of work, for us and the Network -- preparing plans and materials for getting a better marketing system going. as a functioning wholesale resource on the Network. Helping the formulating the marketing plan, then helping the development of this as a marketing job. Giving presentations, etc. 5a1

Like, they submit an unsolicited proposal to us (ARC), with a plan for proceding. Assume that we, in ARC/ASRI, would structure it then as we liked, and go after funds to put the plan in action (with Stefferud and Hootman executing the plan). They would be willing to help look for the funds to support the plan. 5a2

My reservations: 5a3

SRI also has people in that business -- market planning, etc. 5a3a

He feels ok about that. Says that Stu Blake knows him well enough, and Joe feels that their proposal could

Phone Log: 10 Dec 73, Joe Hootman, re I4 NP for Utility buy.

stand on its merits ok to make him and Steff feel all right about going to the work of submitting it. 5a3a1

And, we have a strangely independent venture already going, where it may be inappropriate to seek outside support to plan ad carry outthemarketing... unless it were really slanted solety toward the ARPA Net and user community. 5a3b

O.K. by them. They are also trying to launch similar things for I4 and some other groups on the Net. 5a3b1

He'll send something.. that will be the first look in an official sense of ARC's formal thinking about this possibillity. I.e., EMC then begin considering this possibility. 5a4

I comment that the Net really needs deelopment of a marketplace schema. And that their idea has merit just from that idea alone. I'd back it on that level. 5a5

DCE 27-FEB-74 11:34 22072

Phone Log: 10 Dec 73, Joe Hootman, re I4 NP for Utility buy.

(J22072) 27-FEB-74 11:34; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /jcn (ILLIAC-4 as Utility Customers??) mdk (Note I4 Document question w.r. NIC) rww ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Visit Log: 5 Dec 73, Dick Garrett, Purdue

Heavy on collaboration and a Computer Aided Design Community

Visit Log: 5 Dec 73, Dick Garrett, Purdue

Dick is Professor of Mechanical Engineering, and Chairman of the Design Division in Purdue's ME Department. We have had many discussions over the past several years (numerous Journalized memos). Both in the substance of his (and his group's) work, and in the spirit and philosophy of their approach, there is a great deal of potential value in close collaboration. We've talked of it often; it dominated the talk during this visit (most of it at the console, generating the following notes). Really have to find a way to follow through. 1

Status notes, re. progress in their CAD activities: 2

Bob Belleville: 2a

Like to get at our TENEX, to be able to "get some software". Interested in implementation language for the PDP-11 (that will run their ANTS). -- We'll have to find out more about what Bob wants.. 2a1

ALso, Bob is putting together some grapics terminals, using video displays. Have video cameras looking at IMLACs to provide source of computer-graphic video. Also, he has ordered character-generator hardware that can provide text video. (Dick doesn't know whose equipment). 2a2

Gary Stowell, who developed the 2-D scaling, rotating, and translating "windowing" equipment for an IMLAC, has a project from NASA now to work on a 3-D version -- to work with any computer. Also, IMLAC is marketing his design, as the SRT-1, at about $4,000. 2b

Project reports now all being done on computer. Outputted via the Gould electrostatic line printer. 2c

All their software is in Fortran IV: initially run on the IMLAC, and CDC 6500; They have transfered it to the NASA 360 (also at West Point and Michigan); and are transferring it into the PDP-11. 2d

Collab NP 3

What chance fo going in on collb, their developing interactive support for diagrammatic graphics, especially with respect to DPCS? 3a

The start of their "Design Community": 4

People getting out there -- former students: 4a

Walt Reed, University of Texas 4a1

Visit Log: 5 Dec 73, Dick Garrett, Purdue

Tom Boardman, University of Michigan (building up a system there like the Purdue one) 4a2

Rick Putnam, NASA Ames, hired to coordinate their graphics development (in the Advanced Vehicle Concepts Group (AVC). 4a3

John Palmer, in charge of Computer Aided Desgn at West Point. 4a4

Plus, six more to leave this coming year. 4a5

And they all are interested in forming a continuing community. 4b

This nucleus is too valuable and dynamic to let sit around. Really needs to get started on putting togeher the base for a network coupled, collaborative community. 4c

Framework for going after the support for collaborative work, and hopefully to extend to supporting their collaborative community. 5

General NP: 5a

Have a student supported out here (or a graduate), like collaboratng with their group but being based here, to help the communications between ARC's set of thoughts and practices and the dynamic new dimensions theirs bring in. 5a1

NASA? Other application areas... 5a2

NSF: HAs a Design Branch, that is aware of and interested in the Purdue facility (as a working lab..). 5a3

Toward Community scheme, general pitch..sharing one coherent facility among a number of workers, spread out. So that the investment in facilites and technicuqe developmnt can have a much wider experiential and utiliation base. 5a4

The "exportability" of developments is getting to be an important concern with sponsors. 5a5

Basic Conditions: 5b

Government support has to be in the funding picture in order for the ARPNETWORK to be available for use. Better then to concentrate upon this at the outset. 5b1

There are three basic slants that the pomotion could take: 5b2

Aiming for substantive work within the discipline of

Visit Log: 5 Dec 73, Dick Garrett, Purdue

Design, to produce tools and methods applicable to the design process (wider range of design areas open). 5b2a

NASA contract is of this type. 5b2a1

Using their talents in 2-D and 3=D graphics to develop interactive tools and methods to apply to other types of applications than designers. (Do this for external client X, directly for his needs, or do this for a Client Y, for mutual (perhaps 3-way) goal, along with SRI-ARC.) 5b2b

Example: Say for technical documentation, to provide the graphic-maipulation part of illustration. 5b2b1

For some philanthropic client, to support the colonization of the CAD Community. 5b2c

Exxample: NSF. 5b2c1

How much money would be needed? 5b3

Collaborative approach, with respect to the initial proposal, so that several organizations are asking for the money to help set up the Community. 5b4

NOTE: This is something that SRI-ARC is interested in; we would help draft and "back" the proposal, even if it weren't to include direct support fo us; also possible to write it to include support for an SRI guy that keeps in special liaison role with the Community. 5b4a

We ought anyway to either have, or to produce over the next months, supportive writeups that can bolster the "proposal plan" and the supportive arguments. 5b4b

Explicit approach: 5c

Note that Dick visited us on 6 Apr 73, together with Gary Stowell and Phil White. In visit log, have alomost two pages of discussion explicitly aimed at the approach for their collaboration, starting Community work, etc. (see -- 15607,4). 5c1

Why not -- why don't the Purdue bunch draft a proposal for a Computer-Aided Design Community? Then we review it; and they try to peddle it. 5c2

Along the way there will be explicit questions that will be much eaiser to field when embedded in a specific context. 5c2a

Visit Log: 5 Dec 73, Dick Garrett, Purdue

Formation of the Communnity seems to be a "primary end goal." 5c2b

Question -- Is anybody else doing or contemplating such a thing? Not that I know of. Met some men in Europe that would be interested; in electronics design, though, and they haven't launched any planning that I know of. 5c3

Note: It would interest Dick to be an active nucleator for a CAD Community. Question of time,of course. Sabattical is over by end of year. 6

How can he/they becme more involved in ANET activity? How much resurce can NIC offer? 6a

What easy-to sell proposal could get them into the AKW environment? From there it would be much eaier to take the succeeding steps toward the CAD Community. 6b

Any chance that the current NASA client would see that much value in a joint buy, to provide more collaboation support between them?? 6b1

Specific Action: He'll try to interest some Ames people in looking into a Utility buy. Will contact me later, likely bring them by if find interest. 7

Literature exchange: 8

Gave him copies of four earlier logs of phone and visits by him. (12218,) (15119,) (15120,) (15607,). Also, one copy each of the Utility Proposals for IPT (14946,), and Bell (19250,). 8a

He left for us a copy of the Mechanical Engineering News, Vol. 10, No. 3, August, 1973: Article on p. 17 by John Palmer of Purdue (in section of Computer Graphics News, edited by Dick). 8b

Visit Log: 5 Dec 73, Dick Garrett, Purdue

(J22073) 27-FEB-74 11:59; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /jcn rww bc mdk (Mike: For your interest) ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Visit Log: 26 Nov 73, Richard McQuillin, Composition Technology, Inc, Cambridge, Mass

Richard J. McQuillin, President
Composition Technology, Incorporated
639 Massachusetts Avenue
Cambridge, Mass. 02139
(617) 868-5540

1

We are long-time acquainces; he has visited us before. His last visit was when his company was just getting started. It now is flourishing. [Note: I am entering this into the Journal much later; essentially all of the notes below were generated in front of the DNLS console, during his visit.]

2

He showed me two hefty publications, done on their system, involving vey heavy mathematical symbolization: "Transactons of the American Mathematica Society, V. 179, May 73, some 505 pages; and "Partial Differential Equations of Mathematical Physics", Tyn Myint-U, American Elsevier Publishing Company, N.Y. 1973

3

Tells that his keyboarding is done almost entirely with home typists, using Courier 12 ball (will be switching to OCR-A), with Optical Character Recognition equipment (been using an ECRM Scanner, switching to an MDG Graphics Scanner) taking the typescript and inputting to the computer. Use "verbalized" long-spelled terms for the special symbols and formatting. Even shipping bulk transcription work to Korea, Malta, West Indies, Inda, etc to get cheap labor. (Says that a number of c mpanies are organizing such services, to which his has been subscribing, on a production basis).

4

There are about 25 employees in house now, and about an equivalent of 25 others "outside". All "flat out" busy doing current wok, and trying to expand. Training secretares and others to do some of the proof reading etc. for the client (or client's staff -- e.g. the secretary of a Harvard professor-author).

5

Dick is now able to consider the potential of networking. Says that some of the time sharing utilities are approaching him. Two types of service seems possible: 1) Having a number of standard formats for documents of various types; 2) a typing manual telling how to type up a complex manuscript. They would get mag tapes from the nearest node of the network, and ship galleys or pages. He is talking to TYMSHARE tomorrow, fo potential use on TYMNET. Would be interested in exploring servicing the ARPANET -- on sort of the same basis as we have set up with DDSI, except their company offers a much more complete service.

6

Mentions that they have software for digitizing special symbols, from the art wok, so tha they can produce the appropriate dot matrix

Visit Log: 26 Nov 73, Richard McQuillin, Composition Technology, Inc. Cambridge, Mass

for their photo-typesetter (Harris Intertype Fototronic CRT), which exposes a line at a time as painted on a CRT face. 7

Told him about our Utility, about Architects, etc. 8

I put forth an hypothetical situation: 9

Suppose that we got a large enough "bootstrapping community" going such that considerable resources could be applied to the DPCS part. Would his company be able to consider for instance taking contract money to do development work on the DPCS tools, where the resulting system would not be propietary to his company, nor wuld they even be given any exclusive licensing or application rights? The resulting tools, part of a larger AK Workshop, would be licensable on an open basis to any qualified service outfit; business success thereafter depending on quality of people service, etc.. 9a

The answer -- not out of the question; board of directors, etc. to be considered. But, a certain amount of huge-system percepton, just within the AKW sub-field of typesetting; can see the even huger system problem of a whole, coordinated AKW System. 9b

He gave me: 10

I gave him: 11

D. C. Engelbart, COORDINATED INFORMATION SERVICES for a DISCIPLINE- OR MISSION-ORIENTED COMMUNITY, paper presented at the Second Annual Computer Communications Conference, San Jose, California, 24 January 1973. (Journal, dated 12 Dec 72 -- 12445.) 11a

D. C. Engelbart, R. W. Watson, J. C. Norton, THE AUGMENTED KNOWLEDGE WORKSHOP, paper presented at the National Computer Conference, New York City, June 1973. (Journal -- 14724.) 11b

Augmentation Research Center, "Output Processor Users' Guide," 23 Aug 73, (Journal -- 12209,) 11c

DCE 27-FEB-74 12:16 22074

Visit Log: 26 Nov 73, Richard McQuillin, Composition Technology, Inc, Cambridge, Mass

(J22074) 27-FEB-74 12:16; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /jcn rww ndm dvn bc ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Tenex Users Group

Michael,
The ident for Tenex Users Group is now TRG and the name is now Tenex Research Group. So, for an absolutely current list of members, in NLS, g(oto)i(dentfication submode)CR and then do a s(tatus)TRG CR. It will tell you the idents of the members.
Marcia

1

Tenex Users Group

(J22116) 27-FEB-74 14:47; Title: Author(s): Marcia Lynn Keeney/MLK; Distribution: /MAH; Sub-Collections: SRI-ARC; Clerk: MLK;

JAKE 27-FEB-74 16:16 22117

Like your style

Just read your ARPANET TENEX Postion paper and thought it was very well presented. Hope it was a win in Washington. 1

Like your style

(J22117) 27-FEB-74 16:16; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /WRF DCW; Sub-Collections: SRI-ARC; Clerk: JAKE;

DVN 27-FEB-74 17:18 22118

A Reminder of the DPCS Group and Subcollection

Thanks for the infomration about Compostion Technology in (journal,22074,). I will redistribute it to DPSC so it will go into the subcollection. The DPCS subcollection has been kept up pretty well and may prove a valuble rsource; don't forget it at distribution time. 1

Have we ever heard furtherfrom McQuillin? 2

DVN 27-FEB-74 17:18 22118

A Reminder of the DPCS Group and Subcollection

(J22118) 27-FEB-74 17:18; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /DCE; Sub-Collections: SRI-ARC; Clerk: DVN;

SRL 28-FEB-74 10:40 22119

Meeting for those interested in User Feedback

If you don't plan to come, any comments on the subject are welcome.

SRL 28-FEB-74 10:40 22119

Meeting for those interested in User Feedback

There has recently been increased interest in user feedback on the part of several people. At this point it seems it might be good to get together for a short meeting to bring those people who are interested up to date on what is currently being done with user feedback. Also, to provide people a chance to present their wishes for handling feedback, and possibly to reach some agreement on future plans. 1

This is especially aimed at MDK, JAKE, KIRK, and JHB, but anyone else is welcome to come or submit comments before that time. 2

I am suggesting next Tuesday morning at 10 in the parsley room. If this conflicts with anyone's schedule, let me know. 3

Some documentation of current feedback practices exists in (analysis,nnls,1), (bair,feed,), and (GJOURNAL, 21683,). The first two should be treated as working files. 4

SRL 28-FEB-74 10:40 22119

Meeting for those interested in User Feedback

(J22119) 28-FEB-74 10:40; Title: Author(s): Susan R. Lee/SRL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>BLAP.NLS;2, 28-FEB-74 10:34 SRL ;

Problems and Lessons from Preparing th DEIS R & D Plan

Bulk 1

The authors orignally outlined the plan for about 20 250-word pages. It came out nearer 70. In the normal course of preparing a doccment, if the rough draft grows, the writers can gather support from the large universe of typists. At SRI there are about 5 people competent to type bulk text into NLS who do not have other peremptory claims on their time. Each of the 5 has other duties. 1a

We need to train more people in DEX. 1b

We did train Beryl Lelo in DEX and Eileen Walters in this aspect of TNLS. 1c

Joe Bhardt has developed a word processing system based on a PDP-11. They have a DEX-like system for recording text. They assert 11 can convert their cassettes to cassettes that DEX can read. At least two people are trained in their input conventions. We are planning to enter the non-tabular parts of the current (3/1) revision of the R&D plan via the 11. 1d

The scurry for typists meant different people typed different parts of the draft. On the whole we were able to avoid misarrangements of text in the online files, but we did not do so well on tables. 1e

Times 1f

For future reference, let me give some rough figures for what we can expect in the way of typing speed. These times are for someone not working at peak efficiency in a pool but rather in an office with a normal level of interruption and between 8 a.m. and 5 p.m. with 250-word pages: 1f1

DEX, TNLS, Display text input: 6 pages/hour 1f1a

TNLS Light editing: 6 pages/hour 1f1b

DNLS Light editing: 12 pages/hour 1f1c

Light editing excludes gross changes in organization (which go much faster) and implies pages where say 15-20 words or phrases are changed or inserted. 1f1c1

TNLS Tables (pages that would use tabs in normal typing): 1/2 page/hr. 1f1d

DNLS Tables: 1 page/hour 1f1e

Problems and Lessons from Preparing th DEIS R & D Plan

Tables 2

The R&D plan includes about 15 pages of tables. I put them online in display. It was largely for access to display that we fited the plan on ARC's machine rather than using OFFICE-1 except for backup. Getting the tables in and in the right place caused a lot of problems. For a significant time an author believed that some of his tables were online while I had never seen them. The author failed to note on the MS and I failed to insist upon learning the exact location of the tables. (see ? below). Several hours were lost getting them right. Since tabs do not appear the same in all output media, I built the table with spaces. Spaces meant setting and resetting, at least indenting and in some cases other Output Processor directives. A file rich in directives meant a finished-looking draft could only appear off hours or by exempting the job from suspension on even, on one occasion case as we were rushing to make a plane by, high-cuing the job. 2a

NLS does not handle tables as gracefully as linear text. As I and others have pointed out (journal,16254,) the tree-form structure is at faaut here and a matrix form would be superior. In the interim useful tabs would help. 2b

Some directives would have been necessary even with tabs. 2c

Crashes 3

It is wth pleasure I note that crashes were not a problem. They would have been if we'd been working on OFFICE-1 which happened to crash at several critical times. 3a

Authors' Sense of Access 4

The authors (mainly Dick Schmidt (RAS) and Oliver Whitby (OWW)) are not NLS users. This meant they gave up their MSS, piece by piece, to people who typed them into our inky pit from which they might never return and wherein their condition from moment to moment were uncertain and invisible. Let me say no one complained (to me) -- the problem was evident in various acts. 4a

The acculumlation of printed drafts becomes confusing if it is not controlled. After a while various old version tun up even if you try to keep destroying them. By the vernsion number at the head of file it is always possible to tell which version in order you have, but not whether it is te last version. 4b

A directive like GDT that would generate the file name including version number at any point (say in a header) might be helpful. 4c

Quickprint An Output Processor 4d

Because of the tables, I tried always to return processed drafts to authors even though that was frequently difficult. In retrospect I think that was a mistake. When I came to people and said "Your table will look OK when it's printed right" they seemed to believe me. 4d1

Pages 4e

People accepted the impossibility of putting footnotes at the bottom of pages. The real problems were in communicating about the document. For example I would ask "Where does table V-1 go?" An author would answere "It follows page 30." Well that is a meaningless statement except in reference to a given print run of a document of this size. So I would have to prod the author under trying conditions for some other specification, and in doing so give him the feeling his document was growing ever more formless. 4e1

We're getting used to thinking of doccments in NLS without pages. They are unpaged files. We naturally locate things by hierarchy. SID, (anacquisition number given to each statement) or by contents. 4e2

It has been argued that the Output Processor should be a two-pass system, knowing on the second pass the page where each character lies. A two-pass system could footnote at the bottom of pages, but it would solve few other problems and would be expensive. 4e3

I think in this case we must carefully teach users and they must accpet that page numbers are something tacked on in printing and that the "real" location of items is specified by hierarchy, content, or SID, which seems to me in general more functional anyway. 4e4

The "Real" Document 4f

The high-cueing which irritated a lot of people at ARC was to print a copy to put on a plane to fly to Washington. To people used to NLS in which the real document is on the disk and a piece of paper is merely an instantiation, effort seemd a little mad. Couldn't Dean just print it in Washington? -- the real job is as close as anyone's terminal. In fact he did and the figures could be (and some were) telefaxed. 4f1

But people just do not feel that way and in terms of the reliability of both the machine and the prodcedures for getting

hardcopy to the right place, that have some reason on their side. 4f2

Figures 5

The plan has anumber of figures. We paged with a note that the page should be a figure. The system worked better than I expected. There were some problems with location similar to those with tables. 5a

The existence of figures complicates the question of the "real" document . 5b

What We Need 6

More Dex typists 6a

A faster Output Processor 6b

A capacity for handling matrices 6c

Tabs that are the same for all output media 6d

Procedures for helping non-NLS authors who have a sense the stateof their draft. 6e

In future EPAC doccment production I may ask typists to return a quick print of input or edited sections to the author as a matter of course and also, perhaps, to a bulletin board. 6e1

Procedures for halting suspension and high-cuing at Office-1 6f

On the occasion when I printed the R&D plan for shipment to Wahsngton, I could have sent it to OFFICE-1. I did not because, at a moment when time pressures made me feel I must be certain of each step, I wasn't sure if I could prevent it from being suspended. 6f1

To Continue Teaching and Learning 6g

It's a new medium in giving other people a feeling of when it's easy and when it's hard, what's safe and what's risky, is hard. We must be willing on occasion to do things that appear very inefficient because it is impossible to explain for the moment why they are inefficient. We must also watch the questions of novices to discover when our own procedures are arbitrary. 6g1

Display NLS 6h

Problems and Lessons from Preparing th DEIS R & D Plan

DVN 2-MAR-74 19:35 22124

Problems and Lessons from Preparing th DEIS R & D Plan

(J22124) 2-MAR-74 19:35; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: DEIS DPCS DLS; Sub-Collections: SRI-ARC DEIS DPCS; Clerk: DVN;

Catalog Program File Size

21-MAR-74 1111-PDT HARDEMAN: Catalog File Sizes
Distribution: VANNOUHUYS, Hardeman
Received at: 21-MAR-74 11:11:14 1

DIRK, THE FOLLOWING REPRESENTS THE MINIMUM SET OF FILES REQUIRED FOR
SUCCESSFUL NICJ AND ARCJ RUNS AT OFFICE-1. THE SET MAY HAVE TO BE EXPNDED DEPENDING OF WHERE AND HOW THE SOURCE FILE IS CONSTRUCTED, THE
BELOW ASSUMES IT WAS CREATED OVER HERE AND PASSED OVER THERE TO BE PROCCESSED.

FILE	SIZE
APROGS	21
ARCJPROGS	6
CPPPROG.REL	16
CPPPROG.NLS	36
CPPTABLES	44
JPROGS	18
KEYPROGS	5
NICJPROGS	5
NPROGS	10
TPROGS	38
UNKEY	1
UPTABLES	4

	204
SOURCE FILE +	1a

Catalog Program File Size

(J22125) 21-MAR-74 17:16; Title: Author(s): Beauregard A. Hardeman/BAH(FOR THE RECORD); Distribution: /JCN MEJ JHB JBN JDH; Sub-Collections: DEIS DPCS SRI-ARC; Clerk: DVN;

Quarterly Management Report 10

(J22127) 10-JUL-74 10:14; Title: Author(s): Robert S. Ratner, Karolyn J. Martin, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach, Marcia Lynn Keeney, Susan R. Lee, Elizabeth K. Michael, Elizabeth J. (Jake) Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim) White, Paul Rech, Michael D. Kudlick, William R. (Ferg) Ferguson, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews/SRI-ARC; Distribution: /DLS([INFO-ONLY]) CF([INFO-ONLY]) ; sub-Collections: SRI-ARC; Clerk:

Quarterly Management Report 10

ARPA Order Number: - Program: - 1

Title: "Network Infomation Center and Augmentation System Development" 1a

Contractor: Augmentation Research Center, Stanford Research Institute 1b

Date of Contract: 10 May 1972 1c

Amount of Contract: $2,753,000 1d

Contract Number: F30602-72-C-0313 1e

Principal Investigator: Dr. Douglas C. Engelbart phone (415) 326-6200, ext. 2220 1f

Contract Expiration Date: 30 June 1974 1g

I RESEARCH PROGRAM AND PLAN 2

As per our proposal and contract, work has progressed in the following areas: 2a

Developing service functions for: 2a1

External users - the Network Information Center (NIC) 2a1a

Internal users - prototype systems, such as: 2a1b

Dialog Support System (DSS) 2a1b1

Documentation Production and Control System (DPCS) 2a1b2

Software Engineering Augmentation System (SEAS) 2a1b3

System Developers' Handbook System (SDHS), 2a1b4

Developing service delivery and marketing principles and practices, 2a2

Providing operational marketing and delivery of services, 2a3

II MAJOR ACCOMPLISHMENTS 3

Privacy 3a

During the past quarter, we added a private dialog feature to the Journal. At submission time, the user may designate his

Journal item as either public (the default) or private. Access to private items is restricted by NLS to the clerk, author(s), and addressee(s). This new feature is just one application of what is in reality a much more general system feature. The user can, in the general case, restrict access to any NLS file to any desired set of users and/or user groups. In contrast to TENEX access controls, this new privacy feature, like NLS in general and the Journal in particular, permits specification of users by ident, rather than by TENEX directory. 3a1

Dual-Host Journal 3b

During the past quarter, we converted the Journal to a two-host system in support of the Utility. The resulting system is conceptually a single Journal, distributed at the implementation level on two machines. A user on either machine can distribute Journal items to or receive them from any user within the system, whether he works in an NLS environment at SRI-ARC or OFFICE-1, or in a non-NLS environment at some other ARPANET host, or in a hardcopy (US Postal Service) environment. The current dual-host design was oriented toward quick implementation and short-term use. 3b1

Line Processor 3c

We developed the Line Processor, an inexpensive microcomputer device with its associated NLS virtual terminal concepts and communication protocols, to permit the use of low-cost alpha-numeric displays with mouse and keyset as NLS display terminals. This development contributed to the Network Graphics Protocol. 3c1

New NLS in Operation at ARC 3d

We have implemented at ARC a new command language for the NLS system. It includes features such as: 3d1

A new Command Meta Language (CML), and its command language interpreter, that allow high-level language specification of the interaction of the system with the user and also allow centralized command parsing and user feedback. 3d1a

Help facilities that provide quick syntactic assistance (i.e., a description of command options at any point driven by the CML command tree), or, in case of deeper user questions, provide direct access to more extensive online documentation with automatic entry to the point in the documentation relevant to the user's particular control state. 3d1b

A User Profile system that permits users to choose default operational characteristics. 3d1c

In rewriting the NLS system to take advantage of the linguistic and conceptual changes noted above, we redesigned, cleaned up, and expanded the user command language to remove known inconsistencies, to add novice-oriented features, and to incorporate TENEX functions into NLS. 3d2

User Feedback System 3e

In order to better assess the new command language, the analysis group at ARC has developed a procedure for collecting and handling feedback from ARC users. 3e1

This system serves the relatively experimental conditions at ARC and differs in content and users from the system described below under "User Development". 3e2

Our users are encouraged to submit all comments online via either the Journal or the TENEX message sending system. Reports of bugs, suggestions for new features, and attitudes, both positive and negative, are solicited and are routed to a master file, and the information collected is organized into categories. 3e3

Bugs are reviewed and assigned to a systems developer. The Future Needs and Possibilities section is reviewed by Analysis and a report is submitted to Development of items for future consideration. 3e3a

When action is taken on an item, or when for some reason its status changes, the user who submitted the item is notified by means of an online journal item. Users can also peruse the master file to find the status of an item or to get a general idea of the status of various development efforts. 3e4

The feedback mechanism has been used extensively and viewed positively primarily because of the knowledge that a problem submitted to the file will be considered and some response will be forthcoming. 3e5

User Developemnt 3f

Design and Operation 3f1

A position called "User Development" has been established to provide those noncomputer services such as training and consultation that are necessary to support new users. The

two major efforts during this quarter were instructional development and user feedback, 3f1a

Instructional Development 3f2

Formal courses have been developed that graduate exposure to NLS to ease the user's progression from minimal capability to the highest level he wishes to attain, 3f2a

The Feedback Mechanism 3f3

A directory (Feedback) was implemented to serve as a depository for inquiries made via the system. A User Development staff member sorts the inquiries, consults the appropriate expert, and responds to each individual item within one or two working days, 3f3a

The stored inquiries and responses are analyzed periodically, including a frequency count of the inquiries relevant to particular issues or problems, 3f3b

III PROBLEMS ENCOUNTERED 4

No problems were found that require government action, 4a

IV FISCAL STATUS 5

Estimated expenditures and commitments to date are $2,659,059 excluding computer and other lease commitments. Estimated funds required to complete the work are $93,941, 5a

The estimated date of completion of work is June 30, 1974, 5b

V ACTION REQUIRED BY THE GOVERNMENT 6

None 6a

VI NEXT QUARTER PLANS 7

This is the final quarter of this contract, 7a

Approved by:

D.C. Engelbart, Principal Investigator

Specifications For HELP Command Language Functions

(J22128) 16-JUL-74 10:09; Title: Author(s): Dirk H. Van Nouhuys, Jeanne M. Beck/DVN JMB; Distribution: /RWW([ACTION]) DIRT([INFO-ONLY]) ; Sub-Collections: DIRT SRI-ARC; Clerk: DVN;
Origin: (VANNOUHUYS, MYLIN,NLS;80,), 16-JUL-74 10:02 JMB ;;;;
22128####;

Specifications For HELP Command Language Functions

Dick Watson asked the Documenation Group (JMB & DVN & KIRK) to specify what functions the Help command language should give the user, Kirk wants to stand by his recommendations <in==GJOURNAL,23514,>, Jeanne and Dirk agreed on the following functions, with disagreements as noted, 1

Views: 2

Three views should be available to the user: 2a

Outline view [viewspecs:et(n)b where n is some number] with the depth below the node (n) controlled by the data base builder by viewspecs in the top node, The default depth should be 2 [etb], 2a1

Full view [viewspecs: es(n)b where n is some number] with the depth below the node (n) controlled by the data base builder by viewspecs in the top node, The default depth should be 2 [esb], 2a2

Menu View [Viewspecs es for top node, ebt below that], That is the present result of the show command, 2a3

We need to retain our present ability to label a substatement to be unmenued but print out in full (statements beginning with]) 2a3a

The substatments in all three views should get menu numbers, 2a4

Links: 3

We do not need links in the middle of the text of nodes that call text from other nodes to be printed there and call substatements to be menued along with thos of the source node, That is, we can promise that all links will be at the end of statements, 3a

In full view help links of the form ##<ADDRESS>## will bring over the complete text of the object node and of its substatements to the depth determined by the data base builder's viewspecs 3b

In outline view help links of the form ##<ADDRESS>## will bring over the complete first line of the object node and of its substatements to the depth determined by the data base builder's viewspecs 3c

Menu view operates as it does now (no text is brought over from the objects of links), 3d

Command Functions: 4

Command words: 4a

The user should usually learn about a subject or menu item by typing the word(s) or number without having to first type characters for a command word. 4a1

Bugging: 4b

Dirk: 4b1

I think bugging is irrelevant to HELP. I think bugging should not operate at all in the HELP system. 4b1a

Jeanne: 4b2

Since new users are often impressed with our (their) new capability of bugging items on the screen, they are anxious to use it. Therefore I feel that anywhere the user can type a word or phrase to be searched or can type a menu number, she should be able to bug either. The question is--when the user bugs something in a menued line, should we show that menu item or search for that word? Now there are two ways of handling/interpreting this user input: 4b2a

1. If the bugged item is in an unmenued node (where all lines are showing), it should be taken as a search; if anything in a statement that is menued (i.e. only one line showing) is bugged, we should show that node. 4b2a1

2. If the item bugged is a word or text, it should be searched; if it is a number (that is, she bugs the menu number), we should show that node. 4b2a2

I prefer the second alternative. 4b2a3

I would like bugged items to be taken as word or number rather than text requiring two bugs; this present implementation was confusing to one new DNLS user. I would also not like to tempt users to try a search on a whole line of text--Help's phrases are very limited. 4b2b

INTRODUCTION 1

The Lineprocessor is a device that sits between certain alpha-numeric display terminals and a source of NLS computer service to allow use of the features of Display NLS. 1a

At a workstation equipped with a Lineprocessor you can view your file two-dimensionally, like looking at a page, and at the same time make changes in text by pointing to it anywhere on the screen with a rolling pointing device called a mouse. A mouse and a small keyset allow typing in characters with one hand while moving the mouse with the other. A printer may be attached and function in parallel with normal display use. The Lineprocessor also does some simple computing that reduces the load on the communication lines and the central computer. 1a1

The Lineprocessor must be connected to a source of computer service. It may be wired directly to a computer or to a TIP with access to the ARPA Net, or it may connect to a high-speed telephone line through a modem. The modem may use an acoustic coupler that cradles the receiver. 1a2

The instructions for startup and use assume the Lineprocessor is either wired or connected by a modem without acoustic coupler to a TIP. If these assumptions are false for your workstation, see Setup Procedures in the Appendix. 1a3

We also assume users have access to a TIP Users' Guide and NLS Documentation such as the NLS-8 Quick Reference Guide. 1a4

STARTUP 2

STEP 1: Turn on the display with its ON-OFF switch. 2a

STEP 2: Turn the display to "online" or "receive" mode if this does not happen automatically; make certain the terminal is in "full duplex" mode. 2b

STEP 3: On the Lineprocessor, make sure all the sense switches (the slim silver toggles on the upper right) are down. (See Figure 1) 2c

STEP 4: If the telephone modem is not on, turn it on. 2d

STEP 5: Turn on the Lineprocessor with the ON-OFF button toward the lower right and press the System Reset button. 2e

NOTE: At this point the display cursor (on most displays a small line like a hyphen) should move when you move the mouse. If it doesn't, first press the System Reset button, center top. If that doesn't work, check the connections described under Setup in the appendix. 2e1

The "error" light does not indicate a problem at this stage. If it comes on, turn it off by pressing the Error Reset button just to its left. The status lights (See Figure 1) should read: 0X00. 2e2

STEP 6: Type "@ SPACE I SPACE 25 CARRIAGERETURN" unless the port you are using to reach the TIP has been left open (see STEP 10). 2f

NOTE: Normally the character "@"(atsign) gets the attention of the TIP. The TIP starts responding when you hit "atsign", and stops responding when you hit carriage return or linefeed. "@" is called the TIP intercept character. "@" is inconvenient for the Lineprocessor. The 25 in the command to the TIP in STEP 6 makes <CTRL-Y> the TIP intercept character. <CTRL-Y> will remain your TIP intercept Character until you reset the TIP, or the TIP malfunctions, or you set the intercept to some other character (see "Trouble Shooting" in the Appendix). 2f1

STEP 7: Strike "<CTRL-Y> SPACE L SPACE 43 CARRIAGERETURN" 2g

NOTE: 43 is the number of host Office-1; you may log into other hosts by using other numbers. Only certain hosts run NLS. 2g1

The TIP will respond by writing "open" and Office-1 will respond with its TENEX login message: 2g2

TENEX 1.3#.##.## OFFICE-1 EXEC 1.5# ## 2g2a

STEP 8: When you've seen the TENEX Login message, type:
"TER ESCAPE/ALTMODE LI ESCAPE/ALTMODE CARRIAGERETURN". 2h

NOTE: From now on the status lights should read: XOXO. If the pattern changes, press the System Reset button at upper center. Your display will disappear briefly, and then reappear working normally. 2h1

STEP 9: login to TENEX and NLS. 2i

STEP 10: When you are finished with your NLS session, you can disconnect from the TIP by typing: <CTRL-Y> CARRIAGERETURN. 2j

NOTE: If you log out of TENEX at the end of your session, but do not disconnect from the TIP, you can pick up at step 9 next time merely by typing <CTRL-C>.

2j1

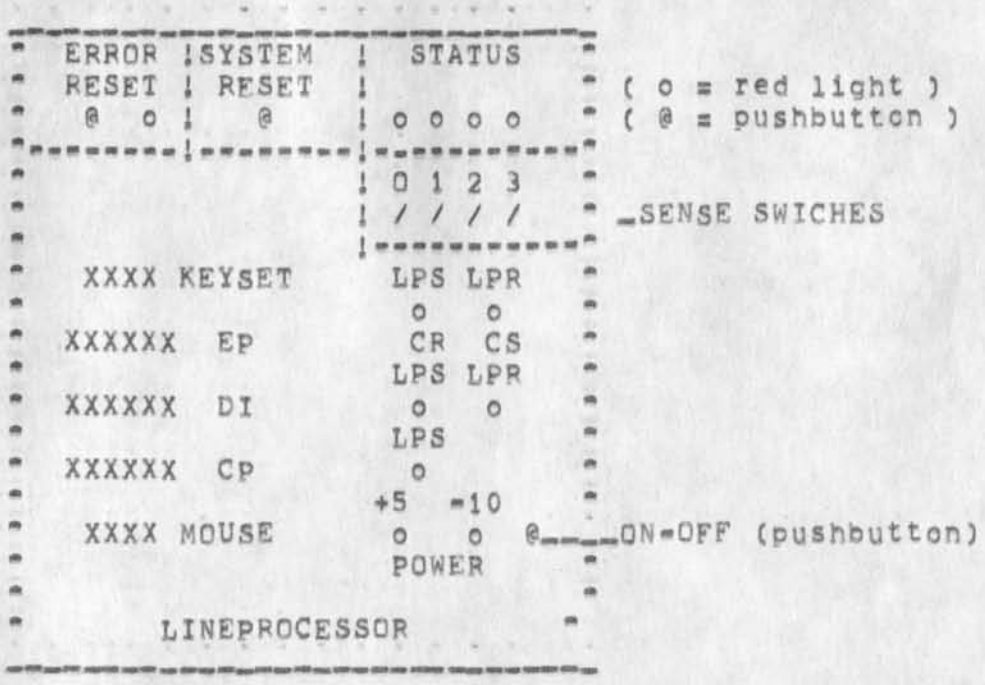


FIGURE 1

Legend:

Connections

EP = External Processor
DI = Display
CP = Copy Printer

Data Flow Lights

LPS = Lineprocessor Send
LPR = Lineprocessor Receive
CR = Computer Receive
CS = Computer Send

Sense Switches

0 = Printer Operation
1 = Echo Test
2 = Special Keys
3 = Coordinate Mode
3 = Coordinate Mode

Status Lights

0 = Printer Status
1 = Lineprocessor Status
2 = Echo Test
3 = Coordinate Mode
3 = Coordinate Mode

[See appendices E & F for more about Sense Switches and Status Lights.]

APPENDICES 4

Appendix A, Printer Operation 4a

The printer port (copy printer) is designed to produce a hard copy in parallel with normal workstation use. At present it is necessary to run a user program to operate a printer attached to a Lineprocessor. Shortly this program will become a normal NLS command. In the meantime, the syntax is: 4a1

STEP 1: Goto (Subsystem) Programs OK 4a1a

STEP 2: Load Program LPPRINT OK 4a1b

STEP 3: Run Program LPPRINT OK 4a1c

From this point forward the program will prompt you. 4a1d

STEP 4: Quit To Base OK 4a1e

To interrupt printing at any time, flip up sense switch 0. While switch 0 is up you may perform any NLS operation, or any TENEX operation if you reach TENEX by NLS's Goto TENEX command and return to NLS via TENEX's Quit command before you put switch 0 back down. When you put switch 0 down again, printing will continue. 4a1f

To stop printing before the document is finished, run the program LPPRINT again (repeat step 1 and then step 3 above). The program will recognize that you are already printing and ask you if you want to stop. Type "y" or <CTRL-D>. 4a1g

At times when many data transmission errors are occurring, the printer may stop (STOP, not just pause for a few seconds.) Press the System Reset button. Very occasionally, Reset will drop a few characters from what was printing out. 4a2

NLS will only support certain hardcopy devices known to us, currently the Texas Instruments 700 series and the GE Terminets. We must know the timing characteristics of a device to be able to properly support it. If you want us to support a new printer device, you should see to it that ARC's Utility Staff gets necessary technical data. 4a3

At present, you can only use a printer attached to the Lineprocessor while you are using NLS. 4a4

Appendix B, Setup 4b

When first setting up a display and line processor, perform these steps: 4b1

Plug display into "DI" port of Lineprocessor. 4b1a

Set display transmission rate to 9600 baud. 4b1b

Set Lineprocessor "DI" speed to 9600 baud. 4b1c

Set display to full duplex (called "echo plex" on some terminals) 4b1d

Connect the line from the modem, TIP, or computer to the "EP" port on Lineprocessor. 4b1e

Set the "EP" baud rate switches to the correct setting -- to match modem or TIP connection speeds. 4b1f

Connect printer (if you have one) to "CP" port on Lineprocessor and set speed to correct value. 4b1g

Connect mouse and keyset to Lineprocessor at the plugs marked on the Lineprocessor. 4b1h

Appendix C, Teletype Mode 4c

The mode of Lineprocessor operation that supports a two-dimensional display and the action of the mouse is called coordinate mode. The Lineprocessor-display combination can also simulate a teletype. A command to the host computer switches from one mode to the other. The command in STEP 8, Terminal (type is) Lineprocessor, activates coordinate mode. If you don't call for that, the Lineprocessor goes into Teletype mode. If you are in coordinate mode, the TENEX command, Terminal Type 37 will return you to teletype mode. 4c1

Appendix D, Special Key Translation 4d

Because NLS uses certain control characters for common special functions (e.g.,<CTRL-D> for Command Accept <CA> and <CTRL-X> <CD> for Command Delete) the Lineprocessor translates convenient keys on some keyboards into these special function codes. The translation depends on the keyboard: 4d1

Delta Data 4d1a

RUBOUT [<CTRL-X>] is changed to Command Accept [<CA> <CTRL-D>].

Back quote is changed to Backspace Character [<BC> <CTRL-A>].

Left brace is changed to Backspace Word [<BW> <CTRL-W>].

Right brace is changed to CDOT [<CTRL-B>].

Vertical bar is changed to Command Delete [<CD> <CTRL-X>].

NOT symbol is changed to RUBOUT [<CTRL-X>].

Hazeltine 4d1b

Left brace is changed to Command Accept [<CA> <CTRL-D>].

Vertical bar is changed to Command Delete [<CD> <CTRL-X>].

Right brace is changed to Backspace Character [<BC> <CTRL-A>].

NOT symbol is changed to Backspace Word [<BW> <CTRL-W>].

Data Media 4d1c

Tilde is changed to Command Accept [<CA> <CTRL-D>].

Capital _ is changed to Command Delete [<CD> <CTRL-X>].

Rubout is changed to Backspace Character [<BC> <CTRL-A>].

\ is changed to Backspace Word [<BW> <CTRL-W>].

Left brace is changed to Command Delete [<CD> <CTRL-X>].

Right brace is changed to _.

Appendix E, Sense Switch Settings 4e

All sense switches are down in normal operation of NLS through the Lineprocessor. 4e1

Putting sense switch 0 up stops printer output (for changing paper, etc.) 4e2

Putting switch 1 up and then hitting the System Reset button starts a Lineprocessor Echo-test program running. Do this only with an ARC hardware person's help (See "Hardware Checkout" below). 4e3

Putting sense switch 2 up inhibits the translations of special keys noted above; the keys then have their normal meanings. 4e4

Putting sense switch 3 up inhibits transmissions of the location of the cursor to the computer. In this circumstance you may address control characters to the TIP in normal manner. 4e5

Appendix F, Status Lights 4f

In normal operation only light three is on. 4f1

Light 0 means the printer is "open". 4f2

Light 1 means the Lineprocessor is "alive". 4f3

Light 2 is only on (i.e. status lights read: 00X0) when the Echo test program is running. This is a hardware checkout program ARC can run for you (See "Hardware Checkout" below). 4f4

Light 3 means the Lineprocessor is in "coordinate" mode. When light 3 is on you may address control characters to the TIP as if there were no Lineprocessor. 4f5

IF the lights start flashing, wait for the light labeled LPR to the right of the plug marked EP to remain off for at least a second, then push the System Reset button. If you were in NLS when this happened, NLS should repaint the screen for you. 4f6

Appendix G, Trouble Shooting 4g

Reset of TIP Intercept Character 4g1

If you are using a TIP and break your connection with it or Reset the TIP (by typing "<CTRL-Y> R CARRIAGERETURN"), the intercept character for the TIP returns to "@". You must then repeat STEP 6. The number 16 instead of 25 in the command in STEP 6 makes <CTRL-P> the TIP intercept character instead of <CTRL-Y>. 4g1a

Sometimes your TIP intercept character (the character that interrupts what you're doing and reads your input as commands to the TIP) may be changed to atsign "@" by accident (such as a data error on the phone line). It is difficult to tell when this happens, but it will trouble you when you happen to hit "@" in the course of your work. Then the TIP will start reacting in unexpected ways to what you type. 4g1b

If your commands stop going in, or there is unrecognizable response to your input, or your normal intercept character fails, and there are no indications of other errors described below, test for this problem by typing a carriage return. Chances are that your preceding input will not be a valid TIP command, and therefore the TIP will respond with "BAD". When you see "BAD", if you repeat STEP 6 and then press the reset button on the Lineprocessor you should be able to go on working. 4g1c

Error Lights 4g2

The error light on the upper left indicates a hardware transmission error. Hit the reset button next to it to turn it off. This light should not come on, but occasional errors are possible. Frequent errors indicate hardware failure or incorrect setup. 4g2a

Halts 4g3

The Lineprocessor will detect certain kinds of errors and halt, displaying an error number in the status lights (the error number flashes on and off at about 10 cps). 4g3a

The number indicates a type of transmission error or program error that prevents the Lineprocessor from continuing.

If in NLS, the user should wait until the "LPR" light on the "EP" connection stops flashing, and then push the System Reset button. NLS will restore the Lineprocessor status and the display.

If not in NLS, the user must issue the Terminal Type Lineprocessor command [Step 8 above] to TENEX again and continue.

If trouble persists, call ARC personnel at (415)326-6200 extension 3630, or, if it is not urgent, address an item through Sendmail to FDBK.

When the Host Crashes 4g4

If the host crashes, the TIP will send you the message "Host not responding". 4g4a

The TIP will keep your connection open for you, but will not tell you when the host comes up. If you want to stay at the workstation in hopes of continuing your work, you must hit <CTRL-C> from time to time as a test. When the host comes up, it will respond to <CTRL-C> with the TENEX Login message. When it responds, go back to Step 8 above and continue from there. 4g4b

Appendix H, Hardware Checkout 4h

There is a hardware checkout procedure for measuring the error rate between our host and the Lineprocessor, called echo test. If you suspect many errors in your communication line, call ARC [(415)326-6200 extension 3630] and ask for someone to run the Lineprocessor's echo test program for you, with your help. A hardware person will probably ask you to put Switch 1 up and hit System Reset and give you further directions from there. 4h1

The Lineprocessor uses cards that include Programmable Read Only Memory (PROM). A two-PROM hardware test program is available from SRI-ARC for testing Lineprocessors. Operating instructions are included. A sequence of simple tests are provided to check out each aspect of the Lineprocessor and connected devices. 4h2

For more information on test programs, communicate with Martin Hardy at: 4h2a

SRI
333 Ravenswood Avenue
Menlo Park, California 94025
(415) 326-6200 ex3921
Sendmail System Ident: MEH
Sendmessage Address: HARDY@SRI-ARC 4h2b

The version number of the PROM in your Lineprocessor appears in the upper left hand corner of the screen as a letter and a number. If you are working through a TIP it shows briefly when you hit the System Reset button; if you are not working through a TIP it remains in place. From time to time ARC will issue updates, e.g. to accomodate new printing devices. ARC will notify you how to handle a change. 4h3

Appendix I, TIP Ports and TIP Login 4i

Recently all the TIP ports that have a Lineprocessor connected to them have been set permanently "Wild". This means that a Lineprocessor user will not be required to login to the Network to use the port and need only follow the procedures described in steps 6 and 7. 4i1

&SRI-ARC 31-DEC-74 22:20 22131

LINEPROCESSOR USERS' GUIDE

SRI-ARC

1 JAN 75

Augmentation Research Center

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025

Lineprocessor Users' Guide

(J22131) 31-DEC-74 22:20;;;; Title: Author(s): Augmentation Research Center /&SRI-ARC; Distribution: /JOAN([ACTION] dirt notebok pleaase) DIRT([INFO-ONLY]) MEH([INFO-ONLY]) ; Clerk: DVN; Origin: < DOCUMENTATION, NOVGUIDE.NLS;4, >, 31-DEC-74 22:18 DVN ;;;; Title: Author(s): SRI-ARC; Distribution: /SRI-ARC([ACTION]) ; Sub-Collections: SRI-ARC DIRT NIC; Clerk: ACM;

####;