

TRANSMITTAL TO: Louis Pouzin

TRANSMITTAL TO: Louis Pouzin  
Institut de Recherche d'Informatique et  
d'Automatique  
Domaine de Voluceau  
78 - Rocquencourt  
FRANCE

FROM: Marcia Keeney (NIC)  
Station Agent

At your request, I am sending NIC 13977 and 15520.

MLK/kk

1

1a

1b

TRANSMITTAL TO: Louis Pouzin

(J16895) 27-JUN-73 18:03; Title: Author(s): Marcia Lynn Keeney/MLK  
; Distribution: /SA ; Sub-Collections: NIC ; Clerk: KIRK ;

Packet Radio Temporary Note 63

NIC 16896  
Packet Radio Temporary Note 63

Marcia Keeney  
(SRI-NIC)  
June 14, 1973

Note to Members of the Packet Radio Group

Because some complaints have been received at the NIC that we are not distributing the Packet Radio Group Notes in a timely and complete fashion, we thought it would be appropriate to restate the method that we use to do the distribution.

The procedure is that we distribute all notes which we receive as soon after receipt as is practicable. The notes may be sent to us in one of two ways, either as a typed hardcopy document, or through the NIC journal addressed to NIC. In either case, we will assign a NIC number, and then xerox the note and distribute it.

Each document should have on it a Packet Radio Temporary Note number, a NIC number, the author's name and affiliation, the date, and a title. (See above.) These items are necessary for proper cataloging of the note.

To obtain NIC and Packet Radio Temporary Note numbers call NIC at (415) 329-0740, or use your Enterprise number if you have one. If calling is not practical, leave room on the original so that the NIC can type in the numbers.

For your information, the distribution list which we currently use is attached to this letter.

This membership list is distributed monthly to all PRG members as a section of the NIC Directory of Arpanet Participants. The most recent distribution was on June 6.

Before making changes or additions to the list, we obtain the approval of the Packet Radio Group coordinator, Robert E. Kahn.

An INDEX of PRG Notes is also distributed periodically. We have heretofore hoped to do this bi-monthly, but have failed to live up to this schedule up till now. We intend to get on schedule in the immediate future.

If you wish to make any suggestions for changes or improvements to these methods, we hope you will do so. Please contact the NIC Station Agent, Marcia Keeney.

US Mail Address:

Packet Radio Temporary Note 63

Marcia Keeney, Station Agent  
Network Information Center  
Stanford Research Institute  
Menlo Park, California 94025

1f1a

NIC Journal Address:

1f2

NIC or MLK

1f2a

Network Mail Address:

1f3

KEENEY @ SRI-ARC

1f3a

16896 Distribution

Stanley C. Fralick, Lawrence G. Roberts, Albert Vezza, Edward Cebelius, Richard Binder, Fouad A. Tobagi, Robert E. Kahn, Norman Abramson, Francis Dickson, Howard Frank, Leonard Kleinrock, Robert M. (Bob) Metcalfe,

TRANSMITTAL TO: Herrn G. Schulze

TRANSMITTAL TO: Herrn G. Schulze  
DATEL  
Deutsche DATEL Gesellschaft fur  
Datenfernverarbeitung m.b.H.  
6100 Darmstadt  
Postfach 120  
GERMANY

FROM: Marcia Keeney (NIC)  
Station Agent

1

At your request, I am sending NIC 4568, 4917, 7728, and 10510. We are unable to supply NIC 7104 and 13460 to non-members of the ARPA Network.

1a

MLK/kk

1b

MLK 27-JUN-73 18:05 16897

TRANSMITTAL TO: Herrn G. Schulze

(J16897) 27-JUN-73 18:05; Title: Author(s): Marcia Lynn Keeney/MLK  
; Distribution: /SA ; Sub-Collections: NIC ; Clerk: KIRK ;

TRANSMITTAL TO: H. A. Kinslow

TRANSMITTAL TO: H. A. Kinslow  
H. Kinslow Associates, Inc.  
Computer Systems Architecture  
41 West Putnam Avenue  
Greenwich, Connecticut 06830

FROM: Marcia Keeney (NIC)  
Station Agent

1

At your request, I am sending NIC

1a

10602	10598	10549	10428	10425	10352	10166
9931	9929	9880	9632	9630	9477	9258
8302	8300	8271	8165	8164	8123	7817
7549	7545	7524	7183	7152	7140	7137
7131	7127	7102	6729	6713	5740	5668
4752	4750	and	4748.			

1a1

We are unable to supply NIC 5145, 6804, 7104 to non-members of the ARPA Network.

1b

NIC 10168 is a book and NIC 8194 is a long report, neither of which we distribute.

1c

MLK/kk

1d



TRANSMITTAL TO: H. A. Kinslow

(J16898) 27-JUN-73 18:06; Title: Author(s): Marcia Lynn Keeney/MLK  
; Distribution: /SA ; Sub-Collections: NIC ; Clerk: KIRK ;

TRANSMITTAL TO: Schuyler Stevenson

TRANSMITTAL TO: Schuyler Stevenson  
Department of Commerce NOAA  
325 South Broadway  
Boulder, Colorado 80302

FROM: Marcia Keeney (NIC)  
Station Agent

1

At your request, I am sending Resource Notebook Update 10 and dividers. If you already have any of the dividers which I am enclosing, discard the extra one; there is no way of telling from the transmittal letter which dividers were sent with number 10 so I'm enclosing a divider for each updated section just to be safe.

1a

MLK/kk

1b

TRANSMITTAL TO: Schuyler Stevenson

(J16899) 27-JUN-73 18:04; Title: Author(s): Marcia Lynn Keeney/MLK  
; Distribution: /SA ; Sub-Collections: NIC ; Clerk: KIRK ;

## New form for Append, Copy, and Move

## Experimental form for Append, Copy, Move

1

It has been proposed that the (To -- From) constructions in the NLS command language be changed to be (From -- To), which is more like most other editing systems. This suggestion has been implemented in the xnlS system for the Append, Copy, and Move command in both TNLS and DNLS. The echoing is still a bit clumsy in DNLS, but is intentionally a bit awkward to warn users of the changed syntax.

1a

This change is temporary; please take time to try the commands and record your opinions. The new ordering "feels" very good to me in TNLS, but my opinions of its virtue in DNLS are presently mixed.

1b

16900 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, 1  
Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B. 1a  
Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush,  
Elizabeth J. (Jake) Feinler, Augmentation Research Handbook, Kirk E.  
Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim) White, Diane S.  
Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Linda L. Lane,  
Marilyn F. Auerbach, Walt Bass, 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,  
William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De  
Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor 1b

New form for Append, Copy, and Move

(J16900) 30-MAY-73 14:55; Title: Author(s): Charles F. Dornbush/CFD  
; Distribution: /Sri-arc ; Sub-Collections: SRI-ARC; Clerk: CFD ;

I found the problem. You didn't have a delivery entry in the identfile. That's what I was trying to fix the other day but I couldn't get there because they changed it from exec identification submode to goto ident...  
anyhow, i changed your identfile entry to show online and hardcopy distribution of journal stuff. ok? if not, you can change it yourself now. Hope you have better luck now.

16901 Distribution  
Keith N. Sandum,

1  
1a



(J16901) 30-MAY-73 14:13; Author(s): Chuck S. Kline/CSK;  
Distribution: /KNS; Sub-Collections: NIC; Clerk: CSK;

\*\*902

Well, I found out from dave crocker that to get to identification submode now I need to use "goto" instead of "execute". I'm guessing here, but it sounds like a change from a fork to a subroutine call... if so, why not have one command (goto or exec, you pick) and let it determine whether to do a fork or a subroutine call.. in any case, I would have appreciated some advance notice of the change.

1

16902 Distribution

Diane S. Kaye, Harvey G. Lehtaan, Charles H. Irby,

1  
1a

(J16902) 30-MAY-73 14:17; Author(s): Chuck S. Kline/CSK;  
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: CSK;

I am sorry that I haven't distributed the results yet. I was waiting for responses from the tip, tenex, and multics. Anyhow, I will send you a copy of what I have in the mail.

16903 Distribution  
Susan S. Poh,

1  
1a

(J16903) 30-MAY-73 14:20; Author(s): Chuck S. Kline/CSK;  
Distribution: /SSP; Sub-Collections: NIC; Clerk: CSK;

How difficult would it be to have cat. progs. know about statement LEVELS, so that sub-statements could merely be treated as continuations?

I'll let you know about other stuff after I get a chance to look at it.

tnx.

--dave



16904 Distribution  
Jeanne B. North,

1  
1a

(J16904) 30-MAY-73 13:32; Author(s): David H. Crocker/DHC;  
Distribution: /JBN; Sub-Collections: NIC; Clerk: DHC;

Novice Expert Review Team Meeting May 24, 1973

(Journal) Journal documents (most recent first)

1

DCW 30-MAY-73 06:22 16850

Message: As the principle critic of our hardware troops (surely the least tactfull). I would like to compliment Martin et.al. on the outstanding job they did on the tasker retrofit of last week. If you havent noticed you can actually tell the difference between commas and periods, colons and semicolons. I understand they are not quite done yet but if they sure get my vote on what they have done so far. To use a really worn out one RIGHT ON.

1a

NDM 29-MAY-73 16:12 16848

Message: I was very dissappointed to receive Walter's resignation announcement. Having had the pleasure of working with him for a year, I have a great deal of respect for him. I'm sure he will be missed, and I would like to wish him the best of luck and happiness with the Institute for Consciousness Evolution.

1b

MDK 29-MAY-73 15:20 16845

On RWW's Suggested Revisions to Journal Citations

Location: (IJOURNAL, 16845, 1:w)

1c

MEH 29-MAY-73 11:25 16190

Tasker, Our Latest Upgrade and the Future

Location: (IJOURNAL, 16190, 1:w)

1d

WLB 23-MAY-73 13:26 16781

Announcement and Invitation

Message: This message is to confirm that I will be leaving ARC, effective at the close of business on Friday, June 15, to devote my full energies to my duties as Director of the Institute for Consciousness Evolution, the organization which I have set up to conduct programs at Alderness. All ARC people are cordially invited to join me at Alderness to celebrate this joyful event on Saturday, June 16, after which I hope to be able to spend a week or so in British Columbia before returning to Alderness to help with the Wilderness Workshops. Please set aside this date if you can, and I will check with you individually in June to make final arrangements.

PEACE -- Walt

1e

WLB 23-MAY-73 09:56 16780

Novice Expert Review Team Meeting May 24, 1973

Latest Output Processor

Message: A new Output Processor has been up since late Tuesday afternoon. The purpose of bringing up this version was to provide a debugged implementation of the new way of specifying X and Y measures as described in (ijournal,16715,1:w). Non-COM users should find everything working as before with the following addition: when specifying tabstop settings using the TabStop directive, it is not necessary to list all 20 (or less) tabstops individually if (after a possible initial list of unevenly spaced tabstops) all tabstops are spaced at equal intervals. This is done by using "... " (three periods) to specify a continued sequence: is equivalent to -- the "... " must be preceded by a COMMA [for the perverse I have provided that will be equivalent to ]. -- Walt

1f

WLB 22-MAY-73 17:43 16775

BUG in TNLS Output Device COM Directory Specification

Message: Someone has changed the running NLS so that in TNLS Output Device COM puts files into the PRINTER directory rather than the COM directory. This is rather serious since COM formatted files will not make ANY sense to the printer driver and will become lost to COM as well. DNLS Output Device COM still works. -- Walt

1g

Comments: Reported by NDM.

1g1

KIRK 20-MAY-73 19:16 16347

Proposal for a Structural Language that Communicates Databases Online

Location: (IJOURNAL, 16347, 1:w)

1h

Comments: This file has been formatted for easy online access and is not intended to "flow" if read in hardcopy. Much thanks to Mill Jernigan and Dirk vanNouhuys for their comments and suggestions.

1h1

DLS 19-MAY-73 13:28 16697

First Impressions of the TNLS Calculator

Location: (IJOURNAL, 16697, 1:w)

1i

MEH 17-MAY-73 15:12 16189

Modems, possible high speed configuration for Don Andrews

Location: (IJOURNAL, 16189, 1:w)

1j

## Novice Expert Review Team Meeting May 24, 1973

PR 17-MAY-73 12:13 16662  
 Interview of Don McLaughlin  
 Location: (IJOURNAL, 16662, 1:w)

1k

CFD 17-MAY-73 17:34 16655  
 \*\*\* Notice of a change in the Substitute command \*\*\*  
 Location: (IJOURNAL, 16655, 1:w)

1l

BAH 17-MAY-73 17:00 16652  
 May 6-11, 1973: A WEEK IN REVIEW  
 Location: (IJOURNAL, 16652, 1:w)

1m

Comments: The values are a little short this week (6 day instead of 7 day week) because of a system crash that resulted in loss of fact data. Also, the entry for Sweet (Xerox) was in error and had to be deleted...bah

1ml

DSK 16-MAY-73 13:35 16627  
 Novice/Expert Items to be Reviewed  
 Location: (IJOURNAL, 16627, 1:w)

1n

Comments: We need to have these reviewed by the official process and then we want to know their status so that we can oversee whatever implementation needs to take place. Thank you.

1nl

SRL 11-MAY-73 16:27 16393  
 Do you want Superwatch graphs?  
 Message: Superwatch weekly graphs are now available on-line for any interested person. I sent last week's to a small distribution of people I thought might be interested. If you did not receive them and would like them, let me know. Also, if you received them, and would rather not get them, let me know. Thanks.

1o

KIRK 11-MAY-73 23:46 16383  
 Glossary accessible with Locator  
 Message: A glossary of a few (growing in number) basic terms used around ARC/NIC is now available with TNLS accessing instructions in <NIC,GLOSSARY,> and is accessible from <NIC,LOCATOR,2:ebt>.

1p

JEW 11-MAY-73 13:52 16376  
 Helping the User Keep Track of NLS Changes

Novice Expert Review Team Meeting May 24, 1973

Location: (IJOURNAL, 16376, 1:w)

1q

CFD 11-MAY-73 15:07 16371

A New Look to the Substitute Command

Location: (IJOURNAL, 16371, 1:w)

1r

Comments: The Substitute command has been changed in the (<rel-nls>xnls) experimental NLS system. Try it and let's hear your opinion

1r1

WLB 10-MAY-73 16:12 16367

New Output Processor Handles Journal Headers Like in the Good Ol' Days

Message: The running Output Processor has been fixed so that the HJ directive works the way it used to -- only better (I think)

You can format files without any concern for what the Journal Header will do to your page layout, for the Output Processor will cleverly fit it into the top margin of your document (as long as there is enough room). Or, if you prefer, you can insert your own HJ directive in the file, and it will be ignored after Journal submission, as only the FIRST HJ directive in a file will be executed -- others will be ignored (except that they are recognized so that they will print or not according to the D directive (print directives switch). Please let me know if this doesn't work as claimed for you. -- Walt

1s

SRL 10-MAY-73 09:57 16363

Number of Journal Items Submitted from March '72 through April '73

Location: (IJOURNAL, 16363, 1:w)

1t

BAH 10-MAY-73 16:57 16352

APR 29 - May 5: A WEEK IN REVIEW

Location: (IJOURNAL, 16352, 1:w)

1u

DVN 9-MAY-73 21:05 16348

COM User's Meetin May 11th

Message: On Friday th 11th at 2:00 in the conference room Walt Bass, Dean Meyer, and myself would like to meet with people who are interested in printing through COM. We will report on the current imperfect but hopeful state of COM production and welcome informaton about User's hopes and needs.

1v

Novice Expert Review Team Meeting May 24, 1973

MEH 9-MAY-73 15:01 14904

Mouse and Keyset Converter, Status Report #1

Location: (IJOURNAL, 14904, 1:w)

1w

MLK 9-MAY-73 16:15 16342

Protocol and User Guide Updates

Message: I will be distributing the update to the User Guide and the Protocol notebook this afternoon. So keep an eye out (if you have these notebooks) for the updates in your in-box. Be sure to file them. Marcia.

1x

JDH 9-MAY-73 21:35 16349

Wrong Link on #16340

Message: An incorrect link was delivered this afternoon with the citation to document #16340. It should be (IJOURNAL, 16340, 1:w). The incorrect link will work for a day or two, but replace it with the correct one if you expect to keep it around a while.

1y

MFA 9-MAY-73 11:33 16340

NEW NLS - BROUGHT UP 6 MAY 73

Location: (IJOURNAL, 1234, 1:w)

1z

Comments: Some of the items documented here were previously included in the NLS Preview document (see -- 15312)

1z1

MEJ 5-MAY-73 12:38 16293

Location: (IJOURNAL, 16293, 1:w)

1a@

MLK 4-MAY-73 14:04 16288

New Employee at NIC

Message: Fellow ARC-ers-- NIC has a new member by the name of Judy Cooke. She will be working Monday, Wednesday, and Friday (alternating days with Carol). Please feel free to come in and introduce yourself to her.

1aa

JEW 4-MAY-73 14:30 16283

The Network Grooves Under 1.31

Location: (IJOURNAL, 16283, 1:w)

1ab

JEW 4-MAY-73 14:08 16282

Adding a DELETE Function to BSYS

Novice Expert Review Team Meeting May 24, 1973

Location: (IJOURNAL, 16282, 1:w)

1ac

HGL 4-MAY-73 11:44 16281

DEX 1.5 Will Be Up For General Use in New NLS

Message: Input only DEX-1.5 will be up for general use when the next major new version of NLS is brought up. It is much more efficient than DEX-1 and is, more importantly, easier to use for straight text input. Documentation will soon be available. In its absence, HGL or KIRK will be happy to explain its use.

1ad

BAH 3-MAY-73 21:53 16280

April 22-28, 1973: A WEEK IN REVIEW

Location: (IJOURNAL, 16280, 1:w)

1ae

MLK 4-MAY-73 14:04 16288

New Employee at NIC

Message: Fellow ARC-ers-- NIC has a new member by the name of Judy Cooke. She will be working Monday, Wednesday, and Friday (alternating days with Carol). Please feel free to come in and introduce yourself to her.

1af

JEW 4-MAY-73 14:30 16283

The Network Grooves Under 1.31

Location: (IJOURNAL, 16283, 1:w)

1ag

JEW 4-MAY-73 14:08 16282

Adding a DELETE Function to BSYS

Location: (IJOURNAL, 16282, 1:w)

1ah

HGL 4-MAY-73 11:44 16281

DEX 1.5 Will Be Up For General Use in New NLS

Message: Input only DEX-1.5 will be up for general use when the next major new version of NLS is brought up. It is much more efficient than DEX-1 and is, more importantly, easier to use for straight text input. Documentation will soon be available. In its absence, HGL or KIRK will be happy to explain its use.

1ai

BAH 3-MAY-73 21:53 16280

April 22-28, 1973: A WEEK IN REVIEW

Location: (IJOURNAL, 16280, 1:w)

1aj



Novice Expert Review Team Meeting May 24, 1973

DNB 19-APR-73 16:37 16020  
 Proposed ARPA Energy Project Work Statement  
 Location: (MJOURNAL, 16020, 1:w)

1ak

Comments: This work statement describes the type of areas the energy project headed by Dave Berg is going to be looking at. Preliminary discussions with ARPA NMR Office indicate that of the two main goals specified their interest is primarily in the data management system rather than setting up a community at this time, although they feel some effort can be expended in this direction as I understand it (RWW)

1ak1

JBN 16-APR-73 16:14 15960  
 April Issue of ARPANET NEWS is Published  
 Location: (MJOURNAL, 15960, 1:w)

1al

JCN RWW 30-MAR-73 18:35 15263  
 Proposal for Research No. ISU-73-51 -- WORKSHOP UTILITY SERVICE  
 FOR RADC USE OF - 21.00 WORKSHOP TECHNOLOGY  
 Location: (MJOURNAL, 15263, 1:w)

1am

JCN RWW 30-MAR-73 18:37 14946  
 Proposal for Research No. ISU-73-5 -- WORKSHOP UTILITY SERVICE FOR  
 ARPA AND IPT CONTRACTOR USE 123.00 KNOWLEDGE WORKSHOP  
 TECHNOLOGY  
 Location: (MJOURNAL, 14946, 1:w)

1an

JFV 30-MAR-73 15:58 15410  
 DATA-BASE FACILITIES. Report #3. Language Facilities in a Common  
 Data-Basse System: A user viewpoint.  
 Location: (MJOURNAL, 15410, 1:w)

1ao

Comments: Desirable characteristics of the common data-base system planned under MPS are discussed here in terms of user interface. The discussion is presented in the form of recorded dialogue among JBN, JAKE, MDK and JFV and is divided into ten major sections that cover the points to be developed in future discussions with the NMDT group.

1aol

NMDT 22-MAR-73 8:30 15249  
 A Look at the MPS Conversion  
 Location: (LJOURNAL, 15249, 1:w)

1ap

Novice Expert Review Team Meeting May 24, 1973

Comments: This is a substantially revised edition of the paper appearing as 14928.

1ap1

DCE 19-MAR-73 16:47 15141

115 Relevant statements transcribed from Drucker X(3074,) X(4247, ), Anderson and Coover X(13956, ), and DCE's OSR62 X(3906, ), as relevant to Knowledge Workshops, cf J(14724, ).  
Location: (LJOURNAL, 15141, 1:w)

1aq

Comments:

1aq1

RWW 2-MAR-73 10:09 14867

Second Request for Plans and Review Status

Message: A couple of weeks ago I requested task area pushers and review pushers to send me brief plans and time estimates and status of where they planned to start in the design review cycle outlined in (14164, ). Some people responded, others like me didn't. The last two weeks or so have been incredibly hectic for most people so I understand, but the next week or so looks better so please send me the requested info next week if you haven't already. Thanks

1ar

(author) Journal documents authored

2

EKM 22-MAY-73 14:31 16767

Group Allocation Review Team Meeting

Message: There will be a meeting of the Group Allocation Review Team on Friday, May 25, at 9:00 a.m. in EKM's office. The file <WALLACE> Group-Allocation.Design outlines the implementation design and presents a list of unresolved questions for our review.  
\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2a

EKM 22-MAY-73 14:27 16766

Novice Expert Review Team Meeting

Message: There will be a meeting of the Novice Expert Review Team on Thursday, May 24th, at 10:00 a.m. in EKM's office. The list of items to be reviewed is contained in <IJOURNAL> 16627.  
\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2b

DSK EKM 21-MAY-73 11:08 16706

Calculator Team Response to Request for Design Modification

Location: (IJOURNAL, 16706, 1:w)

\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2c

Novice Expert Review Team Meeting May 24, 1973

JFV EKM KIRK LLL 19-APR-73 10:45 16017

The Economics of Text-editing Functions: Cost-effectiveness  
analysis of NLS and other systems.

Location: (MJOURNAL, 16017, 1:w)

\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2d

Comments: This is an updated version of 15983. Includes summary  
of seminar discussion and revised cost figures for DNLS.

2d1

JFV EKM KIRK LLL 17-APR-73 09:07 15983

The Economics of Text-Editing Functions: Cost-effectiveness  
analysis of NLS and other systems.

Location: (MJOURNAL, 15983, 1:w)

\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2e

Comments: A method for estimating the cost-effectiveness of a  
text-editor under normal office operating conditions is  
described. This "test-kit" has been applied to TNLS, DNLS and  
two other systems. Extension of the analysis to TECO and other  
editors is proposed.

2e1

EKM 6-APR-73 16:04 15612

VISITOR LOG: Ehrman and Hunt from SLAC

Location: (MJOURNAL, 15612, 1:w)

\*\*\*\*\*Note: Author Copy\*\*\*\*\*

2f

(save) Save for reading

3

SRL 1-MAY-73 08:45 16264

Location: (MJOURNAL, 16264, 1:w)

Text editing cost analysis including TECO

3a

NLSControlCharacters

4

CA=|;ECHO=|;

4a

16905 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, 1  
Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B. 1a  
Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush,  
Elizabeth J. (Jake) Feinler, Augmentation Research Handbook, Kirk E.  
Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim) White, Diane S.  
Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Linda L. Lane,  
Marilyn F. Auerbach, Walt Bass, 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,  
William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De  
Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor 1b

Novice Expert Review Team Meeting May 24, 1973

(J16905) 30-MAY-73 14:48; Title: Author(s): Elizabeth K.  
Michael/EKM; Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk:  
EKM;  
Origin: <MICHAEL>EKM.NLS;29, 5-MAY-73 08:12 EKM ;

test to csk

16906 Distribution  
Chuck S. Kline,

1  
1a

(J16906) 30-MAY-73 17:26; Author(s): David H. Crocker/DHC;  
Distribution: /CSK; Sub-Collections: NIC; Clerk: DHC;



Response to (16834,) and some SNDMSGs from RLL Recently

Belated answers to several question sets you have sent:

1

From (16834,):

1a

Sendprint--I'll have to defer your questions here to Marilyn Auerbach..I'm not up on sendprint..but should be.

1a1

About printing .1a1 .1a2 etc These are all in a plex. To see only those statements do a Print Plex .1a1 (or some other optional way of pointing to .1a1 plex) then CA viewspecs des CA This will print only that plex, only one level, all lines of those statements. This now sounds like what you want. If you want more depth, add a b for each added level you want--after you type the de in viewspecs. The thing you can't do is type only n-level statements throughout a file...like .1a1 .1a2 .2a1 .2a2 etc. There is a way for users to learn to make user-programs that would do it...but too much trouble for now I suspect. Or if enuf demand, we may make it a feature.

1a2

You are supposed to get a Journal branch set up automatically if you don't have one.. I still don't know why you didn't get the mesage. I am sending a secondary copy just for the heck of it. (16461,). Feel free to use my initial file anyway.. you really shouldn't have to have any special branches in yours to get mail.

1a3

Sorry about the weekend troubles...yup, TENEX problems. Seem to have gone away, but I have alerted the boys to watch and track down when they can get a hold on it again.

1a4

Spurious control x's rubouts I have at times too. I'm pretty sure its the telephone line or the terminal. I just have had to ignore it. If it gets worse, let me know.

1a5

BUGS and NP are the right IDENTs to which to send comments...but a copy to me too also keeps me in touch. NP is for ideas that you have that would make the system better, more reliable, powerful...new features that would be nice, etc. You may not get quick (or any?) feedback..but it helps us to get comments..followup with direct to me or others..

1a6

From 5/18 sndmsg:

1b

Re: the NIC resource (query) is the only thing the NIC has online or off right now BUT there is a large slug of data now going into the system that will be available (soon?).

1b1

Tho you might try looking into <mitre-tip>help for some stuff..either TNLS direct or via bring in NIC query..

1b1a

Response to (16834,) and some SNDMSGs from RLL Recently

The latest Journal index is dated 22-May. These are supposed to be updated weekly...but hard to keep up with..we are getting better, tho.. the NIC catalogs are different files and now are in the process of revision. You are looking at the right ones for main Journal use, tho.

1b2

From 5/29 sndmsg:

1c

Echo problem I turned over to White and Irby. I suspect you got Jim White's response.. is it still happening? I usually reset and reenter NLS or even logout and relogin to get out that kind of thing..a bother, of course, but practical when it works. We'll keep on it...if you get it again, look around and get help so we can see it at the time..

1c1

16907 Distribution

Robert N. Lieberman, Marilyn F. Auerbach,

1  
1a

Response to (16834,) and some SNDMSGs from RLL Recently

(J16907) 30-MAY-73 13:23; Title: Author(s): James C. Norton/JCN;  
Distribution: /RLL MFA(see sendprint item); Sub-Collections: SRI-ARC;  
Clerk: JCN;  
Origin: <NORTON>TORLL.NLS;1, 30-MAY-73 13:21 JCN ;

Journal Delivery

Jim White said Journal mail is now sent quickly. CSK tells me he sent some mail at 13:00 today. It has not arrived (his author copy) yet.

Comments?

16908 Distribution

Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

1  
1a

Journal Delivery

(J16908) 30-MAY-73 17:28; Title: Author(s): David H. Crocker, Chuck S. Kline/DHC CSK; Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: DHC;

U.S. Mail Problem

I am still receiving mail (TNLS Guide) at an extremely old address.  
Please throw away any labels that are out of date.

It takes a long time for that stuff to finally be forwarded to me.

tnx.

1



16909 Distribution  
Marcia Lynn Keeney,

1  
1a

U.S. Mail Problem

(J16909) 30-MAY-73 17:36; Title: Author(s): David H. Crocker/DHC;  
Distribution: /MLK; Sub-Collections: NIC; Clerk: DHC;

test message

this is a test message by jon postel.

1

16910 Distribution  
Jonathan B. Postel,

test message

(J16910) 30-MAY-73 16:28; Title: Author(s): Keith N. Sandum/KNS;  
Distribution: /JBP; Sub-Collections: NIC; Clerk: KNS;

plm now has directory at nic @ll-tx2

1

16911 Distribution  
Perry L. Miller,

(J16911) 30-MAY-73 18:16; Title: Author(s): Perry L. Miller/PLM;  
Distribution: /PLM; Sub-Collections: NIC; Clerk: PLM;



Idents for Bostnls

Mil Jernigan (MEJ, ex 4775) handles class arrangements here. Could you send to her the full names, address, phone number, and affiliation of the people in the classes with their initials or whatever they want for iendents so she can get them into the ident file?

1

If you need more User guides or cue cards you can let her know too.

2

16912 Distribution

Nancy J. Neigus, Michael D. Kudlick, Marilyn F. Auerbach,

Idents for Bostnls

(J16912) 31-MAY-73 08:30; Title: Author(s): Dirk H. Van Nouhuys, Mil  
E. Jernigan/DVN MEJ; Distribution: /NJN MDK(fyi) MFA(fyi);  
Sub-Collections: NIC SRI-ARC; Clerk: DVN;

## GOTO and EXECUTE Identification submode

Chuck, there is no "fork" or "subroutine" distinction between GOTO and EXECUTE. We have been trying to slowly change the command language so that you GOTO an "NLS subsystem" (which you must QUIT to get back to NLS) and EXECUTE an obscure command (this will change later to the ability to EXECUTE a subsystem command without having to enter and leave it). Several months ago, I made the Ident subsystem available from both EXECUTE and GOTO and (I think) sent out a message informing users that it would eventually not be available from EXECUTE. I appologize for not seeing to it that people were informed when it actually was taken out of the EXECUTE command. There were a great many changes in the last release of NLS and that one fell through a crack. -- Charles.

P.S. Actually, I guess thinking of GOTO as activating a FORK is reasonable, although it is not actually implemented as a separate fork.

16913 Distribution  
Chuck S. Kline,

GOTO and EXECUTE Identification submode

(J16913) 31-MAY-73 09:41; Title: Author(s): Charles H. Irby/CHI;  
Distribution: /CSK; Sub-Collections: SRI-ARC; Clerk: CHI;

## Comments on Journal Citation Format

Reactions to RWW's and MDK's Suggestions regarding Journal citation format. See (Ijournal, 16786, 1 :w) and (Ijournal, 16845, 1 :w) Parts of these documents copied here for clarity.

1

## CHI's Recommendation:

2

I recommend RWW's format # 3, with the following comments:

2a

There should be no arbitrary restrictions on title or message length, as MDK suggested (I think this would only get in people's way).

2a1

The time of day of the submission could be in the substatement if we want to include it (and I think we do).

2a2

I understand the reasoning behind Mikes suggestion that the link to the document precede the title, but I think it is a fairly large piece of fairly meaningless information to be in a prominent place in the citation. It is nearly the button you push to get the text of the document displayed/printed for you.

2a3

Alternative 3 seems a good compromise between readability and typing rate of some obsolete tty terminals. I do not think we should lean to far toward catering to 10 CPS terminals. They are a thing of the past.

2a4

IF the author is a group, the group Ident should appear on the first line (not the no-information \*\*\*).

2a5

Viewspeccs should NOT be set on NLS entry to favor those people who are going to read their mail. Rather there should be special mail reading modes one can get into which will do many nice things for him. This should be available from the EXEC also.

2a6

It seems to me that the NIC should be working hard to provide simple mail sending/reading/sorting/referring system that is a vailable from both NLS and the EXEC. NLS is a nice tool, but may be much too powerful and complicated for many nic-users's needs. NLS should not get twisted around to be "nice" to people who are using it because the appropriate interfaces to it are not there The interfaces should be developed instead

2a6a

Quoting the title seems like a reasonable thing to do but the payoff is not very tremendous.

2a7

I would also like to suggest that the substatement containing distribution, etc. could stand some additional formatting. I

## Comments on Journal Citation Format

think at the very least there should be more spaces between the logical fields in the statement. A more radical suggestion is that each field terminate with a Carriage Return (with obvious disadvantages in terms of number of lines occupied). What do you think of the following?

2a8

Five SPACES between fields

2a8a

Authors Continued: SRI-ARC            Distribution: USC-ISI SRL  
PR BAH JEW            Obsoletes: (12345,) (56787,)            Updates:  
(54321,) (65643,)            Subcollections: SRI-ARC NIC  
Keywords: garbage, suggestion, example

2a8a1

Carriage Returns to separate fields

2a8b

Authors Continued: SRI-ARC  
Distribution: USC-ISI SRL PR BAH JEW  
Obsoletes: (12345,) (56787,)  
Updates: (54321,) (65643,)  
Subcollections: SRI-ARC NIC  
Keywords: garbage, suggestion, example

2a8b1

At most two fields per line (using TABs)

2a8c

Authors Continued: SRI-ARC            Distribution: USC-ISI  
SRL PR BAH JEW            Obsoletes: (12345,) (56787,)  
Updates: (54321,) (65643,)  
Subcollections: SRI-ARC NIC  
Keywords: garbage, suggestion, example

2a8c1

## MDK's Recommendation:

3

- I recommend adopting RWW's Format (2) --- see below --- with some changes, principally that the link PRECEED the title, to make jump to link in TNLS work regardless of what parenthetical expression may be in the title. If this recommendation were accepted, then the citation would appear as follows [note that year is omitted, author field is six characters long, the sample title field contains 49 characters (one less than my suggested maximum) plus quotes supplied by the Journal system, and note that with this format and the suggested limits, half the maximum allowable title fits on the first line]:

3a

RWW\*            (AJournal,12345,1:w) 23-MAY 14:37 "This is an Example of a More Complicated Citation."

3b

Authors Continued: DSK JEW            Distribution: USC-ISI SRL PR BAH



## Comments on Journal Citation Format

JEW Obsoletes: (12345,) (56787,) Updates: (54321,) (65643,)  
 Subcollections: SRI-ARC NIC Keywords: garbage, suggestion,  
 example

3b1

## RWW's Alternatives:

4

## Format (1):

4a

RWW 23-MAY-73 14:26 This is a sample of a new citation  
 format showing what it would look

like

for the simplest collection of  
 information.

(KJournal,12345,1:w)

4a1

RWW\* 23-MAY-73 14:37 This is an example of a more  
 complicated citation.

(AJournal,12345,1:w)

4a2

Authors Continued: DSK JEW Distribution: USC-ISI SRL PR  
 BAH JEW Obsoletes: (12345,) (56787,) Updates: (54321,)  
 (65643,) Subcollections: SRI-ARC NIC Keywords: garbage,  
 suggestion, example

4a2a

## Format (2):

4b

RWW 23-MAY-73 14:26 This is a sample of a new citation  
 format showing what it would look like for the simplest  
 collection of information.

(KJournal,12345,1:w)

4b1

RWW\* 23-MAY-73 14:37 This is an example of a more  
 complicated citation.

(AJournal,12345,1:w)

4b2

Authors Continued: DSK JEW Distribution: USC-ISI SRL PR  
 BAH JEW Obsoletes: (12345,) (56787,) Updates: (54321,)  
 (65643,) Subcollections: SRI-ARC NIC Keywords: garbage,  
 suggestion, example

4b2a

## Format (3):

4c

RWW 23-MAY This is a sample of a new citation format showing  
 what it would look like for the simplest  
 collection

of information.

(KJournal,12345,1:w)

4c1

Comments on Journal Citation Format

\*\*\* 23-MAY This is an example of a more complicated citation.  
(AJournal,12345,1:w)

4c2

Authors Continued: SRI-ARC Distribution: USC-ISI SRL PR  
BAH JEW Obsoletes: (12345,) (56787,) Updates: (54321,) (65643,)  
Subcollections: SRI-ARC NIC Keywords: garbage, suggestion, example

4c2a

16916 Distribution

Richard W. Watson, Michael D. Kudlick, J. D. Hopper, Diane S. Kaye,  
James E. (Jim) White,

Comments on Journal Citation Format

(J16916) 31-MAY-73 11:53; Title: Author(s): Charles H. Irby/CHI;  
Distribution: /RWW MDK JDH DSK JEW; Sub-Collections: SRI-ARC; Clerk:  
CHI;  
Origin: <IRBY>JCIT.NLS;1, 31-MAY-73 11:51 CHI ;

## Group Allocation Review Team Meeting

GROUP ALLOCATION REVIEW TEAM MEETING: FRIDAY, MAY 24, 1973

## SUMMARY:

The Group Allocation Review Team met to consider DCW's document <WALLACE>GROUP-ALLOCATION>DESIGN which defines the implementation of the computer resource allocation plan set forth by PR in <MJOURNAL>13580 This plan was approved for implementation by DCE on 29-DEC-72..

Unresolved questions listed at the end of <WALLACE>GROUP-ALLOCATION.DESIGN were resolved. The plan was approved by the team. Areas of uncertainty regarding user satisfaction were identified and responsibility for monitoring these was assigned.

The team approved bringing up the system on Sunday, May 26, 1973 with system parameters set to facilitate more complete testing and with minimum impact on users.

MFA was asked to prepare initial notification of the change to users by Wednesday, May 29 and to provide full user documentation at the earliest possible time.

PR was asked to provide current use statistics and guidance to Jim Norton and Dick Watson for the assignment of groups and their allocations at ARC.

## MINUTES:

## Express Logons:

Smokey explained the express logon concept. Anyone may logon with the special exec level ELOG command. The user will be active for 5 minutes at the end of which he will be logged off with no warning.

There is no limit to the number of ELOGS at any one time.

This was identified as an area which should be watched carefully as it may be possible for greedy users to overload the system if they abuse the spirit of the express feature. The feature is intended to provide ready information about the state of the users world (e.g. does he have journal mail or a message) and enable him to send very short messages or obtain quick prints of files.

The team agreed it may be necessary to limit the number of

## Group Allocation Review Team Meeting

express logins in the future but if the feature is not misused limiting it will not be necessary.

3a4

## CPU Time:

3b

CPU time as opposed to connect time was considered as an alternate algorithm for allocating resources. It was agreed that for the present, connect time is much more easily implemented and understandable, but that thought should be given to a more complex algorithm as users with variant work patterns begin using the system.

3b1

## Groupstat command:

3c

The groupstat special command was explained. This command tells the user his own status and information about his group's allocation and status.

3c1

## User Reports:

3d

The concept of allowing unsold resources to be used freely was approved. However, it was agreed that users should be kept apprised of their usage in relation to resources allocated to and paid for by them so that they can make appropriate budget adjustments when essentially free resources are no longer available.

3d1

It was agreed that statistics should be collected that will enable the analysis group to deliver monthly reports to users by group, ident and account number showing usage distribution and particularly emphasizing OFFQUOTA time used.

3d2

## Offquota Logouts:

3e

The team voted with PR dissenting that the last in first out method would be used to choose offquota users to be logged out. The rationale behind this choice was that the user who has been on the longest is possibly doing the most real work. The first in first out method would result in a constant and inefficient rotation of offquota users and would conflict with the express concept.

3e1

## Notices to users:

3f

It was agreed that users would receive messages from the system only in the event of imminent logout.

3f1

The message: "If you are still offquota, autologout will occur at hh:mm" will be sent 5 minutes prior to autologout.

3f2

## Group Allocation, Review Team Meeting

That user will be logged out unless he can make himself ONQUOTA within the 5 minute period. This can occur if other ONQUOTA members of his group logout. He will not be informed of his changed status, but can do a Groutstat at any time.

3f3

## Change in a Group's Allocation:

3g

When a group's allocation is automatically increased OFFQUOTA group members are made onquota in order of the time they logged in. That is, the OFFQUOTA member who logged in first will become ONQUOTA first.

3g1

When a groups allocation is decreased the last members to login are made offquota.

3g2

User's are not notified of their change in status.

3g3

The Team discussed an alternate method of handling status changes which would allow each group to specify the order in which group members would be made OFFQUOTA. It was agreed to proceed with the LIFO method described above keeping in mind this alternative.

3g4

## Load Average:

3h

If the load average is high OFFQUOTA user's will not be allowed to log in regardless of the total number of users on the system.

3h1

If a groups total number of users is less than that groups allocation members may login regardless of the load average.

3h2

## The Groups:

3i

There will be four groups initially.

3i1

LOCAL 10 8 a.m. - 2 p.m. 15 2 p.m. - 8 a.m.

3i2

NIC-USERS 16 All the Time

3i3

RADC 8 5 a.m. - 8 a.m. 4 8 a.m. - 5 a.m.

3i4

SYSTEM JOBS 4 All the Time

3i5

The purpose of this initial group allocation is to permit thorough testing of the system with absolute minimum impact on NIC-USERS.

3i6

## Group Allocation Review Team Meeting

Jim Norton was asked to contact RADC and explain the new system. 3i7

Jim Norton and Dick Watson were asked to define ARC groups based on statistics provided by Paul Rech. The new ARC groups will go into effect after the system is tested. 3i8

System Messages: 3j

The message 3j1

No New Logins Allowed 3j1a

remains unchanged. 3j2

When an OFFQUOTA user is about to be logged out he will receive the message 3j3

If you are still offquota outologout will occur at hh:mm. 3j3a

When a user logs in OFFQUOTA he will receive the message immediately after the LOGIN 3j4

Offquota Login: Type 'Offquota' for help 3j4a

The system response to his typing 'offquota' will be a 'grouptstat' and an explanation of the automatic logout process. 3j5

Marilyn was asked to give user notification through the Journal immediately. 3j6



Group Allocation Review Team Meeting

(J16917) 31-MAY-73 10:07; Title: Author(s): Elizabeth K.  
Michael/EKM; Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk:  
EKM;  
Origin: <MICHAEL>GART1.NLS;2, 30-MAY-73 17:05 EKM ;

16917 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews,  
Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B.  
Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush,  
Elizabeth J. (Jake) Feinler, Augmentation Research Handbook, Kirk E.  
Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim) White, Diane S.  
Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Linda L. Lane,  
Marilyn F. Auerbach, Walt Bass, 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,  
William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De  
Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

\*? Querying Problem

When I type G[oto] P[rograms] ? I do not get a list of alternative inputs.

1

16918 Distribution

Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

? Querying Problem

(J16918) 31-MAY-73 13:34; Title: Author(s): David H. Crocker/DHC;  
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: DHC;

Using Programs

Just looked over the write-ups on user-progs. The L-10 Manual does not seem to be enough (even with the <user-progs>-userguide) to know how to write programs. E.G. I/O is unclear, in terms of telling the program about attaching the console, files, etc.

Is ther any documentation on that (and/or anything else?)

tnx. --Dave

16919 Distribution  
N. Dean Meyer,

Using Programs

(J16919) 31-MAY-73 13:41; Title: Author(s): David H. Crocker/DHC;  
Distribution: /NDM; Sub-Collections: NIC; Clerk: DHC;



HSCF File Service

I just talked with some of the people over at Health Sciences about their File Service. Apparently, it would not cost much (Tape copying charges only) which sounds like they might be helpful, cooperative, etc.

16920 Distribution

Ronald M. Stoughton, Mark C. Krilanovich,

HSCF File Service

(J16920) 31-MAY-73 13:46; Title: Author(s): David H. Crocker/DHC;  
Distribution: /RMS MCK; Sub-Collections: NIC; Clerk: DHC;

Jake -- What is the status/estimates for having the USING Meeting notes online?

16921 Distribution  
Elizabeth J. (Jake) Feinler,

(J16921) 31-MAY-73 13:47; Author(s): David H. Crocker/DHC;  
Distribution: /JAKE; Sub-Collections: NIC; Clerk: DHC;

Phone Call From Perry Miller, MIT, Re SUR Bibliographic Work

To: MDK JBN DCE RWW JCN DVN MLK

From: Mil Jernigan

Today, 5-31-73, Perry Miller, MIT, called Marcia on the NIC phone to ask about setting up a bibliographic catalog of interest to the SUR Group. Marcia was not sure what he was talking about and asked me to take the phone to find out what he meant.

He was looking for some way to notify the SUR Group of items of interest, such as reports and journal articles, without actually issuing them as SUR Notes. I suggested that, since all the SUR Group had a NIC Catalog at their sites, why not use the established procedure and send us the items and let us catalog them in the usual way using some method, index, or listing that he could use to call the attention of the SUR Group to the items. This was agreed as logical after he looked at his copy of the NIC Catalog there at MIT and saw the various formats.

I pointed out that it is possible in our cataloging system to obtain listings such as the indexes (calling his attention to the SUR Indexes, RFC Indexes, etc.) that served the purpose of special interest subcollections. He liked the set-up. It was agreed that he would look over the current catalog very carefully, noting the NIC number of items he would like to include in the listing, and let me know so that those items could be tagged with a subcollection notation.

He took down the information needed for purposes of coding items from journals (journal name, vol., issue number, date, paging). I explained about the necessity for getting one copy of the article that would have good contrast so Marcia can use it for a master, told him that if he cannot get a good contrast for some reason and it is reasonably easy to find in a library such as the SRI library that we could assist in looking up and getting a copy (but didn't promise more than assistance).

He will contact personally some of the SUR Group and start getting material coming in to us. He will ask that the items have a slip of paper stapled to the front containing the following information: Bibliographic reference (journal name, volume, etc.), key words that they would like to use, and a statement that the item is being sent to be listed as part of the SUR Group bibliography (NOT a SUR Note).

I suggested he send them to Marcia so she will know what is going on and can answer questions as she gets them; she can shuttle them over to me for coding and entry into the catalog system.

I found out that he is some sort of special assistant to J.C.R.

Phone Call From Perry Miller, MIT, Re SUR Bibliographic Work

Licklider and Licklider had told him to call NIC to find out about this -- after I had described the catalog capabilities, etc. He is getting his doctorate tomorrow, will be at Lincoln Labs during the summer, and back at MIT in the Fall, all the time with Licklider. Apparently JCRL has handed him the job of coordinating this -- simply told him to contact us and get it done, leaving him to find out how. His address during the summer (beginning next week?), will be

Perry Miller  
Lincoln Laboratory  
Lexington, Massachusetts  
Phone: (617) 862-5500 ext 7277

and at home

Perry Miller  
349 Broadway  
Cambridge, Mass. 02149  
Phone (617) 547-1198.

9

Miller promised to look over the NIC catalog and get a good idea of its capabilities, then draft out something of what we were talking about and what he would request of and expect from the members of the SUR Group, and BEFORE he contacted anyone else, send it to me as a journal message. We would look at what he had written and NIC decisions would be made and we would edit, or reply, to his message, again by journal. And from that agreement, he could carry on from there. He said that he would do that within the next week.

10

I definitely pointed out that we were very short of both personnel and disk space and that we would be happy to assist in the effort as far as it was possible to do so within our capabilities, time, disk space, and money being as they were. I emphasized that no deadlines should be set or expected at this point or in the near future. He said that was agreeable and that no specific deadline had been set by Licklider, that it was a facility that needed doing and Licklider felt that NIC would have the know how.

11



16922 Distribution

Michael D. Kudlick, Jeanne B. North, Douglas C. Engelbart, Richard W. Watson, James C. Norton, Dirk H. Van Nouhuys, Marcia Lynn Keeney,

Phone Call From Perry Miller, MIT, Re SUR Bibliographic Work

(J16922) 31-MAY-73 13:58; Title: Author(s): Mil E. Jernigan/MEJ;  
Distribution: /MDK JBN DCE RWW JCN DVN MLK; Keywords: SUR Bibliography;  
SUR Group; Bibliographic Collections; Sub-Collections: NIC SRI-ARC;  
Clerk: MEJ;  
Origin: <JERNIGAN>PHONE.NLS;1, 31-MAY-73 13:53 MEJ ;

## Novice Expert Review Team Meeting

NOVICE EXPERT REVIEW TEAM MEETING MAY 24, 1973 10:00 a.m.

The Novice Expert Review Team met to consider proposals for NLS changes presented in two documents prepared by the Novice Expert Design Team.

A. <IJOURNAL> 16627 (author Kays): A list of miscellaneous recommendations:

1. The N.E.R.T. approved the recommendation to move the "Insert Journal Submission" out of the Journal system and into regular NLS. The syntax will be

I<nsert> J<ournal Submission>

2. Changes to the substitute command were approved. The recommended syntax is

s<ubstitute f<ENTITY> CA <in what> STRUCTURE CA

<New entity(s)> ENTITY CA

<Old Entity> ENTITY CA

<Finished ?> y<es>/n<o> CA

CHI stated his preference for specifying STRUCTURE after Old Entity rather than before New Entity.

3. The team agreed that the TNLS help for the new A:, T:, etc. should be put at the top of the TNLS help list.

4. The Design Team's recommendation to leave the message area's last message up until it gets rewritten or cleared out through the normal mechanism was not approved. The group feels that the message handling problem cannot be generalized.

The Review Team requested that the Design Team select a member to look at each message individually and make a recommendation for each.

CHI stated his preference for specifying STRUCTURE after Old Entity rather than before New Entity.

B. <IJOURNAL> 16717 (author Irby): Command Language Recommendations:

CHI said that a first look at the subsystem/NLS interface indicates that it may not be implemented until MPS. However, he will continue to study the problem.

## Novice Expert Review Team Meeting

RWW decided that the recommendations contained in the paper should be reviewed by the Command Language group. 4b

A joint meeting of the Novice/Expert Teams and the Command Language Teams was scheduled for 8:30 a.m. Tuesday, May 29 to review the proposed changes. 4c

CHI asked that all members study Appendix B. He emphasized the importance of completing implementation prior to the end of June when intensive training of new ARC and Utility users will be under way. 4d

## C. Miscellaneous: 5

1. DNLS Help requires more study by the design team. DVN pointed out that an on line user manual requires a serious writing effort. 5a

2. Exec helps are being coordinated with BBN. 5b

3. MDK brought up the problem of informing users about new systems containing new features and possibly changes in use of old features. 5c

He suggested that NLS type a version number like TENEX does. The team felt that users would not notice it. 5d

As an alternative MDK suggested a flag in the user's initial file which would indicate this user had not logged in since the last system change and would generate a message informing him of changes and where to look for documentation. 5e

MDK requested that the Journal Committee look into having a Documentation Branch in Journal Files. This branch would contain descriptions of and links to documentation of new system features and changes. 5f

4. The team agreed that there be two modes of user operation, Novice and Expert. In Novice mode the user would receive more prompting and more help. The Design Teamd was asked to propose a plan for the two modes. 5g

16923 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews,  
Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B.  
Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush,  
Elizabeth J. (Jake) Feinler, Augmentation Research Handbook, Kirk E.  
Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim) White, Diane S.  
Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Linda L. Lane,  
Marilyn F. Auerbach, Walt Bass, 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,  
William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De  
Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

Novice Expert Review Team Meeting

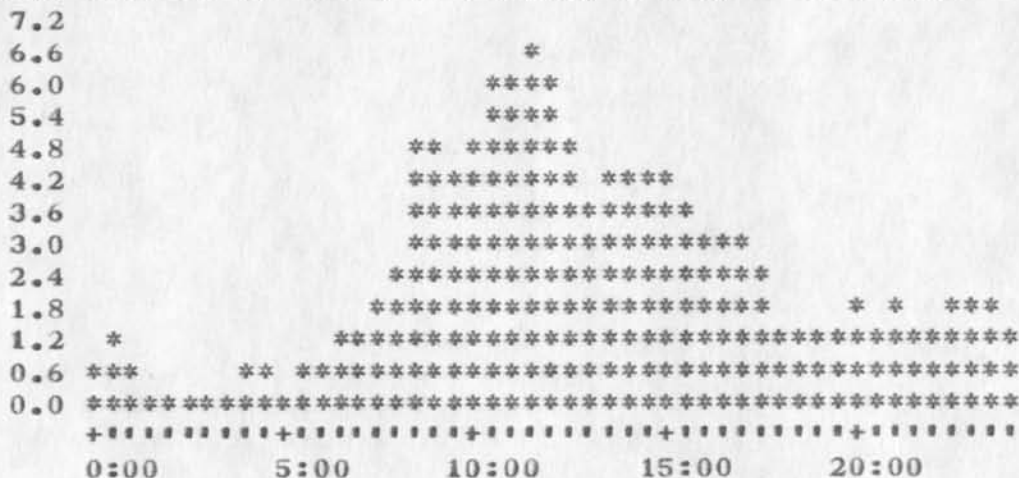
(J16923) 31-MAY-73 10:55; Title: Author(s): Elizabeth K.  
Michael/EKM; Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk:  
EKM;  
Origin: <MICHAEL>NERT1.NLS;3, 30-MAY-73 08:25 EKM ;

SRI-ARC April and May System Load Data

SRI-ARC April and May System Load Data

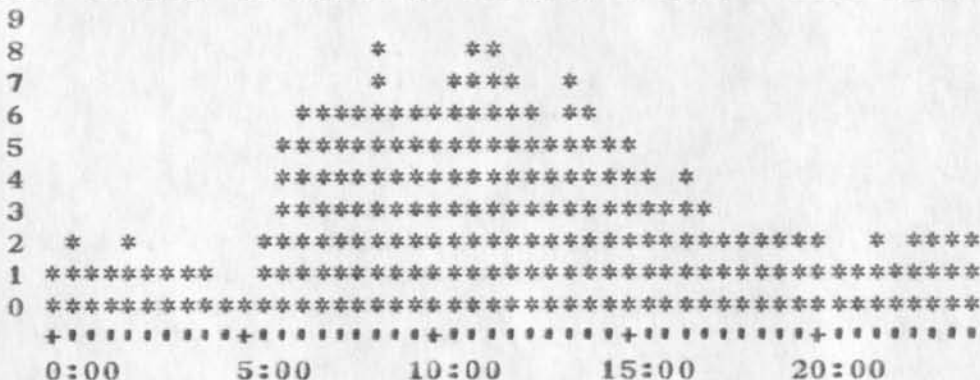
AVERAGE GRAPHS FOR MONTH OF APRIL

TIME PLOT OF AVERAGE LOAD FROM 0:00 to 24:15, MON-FRI, FOR APRIL  
x axis labeled in units of hr:min, x unit = 1800 sec.



TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FROM 0:00 to 24:15,  
MON-FRI, FOR APRIL

x axis labeled in units of hr:min, x unit = 1800 sec.

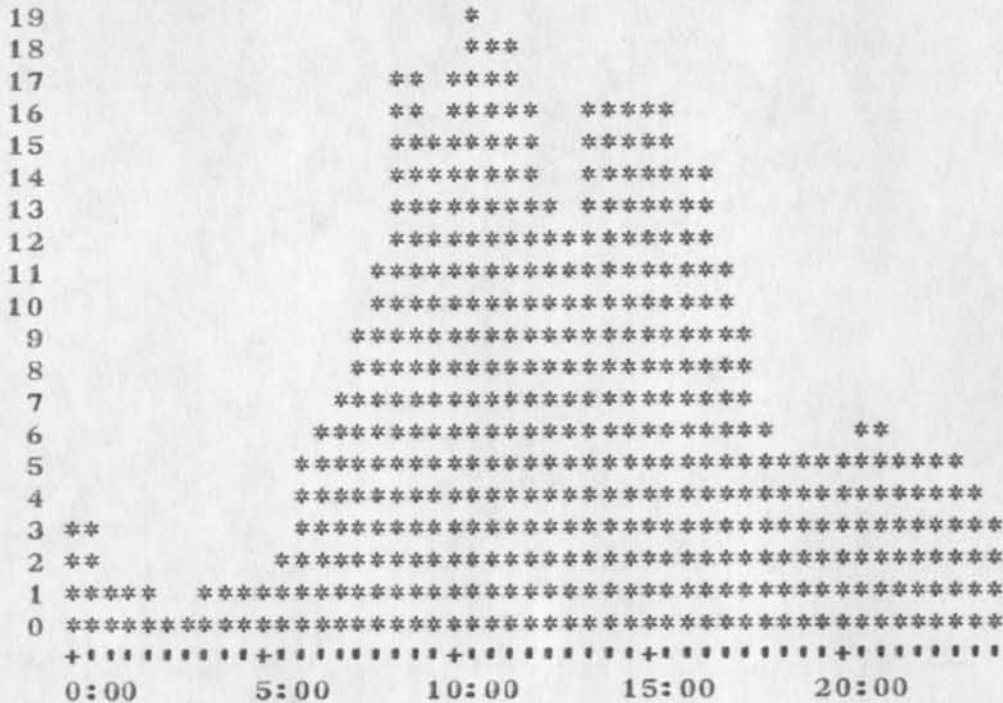




SRI-ARC April and May System Load Data

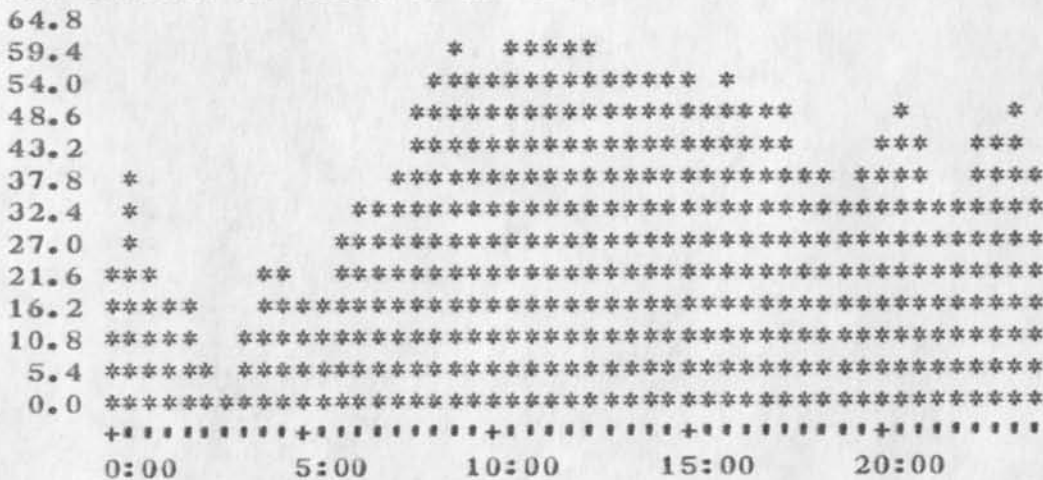
TIME PLOT OF AVERAGE NUMBER OF USERS FROM 0:00 to 24:15, MON-FRI, FOR APRIL

x axis labeled in units of hr:min, x unit = 1800 sec.



TIME PLOT OF AVERAGE PERCENT OF CPU TIME CHARGED TO USER ACCOUNTS FROM 0:00 to 24:15, MON-FRI, FOR APRIL

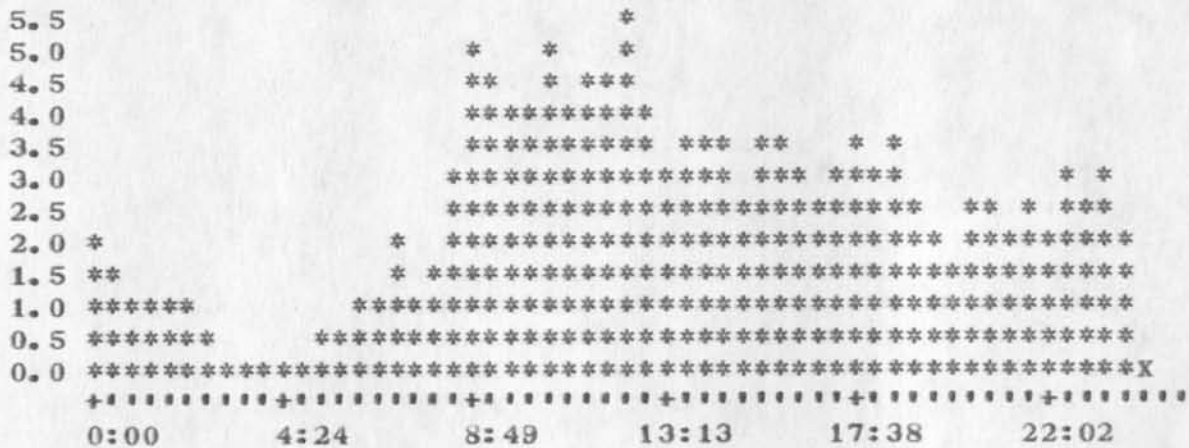
x axis labeled in units of hr:min, x unit = 1800 sec.



SRI-ARC April and May System Load Data

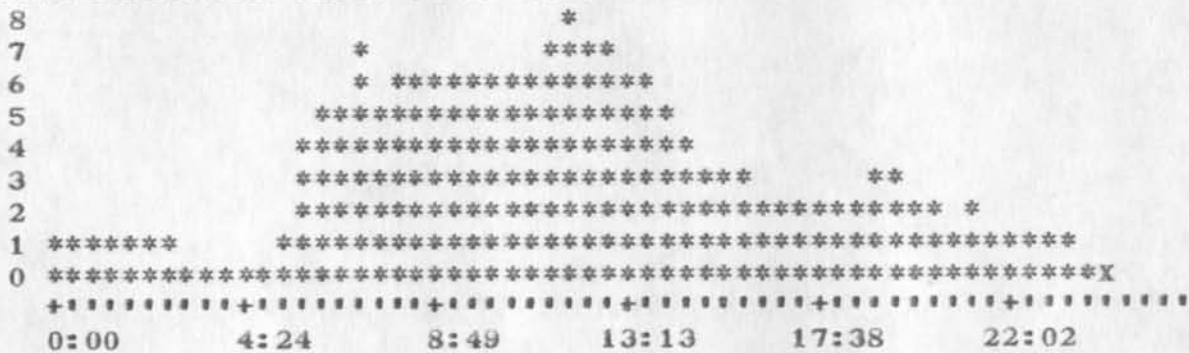
WEEKLY GRAPHS FOR MONTH OF MAY TO DATE  
TIME PLOT OF AVERAGE LOAD MON-FRI, FOR THE WEEK OF 4/30/73

x axis labeled in units hr:min, xunit = 1587 sec.



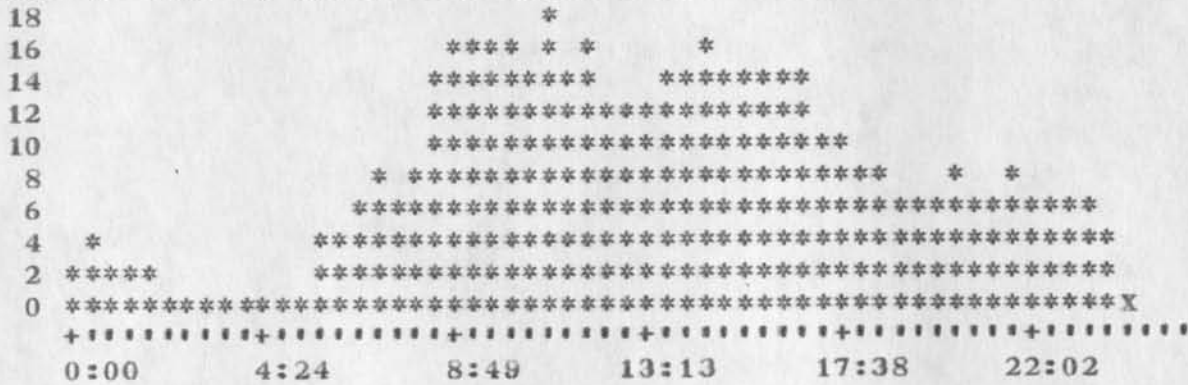
TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS MON-FRI, FOR THE WEEK OF 4/30/73

x axis labeled in units of hr:min, xunit = 1587 sec.



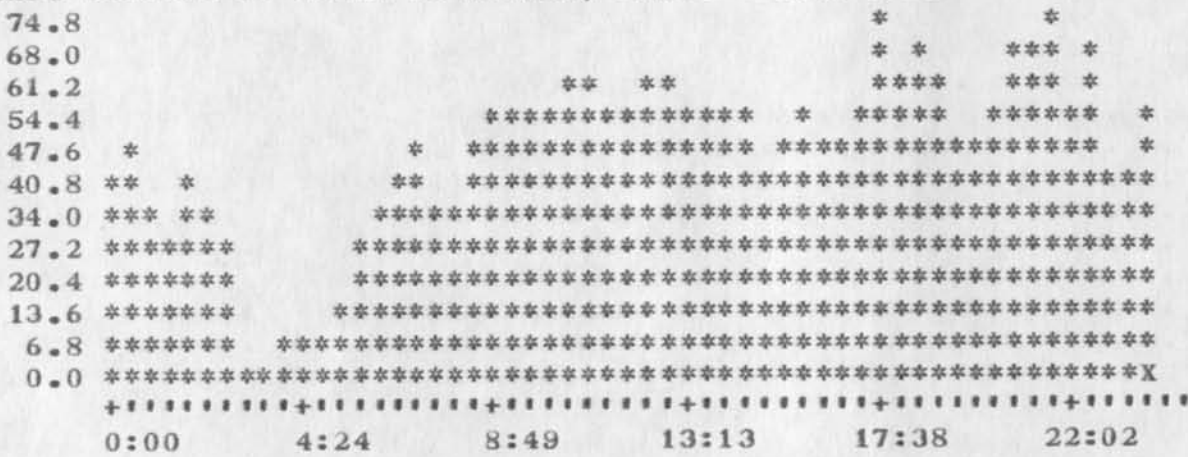
SRI-ARC April and May System Load Data

TIME PLOT OF AVERAGE NUMBER OF USERS MON-FRI, FOR THE WEEK OF 4/30/73  
x axis labeled in units of hr:min, xunit = 1587 sec.



TIME PLOT OF AVERAGE PERCENT OF CPU TIME CHARGED TO USER ACCOUNTS  
MON-FRI, FOR WEEK OF 4/30/73

x axis labeled in units of hr:min, xunit = 1587 sec.

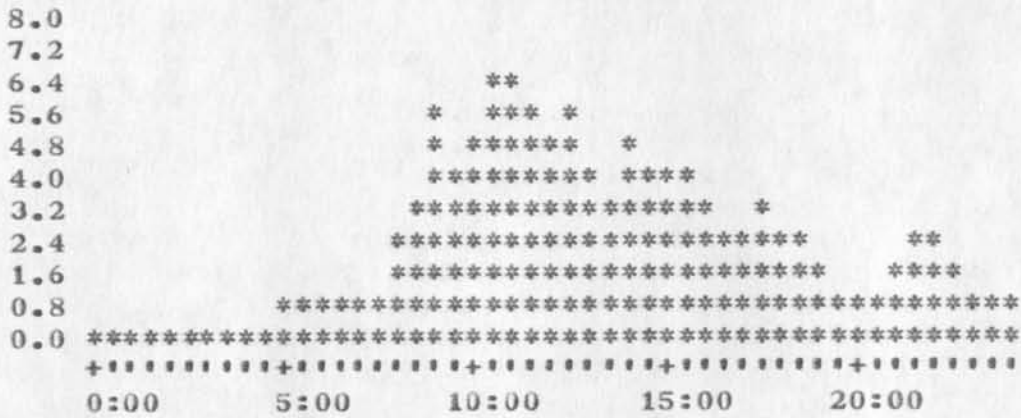


SRI-ARC April and May System Load Data

GRAPHS FOR WEEK OF 5/7/73

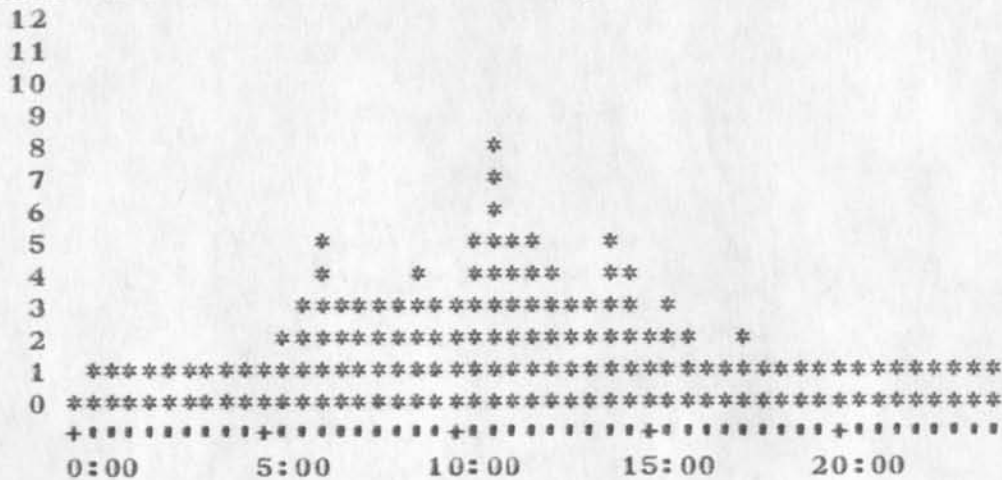
TIME PLOT OF AVERAGE LOAD MON-FRI, FOR THE WEEK OF 5/7/73

x axis labeled in units of hr:min, xunit = 1800 sec.



TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS MON-FRI, FOR THE WEEK OF 5/7/73

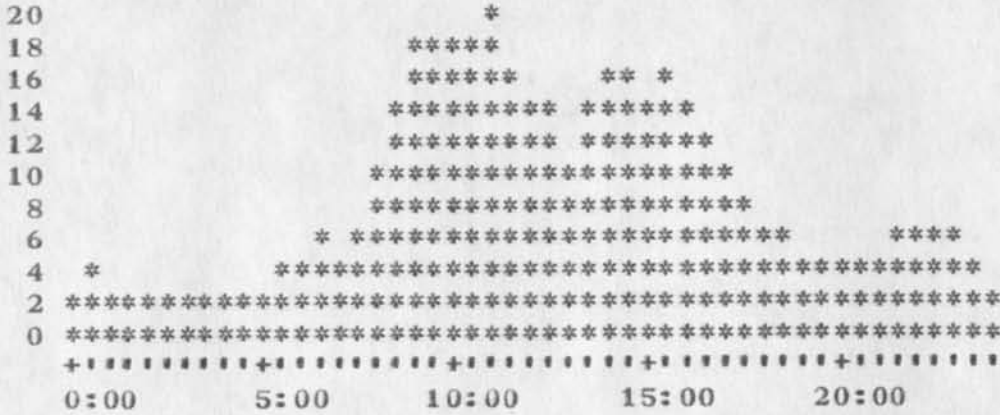
x axis labeled in units of hr:min, xunit = 1800 sec.



SRI-ARC April and May System Load Data

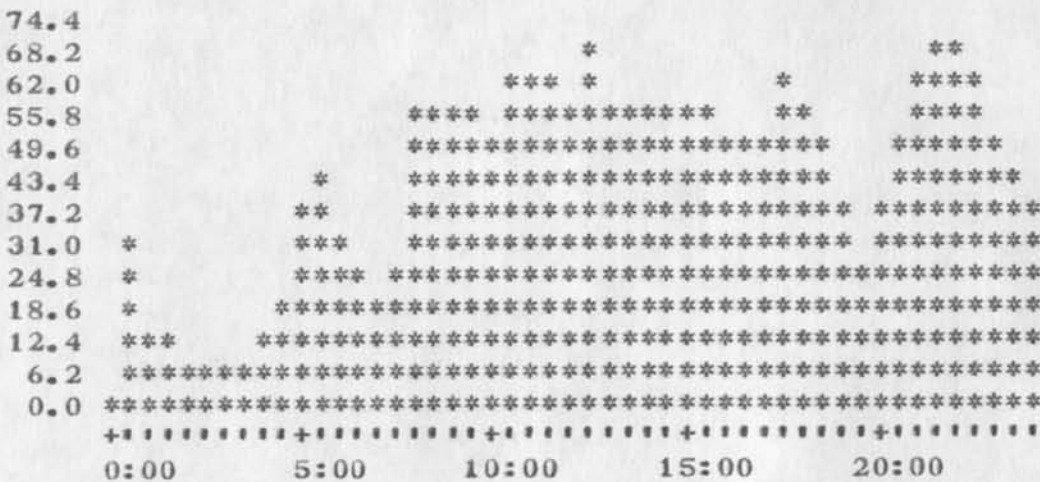
TIME PLOT OF AVERAGE NUMBER OF USERS MON-FRI, FOR THE WEEK OF 5/7/73

x axis labeled in units of hr:min, xunit = 1800 sec.



TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS MON-FRI, FOR WEEK OF 5/7/73

x axis labeled in units of hr:min, xunit = 1800 sec.

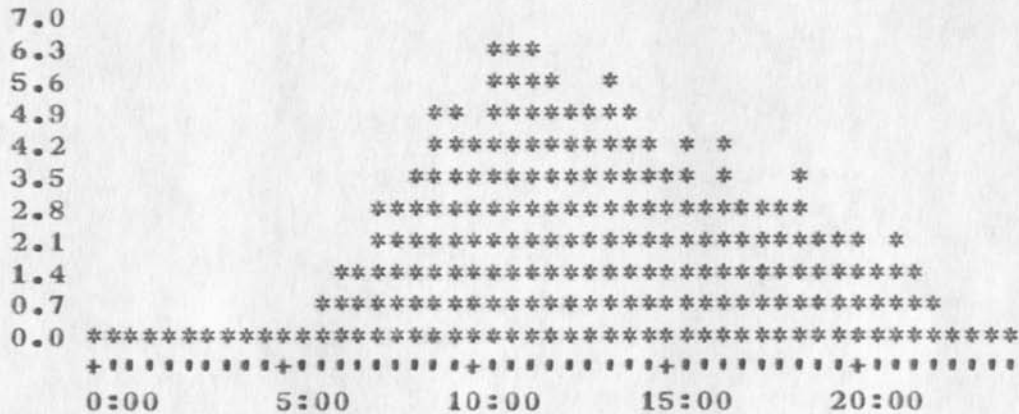


SRI-ARC April and May System Load Data

GRAPH SFOR WEEK OF 5/13/73

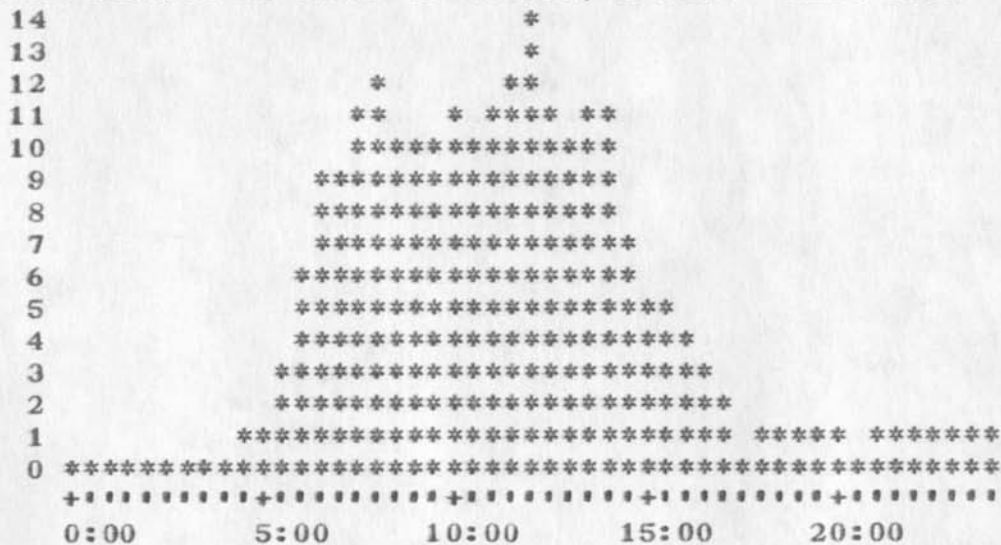
TIME PLOT OF AVERAGE LOAD MON-FRI, FOR THE WEEK OF 5/14/73

x axis labeled in units of hr:min, x unit = 1800 sec.



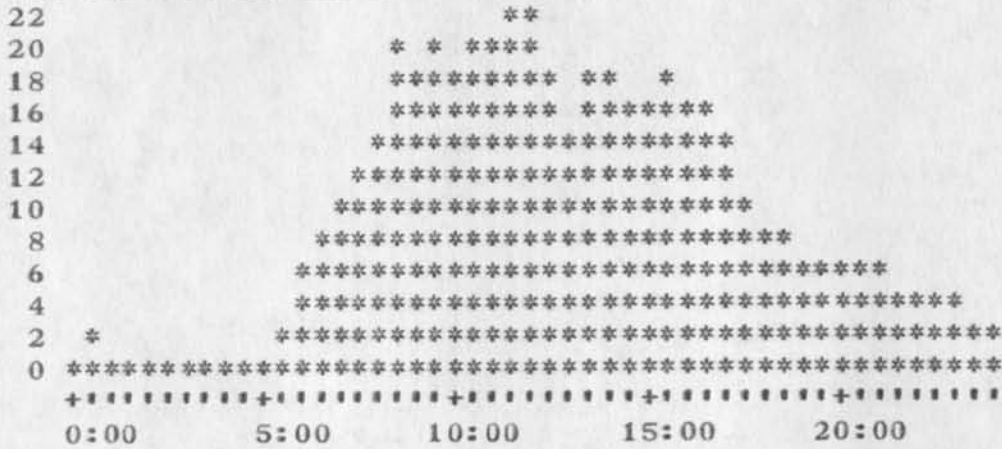
TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS MON-FRI, FOR THE WEEK OF 5/14/73

x axis labeled in units of hr:min, x unit = 1800 sec.



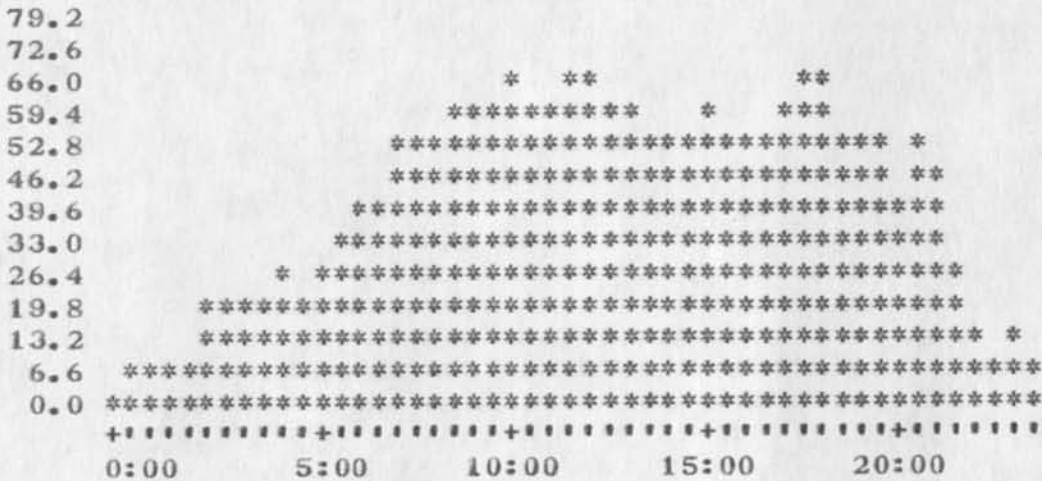
SRI-ARC April and May System Load Data

TIME PLOT OF AVERAGE NUMBER OF USERS MON-FRI, FOR THE WEEK OF 5/14/73  
x axis labeled in units of hr:min, x unit = 1800 sec.



TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS  
MON-FRI, FOR WEEK OF 5/14/73

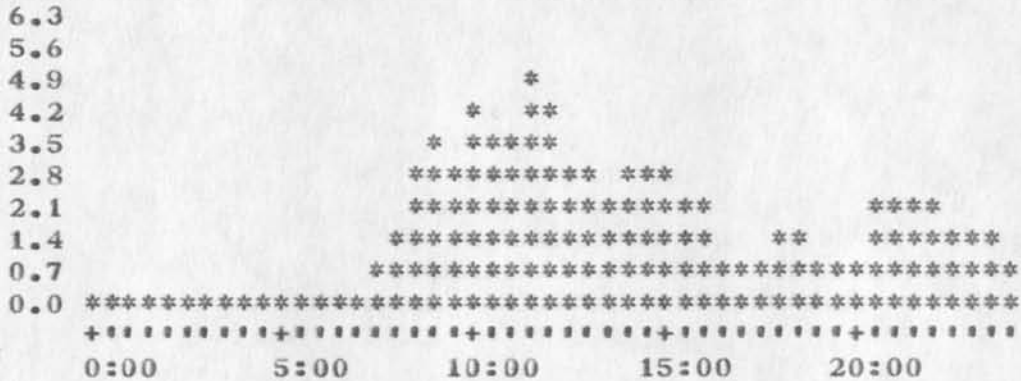
x axis labeled in units of hr:min, x unit = 1800 sec.



SRI-ARC April and May System Load Data

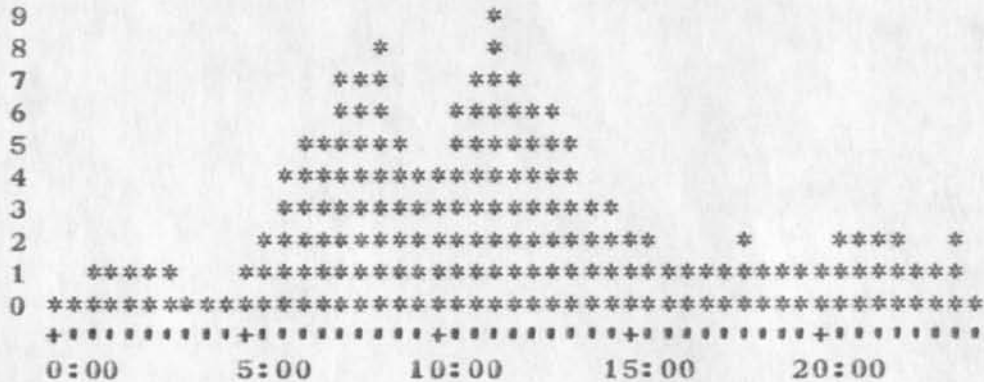
GRAPHS FOR WEEK OF 5/21/73

TIME PLOT OF AVERAGE LOAD MON-FRI, FOR THE WEEK OF 5/21/73  
 x axis labeled in units of hr:min, x unit =1800 sec.



TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS MON-FRI, FOR THE WEEK OF 5/21/73

x axis labeled in units of hr:min, x unit = 1800 sec.

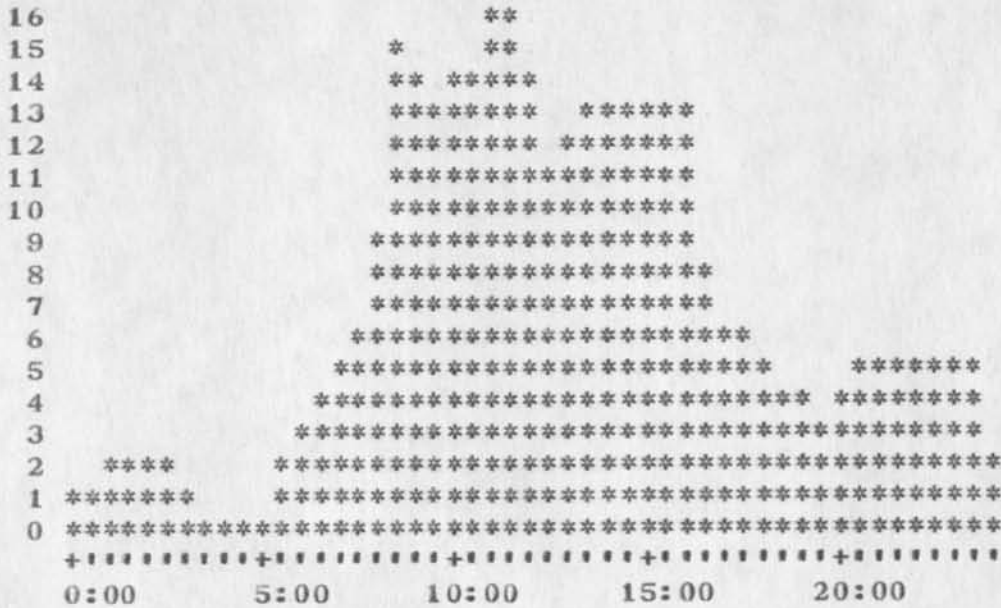




SRI-ARC April and May System Load Data

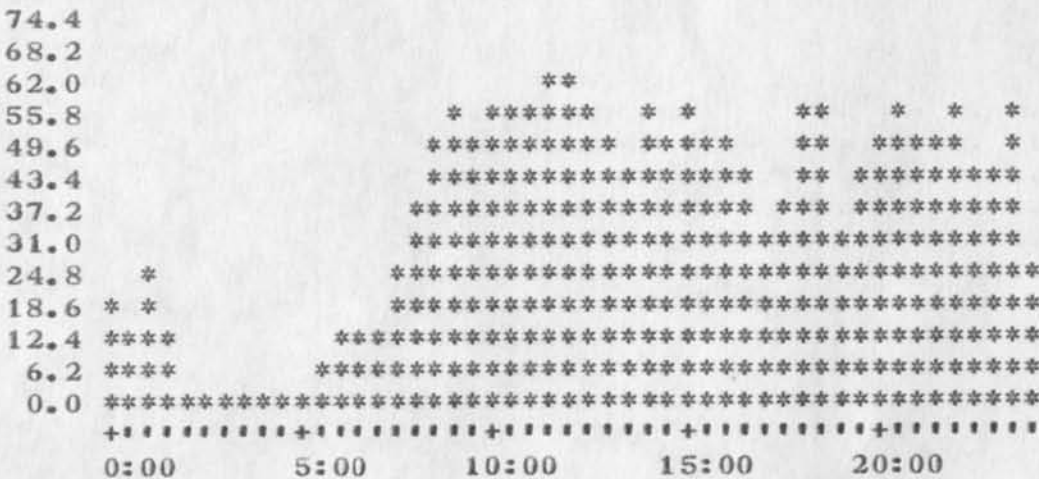
TIME PLOT OF AVERAGE NUMBER OF USERS MON-FRI, FOR THE WEEK OF 5/21/73

x axis labeled in units of hr:min, x unit = 1800 sec.



TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS MON-FRI, FOR WEEK OF 5/21/73

x axis labeled in units of hr:min, x unit = 1800 sec.



16924 Distribution

Susan R. Lee, Jeanne B. North,

SRI-ARC April and May System Load Data

(J16924) 31-MAY-73 12:45; Title: Author(s): James C. Norton/JCN;  
Distribution: /SRL(copy of final version) JBN(fyi); Sub-Collections:  
SRI-ARC; Clerk: JCN;  
Origin: <NORTON>GRAPHS.NLS;1, 31-MAY-73 12:10 JCN ;

SRI-ARC April and May System Load Data Transmittal

Augmentation Research Center  
Stanford Research Institute  
Menlo Park, California 94025

Donald S. Yee  
RCA-ARPANET  
P.O. Drawer D  
Cocoa Beach, Florida 32931

Dear Donald:

I was glad to talk with you today.

1

The enclosed document (16915,) presents the data on SRI-ARC system loading for April 1973 and several weeks in May--as we discussed today and as you recently requested. The ARC system is, as you know, used by local ARC researchers, by RADC users via the ARPANET for in-depth use in their daily work, and by other Network users as part of the Network Information Center's (the NIC's) online information retrieval and communication service.

2

Here are some comments about the factors shown on the enclosed charts:

3

AVERAGE LOAD is the number of "runnable jobs" in the balance set during each 15 minute interval. This in itself is not of much interest to most users BUT it does give them a reference point against which to gauge their feelings of system responsiveness. The level of tolerable responsiveness varies from TENEX to TENEX depending upon the facility configuration and the subsystems being run.

3a

A load average of 12 on one TENEX may permit reasonable responsiveness for programs being run where, on another machine (such as SRI-ARC's), a level of only 5 may give users a feeling that the system is getting slow. At ARC, most users are performing operations that demand quick response and, if working at a display, put a heavy load on the system during such highly interactive sessions.

3a1

We have provided priority treatment for such interactive users thru adjustments to the system scheduler, but even with this advantage, response for those people gets "slow" when the load average climbs

## SRI-ARC April and May System Load Data Transmittal

above 5. Network and local ARC users in typewriter mode do not feel slowed down until the load average reaches a higher level--say about 6 or 7.

3a2

AVERAGE PERCENT OF CPU TIME CHARGED TO USER ACCOUNTS is limited (with our use characteristics) to a maximum of 60-70% of the CPU due to system overhead requirements and depending on the nature of the user-job mix. Thus, an average of 55-60% used by users in April in the busy part of the day indicates that we are about at capacity at those times. Users cannot stay interactive and "always be there" to use otherwise unused CPU time every minute it becomes available.

3b

The AVERAGE NUMBER OF NETWORK USERS (NIC and RADC) is limited to 16 from 5am to 8am pst and limited to 8 from 8am to 6pm pst. This has resulted in few login refusals for Network people (so far, to our knowledge) and has helped us to give the Network users the service availability we have agreed upon with ARPA-IPT as their fair share--note that we are at once both a service node and a research center.

3c

We are about to implement a group allocation system that is intended to better manage the system resources dynamically to both guarantee various groups (ARC subgroups, RADC, NIC users) their fair share of resources and to encourage otherwise unused time to be used.

3c1

In the data for the week of 5/14, you will note higher than usual Network usage. This was due to a TNLS class run by us at Mitre, where we made special allowances for more Network users several days.

3c2

If you have any questions about the data or need more for your work, please let me know--I'd be glad to try to help.

4

Sincerely,

James C. Norton  
Augmentation Research Center

16925 Distribution

Jeanne B. North, Susan R. Lee,

SRI-ARC April and May System Load Data Transmittal

(J16925) 31-MAY-73 12:48; Title: Author(s): James C. Norton/JCN;  
Distribution: /JBN(fyi) SRL(fyi); Sub-Collections: SRI-ARC; Clerk: JCN;  
Origin: <NORTON>TOYEE.NLS;1, 31-MAY-73 12:17 JCN ;

Proposed Spec for Network Journal Submission and Delivery

This document is hereby submitted for review by the Journal Development Review Team; further comments are also solicited from the Design Team.



## Proposed Spec for Network Journal Submission and Delivery

## Introduction

1

This document proposes modifications to SRI-ARC software which would make the NIC Journal more readily accessible to Network users. The aim is to minimize the amount of familiarity with SRI-ARC's system (specifically NLS) required of the user before he can effectively exploit this basic NIC service. This proposal is motivated by the belief that a user shouldn't be FORCED to become adept at the use of NLS before he can send and receive Journal mail.

1a

The discussion that follows treats two major areas:

1b

(1) Journal Submission -- providing a mechanism by which the user can create and submit a Journal article in the comfort (and familiarity) of his own host.

1b1

(2) Journal Delivery -- providing a mechanism by which the NIC can deliver Journal mail to a user at his home host through the Net.

1b2

The discussion describes a first-cut implementation of Network Journal submission and delivery. A more flexible and slightly cleaner user interface will be fashioned when the File Transfer Protocol (FTP), upon which both implementations will rely, is revised to deal more comprehensively with the issues of mail delivery, forwarding, and recording (see -- 15146,1).

1c

This initial implementation requires no modifications to software anywhere in the Net except at SRI-ARC. It supports the most powerful feature of the Journal -- the use of group, as well as individual idents -- but disallows many of the features -- such as preassigned numbers, comments, secondary distribution, etc. -- available to the user working in NLS.

1d

Implementation of the user features described here requires:

1e

(1) Modification of SRI-ARC's FTP server process to distinguish between normal (unrecorded) and Journal (recorded and forwarded) submissions, to extract author and addressee information from the 'user name' field in the FTP mail command, and to store control information and article text in an NLS file for processing by the Journal.

1e1

(2) Addition of an entry to NLS which SRI-ARC's FTP server process can employ to verify idents and create the NLS file.

1e2

(3) Modification of the Journal to make control information and

## Proposed Spec for Network Journal Submission and Delivery

article text for Journal items with Network addressees available to the background delivery process MAILER. 1e3

The new FTP mail protocol will provide a number of features which the second-cut implementation of Journal submission and delivery will exploit. The protocol will allow explicitly for: 1f

(1) Title. 1f1

(2) Requests to record (journalize) mail. 1f2

(3) Acknowledgment for forwarded mail and the specification of parameters to control it. 1f3

(4) Multiple addressees (each verified separately by the server). 1f4

(5) Mail size distinctions, with provision for formally transmitting pathnames as well as text. 1f5

Journal Submission from the Net 2

USER DESCRIPTION 2a

The remote user prepares the text of his Journal article in his host using whatever tools he has available to him. He may wish to prepare long articles beforehand using his text editor (TECO, if he's a TENEX user). For short messages, he may be content with the simple-minded editing features (such as backspace character and line delete) provided by his submission subsystem. 2a1

The remote user will initiate the submission process using the FTP mail subsystem (front-end) provided by his host. For TENEX users, this front-end is currently SNDMSG. The user will send his Journal article as mail to the NIC, addressing it to a fictitious user whose name is of the form: 2a2

```
<author> [ $( <SP> <author> ) ] '/ <recipient> [ $( <SP>
<recipient> ) ] 2a2a
```

'Author' is the ident of one of the user(s) submitting the article, and 'recipient' the ident of one of its intended recipient(s). An ident, as usual, may designate either a group or an individual. SRI-ARC will verify the idents. If it finds them correct, it will accept the mail. An invalid ident will cause the mail to be rejected. 2a3

For TENEX users, the submission process, for short messages,

## Proposed Spec for Network Journal Submission and Delivery

will follow a scenario like the one below (given the current SNDMSG). In this example, the author is JEW and the recipient DHC. System responses are bracketed; everything else is user input. Special characters such as carriage return are enclosed in angle brackets:

2a4

```
[@] sndmsg <CR>
[Type ? for help]
[Users:] jew/dhc@nic <CR>
[Subject:] SMFS Runs on TENEX 1.31 at the NIC <CR>
[Message: (? for help):] Dave-- The NIC came up on TENEX
1.31 on 1-APR. I tried SMFS here on the new monitor and it
works fine. I don't understand why I had problems running
your copy of the code at BBN-TENEX. Are you still unable to
reference the same archived file from two different TENEXs?
--Jim <↑Z>
[jew/dhc at NIC -- OK]
[@]
```

2a4a

For longer articles, the submission process will look like the following. Here, the the recipients are SRI-ARC (a group), and MCK and RMS:

2a5

```
[@] sndmsg <CR>
[Type ? for help]
[Users:] jew/sri-arc mck rms@nic <CR>
[Subject:] Farming Batch Work out to UCSB -- A Scenario <CR>
[Message: (? for help):] <↑B> [(Insert file: ] rje.txt <CR>
[...EOF)] <↑Z>
[jew/sri-arc mck rms at NIC -- OK]
[@]
```

2a5a

Multiple authors, though they don't appear in either of the examples above, are, like multiple addressees, specifically allowed.

2a5b

Much of the flexibility available in the NLS submission process is clearly absent from the initial Network implementaton (as described above). No provision will be made initially for specification of comments, RFC numbers, clerk, subcollections, keywords, preassigned numbers or the like; only author, title, distribution list, and text will be permitted.

2a6

## IMPLEMENTATION

2b

Network Journal submission requests will enter the SRI-ARC system through its FTP server process FTPSRV running as a fork under SYSJOB. The 'user name' field in FTP mail commands will

## Proposed Spec for Network Journal Submission and Delivery

be parsed by FTPSRV for the character slash. If a slash is found, the mail will be assumed to be destined for the Journal. 2b1

FTPSRV will create a temporary sequential file to hold parameters such as author and addressees. It will then map NLS into an inferior fork and start it at a special entry point, passing it the JFN for the parameter file. 2b2

NLS will verify the idents of the author(s) and recipient(s) and return immediately to FTPSRV with an indication of whether errors were found. If one or more idents were incorrect, FTPSRV will promptly refuse the mail with an appropriate diagnostic. If none is in error, it will accept the text of the mail from the user process, append it to the control file, and return to NLS. NLS will then create an NLS file containing the message and the appropriate origin statement, and deposit it in <TEJOURNAL> for processing by the Journal delivery process. 2b3

NLS will scan the first dozen lines of the message's text for the following: 2b4

```
( <message front> / <CRLF> ) ( "RE:" / "TITLE:" / "SUBJECT:"  
" ) <string> <CRLF>
```

2b4a

If found, <string> will be taken as the Journal title (otherwise, the title will be taken as null), and the label, title, and delimiting CR LF will be deleted from the message. 2b5

This algorithm will succeed in extracting title information from the header with which SNDMSG prefixes the user's message. It will also allow users whose submission subsystem supplies no header to type in the title information themselves. 2b5a

The following bit of heuristics (which will go away entirely with the second implementation) will be applied to strip messages generated by SNDMSG of their system-supplied headers and trailers. If the string: 2b6

```
"- - - -" <CRLF>
```

2b6a

appears within the first dozen lines of the message, the character following it will be taken as the start of the message proper, and the string: 2b7

```
"-----" <CRLF> <message end>
```

2b7a

will be discarded if it occurs. 2b8

## Proposed Spec for Network Journal Submission and Delivery

If the text of a piece of Journal mail (after header and trailer have been removed) doesn't exceed in length the maximum length of an NLS statement, and if it's a single paragraph (i.e., if <CRLF> <CRLF> doesn't appear in it); then it will be journalized as if submitted with 'Submit Message' (in NLS); otherwise, it will be converted to NLS structured form and submitted as if by 'Submit File'.

2b9

## Journal Delivery through the Net

3

## USER DESCRIPTION

3a

Two modes of Journal delivery are currently available to NLS users; each user can select one or both:

3a1

(1) ONLINE -- an entry containing the text of the mail or, for longer items, a citation to it, is made in the user's initial file, which resides in his directory at SRI-ARC.

3a1a

(2) HARDCOPY -- the text of the mail is sent to the user (i.e., to an address of his choosing) via the U.S. Postal Service.

3a1b

A third delivery method will be defined:

3a2

(3) NETWORK -- Journal mail addressed to the user will be transmitted to him at a host and mailbox of his choosing via the Net.

3a2a

Short messages ('Submit Message') will be delivered in their entirety to the remote user, preceded by the usual sort of header giving author, date and time, citation number, and title:

3a3

JEW 4-APR-73 11:21 15490

SMFS Runs on TENEX 1.31 at the NIC

Message: Dave-- The NIC came up on TENEX 1.31 on 1-APR. I tried SMFS here on the new monitor and it works fine. I don't understand why I had problems running your copy of the code at BBN-TENEX. Are you still unable to reference the same archived file from two different TENEXs? --Jim

3a3a

Only a citation to larger Journal articles ('Submit File') will be sent:

3a4

JEW 4-APR-73 17:51 15491

Farming Batch Work out to UCSB -- A Scenario

Location: SRI-ARC <MJOURNAL>15491.NLS;XNLS

3a4a

## Proposed Spec for Network Journal Submission and Delivery

In place of the usual link (which appears in ONLINE delivery) is a host name (SRI-ARC) and a pathname to the file at that host. Using it, the remote user or a process running on his behalf can fetch a copy of the file from SRI-ARC via FTP. The parameter ';XNLS' signals SRI-ARC's FTP server process to convert the NLS file to sequential form (using a default conversion algorithm) before transmission to the user through the Net.

3a5

Journal mail will be delivered via FTP mail command to a host (i.e., to it's FTP server process) and mailbox address of the user's choosing; these two parameters will be maintained in the Ident file for each user who selects NETWORK delivery, and can, like his delivery mode, be viewed or changed from the Ident System in NLS. Initial values for host and mailbox address are being solicited from the Network community (see -- 16400,).

3a6

## IMPLEMENTATION

3b

The actual Network Journal delivery operation will be performed by a process called MAILER who runs in a fork beneath SYSJOB and who currently delivers mail queued by SNDMSG.

3b1

The Journal delivery process will simply create a sequential file (and set a flag in <SYSTEM>MAILER.FLAGS) containing whatever mail was sent to the user since the last delivery, and name it:

3b2

```
"[--UNSENT-MAIL--]." <mailbox> '@ <host>
```

3b2a

The contents of the file will be, in essence, a sequentialized version of a portion of an on-line user's initial file, containing citations and messages. The file's extension contains the addressing information required by MAILER to properly deliver the mail.

3b3

MAILER runs at regular intervals (currently once every ten minutes), and attempts delivery for all '[--UNSENT-MAIL--]' files in the file system. Delivery attempts often fail one or more times because the addressed host is disconnected from the Net or it's FTP server process is inoperative.

3b4

## Areas to Receive Later Attention

4

The implementation described above equips the user with basic submission and delivery tools -- a subset of those available to the NLS user; the user interface is not all that's desired, and there are no bells and whistles. The areas identified below require further attention. In large measure, they depend for

## Proposed Spec for Network Journal Submission and Delivery

implementation upon a more flexible and thorough Network mail protocol, and the continued evolution of MAILER (the delivery agent).

4a

## SUBMISSION FLEXIBILITY

4b

The existing mail transfer protocol within FTP is being rewritten and expanded (see -- 15146,). It will make possible explicit specification of such parameters as title, subcollections, clerk, preassigned numbers; and will include an escape for specifying other, more host-dependent parameters such as RFC numbers. These additional FTP commands will be supported by SRI-ARC's FTP server process, who will convey them to NLS for inclusion in the origin statement of the submission file.

4b1

The new mail protocol will also make specification of multiple addressees explicit, and each will be separately verified and acknowledged, allowing easy correction of spelling errors, for example.

4b2

## EFFICIENT AND INTELLIGENT DELIVERY

4c

MAILER is a simple program, designed to handle a relatively small volume of mail in a very simple-minded fashion. It requires, for example, that a copy of the file be created for EACH of its addressees. That isn't much of a problem in the context of SNDMSG, where the number of addressees is typically fairly small; but will become a problem -- both in terms of storage requirements and CPU overhead -- in an environment where, because of group idents, the user can and frequently does direct mail to a large number of individuals (take the group ident 'NLG' as an example, currently designating about 60 people).

4c1

[This contrast between the Journal and SNDMSG breaks down in principle, but not I think in application, because SNDMSG implements ad hoc group idents by allowing the distribution list to be taken from a file.]

4c1a

MAILER currently provides negative acknowledgment for delivery attempts that have remained queued (and undeliverable) for five days. However, it infers the author of the mail from the directory in which the failing file resides, and places the acknowledgment in the corresponding MESSAGE.TXT file. This mechanism must be generalized to allow for cases where the sender expects acknowledgment to a mailbox in another host.

4c2

Other improvements might be made to MAILER, such as causing it

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to deliver all mail queued for a given host in a single FTP transaction. The program must be made generally more efficient to handle its drastically increased workload in a reasonable fashion.

4c3

MAILER will have to be modified for the new mail protocol -- to send the appropriate FTP commands and to parse (perhaps) a header in the 'unsent mail' file for the new, more esoteric parameters.

4c4

## ACKNOWLEDGMENT

4d

The Journal normally acknowledges delivery of a Journal article by inserting a statement in the AUTHOR branch of the author's initial file. Users who receive delivery of mail addressed to them through the Net should, when they author a journal article, have it's delivery acknowledged to them in the same manner. Acknowledgment to their initial file is clearly inappropriate since they may never have even used NLS or know what an initial file is (in fact, there is no need for them to even HAVE an initial file). MAILER should acknowledge delivery to the sender when all addressees have been disposed of.

4d1

And acknowledgment is no longer as simple as is it currently; delivery can FAIL for one or more of the addressees (their hosts never come up), and so MAILER must time out delivery attempts and inform the sender of such cases. A number of delivery attempts spanning a number of days (or longer) should be made before delivery is abandoned as hopeless (the current MAILER tries for five days).

4d2

Recorded in the NIC's Ident file might be parameters affecting the nature of the acknowledgment the user receives. He might elect to always receive acknowledgment, or to receive it only if the delivery attempt fails for one or more addressees, or to receive a status report periodically during the delivery process.

4d3

## UNRECORDED MAIL

4e

SRI-ARC might allow itself to be used simply as a forwarding agent: the user could choose that a piece of mail be delivered to a list of addressees, specified by idents, without that piece of mail being assigned a NIC number and without it's being cataloged.

4e1



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Proposed Spec for Network Journal Submission and Delivery

(J16926) 31-MAY-73 13:21; Title: Author(s): James E. (Jim)  
White/JEW; Distribution: /JDDT JDRT; Sub-Collections: SRI-ARC JDDT JDRT;  
Clerk: JEW;  
Origin: <WHITE>SUBDELPROP.NLS;12, 31-MAY-73 13:14 JEW ;